# DOCUMENT INFO

15

DocID: 00000334

Filename: 58603-2010-02-02-FIG-01 (Field Data - Longshore-SCI).pdf

160744

SOVEREIGN CONSULTING

Work Day: Tuesday Work Date: 02-02-10

Client/Owner: **Motiva Enterprises LLC** Page 1 of 2

**Well Gauge Report** Address: **25 Paidge Avenue, Brooklyn, NY** SCI Job #: **EQ017**

| Well ID | Time of Reading | Well Diameter | Total Depth | Depth to Product | Depth to Water | Volume Purged (gal.) | Comments/Product Removed |
|---|---|---|---|---|---|---|---|
| 1 | | | | | 3.62 | | |
| 3 | | | | | 3.05 | | |
| 29 | | | | | 2.12 | | |
| 4 | | | | 2.64 | 2.69 | | |
| 30 | | | | | 2.68 | | |
| 5 | | | | | 2.07 | | |
| 28 | | | | | 1.92 | | |
| 27 | | | | | 2.66 | | |
| 6 | | | | | 4.45 | | |
| 13 | | | | | 7.28 | | |
| 14 | | | | | 6.43 | | |
| 23 | | | | | 4.04 | | |
| 24 | | | | | 3.95 | | |
| 25 | | | | | 3.06 | | |
| TRW 1 | | | | 4.42 | 4.44 | | |
| 26 | | | | 4.26 | 4.27 | | |
| TRW 2 | | | | | 4.31 | | |
| 2 | | | | 4.24 | 4.35 | | 0.25 gallons |
| TRW 3 | | | | Under | Water | | |
| TRW 4 | | | | Under | Water | | |
| TRW 5 | | | | Under | Water | | |

Well Volumes (Gallons / Linear Foot): 2" = 0.17, 4" = 0.66, 6" = 1.50, 8" = 2.60, 12" = 5.81

SOVEREIGN CONSULTING

Work Day: Tuesday Work Date: 02-02-10

Client/Owner: **Motiva Enterprises LLC** Page 2 of 2

**Well Gauge Report** Address: **25 Paidge Avenue, Brooklyn, NY** SCI Job #: **EQ017**

| Well ID | Time of Reading | Well Diameter | Total Depth | Depth to Product | Depth to Water | Volume Purged (gal.) | Comments/Product Removed |
|---|---|---|---|---|---|---|---|
| 31 | | | | 4.23 | 4.79 | | 0.75 gallons |
| TRW 6 | | | | Under | Water. | | |
| 20 | | | | | 3.35 | | |
| 15 | | | | | 3.48 | | |
| 16 | | | | | 3.28 | | |
| 17 | | | | | 3.46 | | |
| 18 | | | | | 3.43 | | |
| 19 | | | | | 4.34 | | |
| 32 | | | | | 4.59 | | |
| 9 | | | | | 5.33 | | |
| 8 | | | | | 5.34 | | |
| 34 | | | | | 7.35 | | |
| 33 | | | | | 5.72 | | |
| 39 | | | | | 7.49 | | |
| 40 | | | | 9.31 | 9.42 | | 0.25 gallons |
| 35 | | | | | 6.53 | | |
| 36 | | | | 9.35 | 9.39 | | |
| 41 | | | | 8.05 | 8.07 | | |
| 37 | | | | 7.86 | 7.89 | | |
| 38 | | | | | 7.38 | | |
| | | | | | | | |

Well Volumes (Gallons / Linear Foot): 2" = 0.17, 4" = 0.66, 6" = 1.50, 8" = 2.60, 12" = 5.81

Motiva - Brooklyn Terminal 2-2-10
25-Paidge Ave - Brooklyn - NY
Long Shore Env on site @ 8.00 off @ 11.15
EL. AF. 04 Tacoma 35°F cloudy

"Well Gauging and Recovery Product"

| ID | DTW | DTP | LPH | Recovery |
|---|---|---|---|---|
| I | 3.62 | | | |
| 3 | 3.05 | | | |
| 29 | 2.12 | | | |
| sh. ~~30~~ 4 | 2.69 | 2.64 | .05 | |
| 30 | 2.68 | | | |
| 5 | 2.07 | | | |
| 28 | 1.92 | | | |
| 27 | 2.66 | | | |
| 6 | 4.45 | | | |
| 13 | 7.28 | | | |
| 14 | 6.43 | | | |
| 23 | 4.04 | | | |
| 24 | 3.95 | | | |
| 25 | 3.06 | | | |
| TRW 1 | 4.44 | 4.42 | .02 | |
| 26 | 4.27 | 4.26 | .01 | |
| TRW 2 | 4.31 | | | |
| 2 | 4.35 | 4.24 | .11 | .25 |
| TRW 3 | Under water | | | |
| TRW 4 | Under water. | | | |
| TRW 5 | Under water | | | |
| 31 | 4.79 | 4.23 | .56 | .75 |

Motiva Brooklyn Terminal 2-2-10
25 Paidge Ave - Brooklyn - N.Y

"Well Gauging and Recovery Product"

| ID | DTW | DTP | LPH | Recovery |
|---|---|---|---|---|
| TRW 6 | Under | Water | | |
| 20 | 3.35 | | | |
| 15 | 3.48 | | | |
| 16 | 3.28 | | | |
| 17 | 3.46 | | | |
| 18 | 3.43 | | | |
| 19 | 4.34 | | | |
| 32 | 4.59 | | | |
| 9 | 5.33 | | | |
| 8 | 5.34 | | | |
| 34 | 7.35 | | | |
| 33 | 5.72 | | | |
| 39 | 7.49 | | | |
| 40 | 9.42 | 9.31 | .11 | .25 |
| 35 | 6.53 | | | |
| 36 | 9.39 | 9.35 | .04 | |
| 41 | 8.07 | 8.05 | .02 | |
| 37 | 7.89 | 7.86 | .03 | |
| 38 | 7.38 | | | |

(1.25 Gal Recovered)

Motiva – Brooklyn Terminal — 01-12-10
25 Paidge Ave – Brooklyn – NY
Long Shore Env on site @ 8.00 off @ 2.00
EL. 04 Tacoma 38°F Sunny & windy

Well gauging and Recovery Product

| ID | DTW | DTP | LPH | Recovery |
|---|---|---|---|---|
| 1 | 3.49 | | | |
| 3 | 2.87 | | | |
| 29 | 1.96 | | | |
| 30 • | 2.56 | | | |
| 4 | 2.54 | 2.49 | .06 | |
| 5 | 1.95 | | | |
| 28 • | 1.64 | | | |
| 27 | 2.59 | | | |
| 6 | 3.87 | | | |
| 13 | 7.43 | | | |
| 14 | 6.64 | | | |
| 23 | 4.16 | | | |
| 24 | 4.02 | | | |
| 25 | 3.12 | | | |
| TRW1 | 4.33 | 4.30 | .03 | |
| 26 | 4.27 | 4.25 | .02 | |
| TRW2 | 4.17 | | | |
| 2 | 4.09 | 4.05 | .05 | |
| TRW4 | Under | Water | | |
| TRW5 | Under | Water | | |
| 31 | 4.56 | 3.85 | .71 | .75 |
| TRW6 | Under | Water | | |

Motiva – Brooklyn Terminal — 01-12-10
25 Paidge Ave – Brooklyn – N.Y

Well Gauging and Recovery Product

| ID | DTW | DTP | LPH | Recovery |
|---|---|---|---|---|
| 20 | 3.24 | | | |
| 15 | 3.39 | | | |
| *16 | 3.32 | | | |
| 17 | 3.59 | | | |
| 18 | 3.56 | | | |
| 19 | 4.29 | | | |
| 32 | 4.45 | | | |
| 9 | 5.67 | | | |
| 8 | 5.54 | | | |
| RW 36 | 8.95 | 8.88 | .07 | |
| 35 | 6.49 | | | |
| RW 40 | 8.87 | 8.76 | .11 | .25 |
| TRW3 | Under | Water | | |
| 34 | 7.33 | 7.31 | .02 | |
| 33 | 5.71 | | | |
| 39 | 6.65 | | | |
| 41 | 8.04 | 8.01 | .03 | |
| 37 | 7.75 | 7.74 | .01 | |
| 38 | 7.28 | | | |
| | | | | |
| | {"1.0 Gal Recovered"} | | | |

Shell/Motiva 0007013

SOVEREIGN CONSULTING

Work Day: Tues. Work Date: 01/12/10

Client/Owner: **Motiva Enterprises LLC** Page 2 of 2

**Well Gauge Report** Address: **25 Paidge Avenue, Brooklyn, NY** SCI Job #: **EQ017**

| Well ID | Time of Reading | Well Diameter | Total Depth | Depth to Product | Depth to Water | Volume Purged (gal.) | Comments/Product Removed |
|---|---|---|---|---|---|---|---|
| TW-6 | 1135 | 6 | | N/A → | | - | Manway filled w/ water (run-off) |
| MW-20 | 1145 | 4 | | - | 3.24 | - | |
| -15 | 1200 | 4 | | - | 3.39 | - | |
| -16 | 1205 | 4 | | - | 3.32 | - | |
| -17 | 1215 | 4 | | - | 3.59 | - | |
| -18 | 1225 | 4 | | - | 3.56 | - | |
| -19 | 1235 | 4 | | - | 4.29 | - | |
| -32 | 1245 | 4 | | - | 4.45 | - | |
| -9 | 1300 | 4 | | - | 5.67 | - | |
| -8 | 1305 | 4 | | - | 5.54 | - | |
| -36 | 1310 | 6 | | 8.88 | 8.95 | - | |
| -35 | 1320 | 4 | | - | 6.49 | - | |
| -40 | 1330 | 6 | | 8.76 | 8.87 | - | 0.25 gallons Inapl |
| TW-3 | 1335 | 6 | | N/A → | | - | Manway filled w/ water (run-off) |
| -34 | 1345 | 4 | | 7.31 | 7.33 | - | |
| -33 | 1350 | 4 | | - | 5.71 | - | |
| -39 | 1355 | 4 | | - | 6.65 | - | |
| -41 | 1405 | 4 | | 8.01 | 8.04 | - | |
| -37 | 1410 | 6 | | 7.74 | 7.75 | - | |
| -38 | 1415 | 4 | | - | 7.28 | - | |
| | | | | | | | |

Well Volumes (Gallons / Linear Foot): 2" = 0.17, 4" = 0.66, 6" = 1.50, 8" = 2.60, 12" = 5.81

SOVEREIGN CONSULTING

Work Day: Tues. Work Date: 01/12/10

Client/Owner: **Motiva Enterprises LLC** Page 1 of 2

**Well Gauge Report** Address: **25 Paidge Avenue, Brooklyn, NY** SCI Job #: **EQ017**

| Well ID | Time of Reading | Well Diameter (in.) | Total Depth | Depth to Product | Depth to Water | Volume Purged (gal.) | Comments/Product Removed |
|---|---|---|---|---|---|---|---|
| MW-1 | 805 | 4 | | — | 3.49 | — | |
| -3 | 815 | 4 | | — | 2.87 | — | |
| -29 | 825 | 4 | | — | 1.96 | — | |
| -30 | 835 | 4 | | — | 2.56 | — | |
| -4 | 845 | 4 | | 2.49 | 2.54 | — | |
| -5 | 850 | 4 | | — | 1.95 | — | |
| -28 | 855 | 4 | | — | 6.64 | — | |
| -27 | 900 | 4 | | — | 2.59 | — | |
| -6 | 915 | 4 | | — | 3.87 | — | |
| -13 | 930 | 4 | | — | 4.43 | — | |
| -14 | 945 | 4 | | — | 6.64 | — | |
| -23 | 955 | 4 | | — | 4.16 | — | |
| -24 | 959 | 4 | | — | 4.02 | — | |
| -25 | 1010 | 4 | | — | 3.12 | — | |
| TW-1 | 1030 | 6 | | 4.30 | 4.33 | — | |
| MW-26 | 1045 | 4 | | 4.25 | 4.27 | — | |
| TW-2 | 1100 | 6 | | — | 4.17 | — | |
| MW-2 | 1115 | 4 | | 4.05 | 4.09 | — | |
| TW-4 | 1120 | 6 | | N/A → | | — | Heavy filled w/ water (run-off) |
| TW-5 | 1125 | 6 | | N/A → | | — | " |
| MW-31 | 1130 | 4 | | 3.85 | 4.56 | — | 0.75 gal. Inapl |

Well Volumes (Gallons / Linear Foot): 2" = 0.17, 4" = 0.66, 6" = 1.50, 8" = 2.60, 12" = 5.81

# DOCUMENT INFO

15

DocID: 00000422

Filename: 58603-2010-09-01-FIG-01 (Field Activity Reports - SCI).pdf

SOVEREIGN CONSULTING - WELL GAUGING/HAND-BAILING DATA SUMMARY SHEET — DATE (DAY OF WEEK): Wed. (09/01/10)

PAGE 1 OF 1 — CLIENT: MOTIVA ENTERPRISES LLC - 25 PAIDGE AVENUE, BROOKLYN NY

SCI JOB # EQ017

| WELL ID | TIME OF READING | WELL DIA. (IN) | TOTAL DEPTH (FT) | DEPTH TO PRODUCT (FT) | DEPTH TO WATER (FT) | PRODUCT THICKNESS (FT) | PRODUCT RECOVERED (GAL) | NOTES |
|---|---|---|---|---|---|---|---|---|
| MW-1 | 8:50 | 4 | 11.24 | | 3.32 | | | |
| MW-2 | 9:38 | 4 | 10.85 | 3.75 | 3.82 | 0.07 | | |
| MW-3 | 8:52 | 4 | 11.36 | | 3.01 | | | |
| MW-4 | 8:56 | 4 | 11.17 | 2.49 | 2.52 | 0.03 | | |
| MW-5 | 8:57 | 4 | 9.35 | | 1.98 | | | |
| MW-6 | 9:02 | 4 | 10.84 | | 5.28 | | | |
| MW-7R | 10:27 | 4 | 12.49 | | 5.78 | | | |
| MW-8 | 10:30 | 4 | 8.03 | | 6.44 | | | |
| MW-9 | 10:32 | 4 | 7.70 | | 6.41 | | | |
| MW-13 | 9:14 | 4 | 14.08 | | 7.28 | | | |
| MW-14 | 9:15 | 4 | 14.13 | | 6.22 | | | |
| MW-15 | 9:50 | 4 | 12.56 | | 3.18 | | | |
| MW-16 | 9:51 | 4 | 15.19 | | 3.08 | | | |
| MW-17 | 9:54 | 4 | 12.24 | | 2.61 | | | |
| MW-18 | 9:56 | 4 | 11.52 | | 3.05 | | | |
| MW-19 | - | - | - | | - | | | destroyed |
| MW-20 | 9:49 | 4 | 11.52 | | 3.26 | | | |
| MW-21R | 9:09 | 4 | 12.08 | | 3.93 | | | |
| MW-22R | 9:11 | 4 | 8.46 | | 3.98 | | | |
| MW-23 | 9:19 | 4 | 12.56 | | 3.84 | | | |
| MW-24 | 9:20 | 4 | 12.67 | | 3.82 | | | |
| MW-25 | - | 4 | 14.54 | | 2.94 | | | |
| MW-26 | 9:35 | 4 | 10.62 | 3.67 | 3.75 | 0.08 | | |
| MW-27 | 9:00 | 4 | 14.29 | | 2.42 | | | |
| MW-28 | 8:59 | 4 | 10.94 | | 1.79 | | | |
| MW-29 | 8:54 | 4 | 9.67 | | 2.09 | | | |
| MW-30 | 9:05 | 4 | 9.42 | | 2.23 | | | |
| MW-31 | 9:44 | 4 | 8.86 | 3.62 | 3.90 | 0.28 | 0.50 | |
| MW-32 | 9:59 | 4 | 10.66 | | 3.99 | | | |
| MW-33 | 10:43 | 4 | 7.33 | | 5.61 | | | |
| RW-34 | 10:39 | 6 | 10.81 | 7.09 | 7.12 | 0.03 | | |
| MW-35 | 10:45 | 4 | 7.79 | | 6.47 | | | |
| RW-36 | 10:50 | 6 | 10.48 | 9.56 | 9.78 | 0.22 | 0.25 | |
| RW-37 | 10:57 | 6 | 10.40 | 7.64 | 7.65 | 0.01 | | |
| MW-38 | 11:02 | 4 | 8.17 | | 7.01 | | | |
| MW-39 | 10:35 | 4 | 8.45 | | 7.11 | | | |
| RW-40 | 10:48 | 6 | 11.66 | | 9.30 | | | |
| MW-41 | 10:59 | 4 | 9.49 | 8.42 | 8.45 | 0.03 | | |
| MW-42 | 9:24 | 4 | 12.60 | | 3.69 | | | |
| MW-43 | 9:22 | 4 | 12.42 | | 3.56 | | | |
| MW-44 | 9:28 | 4 | 12.47 | | 3.50 | | | |
| MW-45 | - | 4 | 11.96 | 3.19 | 3.23 | 0.04 | | |
| TRW-1 | 9:33 | 6 | 10.28 | 3.94 | 3.95 | 0.01 | | |
| TRW-2 | 9:37 | 6 | 10.23 | | 3.80 | | | |
| TRW-3 | - | 6 | - | | - | | | flooded |
| TRW-4 | - | 6 | - | | - | | | flooded |
| TRW-5 | 9:40 | 6 | 10.19 | 3.25 | 3.27 | 0.02 | | |
| TRW-6 | 9:46 | 6 | 10.05 | | - | | | |

## Sovereign Consulting Inc.
## Tailgate Safety Meeting Form
(To be submitted with field notes to Project Manager each day)

| | | | |
|---|---|---|---|
| **Project Name:** | Motiva Terminal | **Date:** | 9-01-10 |
| **Location:** | 25 Paidge Av Brooklyn NY | **Weather:** | Sunny |
| **Project Manager [Print]:** | Matt Schneck | **Temp:** | 90± |
| **Contractors/Subcontractors:** | Edgar Lucero | | |
| **Scope of Work:** | Well gauging and recovery product | | |

**Task Hazards:** (check all that apply) *requires Permit to Work

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☐ | Excavations* | ☐ | Haz. Substances | ☑ | Sanitation | ☐ |
| Confined Spaces* | ☐ | Explosion | ☐ | Heavy Equipment | ☐ | Sharp Objects | ☐ |
| Cutting/Welding* | ☐ | Falling Objects | ☐ | Ladders* | ☐ | Tools | ☑ |
| Electrical | ☐ | Fire | ☐ | Noise | ☐ | Traffic | ☑ |
| Environmental Hazard | ☑ | Insects/Biological | ☐ | Slip/Trip Hazards | ☑ | Weather | ☐ |
| Elevated Work* | ☐ | Flying Debris | ☐ | Overhead | ☐ | Other (describe below) | ☐ |

**Engineering Controls / Work Practices:**

**Levels of Protection / Personal Protective Equipment:**

| | | | |
|---|---|---|---|
| Level A ☐ | Eye & Face Protection ☑ | Safety Glasses ☑ | Face Shield ☐ |
| Level B ☐ | Foot Protection ☑ | Steel Toes ☑ | Hip Boots/Waders ☐ |
| Level C ☐ | Hand Protection ☑ | Nitrile Gloves ☑ | Leather Gloves ☐ Full Arm Chemical ☐ |
| Level D ☑ | Head Protection ☑ | Hard Hat ☑ | |
| | Hearing Protection ☐ | Ear Muffs/Plugs ☐ | |
| | Other ☑ | Barricades ☐ | High Visibility Safety Vests ☑ Cones/Flags ☐ |
| | | Amber Light/Vehicle Hazards ☐ | Crash Truck ☐ Tyvek/Coveralls ☐ |

| Air Monitoring/Sampling | | Emergency Response | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☐ | Emergency Alarms | ☐ | First Aid Kit | ☐ | Cell Phone (none) | ☐ |
| FID/PID | ☐ | Emergency Contacts | ☐ | Spill Kit | ☐ | Fire Extinguisher | ☑ |
| Detector Tubes | ☐ | Evacuation Routes | ☑ | Hospital Route | ☑ | Pedestrian Safety | ☐ |
| Dust Monitor | ☐ | Explosion/Fire | ☐ | Work Area | ☐ | Vapor/Dust Suppression | ☐ |
| Personal Air | ☐ | Medical Emergency | ☐ | Smoking/Break Area | ☐ | | |

**Are site workers Fit To Work?** Yes ☑ No ☐

**Comments:** N/A

**Name & Title of Person Conducting Tailgate Safety Meeting:**

**Signature:** Edgar Lucero **Date:** 9-01-10



Shell/Motiva 0007018

**SHELL**
**Life-Saving Rules**

Work with a valid Work Permit when required

Verify isolation before work begins and use the specified life protecting equipment

Obtain authorisation before overriding or disabling safety critical equipment

Conduct gas tests when required

Obtain authorisation before entering a confined space

Protect yourself against a fall when working at height

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth within this project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

### SIGN IN

MEETING ATTENDEES

| Name [Print] | Company | Signature |
|---|---|---|
| Edgar Lucero | Long shore Env | Edgar Lucero |
| G. Rozaks | LONG SHORE | [illegible] |
| N [illegible] | MOTIVA | [illegible] |
| | | |
| | | |

| | | | |
|---|---|---|---|
| Have all personnel been informed of work to be completed? | YES | NO | NA |
| Has fuel delivery service been informed? | YES | NO | NA |
| Is fuel delivery due today? | YES | NO | NA |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | NA |
| Are work areas controlled to protect workers, site staff, and the public? | YES | NO | NA |
| Do all workers have their API Safety Key card? | YES | NO | NA |
| Have all reviewed and understand the Shell 12 Life-Saving Rules | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Edgar Lucero Long Shore | | | | |

### SIGN OUT

| | | | |
|---|---|---|---|
| Has the work area been left tidy and safe? | YES | NO | NA |
| Are site personnel aware of status of work? | YES | NO | NA |
| Are changes to equipment documented and communicated? | YES | NO | NA |
| All incidents, near misses, unsafe situations reported? | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Edgar Lucero Long Shore | | | | |

**SHELL**
**Life-Saving Rules**

Do not walk under a suspended load

No alcohol or drugs whi working or driving

Wear your seat belt

Do not smoke outsid designated smoking ar

While driving, do not u your phone and do no exceed speed limits

Follow prescribed Jour Management Plan

SOVEREIGN CONSULTING

# Job Safety Analysis
# Worksheet Acknowledgement

SCI Project #: EQ-017 Date: 9-1-10

Site Location: Motiva Terminal / 25 Paidge Av Brooklyn NY

List JSA(s) Reviewed: General site Activites

Well Gauging

| Name (Print) | Company | Signature |
|---|---|---|
| EDGAR LUCERO | LONG SHORE | Edgar Lucero. |
| GEORGE ROZAKIS | LONG SHORE | |
| N. Solis. | MOTIVA. | N. Solis. |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Sovereign Representative: _____

Tracking # - 871520343310

# Shell Oil Products Chain Of Custody Record

**LAB (LOCATION)**
- ☑ XENCO (_____)
- ☐ CALSCIENCE (_____)
- ☐ TEST AMERICA (_____)
- ☐ SPL (_____)
- ☐ OTHER (_____)

**Please Check Appropriate Box:**
☑ ENV. SERVICES | ☐ MOTIVA RETAIL | ☐ SHELL RETAIL
☐ MOTIVA SD&CM | ☐ CONSULTANT | ☐ LUBES
☐ SHELL PIPELINE | ☐ OTHER _____

Print Bill To Contact Name: Doug Weimer
INCIDENT # (ENV SERVICES): 9 7 0 9 4 9 8 1 ☐ CHECK IF NO INCIDENT # APPLIES
DATE: 7/27/2010
PO #:
SAP #: 1 0 0 6 2 3
PAGE: 1 of 1

CONSULTANT COMPANY: Sovereign Consulting Inc.
ADDRESS: 290 Executive Dr, Suite 300
CITY: Cranberry Twp, PA 16066
TELEPHONE: 724-553-5084 | FAX: | E-MAIL: gbosiljcic@sovcon.com

SITE ADDRESS (Street, City and State): 25 Paidge Avenue, Brooklyn NY
CONSULTANT PROJECT CONTACT (Report to): Greg Bosiljcic - 724-553-5084
CONSULTANT PROJECT NO.: EQ24
SAMPLER NAME(S) (Print): Matthew Abbott - Longshore Environmental 631-472-1732
LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND
DELIVERABLES: ☑ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY) _____
TEMPERATURE ON RECEIPT C° Cooler #1 | Cooler #2 | Cooler #3

**SPECIAL INSTRUCTIONS OR NOTES :**
☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ PROVIDE LEDD DISK

**REQUESTED ANALYSIS**

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | EPA 8260 (FULL LIST) | MTBE | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-7R | 7/27/10 | 7:45 | GW | X | | | | Ice | 3 | X | X | |
| | MW-8 | 7/27/10 | 7:55 | GW | X | | | | Ice | 3 | X | X | |
| | MW-9 | 7/27/10 | 8:05 | GW | X | | | | Ice | 3 | X | X | |
| | MW-21R | 7/27/10 | 8:15 | GW | X | | | | Ice | 3 | X | X | |
| | MW-22R | 7/27/10 | 8:25 | GW | X | | | | Ice | 3 | X | X | |
| | TRIP BLANK | 7/27/10 | 5:00 | GW | X | | | | Ice | 3 | X | X | |
| | FIELD BLANK | 7/27/10 | 7:30 | GW | X | | | | Ice | 3 | X | X | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
|---|---|---|---|
| | | 07/27/10 | 17:00 |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |

05/2/08 Revision

Shell/Motiva 0007021

SOVEREIGN CONSULTING - GROUND WATER SAMPLING DATA SUMMARY SHEET
PAGE 1 OF 1

DATE (DAY OF WEEK): 07-27-10 (Tues.)
CLIENT: MOTIVA ENTERPRISES LLC - 25 PAIDGE AVENUE, BROOKLYN NY
SCI JOB # EQ017

| WELL ID | TIME OF READING | WELL DIA. (IN) | TOTAL DEPTH (FT) | DEPTH TO PRODUCT (FT) | DEPTH TO WATER (FT) | VOLUME PURGED (GAL) | D.O. (UG/L) | TEMP (DEG. C) |
|---|---|---|---|---|---|---|---|---|
| MW-1 | | 4 | | | | 0 | | |
| MW-2 | | 4 | | | | 0 | | |
| MW-3 | | 4 | | | | 0 | | |
| MW-4 | | 4 | | | | 0 | | |
| MW-5 | | 4 | | | | 0 | | |
| MW-6 | | 4 | | | | 0 | | |
| MW-7R | 7:45 | 4 | 12.33 | | 5.97 | 13 | 0.19 | 20.90 |
| MW-8 | 7:55 | 4 | 8.02 | | 6.64 | 3 | 0.22 | 19.43 |
| MW-9 | 8:05 | 4 | 7.69 | | 6.59 | 2 | 0.22 | 19.73 |
| MW-13 | | 4 | | | | 0 | | |
| MW-14 | | 4 | | | | 0 | | |
| MW-15 | | 4 | | | | 0 | | |
| MW-16 | | 4 | | | | 0 | | |
| MW-17 | | 4 | | | | 0 | | |
| MW-18 | | 4 | | | | 0 | | |
| MW-19 | | 4 | | | | 0 | | |
| MW-20 | | 4 | | | | 0 | | |
| MW-21R | 8:15 | 4 | 12.06 | | 3.95 | 16 | 0.19 | 24.83 |
| MW-22R | 8:25 | 4 | 8.50 | | 3.94 | 9 | 0.20 | 23.09 |
| MW-23 | | 4 | | | | 0 | | |
| MW-24 | | 4 | | | | 0 | | |
| MW-25 | | 4 | | | | 0 | | |
| MW-26 | | 4 | | | | 0 | | |
| MW-27 | | 4 | | | | 0 | | |
| MW-28 | | 4 | | | | 0 | | |
| MW-29 | | 4 | | | | 0 | | |
| MW-30 | | 4 | | | | 0 | | |
| MW-31 | | 4 | | | | 0 | | |
| MW-32 | | 4 | | | | 0 | | |
| MW-33 | | 4 | | | | 0 | | |
| RW-34 | | 6 | | | | 0 | | |
| MW-35 | | 4 | | | | 0 | | |
| RW-36 | | 6 | | | | 0 | | |
| RW-37 | | 6 | | | | 0 | | |
| MW-38 | | 4 | | | | 0 | | |
| MW-39 | | 4 | | | | 0 | | |
| RW-40 | | 6 | | | | 0 | | |
| MW-41 | | 4 | | | | 0 | | |
| MW-42 | | 4 | | | | 0 | | |
| MW-43 | | 4 | | | | 0 | | |
| MW-44 | | 4 | | | | 0 | | |
| MW-45 | | 4 | | | | 0 | | |
| TRW-1 | | 6 | | | | 0 | | |
| TRW-2 | | 6 | | | | 0 | | |
| TRW-3 | | 6 | | | | 0 | | |
| TRW-4 | | 6 | | | | 0 | | |
| TRW-5 | | 6 | | | | 0 | | |
| TRW-6 | | 6 | | | | 0 | | |

# Sovereign Consulting Inc.
## Tailgate Safety Meeting Form
(To be submitted with field notes to Project Manager each day)

| | |
|---|---|
| **Project Name:** Motiva Terminal | **Date:** 07/27/10 |
| **Location:** 25 Paidge Ave, Brooklyn, NY | **Weather:** |
| **Project Manager [Print]:** Greg Bosiljcic | **Temp:** |
| **Contractors/Subcontractors:** Longshore | |
| **Scope of Work:** GW sample ~(5) wells | |

| **Task Hazards:** (check all that apply) *requires Permit to Work | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☐ | Excavations* | ☐ | Haz. Substances | ☐ | Sanitation | ☐ |
| Confined Spaces* | ☐ | Explosion | ☐ | Heavy Equipment | ☐ | Sharp Objects | ☐ |
| Cutting/Welding* | ☐ | Falling Objects | ☐ | Ladders* | ☐ | Tools | ☐ |
| Electrical | ☐ | Fire | ☐ | Noise | ☐ | Traffic (tractor trailer) | ☒ |
| Environmental Hazard | ☐ | Insects/Biological | ☐ | Slip/Trip Hazards | ☒ | Weather | ☐ |
| Elevated Work* | ☐ | Flying Debris | ☐ | Overhead | ☐ | Other (describe below) | ☒ |
| | | | | | | water | |

**Engineering Controls / Work Practices:** wear life vests when near bulkhead

| **Levels of Protection / Personal Protective Equipment:** | | | |
|---|---|---|---|
| Level A | ☐ | Eye & Face Protection | ☑ Safety Glasses ☐ Face Shield ☐ |
| Level B | ☐ | Foot Protection | ☑ Steel Toes ☐ Hip Boots/Waders ☐ |
| Level C | ☐ | Hand Protection | ☑ Nitrile Gloves ☐ Leather Gloves ☐ Full Arm Chemical ☐ |
| Level D | ☒ | Head Protection | ☑ Hard Hat ☐ |
| | | Hearing Protection | ☐ Ear Muffs/Plugs ☐ |
| | | Other | ☑ Barricades ☐ High Visibility Safety Vests ☐ Cones/Flags ☐ |
| | | | Amber Light/Vehicle Hazards ☐ Crash Truck ☐ Tyvek/Coveralls ☐ |

| **Air Monitoring/Sampling** | | **Emergency Response** | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☐ | Emergency Alarms | ☐ | First Aid Kit | ☐ | Cell Phone | ☐ |
| FID/PID | ☐ | Emergency Contacts | ☐ | Spill Kit | ☐ | Fire Extinguisher | ☐ |
| Detector Tubes | ☐ | Evacuation Routes | ☐ | Hospital Route | ☐ | Pedestrian Safety | ☐ |
| Dust Monitor | ☐ | Explosion/Fire | ☐ | Work Area | ☐ | Vapor/Dust Suppression | ☐ |
| Personal Air | ☐ | Medical Emergency | ☐ | Smoking/Break Area | ☐ | | |

**Are site workers Fit To Work?** Yes ☑ No ☐

**Comments:**

**Name & Title of Person Conducting Tailgate Safety Meeting:**

**Signature:** Matthew A. Abbott **Date:** 7/27/10



Shell/Motiva 0007023

**SHELL**
**Life-Saving Rules**

Work with a valid Work Permit when required

Verify isolation before work begins and use the specified personal protective equipment

Obtain authorisation before overriding or disabling safety critical equipment

Conduct gas tests when required

Obtain authorisation before entering a confined space

Protect yourself against a Fall when working at height

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth within this project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

### SIGN IN

MEETING ATTENDEES

| Name [Print] | Company | Signature |
|---|---|---|
| Matthew Abbott | Longshore Env. | |
| Jane Hawkins | Longshore Env. | |
| | | |
| | | |
| | | |

| | | | |
|---|---|---|---|
| Have all personnel been informed of work to be completed? | YES | NO | NA |
| Has fuel delivery service been informed? | YES | NO | NA |
| Is fuel delivery due today? | YES | NO | NA |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | NA |
| Are work areas controlled to protect workers, site staff, and the public? | YES | NO | NA |
| Do all workers have their API Safety Key card? | YES | NO | NA |
| Have all reviewed and understand the Shell 12 Life-Saving Rules | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Matthew Abbott | | 7/27/10 0730 | | |

### SIGN OUT

| | | | |
|---|---|---|---|
| Has the work area been left tidy and safe? | YES | NO | NA |
| Are site personnel aware of status of work? | YES | NO | NA |
| Are changes to equipment documented and communicated? | YES | NO | NA |
| All incidents, near misses, unsafe situations reported? | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Matthew Abbott | | 07/27/10 0830 | | |

**SHELL**
**Life-Saving Rules**

Do not walk under a suspended load

No alcohol or drugs when working or driving

Wear your seat belt

Do not smoke outside designated smoking areas

When driving, do not use your phone and do not exceed speed limit

Follow prescribed Isolation Management Plan



Shell/Motiva 0007024

SOVEREIGN CONSULTING

# Job Safety Analysis

## Worksheet Acknowledgement

**SCI Project #:** EQ-017 **Date:** 7/27/10

**Site Location:** 37 Paidge Ave, Brooklyn NY

**List JSA(s) Reviewed:** General Site Activities

Ground-Water Sampling

| Name (Print) | Company | Signature |
|---|---|---|
| Matthew Abbott | LongShore Env. | |
| Jane Hawkins | LongsLore Env | Jane Hawkins |
| | | |
| | | |
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| | | |
| | | |
| | | |
| | | |
| | | |

**Sovereign Representative:** _____

SOVEREIGN CONSULTING - WELL GAUGING/HAND-BAILING DATA SUMMARY SHEET
PAGE 1 OF 1

DATE (DAY OF WEEK): 07-02-10 (FRIDAY)
CLIENT: MOTIVA ENTERPRISES LLC - 25 PAIDGE AVENUE, BROOKLYN NY
SCI JOB # EQ017

| WELL ID | TIME OF READING | WELL DIA. (IN) | TOTAL DEPTH (FT) | DEPTH TO PRODUCT (FT) | DEPTH TO WATER (FT) | PRODUCT THICKNESS (FT) | PRODUCT RECOVERED (GAL) | NOTES |
|---|---|---|---|---|---|---|---|---|
| MW-1 | 9:15 | 4 | 11.24 | | 2.49 | | | |
| MW-2 | 10:15 | 4 | 10.85 | 4.08 | 4.16 | 0.08 | | |
| MW-3 | 9:30 | 4 | 11.36 | | 3.08 | | | |
| MW-4 | 10:55 | 4 | 11.17 | 2.58 | 2.60 | 0.02 | | |
| MW-5 | 11:00 | 4 | 9.35 | | 2.04 | | | |
| MW-6 | 11:09 | 4 | 10.84 | | 6.93 | | | |
| MW-7R | 12:10 | 4 | 12.49 | | 6.15 | | | |
| MW-8 | 12:05 | 4 | 8.03 | | 6.79 | | | |
| MW-9 | 12:15 | 4 | 7.70 | | 6.69 | | | |
| MW-13 | 7:40 | 4 | 14.08 | | 7.61 | | | |
| MW-14 | 7:35 | 4 | 14.13 | | 6.82 | | | |
| MW-15 | 9:55 | 4 | 12.56 | | 3.35 | | | |
| MW-16 | 9:57 | 4 | 15.19 | | 3.16 | | | |
| MW-17 | 10:00 | 4 | 12.24 | | 2.88 | | | |
| MW-18 | 10:05 | 4 | 11.52 | | 3.35 | | | |
| MW-19 | | 4 | 11.74 | | | | | destroyed? |
| MW-20 | 9:50 | 4 | 11.52 | | 3.15 | | | |
| MW-21R | 7:45 | 4 | 12.08 | | 3.99 | | | |
| MW-22R | 7:50 | 4 | 8.46 | | 4.17 | | | |
| MW-23 | 7:30 | 4 | 12.56 | | 4.33 | | | |
| MW-24 | 7:55 | 4 | 12.67 | | 4.18 | | | |
| MW-25 | 8:00 | 4 | 14.54 | | 3.26 | | | |
| MW-26 | 10:10 | 4 | 10.62 | | 4.10 | 4.10 | | |
| MW-27 | 11:07 | 4 | 14.29 | | 2.55 | | | |
| MW-28 | 11:05 | 4 | 10.94 | | 1.85 | | | |
| MW-29 | 9:45 | 4 | 9.67 | | 2.08 | | | |
| MW-30 | 10:50 | 4 | 9.42 | | 2.47 | | | |
| MW-31 | 10:25 | 4 | 8.86 | 3.83 | 4.63 | 0.80 | 1.00 | |
| MW-32 | 10:07 | 4 | 10.66 | | 4.54 | | | |
| MW-33 | 11:50 | 4 | 7.33 | | 5.69 | | | |
| RW-34 | 11:45 | 6 | 10.81 | 7.16 | 7.18 | 0.02 | | |
| MW-35 | 11:40 | 4 | 7.79 | | 6.48 | | | |
| RW-36 | 11:30 | 6 | 10.48 | 10.16 | 10.36 | 0.20 | 0.25 | |
| RW-37 | 11:25 | 6 | 10.40 | 7.73 | 7.78 | 0.05 | | |
| MW-38 | 11:15 | 4 | 8.17 | | 7.14 | | | |
| MW-39 | 11:55 | 4 | 8.45 | | 7.42 | | | |
| RW-40 | 11:35 | 6 | 11.66 | | 9.71 | 9.71 | | |
| MW-41 | 11:20 | 4 | 9.49 | 8.76 | 8.82 | 0.06 | | |
| MW-42 | 8:10 | 4 | 12.60 | | 4.03 | | | |
| MW-43 | 8:30 | 4 | 12.42 | | 3.91 | | | |
| MW-44 | 8:20 | 4 | 12.47 | | 3.85 | | | |
| MW-45 | | 4 | 11.96 | 3.48 | 3.52 | 0.04 | | |
| TRW-1 | - | 6 | - | 4.28 | 4.35 | 0.07 | | |
| TRW-2 | 10:12 | 6 | 10.23 | | 4.13 | | | |
| TRW-3 | - | 6 | - | | | | | flooded |
| TRW-4 | - | 6 | - | | | | | flooded |
| TRW-5 | 10:30 | 6 | 10.19 | 3.54 | 3.68 | 0.14 | 0.25 | |
| TRW-6 | 10:45 | 6 | 10.05 | 3.10 | 3.34 | 0.24 | 0.25 | |

# Sovereign Consulting Inc.
## Tailgate Safety Meeting Form
(To be submitted with field notes to Project Manager each day)

| | |
|---|---|
| **Project Name:** Motiva Terminal (EQ017) | **Date:** 04/02/10 |
| **Location:** 25 Paidge Ave, Brooklyn NY | **Weather:** Clear |
| **Project Manager [Print]:** Greg Bosiljcic (SOC) | **Temp:** ~80°F |
| **Contractors/Subcontractors:** Ladyshore Env. | |

**Scope of Work:** Well gauging / product recovery

**Task Hazards:** (check all that apply) *requires Permit to Work

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☐ | Excavations* | ☐ | Haz. Substances | ☐ | Sanitation | ☐ |
| Confined Spaces* | ☐ | Explosion | ☐ | Heavy Equipment | ☐ | Sharp Objects | ☐ |
| Cutting/Welding* | ☐ | Falling Objects | ☐ | Ladders* | ☐ | Tools | ☐ |
| Electrical | ☐ | Fire | ☐ | Noise | ☐ | Traffic | ☒ |
| Environmental Hazard | ☒ | Insects/Biological | ☐ | Slip/Trip Hazards | ☐ | Weather | ☐ |
| Elevated Work* | ☐ | Flying Debris | ☐ | Overhead | ☐ | Other (describe below) | ☒ |

Drowning (Bulkhead)

**Engineering Controls / Work Practices:** Buddy System

**Levels of Protection / Personal Protective Equipment:**

| | | | |
|---|---|---|---|
| Level A | ☐ | Eye & Face Protection | ☒ Safety Glasses ☐ Face Shield ☒ |
| Level B | ☐ | Foot Protection | ☒ Steel Toes ☒ Hip Boots/Waders ☐ |
| Level C | ☐ | Hand Protection | ☒ Nitrile Gloves ☒ Leather Gloves ☐ Full Arm Chemical ☐ |
| Level D | ☒ | Head Protection | ☒ Hard Hat ☒ |
| | | Hearing Protection | ☐ Ear Muffs/Plugs ☐ |
| | | Other | ☒ Barricades ☐ High Visibility Safety Vests ☒ Cones/Flags ☐ |
| | | Life Vest ☒ | Amber Light/Vehicle Hazards ☐ Crash Truck ☐ Tyvek/Coveralls ☐ |

| Air Monitoring/Sampling | | Emergency Response | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☐ | Emergency Alarms | ☐ | First Aid Kit | ☐ | Cell Phone (None) | ☒ |
| PID/FID | ☐ | Emergency Contacts | ☐ | Spill Kit | ☐ | Fire Extinguisher | ☐ |
| Detector Tubes | N/A ☐ | Evacuation Routes | ☒ | Hospital Route | ☐ | Pedestrian Safety | ☐ |
| Dust Monitor | ☐ | Explosion/Fire | ☐ | Work Area | ☒ | Vapor/Dust Suppression | ☐ |
| Personal Air | ☐ | Medical Emergency | ☐ | Smoking/Break Area | ☒ | | |

**Are site workers Fit To Work?** Yes ☑ No ☐

**Comments:**

**Name & Title of Person Conducting Tailgate Safety Meeting:** Edgar Lucero

**Signature:** Edgar Lucero **Date:** 07/02/10



Shell/Motiva 0007027

**SHELL**
**Life-Saving Rules**

Work with a valid Work Permit when required

Verify isolation before work begins and use the specified life protecting equipment

Obtain authorization before overriding or disabling safety critical equipment

Conduct gas tests when required

Obtain authorization before entering a confined space

Protect yourself against a fall when working at height

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth within this project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

### SIGN IN

MEETING ATTENDEES

| Name [Print] | Company | Signature |
|---|---|---|
| Edgar Lucero | Longshore Env | Edgar Lucero |
| Arturo Franco | " | Arturo Franco |
| | | |
| | | |
| | | |

| | | | |
|---|---|---|---|
| Have all personnel been informed of work to be completed? | (YES) | NO | NA |
| Has fuel delivery service been informed? | YES | NO | (NA) |
| Is fuel delivery due today? | YES | NO | (NA) |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | (NA) |
| Are work areas controlled to protect workers, site staff, and the public? | (YES) | NO | NA |
| Do all workers have their API Safety Key card? | (YES) | NO | NA |
| Have all reviewed and understand the Shell 12 Life-Saving Rules | (YES) | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Edgar Lucero | Edgar Lucero | 07/02/10 | | |

### SIGN OUT

| | | | |
|---|---|---|---|
| Has the work area been left tidy and safe? | YES | NO | NA |
| Are site personnel aware of status of work? | YES | NO | NA |
| Are changes to equipment documented and communicated? | YES | NO | NA |
| All incidents, near misses, unsafe situations reported? | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Edgar Lucero | Edgar Lucero | 07/02/10 | | |

**SHELL**
**Life-Saving Rules**

Do not walk under a suspended load

No alcohol or drugs when working or driving

Wear your seat belt

Designated smoking areas

While driving, do not use your phone and do not exceed speed limit

Follow prescribed Journey Management Plan



Shell/Motiva 0007028

SOVEREIGN CONSULTING

# Job Safety Analysis
## Worksheet Acknowledgement

**SCI Project #:** 70-017 **Date:** 07/02/10

**Site Location:** 25 Paidge Ave, Brooklyn NY

**List JSA(s) Reviewed:** General Site Activities
Well Gauging / LNAPL Recovery

| Name (Print) | Company | Signature |
|---|---|---|
| Edyer Lucero | Langhorn | |
| Arturo Franco | ↓ | |
| | | |
| | | |
| | | |
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| | | |
| | | |

**Sovereign Representative:** _____

Log Number

# SOIL SAFE, INC.

## NON-HAZARDOUS MATERIAL MANIFEST

### GENERATOR

Generator Name Motiva / Shell Term # 84009 Generator Site/Location

Address 25 Ridge Ave Address

Brooklyn, NY

Phone No. Phone No.

Approval Number LH 7165

Description of Material

Non-Regulated Petroleum Contaminated Soil

Non DOT/RCRA Regulated

GROSS

TARE

NET

TONNAGE

**I hereby certify that the above named material does not contain free liquid as defined by 40 CFR Part 260.10 or any applicable state law, is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.**

Generator Authorized Agent Name Signature Shipment Date

### TRANSPORTER

Transporter Name Driver Name (Print)

Address Vehicle License No. / State / EPA No.

Truck Number 307

I hereby certify that the above named material was picked up at the generator site listed above.

Driver Signature Shipment Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

Driver Signature Delivery Date

### DESTINATION

Site Name **Soil Safe, Inc. - Bridgeport** Phone No. **1-856-467-8030**

Address **378 Route 130 Logan Township, NJ 08085**

No left turn on Rt. 130 North into the facility.

Business hours are: Monday through Friday 7 AM to 5 PM. 5 PM to 10 PM By Appointment only. Saturday by appointment only.

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

Name of Authorized Agent Signature Receipt Date

White - Facility Green - Facility Yellow - Generator Pink - Broker Goldenrod - Contractor Blue - Trucking Co.

Log Number

# SOIL SAFE, INC.

## NON-HAZARDOUS MATERIAL MANIFEST

### GENERATOR

Generator Name Motiva/Shell Tomh 84009 Generator Site/Location _____

Address 25 Ridge Dr Address _____

Brooklyn NY

Phone No. _____ Phone No. _____

Approval Number 44 7165

Description of Material

Non-Regulated Petroleum Contaminated Soil

Non DOT/RCRA Regulated

FULL LOAD

GROSS

TARE

NET

TONNAGE

**I hereby certify that the above named material does not contain free liquid as defined by 40 CFR Part 260.10 or any applicable state law, is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.**

Generator Authorized Agent Name Signature Shipment Date

### TRANSPORTER

Transporter Name _____ Driver Name (Print) _____

Address _____ Vehicle License No. / State / EPA No. _____

_____ Truck Number _____

I hereby certify that the above named material was picked up at the generator site listed above.

I hereby certify that the above named material was delivered without incident to the destination listed below.

Driver Signature Shipment Date Driver Signature Delivery Date

### DESTINATION

Site Name **Soil Safe, Inc. - Bridgeport** Phone No. **1-856-467-8030**

Address **378 Route 130 Logan Township, NJ 08085**

No left turn on Rt. 130 North into the facility.

Business hours are: Monday through Friday 7 AM to 5 PM. 5 PM to 10 PM By Appointment only. Saturday by appointment only.

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

Name of Authorized Agent Signature Receipt Date

White - Facility Green - Facility Yellow - Generator Pink - Broker Goldenrod - Contractor Blue - Trucking Co.

**GONDUL TRUCKING, INC.**
8006 Rt. 130 North ■ Delran, NJ 08075

# TIME, LABOR & EQUIPMENT REPORTS
*(Time & Material Contracts)*

DATE 6-25-10

COMPANY Motiva/~~Sh~~ Shell Term #84009

JOB SITE Motiva/Shell Term #84009

ADDRESS 25 Paidge Ave brooklyn NY

PROJECT NO. CONTRACTOR CONTRACT NO.

| NAME | CRAFT | FROM | TO | TOTAL HOURS Straight Time | TOTAL HOURS Over Time | REMARKS |
|---|---|---|---|---|---|---|
| Yens V. | | 6:00 AM | 11:00 | 5 | | |
| Gundul #310 | | | | | | |
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| EQUIPMENT DESCRIPTION | EQUIPMENT NUMBER | FROM | TO | TOTAL HOURS | REMARKS |
|---|---|---|---|---|---|
| | | | | | |
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| | | | | | |

WORK DESCRIPTION OR ACTIVITIES:

WEATHER:
☐ Clear ☐ Partly Cloudy ☐ Overcast ☐ Rain ☐ Snow ☐ _____ Temperature At Noon_____

For Contractor Martin L. Abbott LS Agent for Motiva Enterprises LLC 6/25/10

## Sovereign Consulting Inc.
## Tailgate Safety Meeting Form
(To be submitted with field notes to Project Manager each day)

| | |
|---|---|
| **Project Name:** Motiva Terminal → EQ017 | **Date:** 06/25/10 |
| **Location:** 25 Paidge Ave. Brooklyn NY | **Weather:** Clear |
| **Project Manager [Print]:** Eric Basiljevic (Sov) | **Temp:** ~80°F |
| **Contractors/Subcontractors:** Longshore Env. | |
| **Scope of Work:** Spill Loading Overwith | |

| **Task Hazards:** (check all that apply) *requires Permit to Work | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☒ | Excavations* | ☐ | Haz. Substances | ☐ | Sanitation | ☐ |
| Confined Spaces* | ☐ | Explosion | ☐ | Heavy Equipment | ☒ | Sharp Objects | ☐ |
| Cutting/Welding* | ☐ | Falling Objects | ☐ | Ladders* | ☐ | Tools | ☐ |
| Electrical | ☐ | Fire | ☐ | Noise | ☐ | Traffic | ☒ |
| Environmental Hazard | ☐ | Insects/Biological | ☐ | Slip/Trip Hazards | ☒ | Weather | ☒ |
| Elevated Work* | ☐ | Flying Debris | ☐ | Overhead | ☐ | Other (describe below) | ☐ |

**Engineering Controls / Work Practices:**

| **Levels of Protection / Personal Protective Equipment:** | | | |
|---|---|---|---|
| Level A ☐ | Eye & Face Protection | ☒ | Safety Glasses ☒ Face Shield ☐ |
| Level B ☐ | Foot Protection | ☒ | Steel Toes ☐ Hip Boots/Waders ☐ |
| Level C ☐ | Hand Protection | ☒ | Nitrile Gloves ☒ Leather Gloves ☐ Full Arm Chemical ☐ |
| Level D ☒ | Head Protection | ☒ | Hard Hat ☒ |
| | Hearing Protection | ☐ | Ear Muffs/Plugs ☐ |
| | Other | ☒ | Barricades ☐ High Visibility Safety Vests ☒ Cones/Flags ☐ |
| | | | Amber Light/Vehicle Hazards ☐ Crash Truck ☐ Tyvek/Coveralls ☐ |

| **Air Monitoring/Sampling** | | **Emergency Response** | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☒ | Emergency Alarms | ☒ | First Aid Kit | ☒ | Cell Phone (Work) | ☒ |
| FID/PID | ☐ | Emergency Contacts | ☐ | Spill Kit | ☐ | Fire Extinguisher | ☐ |
| Detector Tubes | ☐ | Evacuation Routes | ☒ | Hospital Route | ☐ | Pedestrian Safety | ☐ |
| Dust Monitor N/A | ☐ | Explosion/Fire | ☐ | Work Area | ☐ | Vapor/Dust Suppression | ☐ |
| Personal Air | ☐ | Medical Emergency | ☐ | Smoking/Break Area | ☐ | | |

**Are site workers Fit To Work?** Yes ☒ No ☐

**Comments:**

**Name & Title of Person Conducting Tailgate Safety Meeting:** Matthew A. Abbott

**Signature:** [signature] **Date:** 06/25/10



Shell/Motiva 0007033

**SHELL**
**Life-Saving Rules**

Work with a valid Work Permit when required

Verify isolation before work begins and use the specified personal protective equipment

Obtain authorization before overriding or disabling safety critical equipment

Conduct gas tests when required

Obtain authorization before entering a confined space

Protect yourself against a fall when working at height

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth within this project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

### SIGN IN

MEETING ATTENDEES

| Name [Print] | Company | Signature |
|---|---|---|
| Matthew L. Abbott | Longshore Env. Inc | |
| | | |
| | | |
| | | |
| | | |

| | | | |
|---|---|---|---|
| Have all personnel been informed of work to be completed? | (YES) | NO | NA |
| Has fuel delivery service been informed? | YES | NO | (NA) |
| Is fuel delivery due today? | YES | NO | (NA) |
| Have isolation procedures been agreed— lock out/tag out? | YES | NO | (NA) |
| Are work areas controlled to protect workers, site staff, and the public? | (YES) | NO | NA |
| Do all workers have their API Safety Key card? | (YES) | NO | NA |
| Have all reviewed and understand the Shell 12 Life-Saving Rules | (YES) | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Matthew L. Abbott | | 06/25/10 0700 | | |

Longshore

### SIGN OUT

| | | | |
|---|---|---|---|
| Has the work area been left tidy and safe? | YES | NO | NA |
| Are site personnel aware of status of work? | YES | NO | NA |
| Are changes to equipment documented and communicated? | YES | NO | NA |
| All incidents, near misses, unsafe situations reported? | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Matthew L Abbott | | 06/25/10 | | |

Longshore Env.

**SHELL**
**Life-Saving Rules**

Do not walk under a suspended load

No alcohol or drugs when working or driving

Wear personal protective equipment

Do not smoke outside designated smoking areas

While driving, do not use your phone and do not exceed speed limit

Follow prescribed Isolation Management Plan



Shell/Motiva 0007034

SOVEREIGN CONSULTING

# Job Safety Analysis
# Worksheet Acknowledgement

**SCI Project #:** EQ017 **Date:** 06/25/10

**Site Location:** 25 Paidge Ave, Brooklyn NY

**List JSA(s) Reviewed:** General Site Activities

Soil Stockpiling Activities

| Name (Print) | Company | Signature |
|---|---|---|
| Matthew Hobbs | Conyshore | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

**Sovereign Representative:** _____

Lorco Petroleum Services
450 South Front St.
Elizabeth, NJ 07202
(908) 820-8800
(800) 734-0910
FAX: (908) 820-8412

LORCO PETROLEUM SERVICES

www.lorcopetroleum.com

STANDARD COLLECTION ORDER FORM

765152

## GENERATOR/LOCATION

SALES ORDER # 320 2310

NAME

INFORMATION/ATTENTION LINE

ACCOUNT APPROVAL CODE

DELIVERY ADDRESS

CITY

STATE

ZIP

PHONE NUMBER

PURCHASE ORDER NUMBER

TIME IN

TIME OUT

## BILL TO (IF DIFFERENT FROM LOCATION)

NAME

INFORMATION/ATTENTION LINE

ACCOUNT APPROVAL CODE

DELIVERY ADDRESS

CITY

STATE

ZIP

PHONE NUMBER

PURCHASE ORDER NUMBER

MANIFEST NUMBER

## SHIPPING INFORMATION

This is to certify that the below named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation

| NO. | TYPE | QTY. | UNIT | US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number) | SALES REPRESENTATIVE |
|---|---|---|---|---|---|
| | | | | | |

## SERVICE SECTION

| ITEM # | DESCRIPTION | WASTE CODE | QUANTITY | UNIT PRICE | PRICE | TAX | LINE TOTAL |
|---|---|---|---|---|---|---|---|
| 40500 | USED OIL REMOVAL | | | | | | |
| 40300 | ANTIFREEZE REMOVAL | | | | | | |
| 40400 | OILY WATER DISPOSAL | | | | | | |
| 41100 | SLUDGE DISPOSAL | | | | | | |
| 41000 | GASOLINE/WATER | | | | | | |
| 40900 | DRUM DISPOSAL | 6 x 55 | oil drum | | | | |
| 40611 | NEW 55 GAL DRUMS / 17H | | of | | | | |
| 40515 | OIL WATER SEPARATOR SERVICE | | soil | | | | |
| 41513 | TANK WASHER | | | | | | |
| 41507 | TANK ENTRY | | | | | | |
| 41500 | TRANSPORTATION | | | | | | |
| 41508 | TRUCK AND OPERATOR | | | | | | |
| 41514 | ADDITIONAL LABOR | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | TOTAL | | | |

PARTS WASHER SERVICE INTERVAL _____ DAYS.
USED OIL CUSTOMER SERVICED EVERY 30 DAYS UNLESS OTHERWISE INDICATED.
USED OIL SERVICE INTERVAL _____ DAYS.

GENERATOR WARRANTS AND REPRESENTS THAT THE MATERIALS PROVIDED LORCO HEREUNDER HAVE NOT BEEN MIXED, COMBINED, OR OTHERWISE BLENDED IN ANY QUANTITY WITH MATERIALS CONTAINING POLYCHLORINATED BIPHENYLS (PCB) OR ANY OTHER MATERIAL DEFINED AS HAZARDOUS WASTE UNDER APPLICABLE LAWS, INCLUDING BUT NOT LIMITED TO 40 CFR PART 261, GENERATOR AGREES TO INDEMNIFY AND HOLD LORCO HARMLESS FOR ANY DAMAGES, COSTS, ATTORNEY'S FEES, ETC. ARISING OUT OF OR IN ANY WAY RELATED TO A BREACH OF THE ABOVE WARRANTY BY THE GENERATOR.

Generator certifies that the waste is ☐ used oil ☐ used antifreeze ☐ oily water ☐ oil filter ☐ parts washer solvent

☐ Other _____
Description

In accordance the N.J.A.C. 7:26-12.1 et seq, LORCO has the required permits to accept the above described waste.

X _____
Print Name Title

X _____
Signature Date

GENERATOR/CUSTOMER

**CONDITIONALLY EXEMPT SMALL QUANTITY GENERATOR CERTIFICATION**

I certify that this generator generates less than 100 kilograms of hazardous waste per month, as defined at 40 C.F.R. 261, and does not accumulate more than 1,000 kilograms of such waste during the month.

X _____
GENERATOR'S SIGNATURE

**NON CONDITIONALLY EXEMPT LARGE QUANTITY GENERATOR CERTIFICATION**

DEXSIL CDT TEST RESULTS

X _____ PPM

CHARGE MY ACCOUNT FOR THIS TRANSACTION UNLESS OTHERWISE INDICATED IN THE PAYMENT SECTION. INVOICES REFLECTING CHARGES TO CUSTOMER ARE SUBJECT TO AN INTEREST RATE OF THE LESSER OF 1½% PER MONTH (18% PER ANNUM) OR THE MAXIMUM RATE ALLOWED BY LAW ON ANY INVOICES THAT ARE NOT PAID WITHIN 30 DAYS. IN THE EVENT OF DEFAULT, LORCO SHALL BE ENTITLED TO RECOVER COSTS OF COLLECTION, INCLUDING REASONABLE ATTORNEY'S FEES. INITIAL _____

$

## PAYMENT RECEIVED SECTION

| CASH ☐ | TOTAL RECEIVED |
|---|---|
| CHECK NUMBER | |

In accordance with NJAC7:26-6.7b + 40CFR PART 279 LORCO has notified the US EPA of its location and used oil management activities.

X _____
Print Name

X _____
Signature Date

LORCO REPRESENTATIVE

CUSTOMER

# Job Clearance Form

CONTRACTOR INSTRUCTIONS PRIOR TO START OF WORK: 1. Review form, check appropriate boxes, read and sign at the bottom of this form. 2. Inform dealer, manager or site representative of the job to be performed and potential safety concerns and obtain signature.

| Station # | Station Address: | Work Order Number: | Date: |
|---|---|---|---|
| 58663 | 25 Poidoe Ave | | 5-14-10 |

| Contractor Company Name: | Contractor person in charge (print name): | Number of Workers: | JSA Reference Number: (if required) | Start Time: | End Time: | Labor: | Travel Time: | Travel Distance: |
|---|---|---|---|---|---|---|---|---|
| Lonco | Keyon J | 1 | | | | | | |

**Problem/Work Description:** Removed 6 Drums off Site

Return Call: yes / no

Damage Claim: yes / no

## PPE REQUIRED (CHECK AND/OR FILL BLANK SPACE)

- [x] SAFETY VEST
- [x] PROTECTIVE CLOTHING
- [x] HARD HAT
- [x] GLOVES
- [x] SHOES & BOOTS
- [x] SAFETY GLASSES/GOGGLES
- [ ] HEARING PROTECTION
- [ ] WELDING PPE
- [ ] RESPIRATOR
- [ ] OTHER

Contractor to complete this section below if circumstances on site or specific to this job, may generate additional hazards that are not described in the JSA (also see back of page for additional guidance and if more space required to document)

| TASK STEP | Hazards not covered by JSA | How to reduce or eliminate risk - Include PPE to be Worn |
|---|---|---|
| | | |

**Work documentation requirements** — Lower Risk - no JSA required — Medium Risk / Higher Risk tasks - JSA required — Higher Risk - JSA required & appropriate check list completed (see below)

Examples of Higher / Medium tasks

- [ ] Works at heights: in all cases on open sites - on closed sites if no JSA present
- [ ] Trenching or excavation related to underground tank / product lines
- [ ] Heavy lifting
- [ ] Work in confined spaces (e.g. tank, interceptor or deep manhole entry)
- [ ] Hot work with risk of product or vapour ignition
- [ ] LPG system degassing, installation or maintenance

This form must be completed for each job and updated and re-signed if circumstances change or additional hazards identified.

## SIGN IN

Operating sites: to be signed by the Site Representative

Non-operating sites: to be signed by Contractor Representative only

GENERAL SAFETY CHECKS

- Have all site personnel been informed?
- Has fuel delivery service been informed?
- Is a fuel delivery due?
- Have isolation procedures been agreed - lock out/tag out?
- Are work areas cordoned off to protect workers, site staff & public?
- Other:

| Contractor representative name | Signature |
|---|---|
| Keyon Johnson | Keyon Johnson |

| Site representative name | Signature |
|---|---|
| Matthew L. Abbott | [signature] as RCP for Motiva Enterprises LLC |

## SIGN OUT AND OPERATOR VERIFICATION OF WORK

GENERAL SAFETY CHECKS

- Has the work area been left tidy and safe?
- Are site personnel aware of status of work including remaining isolation?
- Are changes to equipment documented and communicated?
- All incidents, near incidents, unsafe situations reported?
- Other

| Site representative name | Signature |
|---|---|
| Matthew L. Abbott | [signature] as agent for Motiva Enterprises LLC |

Contractor signature: Keyon Johnson

Site representative comments

PARTS - Ordered, Replaced and/or Disposed Of (include model and serial #s as appropriate)

The contractor through its authorized representative shall sign, issue and be solely responsible for all job clearance forms and the obligations arising there under applicable to the work.
This form covers important reminders and is not intended to releave the contractor from safely performing the work in compliance with all applicable laws and regulations.
The store operator may require the contractor to stop work if it appears that the contractor or any of its workers are failing to comply with the requirements in the applicable items of this form or other applicable safety requirements.

# Sovereign Consulting Inc.
## Tailgate Safety Meeting Form
(To be submitted with field notes to Project Manager each day)

| | |
|---|---|
| **Project Name:** Motiva Terminal | **Date:** 05/14/10 |
| **Location:** 25 Paidge Ave. Brooklyn NY | **Weather:** Clear, Humid |
| **Project Manager [Print]:** Greg Bosiljcic (Sovereign) | **Temp:** ~70°F |
| **Contractors/Subcontractors:** LoRco, Longshore | |

**Scope of Work:** drum pick-up for transport & disposal

**Task Hazards:** (check all that apply) *requires Permit to Work

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☐ | Excavations* | ☐ | Haz. Substances | ☐ | Sanitation | ☐ |
| Confined Spaces* | ☐ | Explosion | ☐ | Heavy Equipment | ☒ | Sharp Objects | ☐ |
| Cutting/Welding* | ☐ | Falling Objects | ☐ | Ladders* | ☐ | Tools | ☐ |
| Electrical | ☐ | Fire | ☐ | Noise | ☐ | Traffic | ☒ |
| Environmental Hazard | ☐ | Insects/Biological | ☐ | Slip/Trip Hazards | ☐ | Weather | ☐ |
| Elevated Work* | ☐ | Flying Debris | ☐ | Overhead | ☐ | Other (describe below) | ☐ |

**Engineering Controls / Work Practices:** Forklift / Truck Traffic

**Levels of Protection / Personal Protective Equipment:**

| | | | | | |
|---|---|---|---|---|---|
| Level A | ☐ | Eye & Face Protection | ☒ | Safety Glasses ☒ | Face Shield ☐ |
| Level B | ☐ | Foot Protection | ☒ | Steel Toes ☒ | Hip Boots/Waders ☐ |
| Level C | ☐ | Hand Protection | ☒ | Nitrile Gloves ☒ | Leather Gloves ☐ Full-Arm Chemical ☐ |
| Level D | ☒ | Head Protection | ☒ | Hard Hat ☒ | |
| | | Hearing Protection | ☐ | Ear Muffs/Plugs ☐ | |
| | | Other | ☒ | Barricades ☐ | High Visibility Safety Vests ☒ Cones/Flags ☐ |
| | | | | Amber Light/Vehicle Hazards ☐ | Crash Truck ☐ Tyvek/Coveralls ☐ |

| Air Monitoring/Sampling | | Emergency Response | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☐ | Emergency Alarms | ☐ | First Aid Kit | ☐ | Cell Phone (none) | ☑ |
| FID/PID | ☐ | Emergency Contacts | ☐ | Spill Kit | ☐ | Fire Extinguisher | ☐ |
| Detector Tubes | ☐ | Evacuation Routes | ☑ | Hospital Route | ☐ | Pedestrian Safety | ☐ |
| Dust Monitor | ☐ | Explosion/Fire | ☐ | Work Area | ☐ | Vapor/Dust Suppression | ☐ |
| Personal Air | ☐ | Medical Emergency | ☐ | Smoking/Break Area | ☐ | | |

**Are site workers Fit To Work?** Yes ☑ No ☐

**Comments:** Motiva Personnel will load LoRco truck w/ drums utilizing a forklift

**Name & Title of Person Conducting Tailgate Safety Meeting:** Matthew Abbott

**Signature:** Matthew Abbott **Date:** 05/14/10



Shell/Motiva 0007038

**SHELL**
**Life-Saving Rules**

Work with a valid Work Permit when required

Verify isolation before work begins and use the specified life-protecting equipment

Obtain authorisation before overriding or disabling safety critical equipment

Conduct gas tests when required

Obtain authorisation before entering a confined space

Protect yourself against a fall when working at height

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth within this project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

### SIGN IN

MEETING ATTENDEES

| Name [Print] | Company | Signature |
|---|---|---|
| Matthew h. Abbott | Longshore Env. | |
| Kevyon Johnson | Conco | |
| | | |
| | | |
| | | |

| | | | |
|---|---|---|---|
| Have all personnel been informed of work to be completed? | (YES) | NO | NA |
| Has fuel delivery service been informed? | YES | NO | (NA) |
| Is fuel delivery due today? | YES | NO | (NA) |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | (NA) |
| Are work areas controlled to protect workers, site staff, and the public? | (YES) | NO | NA |
| Do all workers have their API Safety Key card? | (YES) | NO | NA |
| Have all reviewed and understand the Shell 12 Life-Saving Rules | (YES) | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Matthew h. Abbott | | 05/14/10 | | |

Longshore

### SIGN OUT

| | | | |
|---|---|---|---|
| Has the work area been left tidy and safe? | YES | NO | NA |
| Are site personnel aware of status of work? | YES | NO | NA |
| Are changes to equipment documented and communicated? | YES | NO | NA |
| All incidents, near misses, unsafe situations reported? | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| | | | | |

**SHELL**
**Life-Savin**
**R**

Do not walk under a suspended load

No alcohol or drugs w working or driving

Wear yo[illegible]t bel

Do not smoke outsi designated smoking

While driving, do not use your phone and do n exceed speed limit

Follow prescribed Isol Management Plan



Shell/Motiva 0007039

SOVEREIGN CONSULTING

# Job Safety Analysis
# Worksheet Acknowledgement

**SCI Project #:** EQ017 **Date:** 05/14/10

**Site Location:** Motiva BK Terminal - 25 Paidge Ave.

**List JSA(s) Reviewed:** SCI - Drum/Hose

| Name (Print) | Company | Signature |
|---|---|---|
| Matthew H. Abbott | Longshore | |
| Keyon Johnson | Lonco | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

**Sovereign Representative:** _____

* extra visit outside of normal budget *

FIELD FORM (Revised 01/05/06)

| | | |
|---|---|---|
| Date: 05/14/10 | Field Form #: 5810 | Site: 25 Paidge Ave. |
| Day: Fri. | Client: SOVEREIGN | Brooklyn, NY |
| | Region: II | Motiva Terminal |

**Work Description:** 5th visit to meet CORCO for drum pick-up → CORCO 2.5 hrs late

☐ Unit Cost ☒ T&M

| Personnel | Title | Time | | | | |
|---|---|---|---|---|---|---|
| | | Start | On-Site | Off-site | Finish | Total |
| Matthew Abbott | ET | 10⁰⁰ | 11.15 | 13⁰⁰ | 17⁰⁰ | 7 |
| | | | | | | |
| | | | | | | |

| UNIT COSTS | | | MATERIALS | |
|---|---|---|---|---|
| No. | Task No. | Description | No. | Description |
| | 1.1 | Survey Monitoring Wells (site) | | Lock |
| | 1.2 | Sensitive Receptor Survey (site) | | 2" Gripper Plug |
| | 2.1.1 | Drilling Oversight (half day) | | 4" Gripper Plug |
| | 2.2.2 | Drilling Oversight (full day) | | 2" EnviroCap |
| | 2.3.1 | GeoProbe (half day) | | 4" EnviroCap |
| | 2.3.2 | GeoProbe (full day) | | Disposable Bailer |
| | 4.1.1 | GW Monitoring 1-5 wells (per site) | | 55 Gallon Drum |
| | 4.1.2 | GW Monitoring 6-10 wells (per site) | | Tedlar Air Bag |
| | 4.1.3 | GW Monitoring Add. Wells >10(per well) | | Generator |
| | 4.2.1 | Potable Sampling During O&M (well) | | Cones |
| | 4.2.2 | Potable Sampling Separate Visit (well) | | Drum Sampler |
| | 4.3.1 | Product Bailing During O&M (well) | | ORM (lbs.) |
| | 4.3.2 | Product Bailing Separate Visit (site) | | ORM Socks (#) |
| | 4.4 | MW Pad Replacement (well) | | Concrete |
| | 5.1 | O&M-unscheduled site visit (visit) | | |
| | 5.2 | O&M - SVE/AS no treatment (visit) | | |
| | 5.3 | O&M - SVE/AS with treatment(visit) | | |
| | 5.4 | Product Recovery System (visit) | | |
| | 5.5 | Carbon Replacement Liquid (per lb.) | | |
| | 5.6 | Carbon Replacement Vapor (per lb.) | | |
| | 7.1.1 | Construction Monitoring Half Day | | |
| | 7.1.2 | Construction Monitoring Full Day | | |
| | 7.2.1 | Environmental Monitoring Half Day | | |
| | 7.2.2 | Environmental Monitoring Full Day | | |
| | 8.0 | Hydraulic Lift Oversight (event) | | |
| | 9.0 | Waste/Fuel Oil Oversight (event) | | |
| | 11.8.1 | Field Vehicle (per hour) | | |
| | 11.8.2 | Field Vehicle (half day) | | |
| 1 | 11.8.3 | Field Vehicle (full day) | | |
| | 11.8.4 | Field Vehicle (Week) | | |
| | 11.9 | Field Vehicle - Heavy Duty (per day) | | |

*LONGSHORE ENVIRONMENTAL INC.*

SOVEREIGN CONSULTING - GROUND WATER SAMPLING DATA SUMMARY SHEET
PAGE 1 OF 1

DATE (DAY OF WEEK): 04-15-10 (THURSDAY)
CLIENT: MOTIVA ENTERPRISES LLC - 25 PAIDGE AVENUE, BROOKLYN NY
SCI JOB # EQ017

| WELL ID | TIME OF READING | WELL DIA. (IN) | TOTAL DEPTH (FT) | DEPTH TO PRODUCT (FT) | DEPTH TO WATER (FT) | VOLUME PURGED (GAL) | D.O. (UG/L) | TEMP (DEG. C) |
|---|---|---|---|---|---|---|---|---|
| MW-1 | 7:00 | 4 | 11.24 | - | 2.90 | 17 | 6.12 | 14.03 |
| MW-3 | 7:15 | 4 | 11.36 | - | 2.53 | 17 | 3.10 | 13.75 |
| MW-29 | 7:30 | 4 | 9.67 | - | 1.53 | 16 | 2.44 | 15.08 |
| MW-30 | 10:20 | 4 | 9.42 | - | 2.14 | 14 | 1.94 | 16.17 |
| MW-4 | 7:32 | 4 | 11.17 | 2.11 | 2.16 | - | - | - |
| MW-5 | 7:45 | 4 | 9.35 | - | 1.37 | 16 | 1.75 | 14.47 |
| MW-28 | 7:55 | 4 | 10.94 | - | 1.43 | 19 | 1.58 | 15.60 |
| MW-27 | 8:00 | 4 | 14.29 | - | 2.23 | 24 | 1.91 | 16.16 |
| MW-6 | 8:10 | 4 | 10.84 | - | 5.08 | 11 | 6.20 | 12.66 |
| MW-21R | 8:50 | 4 | 12.08 | - | 3.95 | 16 | 2.41 | 11.74 |
| MW-22R | 9:00 | 4 | 8.46 | - | 4.06 | 9 | 2.42 | 11.78 |
| MW-13 | 9:10 | 4 | 14.08 | - | 2.37 | 23 | 2.31 | 11.79 |
| MW-14 | 9:20 | 4 | 14.13 | - | 6.55 | 15 | 2.93 | 12.72 |
| MW-23 | 9:30 | 4 | 12.56 | - | 3.98 | 17 | 2.07 | 13.99 |
| MW-24 | 9:40 | 4 | 12.67 | - | 3.82 | 18 | 2.05 | 13.75 |
| MW-25 | 10:30 | 4 | 14.54 | - | 2.89 | 23 | 1.30 | 14.77 |
| MW-42 | 10:00 | 4 | 12.60 | - | 3.54 | 18 | 1.84 | 13.92 |
| MW-43 | 9:50 | 4 | 12.42 | - | 3.47 | 18 | 1.97 | 14.91 |
| MW-44 | 10:10 | 4 | 12.47 | - | 3.58 | 18 | 1.39 | 14.63 |
| TRW-1 | 10:11 | 6 | NA | NA | NA | NA | NA | NA |
| MW-26 | 10:13 | 4 | 10.62 | 3.68 | 3.70 | - | - | - |
| TRW-2 | 10:40 | 6 | 10.23 | - | 3.76 | 29 | 1.44 | 13.62 |
| MW-2 | 10:42 | 4 | 10.85 | 3.77 | 3.79 | - | - | - |
| TRW-3 | 10:43 | 6 | NA | NA | NA | NA | NA | NA |
| TRW-4 | 10:43 | 6 | NA | NA | NA | NA | NA | NA |
| TRW-5 | 10:43 | 6 | NA | NA | NA | NA | NA | NA |
| MW-31 | 10:44 | 4 | 8.86 | 3.68 | 3.78 | - | - | - |
| MW-20 | 10:50 | 4 | 11.61 | - | 2.75 | 18 | 1.39 | 15.49 |
| MW-15 | 11:00 | 4 | 12.56 | - | 2.94 | 19 | 1.40 | 15.56 |
| MW-16 | 11:10 | 4 | 15.19 | - | 2.24 | 26 | 1.23 | 16.68 |
| MW-17 | 11:20 | 4 | 12.24 | - | 3.17 | 18 | 1.66 | 15.47 |
| MW-18 | 12:30 | 4 | 11.74 | - | 3.01 | 17 | 1.88 | 16.38 |
| MW-19 | 11:30 | 4 | 11.52 | - | 3.57 | 16 | 1.50 | 15.55 |
| MW-32 | 11:40 | 4 | 10.66 | - | 3.62 | 14 | 1.70 | 16.47 |
| MW-9 | 8:40 | 4 | 7.70 | - | 6.46 | 2 | 2.89 | 11.80 |
| MW-8 | 8:30 | 4 | 8.03 | - | 6.48 | 3 | 2.42 | 10.85 |
| MW-7R | 8:20 | 4 | 12.49 | - | 5.80 | 13 | 2.65 | 10.31 |
| RW-34 | 11:41 | 6 | 10.81 | 7.11 | 7.16 | - | - | - |
| MW-33 | 11:50 | 4 | 7.33 | - | 5.62 | 3 | 1.78 | 14.87 |
| MW-39 | 12:00 | 4 | 8.45 | - | 7.07 | 3 | 1.42 | 15.09 |
| RW-40 | 12:02 | 6 | 11.66 | 9.09 | 9.11 | - | - | - |
| MW-35 | 12:10 | 4 | 7.79 | - | 6.47 | 3 | 1.21 | 15.42 |
| RW-36 | 12:12 | 6 | 10.48 | 8.68 | 8.76 | - | - | - |
| MW-41 | 12:14 | 4 | 9.49 | 8.01 | 8.21 | - | - | - |
| RW-37 | 12:13 | 6 | 10.40 | 7.58 | 7.62 | - | - | - |
| MW-38 | 12:20 | 4 | 8.17 | - | 6.83 | 3 | 1.68 | 17.57 |
| TRW-6 | 12:22 | 6 | 9.33 | 2.82 | 2.85 | 13 | - | - |
| MW-45 | 12:23 | 4 | 11.96 | 3.18 | 3.24 | - | - | - |

# Shell Oil Products Chain Of Custody Record

**LAB (LOCATION)**

- ☑ XENCO (_____)
- ☐ CALSCIENCE (_____)
- ☐ TEST AMERICA (_____)
- ☐ SPL (_____)
- ☐ OTHER (_____)

**Please Check Appropriate Box:**

| | | |
|---|---|---|
| ☑ ENV. SERVICES | ☐ MOTIVA RETAIL | ☐ SHELL RETAIL |
| ☐ MOTIVA SD&CN | ☐ CONSULTANT | ☐ LUBES |
| ☐ SHELL PIPELINE | ☐ OTHER _____ | |

**Print Bill To Contact Name:** Doug Weimer

**INCIDENT # (ENV SERVICES):** 9 7 0 9 4 9 8 1 ☐ CHECK IF NO INCIDENT # APPLIES

DATE: 3/1/2010

PO #:

SAP #: 1 0 0 8 2 3

PAGE: 1 of 4

CONSULTANT COMPANY: **Sovereign Consulting Inc.**

ADDRESS: 3104 Unionville Road, Suite 150

CITY: Cranberry Twp, PA 16066

TELEPHONE: 724-553-5084 | FAX: | E-MAIL: gbosilljcic@sovcon.com

SITE ADDRESS (Street, City and State): 25 Paidge Avenue, Brooklyn NY

CONSULTANT PROJECT CONTACT (Report to): Greg Bosiljcic - 724-553-5084

CONSULTANT PROJECT NO.: EQ24

SAMPLER NAME(S) (Print): Nick Zarcone - Longshore Environmental 631-472-1732

LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

DELIVERABLES: ☑ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY) _____

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

**SPECIAL INSTRUCTIONS OR NOTES :**

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ PROVIDE LEDD DISK

**REQUESTED ANALYSIS**

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | EPA 8260 (FULL LIST) | MTBE | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-1 | 4/15/10 | 7:00 | GW | X | | | | Ice | 3 | X | X | |
| | MW-3 | 4/15/10 | 7:15 | GW | X | | | | Ice | 3 | X | X | |
| | MW-29 | 4/15/10 | 7:30 | GW | X | | | | Ice | 3 | X | X | |
| | MW-5 | 4/15/10 | 7:45 | GW | X | | | | Ice | 3 | X | X | |
| | MW-28 | 4/15/10 | 7:55 | GW | X | | | | Ice | 3 | X | X | |
| | MW-27 | 4/15/10 | 8:00 | GW | X | | | | Ice | 3 | X | X | |
| | MW-6 | 4/15/10 | 8:10 | GW | X | | | | Ice | 3 | X | X | |
| | MW-7R | 4/15/10 | 8:20 | GW | X | | | | Ice | 3 | X | X | |
| | MW-8 | 4/15/10 | 8:30 | GW | X | | | | Ice | 3 | X | X | |
| | MW-9 | 4/15/10 | 8:40 | GW | X | | | | Ice | 3 | X | X | |

| | | | |
|---|---|---|---|
| Relinquished by: (Signature) | Received by: (Signature) | Date: 04/15/10 | Time: 1600 |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |

03/2/06 Revision

Shell/Motiva 0007043

# Shell Oil Products Chain Of Custody Record

**LAB (LOCATION)**
- ☑ XENCO (_____)
- ☐ CALSCIENCE (_____)
- ☐ TEST AMERICA (_____)
- ☐ SPL (_____)
- ☐ OTHER (_____)

**Please Check Appropriate Box:**
☑ ENV. SERVICES | ☐ MOTIVA RETAIL | ☐ SHELL RETAIL
☐ MOTIVA SD&CM | ☐ CONSULTANT | ☐ LUBES
☐ SHELL PIPELINE | ☐ OTHER _____

Print Bill To Contact Name: Doug Weimer

INCIDENT # (ENV. SERVICES): 9 7 0 9 4 9 8 1

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 3/1/2010

PAGE: 2 of 4

PO #:

SAP #: 1 0 0 6 2 3

CONSULTANT COMPANY: Sovereign Consulting Inc.

ADDRESS: 3104 Unionville Road, Suite 150

CITY: Cranberry Twp, PA 16066

TELEPHONE: 724-553-5084 | FAX: | E-MAIL: nbosiljcic@sovcon.com

SITE ADDRESS (Street, City and State): 25 Paidge Avenue, Brooklyn NY

CONSULTANT PROJECT CONTACT (Report to): Greg Bosiljcic - 724-553-5084

CONSULTANT PROJECT NO.: EQ24

SAMPLER NAME(S) (Print): Nick Zarcone - Longshore Environmental 631-472-1732

LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

DELIVERABLES: ☑ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY) _____

TEMPERATURE ON RECEIPT C° | Cooler #1 | Cooler #2 | Cooler #3

**SPECIAL INSTRUCTIONS OR NOTES :**

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ PROVIDE LEDD DISK

**REQUESTED ANALYSIS**

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | EPA 8260 (FULL LIST) | MTBE | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-21R | 4/15/10 | 8:50 | GW | X | | | | Ice | 3 | X | X | |
| | MW-22R | 4/15/10 | 9:00 | GW | X | | | | Ice | 3 | X | X | |
| | MW-13 | 4/15/10 | 9:10 | GW | X | | | | Ice | 3 | X | X | |
| | MW-14 | 4/15/10 | 9:20 | GW | X | | | | Ice | 3 | X | X | |
| | MW-23 | 4/15/10 | 9:30 | GW | X | | | | Ice | 3 | X | X | |
| | MW-24 | 4/15/10 | 9:40 | GW | X | | | | Ice | 3 | X | X | |
| | MW-43 | 4/15/10 | 9:50 | GW | X | | | | Ice | 3 | X | X | |
| | MW-42 | 4/15/10 | 10:00 | GW | X | | | | Ice | 3 | X | X | |
| | MW-44 | 4/15/10 | 10:10 | GW | X | | | | Ice | 3 | X | X | |
| | MW-30 | 4/15/10 | 10:20 | GW | X | | | | Ice | 3 | X | X | |

| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
|---|---|---|---|
| | | 04/15/10 | 1600 |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |

05/2/08 Revision

Shell/Motiva 0007044

# Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
- ☑ XENCO (_____)
- ☐ CALSCIENCE (_____)
- ☐ TEST AMERICA (_____)
- ☐ SPL (_____)
- ☐ OTHER (_____)

Please Check Appropriate Box:
- ☑ ENV. SERVICES
- ☐ MOTIVA RETAIL
- ☐ SHELL RETAIL
- ☐ MOTIVA SD&CM
- ☐ CONSULTANT
- ☐ LUBES
- ☐ SHELL PIPELINE
- ☐ OTHER

Print Bill To Contact Name: Doug Weimer

INCIDENT # (ENV. SERVICES): 9 7 0 9 4 9 8 1

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 3/1/2010

PAGE: 3 of 4

PO #:

SAP #: 1 0 0 6 2 5

CONSULTANT COMPANY: Sovereign Consulting Inc.

ADDRESS: 3104 Unionville Road, Suite 150

CITY: Cranberry Twp, PA 16066

TELEPHONE: 724-553-5084 | FAX: | E-MAIL: gbosiljcic@sovcon.com

SITE ADDRESS (Street, City and State): 25 Paidge Avenue, Brooklyn NY

CONSULTANT PROJECT CONTACT (Report to): Greg Bosiljcic - 724-553-5084

CONSULTANT PROJECT NO.: EQ24

SAMPLER NAME(S) (Print): Nick Zarcone - Longshore Environmental 631-472-1732

LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

DELIVERABLES: ☑ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY) _____

TEMPERATURE ON RECEIPT C° | Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | EPA 8260 (FULL LIST) | MTBE | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-25 | 4/15/10 | 10:30 | GW | X | | | | Ice | 3 | X | X | |
| | TRW-2 | 4/15/10 | 10:40 | GW | X | | | | Ice | 3 | X | X | |
| | MW-20 | 4/15/10 | 10:50 | GW | X | | | | Ice | 3 | X | X | |
| | MW-15 | 4/15/10 | 11:00 | GW | X | | | | Ice | 3 | X | X | |
| | MW-16 | 4/15/10 | 11:10 | GW | X | | | | Ice | 3 | X | X | |
| | MW-17 | 4/15/10 | 11:20 | GW | X | | | | Ice | 3 | X | X | |
| | MW-19 | 4/15/10 | 11:30 | GW | X | | | | Ice | 3 | X | X | |
| | MW-32 | 4/15/10 | 11:40 | GW | X | | | | Ice | 3 | X | X | |
| | MW-33 | 4/15/10 | 11:50 | GW | X | | | | Ice | 3 | X | X | |
| | MW-39 | 4/15/10 | 12:00 | GW | X | | | | Ice | 3 | X | X | |

| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
|---|---|---|---|
| | | 04/15/10 | 1600 |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |

05/2/08 Revision

Shell/Motiva 0007045

# Shell Oil Products Chain Of Custody Record

**LAB (LOCATION)**
- ☑ XENCO (_____)
- ☐ CALSCIENCE (_____)
- ☐ TEST AMERICA (_____)
- ☐ SPL (_____)
- ☐ OTHER (_____)

**Please Check Appropriate Box:**
☑ ENV. SERVICES | ☐ MOTIVA RETAIL | ☐ SHELL RETAIL
☐ MOTIVA SD&CM | ☐ CONSULTANT | ☐ LUBES
☐ SHELL PIPELINE | ☐ OTHER _____

Print Bill To Contact Name: Doug Weimer

INCIDENT # (ENV SERVICES): 9 7 6 9 4 9 8 1 | ☐ CHECK IF NO INCIDENT # APPLIES

DATE: 3/1/2010

PO #:

SAP #: 1 0 0 6 2 3

PAGE: 4 of 4

CONSULTANT COMPANY: Sovereign Consulting Inc.

ADDRESS: 3104 Unionville Road, Suite 150

CITY: Cranberry Twp, PA 16066

TELEPHONE: 724-553-5084 | FAX: | E-MAIL: gbosiljcic@sovcon.com

SITE ADDRESS (Street, City and State): 25 Paidge Avenue, Brooklyn NY

CONSULTANT PROJECT CONTACT (Report to): Greg Bosiljcic - 724-553-5084

CONSULTANT PROJECT NO.: EQ24

SAMPLER NAME(S) (Print): Nick Zarcone - Longshore Environmental 631-472-1732

LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

DELIVERABLES: ☑ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY) _____

TEMPERATURE ON RECEIPT C° | Cooler #1 | Cooler #2 | Cooler #3

**SPECIAL INSTRUCTIONS OR NOTES :**

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ PROVIDE LEDD DISK

**REQUESTED ANALYSIS**

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | EPA 8260 (FULL LIST) | MTBE | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-35 | 4/15/10 | 12:10 | GW | X | | | | Ice | 3 | X | X | |
| | MW-38 | 4/15/10 | 12:20 | GW | X | | | | Ice | 3 | X | X | |
| | MW-18 | 4/15/10 | 12:30 | GW | X | | | | Ice | 3 | X | X | |
| | TRIP BLANK | 4/15/10 | 5:00 | GW | X | | | | Ice | 3 | X | X | |
| | FIELD BLANK | 4/15/10 | 7:00 | GW | X | | | | Ice | 3 | X | X | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

| | | | |
|---|---|---|---|
| Relinquished by: (Signature) | Received by: (Signature) | Date: 04/15/10 | Time: 1600 |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |

05/2/06 Revision

Shell/Motiva 0007046

**Sovereign Consulting Inc.**
**Tailgate Safety Meeting Form**
(To be submitted with field notes to Project Manager each day)

| | |
|---|---|
| **Project Name:** GWS & well Gauging | **Date:** 4/15/10 |
| **Location:** 25 Ridge Ave | **Weather:** 58° F clear sky |
| **Project Manager [Print]:** Matt Abbott | **Temp:** 58° F |
| **Contractors/Subcontractors:** | |

**Scope of Work:** GWS & well Gauging

**Task Hazards:** (check all that apply) *requires Permit to Work

| | | | |
|---|---|---|---|
| Cold Heat Stress ☐ | Excavations* ☐ | Haz. Substances ☐ | Sanitation ☐ |
| Confined Spaces* ☐ | Explosion ☐ | Heavy Equipment ☐ | Sharp Objects ☐ |
| Cutting/Welding* ☐ | Falling Objects ☐ | Ladders* ☑ | Tools ☐ |
| Electrical ☐ | Fire ☐ | Noise ☑ | Traffic ☑ |
| Environmental Hazard ☐ | Insects/Biological ☐ | Slip/Trip Hazards ☑ | Weather ☐ |
| Elevated Work* ☐ | Flying Debris ☐ | Overhead ☐ | Other (describe below) ☐ |

**Engineering Controls / Work Practices:**

**Levels of Protection / Personal Protective Equipment:**

| | | |
|---|---|---|
| Level A ☐ | Eye & Face Protection ☑ | Safety Glasses ☑ Face Shield ☐ |
| Level B ☐ | Foot Protection ☑ | Steel Toes ☑ Hip Boots/Waders ☐ |
| Level C ☐ | Hand Protection ☑ | Nitrile Gloves ☑ Leather Gloves ☑ Full Arm Chemical ☐ |
| Level D ☒ | Head Protection ☑ | Hard Hat ☑ |
| | Hearing Protection ☑ | Ear Muffs/Plugs ☑ |
| | Other ☐ | Barricades ☑ High Visibility Safety Vests ☑ Cones/Flags ☑ |
| | | Amber Light/Vehicle Hazards ☐ Crash Truck ☑ Tyvek/Coveralls ☐ |

| Air Monitoring/Sampling | Emergency Response | | |
|---|---|---|---|
| LEL/O2/CO/H2S Meter ☐ | Emergency Alarms ☐ | First Aid Kit ☑ | Cell Phone none ☐ |
| FID/PID ☐ | Emergency Contacts ☐ | Spill Kit ☐ | Fire Extinguisher ☑ |
| Detector Tubes ☐ | Evacuation Routes ☐ | Hospital Route ☑ | Pedestrian Safety ☐ |
| Dust Monitor ☐ | Explosion/Fire ☐ | Work Area ☐ | Vapor/Dust Suppression ☐ |
| Personal Air ☐ | Medical Emergency ☐ | Smoking/Break Area ☐ | |

**Are site workers Fit To Work?** Yes ☑ No ☐

**Comments:** Waiting out for other Contractors working !!

Nick Zarcone — Geologic oper / Env. Tech
**Name & Title of Person Conducting Tailgate Safety Meeting:**

**Signature:** _____ **Date:** 4/15/10



Shell/Motiva 0007047

SOVEREIGN CONSULTING

# Job Safety Analysis
# Worksheet Acknowledgement

**SCI Project #:** _____ **Date:** 4/15/10

**Site Location:** 25 Pridge Ave

**List JSA(s) Reviewed:** GW sampling

| Name (Print) | Company | Signature |
|---|---|---|
| Nick Zarcone | Long Shore | |
| EDGAR LUCERO | long shore | Edgar Lucero |
| Juan A. Fronco | Long Shore | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

**Sovereign Representative:** _____

| Activity<br>List the tasks required to perform the activity in the sequence they are carried out. | Hazards<br>Against each task list the hazards that could cause injury when the task is performed. | Risk control measures<br>List the control measures required to eliminate or minimize the risk of injury arising from the identified hazard. | Who is responsible?<br>Write the name of the person responsible (supervisor or above) to implement the control measure identified. |
|---|---|---|---|
| LNAPL Recovery | Exposure to site contaminants. | Be certain to wear the proper PPE as specified in the site specific HASP. Do not touch sample with unprotected skin. | Sovereign Field Personnel |
| | | | |
| Decontamination (soap and water wash, water rinse). | Exposure to site contaminants. | Additional PPE includes nitrile gloves.<br><br>Do not touch groundwater with unprotected skin. Avoid contact with all decontamination materials including Alconox. | Sovereign Field Personnel |
| | | | |

| | | | | | |
|---|---|---|---|---|---|
| SIGNED: | [signature] | | | | |
| Contractor/Subcontractor | Nick Zucca | Date: 4/15/10 | Project Mgr.: | | Date: ..../..../.... |

Edgar Lucero 4-15-10 Juan A Franco 4-15-10

[signature] [signature]

N. Sdin 4/16/10



Shell/Motiva 0007049

| Activity<br>List the tasks required to perform the activity in the sequence they are carried out. | Hazards<br>Against each task list the hazards that could cause injury when the task is performed. | Risk control measures<br>List the control measures required to eliminate or minimize the risk of injury arising from the identified hazard. | Who is responsible?<br>Write the name of the person responsible (supervisor or above) to implement the control measure identified. |
|---|---|---|---|
| Manhole/Grate cover removal | Back Strain<br><br>Pinch Points, Abrasion<br><br>Stinging insects | Additional PPE includes leather, cut-resistant gloves.<br><br>Inspect tools prior to use. Stop work if correct tools and/or procedures are not available.<br><br>Use proper posture when lifting (keeps your back straight, lift with your knees), take breaks as needed to prevent fatigue to arm and shoulder muscles.<br><br>Place the J-Hook point into opening(s) in the top of the manhole/grate cover and slide the cover out of its seating ring. Do not lift straight up.<br><br>When task is complete, place the J-Hook point into the opening(s) in the top of the manhole/grate cover and slide it back into place within the seating ring. Do not lift straight up. Be careful not to place fingers between manhole/grate cover and seating ring when moving cover.<br><br>Prior to lifting, look for bees, wasps. Utilize Alconox spray or wasp spray to disable bees and wasps. | Sovereign Field Personnel |
| | | | |

Shell/Motiva 0007050

| Activity<br>List the tasks required to perform the activity in the sequence they are carried out. | Hazards<br>Against each task list the hazards that could cause injury when the task is performed. | Risk control measures<br>List the control measures required to eliminate or minimize the risk of injury arising from the identified hazard. | Who is responsible?<br>Write the name of the person responsible (supervisor or above) to implement the control measure identified. |
|---|---|---|---|
| Load/unload equipment from vehicle, manual lifting | Back strain, pinch points, abrasion | Additional PPE includes leather, cut-resistant gloves.<br><br>Utilize proper lifting procedures (keep your back straight, lift with your legs and knees) when unloading equipment from the vehicle. Utilize material handling devices when possible to move equipment (lift gates, pallet jacks, hand trucks, etc.). If necessary, use a ramp for loading/unloading wheeled devices, ensuring the ramp is properly supported prior to use. Communicate with co-workers who are assisting you to avoid back strain and pinch points. Do not carry heavy equipment over long distances without use of a cart, etc. | Sovereign Field Personnel |
| | Faulty or inappropriate equipment | Inspect equipment (including hand tools) prior to use. Put faulty equipment out of service. | |
| | | | |



Shell/Motiva 0007051

# ENVIRONMENTAL WELL, REMEDIATION COMPOUND, and SITE INSPECTION FORM

COST CENTER # - 58603

ADDRESS - 25 Paidge Ave (Brooklyn Terminal)

DATE - 04/15/10

CITY & STATE - Brooklyn, NY

| Well ID | Observations Upon Arrival | | | | Note Repairs Made Detailed Explanation of Maintenance Recommended and Performed | Repair Date and PM Initials |
|---|---|---|---|---|---|---|
| | Manway Cover Type, Size & Condition | Well Cap Type & Condition | Well Lock Condition (if present) | Well Pad Condition | | |
| MW-1 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | good | | |
| MW-3 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | good | | |
| MW-29 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | fair | | |
| MW-28 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | fair | | |
| MW-30 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | poor | well casing is broken about 10" below grade | |
| MW-4 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | fair | | |
| MW-5 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | fair | | |
| MW-6 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | good | | |
| MW-27 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | poor | | |
| MW-9 | 8-in flushmount boltdown - excellent | 4" j-plug | none | excellent | | |
| MW-8 | 8-in flushmount boltdown - excellent | 4" j-plug | none | excellent | | |
| MW-23 | 8" flush-mount finger-grip - ok | 4-in j-plug | none | fair | | |
| MW-13 | 6-in steel stand pipe | 4" j-plug | fair | fair | | |

| Remediation Compound | Type and Condition of Enclosure | Condition of Area Inside Enclosure | Equipment Condition | Emergency Contact Info Visible | Cleaning / Repairs Recommended and Conducted | Repair Date and PM Initials |
|---|---|---|---|---|---|---|
| | | | | | | |

| Number of Drums On-Site | Drum Condition | Labeled Correctly and Writing Legible | Drums Scheduled for Pickup | Drums Located to Min Business Interference | Detailed Explanation of Any Issues Resolved | Date Drums Removed from Site and PM Initials |
|---|---|---|---|---|---|---|
| | | | | | | |

[1]Groundwater monitoring well covers must be painted in accordance with applicable regulations.

All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).

Environmental Well, Remediation Compound, and Site Inspection Form
Original Version 1.0, April 2005, Owner - John Sexton

Field Personnel Signature

Shell/Motiva 0007052

# ENVIRONMENTAL WELL, REMEDIATION COMPOUND, and SITE INSPECTION FORM

COST CENTER # - 58603

DATE - 04/15/10

ADDRESS - 25 Paidge Ave (Brooklyn Terminal)

CITY & STATE - Brooklyn, NY

| Well ID[1] | Observations Upon Arrival | | | | Note Repairs Made Detailed Explanation of Maintenance Recommended and Performed | Repair Date and PM Initials |
|---|---|---|---|---|---|---|
| | Manway Cover: Type, Size, & Condition | Well Cap Type & Condition | Well Lock Condition (if present) | Well Pad Condition | | |
| MW-14 | 6-in steel stand pipe | 4" j-plug | fair | fair | | |
| MW-24 | steel plate (manhole cover plowed off) - ok | 4" j-plug | none | poor | | |
| MW-25 | 8" flush-mount finger-grip - ok | 4" j-plug | none | fair (a little low) | | |
| MW-26 | 24" vault - ok | 4" j-plug | none | fair | | |
| TRW-1 | 24" vault - ok | 6" rubber cap | none | asphalt | | |
| TRW-2 | 24" vault - ok | 6" j-plug | none | asphalt | | |
| MW-2 | 24" vault - ok | 4" j-plug | none | good | | |
| TRW-5 | 24" vault - ok | 6" rubber cap | none | asphalt | | |
| TRW-4 | 24" vault - ok | 5" rubber cap | none | asphalt | | |
| TRW-3 | 24" vault - ok | 6" rubber cap | none | asphalt | | |
| MW-31 | 10" flushmount boltdown - stripped | 4" j-plug | none | good | | |
| TRW-6 | 24" vault - ok | 6" rubber cap | none | asphalt | | |
| MW-16 | 8" flush-mount finger-grip - ok | 4" j-plug | none | fair | | |
| MW-17 | 8" flush-mount finger-grip - ok | 6" j-plug | none | poor | casing is cracked - result of construction on new canopy | |

| Remediation Compound | Type and Condition of Enclosure | Condition of Area Inside Enclosure | Equipment Condition | Emergency Contact Info Visible | Cleaning / Repairs Recommended and Conducted | Repair Date and PM Initials |
|---|---|---|---|---|---|---|
| | | | | | | |

| Number of Drums On-site | Drum Condition | Labeled Correctly and Writing Legible | Drums Scheduled for Pickup | Drums Located to Min Business Interference | Detailed Explanation of Any Issues Resolved | Date Drums Removed from Site and PM Initials |
|---|---|---|---|---|---|---|
| | | | | | | |

[1]Groundwater monitoring well covers must be painted in accordance with applicable regulations.

All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).



Field Personnel Signature

Shell/Motiva 0007053

# ENVIRONMENTAL WELL, REMEDIATION COMPOUND, and SITE INSPECTION FORM

COST CENTER # - 58603

DATE - 04/15/10

ADDRESS - 25 Paidge Ave (Brooklyn Terminal)

CITY & STATE - Brooklyn, NY

| Well ID[1] | Observations Upon Arrival - Manway Cover, Type, Size, & Condition | Well Cap Type & Condition | Well Lock Condition (If Present) | Well Pad Condition | Note Repairs Made Detailed Explanation of Maintenance Recommended and Performed | Repair Date and PM Initials |
|---|---|---|---|---|---|---|
| MW-20 | 8" flush-mount finger-grip - ok | 4" j-plug | none | part of larger concrete pad | | |
| MW-18 | 8" flush-mount finger-grip - ok | 6" j-plug | none | poor | | |
| MW-19 | 8" flush-mount finger-grip - ok | 6" j-plug | none | fair | | |
| MW-32 | steel plate - manhole cover missing | 4" j-plug | none | asphalt - manhole too low | | |
| MW-15 | 8" flush-mount finger-grip - ok | 4" j-plug | none | part of larger concrete pad | | |
| MW-33 | 6-in steel stand pipe | 4" j-plug | fair | fair | | |
| RW-34 | 8-in steel stand pipe | 6" j-plug | fair | fair | | |
| MW-39 | 6-in steel stand pipe | 4" j-plug | fair | fair | | |
| RW-40 | 8-in steel stand pipe | 6" j-plug | fair | fair | | |
| MW-35 | 6-in steel stand pipe | 4" j-plug | fair | fair | | |
| RW-36 | 8-in steel stand pipe | 6" j-plug | fair | fair | | |
| MW-41 | 6-in steel stand pipe | 4" j-plug | fair | fair | | |
| RW-37 | 8-in steel stand pipe | 6" j-plug | fair | fair | | |
| MW-38 | 6-in steel stand pipe | 4" j-plug | fair | fair | | |

| Remediation Compound | Type and Condition of Enclosure | Condition of Area Inside Enclosure | Equipment Condition | Emergency Contact Info Visible | Cleaning / Repairs Recommended and Conducted | Repair Date and PM Initials |
|---|---|---|---|---|---|---|
| | | | | | | |

| Number of Drums On-site | Drum Condition | Labeled Correctly and Writing Legible | Drums Scheduled for Pickup | Drums Located to Min Business Interference | Detailed Explanation of Any Issues Resolved | Date Drums Removed from Site and PM Initials |
|---|---|---|---|---|---|---|
| | | | | | | |

[1]Groundwater monitoring well covers must be painted in accordance with applicable regulations.

All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).



Field Personnel Signature

Shell/Motiva 0007054

# ENVIRONMENTAL WELL, REMEDIATION COMPOUND, and SITE INSPECTION FORM

COST CENTER # - 58603

ADDRESS - 25 Paidge Ave (Brooklyn Terminal)

DATE - 04/15/10

CITY & STATE - Brooklyn, NY

| Well ID | Observations Upon Arrival: Manway Cover Type, Size & Condition | Well Cap Type & Condition | Well Lock Condition (if present) | Well Pad Condition | Note Repairs Made: Detailed Explanation of Maintenance Recommended and Performed | Repair Date and PM Initials |
|---|---|---|---|---|---|---|
| MW-7R | 8-in flushmount boltdown - excellent | 4-in j-plug | none | excellent | | |
| MW-22R | 8-in flushmount boltdown - excellent | 4-in j-plug | none | excellent | | |
| MW-23R | 8-in flushmount boltdown - excellent | 4-in j-plug | none | excellent | | |
| MW-42 | 8-in flushmount boltdown - excellent | 4-in j-plug | none | excellent | | |
| MW-43 | 8-in flushmount boltdown - excellent | 4-in j-plug | none | excellent | | |
| MW-44 | 8-in flushmount boltdown - excellent | 4-in j-plug | none | excellent | | |
| MW-45 | 12-in flushmount boltdown - fair | 4-in j-plug | none | fair | *Well is located next to UST @ Northeast Corner of Tank Pad* | |
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| Remediation Compound | Type and Condition of Enclosure | Condition of Area Inside Enclosure | Equipment Condition | Emergency Contact Info Visible | Cleaning / Repairs Recommended and Conducted | Repair Date and PM Initials |
|---|---|---|---|---|---|---|
| | | | | | | |

| Number of Drums On-site | Drum Condition | Labeled Correctly and Writing Legible | Drums Scheduled for Pickup | Drums Located to Min Business Interference | Detailed Explanation of Any Issues Resolved | Date Drums Removed from Site and PM Initials |
|---|---|---|---|---|---|---|
| | | | | | | |

[1]Groundwater monitoring well covers must be painted in accordance with applicable regulations.

All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).

Environmental Well, Remediation Compound, and Site Inspection Form
Original Version 1.0, April 2005, Owner - John Sexton

Field Personnel Signature

Shell/Motiva 0007055

SOVEREIGN CONSULTING

Work Day: MONDAY Work Date: 03-15-10

Client/Owner: **Motiva Enterprises LLC** Page 1 of 3

**Well Gauge Report** Address: **25 Paidge Avenue, Brooklyn, NY** SCI Job #: **EQ017**

| Well ID | Time of Reading | Well Diameter | Total Depth | Depth to Product | Depth to Water | Volume Purged (gal.) | Comments/Product Removed |
|---|---|---|---|---|---|---|---|
| MW-3 | 10:50 | 4 | 11.26 | - | 1.43 | - | |
| MW-29 | 10:55 | 4 | 9.58 | - | 0.59 | - | |
| MW-30 | 11:00 | 4 | 9.42 | - | - | - | FLOODED |
| MW-4 | 11:25 | 4 | 11.26 | - | 0.98 | - | TRACE PRODUCT |
| MW-5 | 11:30 | 4 | 9.39 | - | - | - | FLOODED |
| MW-28 | 11:35 | 4 | 10.91 | - | 0.53 | - | |
| MW-27 | 11:45 | 4 | 14.51 | - | - | - | FLOODED |
| MW-6 | 11:40 | 4 | 10.84 | - | 1.86 | - | |
| TRW-6 | 11:50 | 6 | - | - | - | - | FLOODED |
| MW-31 | 12:00 | 4 | 8.80 | 1.69 | 1.75 | - | |
| TRW-5 | 12:05 | 6 | - | - | - | - | FLOODED |
| MW-20 | 12:10 | 4 | 11.20 | - | 1.68 | - | |
| MW-15 | 12:15 | 4 | 12.59 | - | 1.89 | - | |
| MW-16 | 12:22 | 4 | - | - | - | - | OBSTRUCTED |
| MW-1 | 12:20 | 4 | 11.18 | - | 2.29 | - | |
| MW-17 | 12:25 | 4 | 12.19 | - | 1.66 | - | |
| MW-18 | 12:30 | 4 | 11.80 | - | 1.61 | - | |
| MW-19 | 12:40 | 4 | 11.50 | - | 1.92 | - | |
| MW-2 | 12:50 | 4 | 8.87 | - | 1.81 | - | TRACE PRODUCT |
| TRW-3 | 13:00 | 6 | - | - | - | - | FLOODED |
| MW-~~25~~ 33 (W) | 13:05 | 4 | 10.59 | - | 1.59 | - | |

Well Volumes (Gallons / Linear Foot): 2" = 0.17, 4" = 0.66, 6" = 1.50, 8" = 2.60, 12" = 5.81

SOVEREIGN CONSULTING

Work Day: MONDAY Work Date: 03-15-10

Client/Owner: **Motiva Enterprises LLC** Page 2 of 3

**Well Gauge Report** Address: **25 Paidge Avenue, Brooklyn, NY** SCI Job #: **EQ017**

| Well ID | Time of Reading | Well Diameter | Total Depth | Depth to Product | Depth to Water | Volume Purged (gal.) | Comments/Product Removed |
|---|---|---|---|---|---|---|---|
| TRW-1 | 13:10 | 6 | - | - | - | - | FLOODED |
| MW-26 | 13:15 | 4 | 10.59 | - | - | - | FLOODED |
| TRW-2 | 13:20 | 6 | 10.01 | - | 2.04 | - | |
| MW-25 | 13:25 | 4 | 14.44 | - | 1.62 | - | |
| MW-44 | 13:30 | 4 | 12.12 | - | 2.47 | - | |
| MW-24 | 13:35 | 4 | 12.61 | - | 2.69 | - | |
| MW-43 | 13:40 | 4 | 12.64 | - | 2.64 | - | |
| MW-42 | 13:45 | 4 | 12.50 | - | 2.50 | - | |
| MW-14 | 13:50 | 4 | 14.19 | - | 5.09 | - | |
| MW-13 | 13:55 | 4 | 14.13 | - | 5.99 | - | |
| MW-22R | 14:00 | 4 | 8.50 | - | 2.53 | - | |
| MW-23R | 14:05 | 4 | 12.10 | - | 2.49 | - | |
| RW-34 | 14:10 | 6 | 7.30 | - | 4.04 | - | |
| MW-33 | 14:05 | 4 | 10.68 | - | 5.69 | - | TRACE PRODUCT |
| MW-39 | 14:15 | 4 | 8.49 | - | 5.43 | - | |
| RW-40 | 14:20 | 6 | 11.57 | 6.16 | 7.41 | - | |
| RW-36 | 14:25 | 6 | 10.69 | 6.73 | 6.82 | - | |
| MW-35 | 14:35 | 4 | 7.74 | - | 5.02 | - | |
| MW-41 | 14:40 | 4 | 9.53 | 5.94 | 5.95 | - | |
| RW-37 | 14:45 | 6 | 10.51 | 6.08 | 6.09 | - | |
| MW-38 | 14:50 | 4 | 8.19 | - | 5.71 | - | |

Well Volumes (Gallons / Linear Foot): 2" = 0.17, 4" = 0.66, 6" = 1.50, 8" = 2.60, 12" = 5.81

SOVEREIGN CONSULTING

Work Day: MONDAY Work Date: 03/15/10

Client/Owner: **Motiva Enterprises LLC** Page 3 of 3

**Well Gauge Report** Address: **25 Paidge Avenue, Brooklyn, NY** SCI Job #: **EQ017**

| Well ID | Time of Reading | Well Diameter | Total Depth | Depth to Product | Depth to Water | Volume Purged (gal.) | Comments/Product Removed |
|---|---|---|---|---|---|---|---|
| MW-7R | 15:05 | 4 | 12.40 | - | 3.78 | - | |
| MW-8 | 15:00 | 4 | 8.00 | - | 4.41 | - | |
| MW-9 | 14:55 | 4 | 7.83 | - | 4.26 | - | |
| TRW-4 | 15:10 | 6 | - | - | - | - | |
| MW-23 | 15:15 | 4 | 12.89 | - | 1.89 | - | |
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Well Volumes (Gallons / Linear Foot): 2" = 0.17, 4" = 0.66, 6" = 1.50, 8" = 2.60, 12" = 5.81

# ENVIRONMENTAL WELL, REMEDIATION COMPOUND, and SITE INSPECTION FORM

COST CENTER # - 58603

ADDRESS - 25 Paidge Ave (Brooklyn Terminal)

DATE - 03/15/10

CITY & STATE - Brooklyn, NY

| Well ID | Observations Upon Arrival: Manway Cover, Type, Size, & Condition | Observations Upon Arrival: Well Cap Type & Condition | Observations Upon Arrival: Well Lock Condition (if present) | Observations Upon Arrival: Well Pad Condition | Note Repairs Made: Detailed Explanation of Maintenance Recommended and Performed | Repair Date and PM Initials |
|---|---|---|---|---|---|---|
| MW-1 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | good | | |
| MW-3 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | good | | |
| MW-29 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | fair | | |
| MW-28 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | fair | | |
| MW-30 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | poor | well casing is broken about 10' below grade | |
| MW-4 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | fair | | |
| MW-5 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | fair | | |
| MW-6 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | good | | |
| MW-27 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | poor | | |
| MW-9 | 8-in flushmount boltdown - excellent | 4" j-plug | none | excellent | | |
| MW-8 | 8-in flushmount boltdown - excellent | 4" j-plug | none | excellent | | |
| MW-23 | 8" flush-mount finger-grip - ok | 4-in j-plug | none | fair | | |
| MW-13 | 6-in steel stand pipe | 4" j-plug | fair | fair | | |

| Remediation Compound | Type and Condition of Enclosure | Condition of Area Inside Enclosure | Equipment Condition | Emergency Contact Info Visible | Cleaning / Repairs Recommended and Conducted | Repair Date and PM Initials |
|---|---|---|---|---|---|---|
| | | | | | | |

| Number of Drums On-Site | Drum Condition | Labeled Correctly and Writing Legible | Drums Scheduled for Pickup | Drums Located to Min. Business Interference | Detailed Explanation of Any Issues Resolved | Date Drums Removed from Site and PM Initials |
|---|---|---|---|---|---|---|
| | | | | | | |

[1]Groundwater monitoring well covers must be painted in accordance with applicable regulations.

All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).

Environmental Well, Remediation Compound, and Site Inspection Form
Original Version 1.0, April 2005, Owner - John Sexton

Field Personnel Signature

Shell/Motiva 0007059

# ENVIRONMENTAL WELL, REMEDIATION COMPOUND, and SITE INSPECTION FORM

COST CENTER # - 58603

DATE - 03/15/10

ADDRESS - 25 Paidge Ave (Brooklyn Terminal)

CITY & STATE - Brooklyn, NY

| Observations Upon Arrival | | | | | Note Repairs Made | |
|---|---|---|---|---|---|---|
| Well ID | Manway Cover, Type, Size, & Condition | Well Cap Type & Condition | Well Lock Condition (if present) | Well Pad Condition | Detailed Explanation of Maintenance Recommended and Performed | Repair Date and PM Initials |
| MW-14 | 6-in steel stand pipe | 4" j-plug | fair | fair | | |
| MW-24 | steel plate (manhole cover plowed off) - ok | 4" j-plug | none | poor | | |
| MW-25 | 8" flush-mount finger-grip - ok | 4" j-plug | none | fair (a little low) | | |
| MW-26 | 24" vault - ok | 4" j-plug | none | fair | | |
| TRW-1 | 24" vault - ok | 6" rubber cap | none | asphalt | | |
| TRW-2 | 24" vault - ok | 6" j-plug | none | asphalt | | |
| MW-2 | 24" vault - ok | 4" j-plug | none | good | | |
| TRW-5 | 24" vault - ok | 6" rubber cap | none | asphalt | | |
| TRW-4 | 24" vault - ok | 6" rubber cap | none | asphalt | | |
| TRW-3 | 24" vault - ok | 6" rubber cap | none | asphalt | | |
| MW-31 | 10" flushmount boltdown stripped | 4" j-plug | none | good | | |
| TRW-6 | 24" vault - ok | 6" rubber cap | none | asphalt | | |
| MW-16 | 8" flush-mount finger-grip - ok | 4" j-plug | none | fair | | |
| MW-17 | 8" flush-mount finger-grip - ok | 6" j-plug | none | fair | | |

| Remediation Compound | Type and Condition of Enclosure | Condition of Area Inside Enclosure | Equipment Condition | Emergency Contact Info Visible | Cleaning / Repairs Recommended and Conducted | Repair Date and PM Initials |
|---|---|---|---|---|---|---|
| | | | | | | |

| Number of Drums On-Site | Drum Condition | Labeled Correctly and Writing Legible | Drums Scheduled for Pickup | Drums Located to Min Business Interference | Detailed Explanation of Any Issues Resolved | Date Drums Removed from Site and PM Initials |
|---|---|---|---|---|---|---|
| | | | | | | |

[1]Groundwater monitoring well covers must be painted in accordance with applicable regulations.

All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).



Field Personnel Signature

Shell/Motiva 0007060

# ENVIRONMENTAL WELL, REMEDIATION COMPOUND, and SITE INSPECTION FORM

COST CENTER # - 58603

DATE - 03/15/10

ADDRESS - 25 Paidge Ave (Brooklyn Terminal)

CITY & STATE - Brooklyn, NY

| Well ID | Observations Upon Arrival: Manway Cover, Type, Size, & Condition | Well Cap Type & Condition | Well Lock Condition (if present) | Well Pad Condition | Note Repairs Made: Detailed Explanation of Maintenance Recommended and Performed | Repair Date and PM Initials |
|---|---|---|---|---|---|---|
| MW-20 | 8" flush-mount finger-grip - ok | 4" j-plug | none | part of larger concrete pad | | |
| MW-18 | 8" flush-mount finger-grip - ok | 6" j-plug | none | poor | | |
| MW-19 | 8" flush-mount finger-grip - ok | 6" j-plug | none | fair | | |
| MW-32 | steel plate - manhole cover missing | 4" j-plug | none | asphalt (manhole too low) | | |
| MW-15 | 8" flush-mount finger-grip - ok | 4" j-plug | none | part of larger concrete pad | | |
| MW-33 | 6-in steel stand pipe | 4" j-plug | fair | fair | | |
| RW-34 | 8-in steel stand pipe | 6" j-plug | fair | fair | | |
| MW-39 | 6-in steel stand pipe | 4" j-plug | fair | fair | | |
| RW-40 | 8-in steel stand pipe | 6" j-plug | fair | fair | | |
| MW-35 | 6-in steel stand pipe | 4" j-plug | fair | fair | | |
| RW-36 | 8-in steel stand pipe | 6" j-plug | fair | fair | | |
| MW-41 | 6-in steel stand pipe | 4" j-plug | fair | fair | | |
| RW-37 | 8-in steel stand pipe | 6" j-plug | fair | fair | | |
| MW-38 | 6-in steel stand pipe | 4" j-plug | fair | fair | | |

| Remediation Compound | Type and Condition of Enclosure | Condition of Area Inside Enclosure | Equipment Condition | Emergency Contact Info Visible | Cleaning / Repairs Recommended and Conducted | Repair Date and PM Initials |
|---|---|---|---|---|---|---|
| | | | | | | |

| Number of Drums On-site | Drum Condition | Labeled Correctly and Writing Legible | Drums Scheduled for Pickup | Drums Located to Min Business Interference | Detailed Explanation of Any Issues Resolved | Date Drums Removed from Site and PM Initials |
|---|---|---|---|---|---|---|
| | | | | | | |

[1]Groundwater monitoring well covers must be painted in accordance with applicable regulations.

All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).



Field Personnel Signature

Shell/Motiva 0007061

# ENVIRONMENTAL WELL, REMEDIATION COMPOUND, and SITE INSPECTION FORM

COST CENTER # - 58603

DATE - 03/15/10

ADDRESS - 25 Paidge Ave (Brooklyn Terminal)

CITY & STATE - Brooklyn, NY

| Well ID | Observations Upon Arrival: Manway Cover Type, Size, & Condition | Well Cap Type & Condition | Well Lock Condition (if present) | Well Pad Condition | Note Repairs Made: Detailed Explanation of Maintenance Recommended and Performed | Repair Date and PM Initials |
|---|---|---|---|---|---|---|
| MW-7R | 8-in flushmount boltdown - excellent | 4-in j-plug | none | excellent | | |
| MW-22R | 8-in flushmount boltdown - excellent | 4-in j-plug | none | excellent | | |
| MW-23R | 8-in flushmount boltdown - excellent | 4-in j-plug | none | excellent | | |
| MW-42 | 8-in flushmount boltdown - excellent | 4-in j-plug | none | excellent | | |
| MW-43 | 8-in flushmount boltdown - excellent | 4-in j-plug | none | excellent | | |
| MW-44 | 8-in flushmount boltdown - excellent | 4-in j-plug | none | excellent | | |
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| Remediation Compound | Type and Condition of Enclosure | Condition of Area Inside Enclosure | Equipment Condition | Emergency Contact Info Visible | Cleaning / Repairs Recommended and Conducted | Repair Date and PM Initials |
|---|---|---|---|---|---|---|
| | | | | | | |

| Number of Drums On-site | Drum Condition | Labeled Correctly and Writing Legible | Drums Scheduled for Pickup | Drums Located to Min Business Interference | Detailed Explanation of Any Issues Resolved | Date Drums Removed from Site and PM Initials |
|---|---|---|---|---|---|---|
| | | | | | | |

[1]Groundwater monitoring well covers must be painted in accordance with applicable regulations.

All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).



Field Personnel Signature

Shell/Motiva 0007062

**Sovereign Consulting Inc.**
**Tailgate Safety Meeting Form**
(To be submitted with field notes to Project Manager each day)

| | |
|---|---|
| **Project Name:** Motiva Terminal | **Date:** 03/15/10 |
| **Location:** 25 Paidge Avenue Brooklyn NY | **Weather:** windy & overcast |
| **Project Manager [Print]:** Greg Basilgic (sp?) | **Temp:** ~45°F |
| **Contractors/Subcontractors:** Longshore Env. | |
| **Scope of Work:** Well gauging | |

**Task Hazards:** (check all that apply) *requires Permit to Work

| | | | |
|---|---|---|---|
| Cold Heat Stress ☐ | Excavations* ☐ | Haz. Substances ☐ | Sanitation ☐ |
| Confined Spaces* ☐ | Explosion ☐ | Heavy Equipment ☐ | Sharp Objects ☐ |
| Cutting/Welding* ☐ | Falling Objects ☐ | Ladders* ☐ | Tools (hand) ☐ |
| Electrical ☐ | Fire ☐ | Noise ☒ | Traffic (trucks) ☒ |
| Environmental Hazard ☐ | Insects/Biological ☐ | Slip/Trip Hazards (uneven) ☒ | Weather (wind) ☒ |
| Elevated Work* ☐ | Flying Debris ☐ | Overhead ☐ | Other (describe below) ☐ |

**Engineering Controls / Work Practices:**

**Levels of Protection / Personal Protective Equipment:**

| | | |
|---|---|---|
| Level A ☐ | Eye & Face Protection ☒ | Safety Glasses ☒ Face Shield ☐ |
| Level B ☐ | Foot Protection ☒ | Steel Toes ☒ Hip Boots/Waders ☐ |
| Level C ☐ | Hand Protection ☒ | Nitrile Gloves ☒ Leather Gloves ☐ Full Arm Chemical ☐ |
| Level D ☒ | Head Protection ☒ | Hard Hat ☒ |
| | Hearing Protection ☐ | Ear Muffs/Plugs ☐ |
| | Other ☒ | Barricades ☐ High Visibility Safety Vests ☒ Cones/Flags ☐ |
| | | Amber Light/Vehicle Hazards ☐ Crash Truck ☐ Tyvek/Coveralls ☐ |

| **Air Monitoring/Sampling** | **Emergency Response** | | |
|---|---|---|---|
| LEL/O2/CO/H2S Meter ☐ | Emergency Alarms ☐ | First Aid Kit ☐ | Cell Phone (none) ☒ |
| FID/PID ☐ | Emergency Contacts ☐ | Spill Kit ☐ | Fire Extinguisher ☐ |
| Detector Tubes ☐ | Evacuation Routes ☒ | Hospital Route ☒ | Pedestrian Safety ☐ |
| Dust Monitor ☐ | Explosion/Fire ☐ | Work Area ☐ | Vapor/Dust Suppression ☐ |
| Personal Air ☐ | Medical Emergency ☐ | Smoking/Break Area ☐ | |

**Are site workers Fit To Work?** Yes ☒ No ☐

**Comments:**

**Name & Title of Person Conducting Tailgate Safety Meeting:** Matt Abbott

**Signature:** [signature] **Date:** 3/15/10

SOVEREIGN CONSULTING

Work Day: Tuesday Work Date: 03-02-10

Client/Owner: **Motiva Enterprises LLC** Page ____ of ____

**Well Gauge Report** Address: **25 Paidge Avenue, Brooklyn, NY** SCI Job #: **EQ017**

| Well ID | Time of Reading | Well Diameter | Total Depth | Depth to Product | Depth to Water | Volume Purged (gal.) | Comments/Product Removed |
|---|---|---|---|---|---|---|---|
| 1 | | | | | 2.46 | | |
| 3 | | | | | 1.28 | | |
| 29 | | | | | 1.04 | | |
| 30 | | | | | Under | Water. | |
| 4 | | | | | 1.59 | | |
| 5 | | | | | 1.06 | | |
| 28 | | | | | 0.91 | | |
| 27 | | | | | 1.54 | | |
| 6 | | | | | 2.34 | | |
| 21R | | | | | 2.96 | | Replacement well in Area of MW-21 |
| 22R | | | | | 2.81 | | " MW-22 |
| 13 | | | | | 6.49 | | |
| 14 | | | | | 5.44 | | |
| 23 | | | | | 2.18 | | |
| 24 | | | | | 3.14 | | |
| A | | | | | 2.90 | | Buckeye well (South - parking lot) |
| B | | | | | 2.91 | | Buckeye well (North - parking lot) |
| C | | | | | 2.87 | | Buckeye well (Middle - driveway) |
| TRW1 | | | | | Under | Water | |
| 26 | | | | 2.85 | 2.86 | | |
| TRW2 | | | | | 2.79 | | |

See Paul Y. for ID's

Well Volumes (Gallons / Linear Foot): 2" = 0.17, 4" = 0.66, 6" = 1.50, 8" = 2.60, 12" = 5.81

SOVEREIGN CONSULTING

Work Day: Tuesday Work Date: 03-02-10

Client/Owner: **Motiva Enterprises LLC** Page ____ of ____

**Well Gauge Report** Address: **25 Paidge Avenue, Brooklyn, NY** SCI Job #: **EQ017**

| Well ID | Time of Reading | Well Diameter | Total Depth | Depth to Product | Depth to Water | Volume Purged (gal.) | Comments/Product Removed |
|---|---|---|---|---|---|---|---|
| 25 | | | | | 2.21 | | |
| 2 | | | | 2.56 | 2.81 | | .25 |
| TRW3 | | | | | Under | Water | |
| TRW4 | | | | | Under | Water | |
| TRW5 | | | | | Under | Water | |
| 31 | | | | 2.39 | 2.93 | | .75 |
| 20 | | | | | 2.18 | | |
| 15 | | | | | 2.45 | | |
| 16 | | | | | 2.12 | | |
| 17 | | | | | 2.27 | | |
| 18 | | | | | 2.26 | | |
| 19 | | | | | 2.72 | | |
| 32 | | | | | 2.77 | | |
| 9 | | | | | 2.97 | | |
| 8 | | | | | 3.04 | | |
| TR | | | | | 2.52 | | Replacement well in area of RW-7 |
| 34 | | | | | 6.33 | | |
| 33 | | | | | 4.85 | | |
| 39 | | | | | 4.68 | | |
| 40 | | | | 6.92 | 7.04 | | .25 |
| 35 | | | | | 5.61 | | |

Well Volumes (Gallons / Linear Foot): 2" = 0.17, 4" = 0.66, 6" = 1.50, 8" = 2.60, 12" = 5.81

**Sovereign Consulting Inc.**
**Tailgate Safety Meeting Form**
(To be submitted with field notes to Project Manager each day)

| | |
|---|---|
| **Project Name:** Motiva LLC | **Date:** 03-02-10 |
| **Location:** 25 Paige Ave Brooklyn NY | **Weather:** Sunny |
| **Project Manager [Print]:** Doug Byers (Sovereign) | **Temp:** 38°F |
| **Contractors/Subcontractors:** Longshore Env. | |
| **Scope of Work:** well gauging / prod. recov. / develop (6) new wells | |

**Task Hazards:** (check all that apply) *requires Permit to Work

| | | | |
|---|---|---|---|
| Cold Heat Stress ☐ | Excavations* ☐ | Haz. Substances ☐ | Sanitation ☐ |
| Confined Spaces* ☐ | Explosion ☐ | Heavy Equipment ☐ | Sharp Objects ☐ |
| Cutting/Welding* ☐ | Falling Objects ☐ | Ladders* ☐ | Tools ☒ |
| Electrical ☐ | Fire ☐ | Noise ☐ | Traffic ☒ |
| Environmental Hazard ☐ | Insects/Biological ☐ | Slip/Trip Hazards ☒ | Weather ☐ |
| Elevated Work* ☐ | Flying Debris ☐ | Overhead ☐ | Other (describe below) ☐ |

**Engineering Controls / Work Practices:**

**Levels of Protection / Personal Protective Equipment:**

| | | |
|---|---|---|
| Level A ☐ | Eye & Face Protection ☒ | Safety Glasses ☒ Face Shield ☐ |
| Level B ☐ | Foot Protection ☒ | Steel Toes ☒ Hip Boots/Waders ☐ |
| Level C ☐ | Hand Protection ☒ | Nitrile Gloves ☒ Leather Gloves ☐ Full Arm Chemical ☐ |
| Level D ☒ | Head Protection ☒ | Hard Hat ☒ |
| | Hearing Protection ☐ | Ear Muffs/Plugs ☐ |
| | Other ☒ | Barricades ☐ High Visibility Safety Vests ☒ Cones/Flags ☒ |
| | | Amber Light/Vehicle Hazards ☐ Crash Truck ☐ Tyvek/Coveralls ☐ |

| Air Monitoring/Sampling | | Emergency Response | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☐ | Emergency Alarms | ☐ | First Aid Kit | ☐ | Cell Phone | ☐ |
| PID/FID | ☐ | Emergency Contacts | ☐ | Spill Kit | ☐ | Fire Extinguisher | ☐ |
| Detector Tubes | ☐ | Evacuation Routes | ☐ | Hospital Route | ☐ | Pedestrian Safety | ☐ |
| Dust Monitor | ☐ | Explosion/Fire | ☐ | Work Area | ☐ | Vapor/Dust Suppression | ☐ |
| Personal Air | ☐ | Medical Emergency | ☐ | Smoking/Break Area | ☐ | | |

**Are site workers Fit To Work?** Yes ☑ No ☐

**Comments:**

**Name & Title of Person Conducting Tailgate Safety Meeting:** Edgar Lucero

**Signature:** <see reverse> **Date:**



Shell/Motiva 0007066

**SHELL**
**Life-Saving Rules**

Work with a valid Work Permit when required

Verify isolation before work begins and use the specified life protecting equipment

Obtain authorisation before overriding or disabling safety critical equipment

Conduct gas tests when required

Obtain authorisation before entering a confined space

Protect yourself against a fall when working at height

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth within this project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

### SIGN IN

MEETING ATTENDEES

| Name [Print] | Company | Signature |
|---|---|---|
| Juan A Franco | Long shore | [signature] |
| Edgar Lucero | Long shore | Edgar Lucero |
| | | |
| | | |
| | | |

| | | | |
|---|---|---|---|
| Have all personnel been informed of work to be completed? | YES | NO | NA |
| Has fuel delivery service been informed? | YES | NO | NA |
| Is fuel delivery due today? | YES | NO | NA |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | NA |
| Are work areas controlled to protect workers, site staff, and the public? | YES | NO | NA |
| Do all workers have their API Safety Key card? | YES | NO | NA |
| Have all reviewed and understand the Shell 12 Life-Saving Rules | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| | | | | |

### SIGN OUT

| | | | |
|---|---|---|---|
| Has the work area been left tidy and safe? | YES | NO | NA |
| Are site personnel aware of status of work? | YES | NO | NA |
| Are changes to equipment documented and communicated? | YES | NO | NA |
| All incidents, near misses, unsafe situations reported? | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| | | | | |

**SHELL**
**Life-[illegible]ing R[illegible]**

Do not walk under a suspended load

No alcohol or drugs wh[illegible] working or driving

Wear y[illegible] [illegible]elt

Do not smoke outsi[illegible] designated smoking a[illegible]

While driving, do not u[illegible] your phone and do n[illegible] exceed speed limits

Follow prescribed Jour[illegible] Management Plan



Shell/Motiva 0007067

FIELD FORM (Revised 01/05/06)

| | | |
|---|---|---|
| Date: 03-02-10 | Field Form #: 5918 | Site: 25 Paige Av |
| Day: Tuesday | Client: SOV | Brooklyn NY |
| | Region: II | |

| |
|---|
| Work Description: Well Gauging and Recovery Product |
| |
| |

| ☐ Unit Cost ☒ T&M | | Time | | | | |
|---|---|---|---|---|---|---|
| Personnel | Title | Start | On-Site | Off-site | Finish | Total |
| Edgar Lucero | | 06.00 | 8:30 | 1400 | 1800 | 1200 |
| Juan Franco | | " " | " " | " " | " " | " " |
| | | | | | | |

| UNIT COSTS | | | MATERIALS | |
|---|---|---|---|---|
| No. | Task No. | Description | No. | Description |
| | 1.1 | Survey Monitoring Wells (site) | | Lock |
| | 1.2 | Sensitive Receptor Survey (site) | | 2" Gripper Plug |
| | 2.1.1 | Drilling Oversight (half day) | | 4" Gripper Plug |
| | 2.2.2 | Drilling Oversight (full day) | | 2" EnviroCap |
| | 2.3.1 | GeoProbe (half day) | | 4" EnviroCap |
| | 2.3.2 | GeoProbe (full day) | | Disposable Bailer |
| | 4.1.1 | GW Monitoring 1-5 wells (per site) | | 55 Gallon Drum |
| | 4.1.2 | GW Monitoring 6-10 wells (per site) | | Tedlar Air Bag |
| | 4.1.3 | GW Monitoring Add. Wells >10(per well) | | Generator |
| | 4.2.1 | Potable Sampling During O&M (well) | | Cones |
| | 4.2.2 | Potable Sampling Separate Visit (well) | | Drum Sampler |
| | 4.3.1 | Product Bailing During O&M (well) | | ORM (lbs.) |
| | 4.3.2 | Product Bailing Separate Visit (site) | | ORM Socks (#) |
| | 4.4 | MW Pad Replacement (well) | | Concrete |
| | 5.1 | O&M-unscheduled site visit (visit) | | |
| | 5.2 | O&M - SVE/AS no treatment (visit) | | |
| | 5.3 | O&M - SVE/AS with treatment(visit) | | |
| | 5.4 | Product Recovery System (visit) | | |
| | 5.5 | Carbon Replacement Liquid (per lb.) | | |
| | 5.6 | Carbon Replacement Vapor (per lb.) | | |
| | 7.1.1 | Construction Monitoring Half Day | | |
| | 7.1.2 | Construction Monitoring Full Day | | |
| | 7.2.1 | Environmental Monitoring Half Day | | |
| | 7.2.2 | Environmental Monitoring Full Day | | |
| | 8.0 | Hydraulic Lift Oversight (event) | | |
| | 9.0 | Waste/Fuel Oil Oversight (event) | | |
| | 11.8.1 | Field Vehicle (per hour) | | |
| | 11.8.2 | Field Vehicle (half day) | | |
| | 11.8.3 | Field Vehicle (full day) | | |
| | 11.8.4 | Field Vehicle (Week) | | |
| | 11.9 | Field Vehicle - Heavy Duty (per day) | | |

*LONGSHORE ENVIRONMENTAL INC.*

# DOCUMENT INFO

15

DocID: 00000428

Filename: 58603-2010-10-30-OTH-01 (Quarterly Site Summary - Shell).pdf

# SHELL OIL PRODUCTS US
# QUARTERLY ENVIRONMENTAL SITE SUMMARY FOR MOTIVA ENTERPRISES LLC HSE STANDARD 325
# BROOKLYN TERMINAL
# 3rd QUARTER 2010

**EXPENSE BUDGET INFORMATION**

Current Year Budget: $79,161
Expenses Incurred: $82,379
5-Year Forecast: 2011 - $34,000 2012- $15,000 2013- $ 2014- $ 2015-
Monthly well gauging / product recovery via hand bailing.
Annual groundwater monitoring of all wells.

| Question | Response (Y, N) | Explanation |
|---|---|---|
| **Does our plume migrate off-site?** | **Y** | **Low levels of MTBE and Benzene are detected above the standard at site perimeter wells. Updated groundwater elevation contours indicate groundwater is migrating off-site.** |
| **Are there down gradient receptors?** | **Y** | **Surface water (Newtown Creek) immediately adjacent to terminal.** |
| **Does a Third Party plume encroach on our property?** | **N** | |
| **Is our Plume commingled with one or more other plumes?** | **N** | |
| **Plume delineated to regulatory standards on-site?** | **Y** | **Results above standards for Benzene and MTBE near property line. However, regulators have not required any additional delineation.** |
| **Plume delineated to regulatory standards off-site?** | **NA** | **No off-site wells** |

**SITE DRIVERS:** Liquid Phase Hydrocarbons (LPH or product) was detected in interior site monitoring wells during this period.

## CURRENT ACTIVITIES

1. Monthly well gauging / product recovery via hand bailing.
2. Annual groundwater monitoring of wells.
3. Quarterly groundwater sampling on northern perimeter monitoring wells.

## PROJECTED WORK

1. Perform monthly well gauging and product recovery.
2. Evaluate LNAPL plume behavior through the LNAPL Source Zone Depletion model.

**OTHER RECOMMENDATIONS/COMMENTS**

Rehab monitoring wells that conditions warrant the repairs.

**PATH TO CLOSURE**

Continue product recovery via hand bailing. Remove LPH to maximum extent practical. Following mitigation of LPH, conduct a risk assessment and evaluate recoverability of LPH.



Confidential Business Information

SITE LOCATION INFORMATION
Incident No.: 97094981
Address: 25 Paidge Ave. Brooklyn, NY

**RECENT ONSITE GROUNDWATER CONCENTRATIONS (Include last four sampling events. List each perimeter well and a representative sample of source wells)**

| Well Number | Perimeter or Source | Date | Benzene (ppb) | BTEX (ppb) | MTBE (ppb) |
|---|---|---|---|---|---|
| 1 | Perimeter | 06/26/07 | <1.0 | <6.0 | <1.0 |
| | | 05/12/08 | <1.0 | <4.0 | <1.0 |
| | | 04/29/09 | <1.0 | <4.0 | <1.0 |
| | | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | | | | |
| 3 | Perimeter | 06/26/07 | <1.0 | <6.0 | <1.0 |
| | | 05/12/08 | <1.0 | <4.0 | <1.0 |
| | | 04/29/09 | <1.0 | <4.0 | <1.0 |
| | | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | | | | |
| 6 | Perimeter | 06/26/07 | <1.0 | <6.0 | <1.0 |
| | | 05/12/08 | <1.0 | <4.0 | <1.0 |
| | | 04/29/09 | <1.0 | <4.0 | <1.0 |
| | | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | | | | |
| 7 | Perimeter | 06/27/07 | <1.0 | <6.0 | <1.0 |
| | | 05/12/08 | <1.0 | <4.0 | <1.0 |
| | | | Well Abandon during bulkhead construction | | |
| 7R | Perimeter | 04/15/10 | **16.9** | 16.9 | **31.5** |
| | | 07/27/10 | <5.0 | <5.0 | **25.6** |
| | | | | | |
| 8 | Perimeter | 05/12/08 | <1.0 | <4.0 | 6.3 |
| | | 04/29/09 | **2.4** | 2.4 | 6.6 |
| | | 04/15/10 | **44.9** | 44.9 | **37.6** |
| | | 07/27/10 | **24.3** | 24.3 | **39.5** |
| | | | | | |
| 9 | Perimeter | 05/12/08 | <1.0 | <4.0 | <1.0 |
| | | 04/29/09 | <1.0 | <4.0 | 4.7 |
| | | 04/15/10 | **12.5** | 12.5 | **15.2** |
| | | 07/27/10 | <5.0 | <5.0 | <5.0 |
| | | | | | |
| 13 | Perimeter | 06/26/07 | <1.0 | <6.0 | <1.0 |
| | | 05/12/08 | <1.0 | <4.0 | <1.0 |
| | | 04/29/09 | <1.0 | <4.0 | <1.0 |
| | | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | | | | |
| 14 | Perimeter | 06/26/07 | <1.0 | <6.0 | <1.0 |
| | | 05/12/08 | <1.0 | <4.0 | <1.0 |
| | | 04/29/09 | <1.0 | <4.0 | <1.0 |
| | | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | | | | |
| 21 | Perimeter | 06/26/07 | **7.07** | 27.2 | **10.7** |
| | | 05/12/08 | <1.0 | <4.0 | **93.2** |
| | | | Well Abandon during bulkhead construction | | |
| 21R | Perimeter | 04/15/10 | **139** | 247 | <5.0 |
| | | 07/27/10 | **160** | 303.8 | **14.2** |
| | | | | | |
| 22 | Perimeter | 06/26/07 | **444** | 850 | **13.8** |
| | | 05/12/08 | **270** | 486 | **19.6** |
| | | | Well Abandon during bulkhead construction | | |
| 22R | Perimeter | 04/15/10 | **386** | 2,705 | **42.8** |



Confidential Business Information

SITE LOCATION INFORMATION
Incident No.: 97094981
Address: 25 Paidge Ave. Brooklyn, NY

| Well Number | Perimeter or Source | Date | Benzene (ppb) | BTEX (ppb) | MTBE (ppb) |
|---|---|---|---|---|---|
| **22R** | | 07/27/10 | **337** | 2,525 | **31.4** |
| | | | | | |
| **23** | **Perimeter** | 06/26/07 | <1.0 | 4.37 | 5.64 |
| | | 05/12/08 | <1.0 | <4.0 | 2.70 |
| | | 04/29/09 | <1.0 | <4.0 | 2.80 |
| | | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | | | | |
| **24** | **Perimeter** | 06/26/07 | <1.0 | <6.0 | 5.13 |
| | | 05/12/08 | **144** | 265 | **621** |
| | | 04/29/09 | **11.3** | 17.3 | **37.1** |
| | | 04/15/10 | <5.0 | <5.0 | 6.63 |
| | | | | | |
| **27** | **Perimeter** | 06/26/07 | <1.0 | <6.0 | 8.86 |
| | | 05/12/08 | <1.0 | <4.0 | <1.0 |
| | | 04/29/09 | <1.0 | <4.0 | <1.0 |
| | | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | | | | |
| **28** | **Perimeter** | 06/26/07 | <1.0 | <6.0 | 5.75 |
| | | 05/12/08 | <1.0 | 2.40 | 6.40 |
| | | 04/29/09 | <1.0 | <4.0 | 3.90 |
| | | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | | | | |
| **42** | **Perimeter** | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | | | | |
| **43** | **Perimeter** | 04/15/10 | <5.0 | <5.0 | **17.5** |
| | | | | | |
| **44** | **Perimeter** | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | | | | |
| **19** | **Source** | 06/26/07 | **114** | 139 | **12** |
| | | 05/12/08 | **11.4** | 13 | 4.20 |
| | | 04/29/09 | **7.5** | 11.9 | 7.70 |
| | | 04/15/10 | **11.2** | 62.4 | 5.59 |
| | | | | | |
| **18** | **Source** | 06/26/07 | **83.1** | 129 | **12.2** |
| | | 05/12/08 | **49.8** | 83.2 | 3.7 |
| | | 04/29/09 | **76.9** | 123 | 6.6 |
| | | 04/15/10 | **36.6** | 71.8 | <5.0 |
| | | | | | |
| **15** | **Source** | 06/26/07 | **234** | 319 | **54.7** |
| | | 05/12/08 | **264** | 381 | **40.9** |
| | | 04/29/09 | **165** | 320 | **45.9** |
| | | 04/15/10 | **839** | 9,266 | **38.8** |
| **Regulatory Standards** | | | **0.7** | **NA** | **10** |

**RECENT OFFSITE GROUNDWATER CONCENTRATIONS (Include last four sampling events. List representative sample of wells)**

| Well Number | Date | Benzene (ppb) | BTEX (ppb) | MTBE (ppb) |
|---|---|---|---|---|
| **Not Applicable** | | | | |



Confidential Business Information Shell/Motiva 0007072

SITE LOCATION INFORMATION
Incident No.: 97094981
Address: 25 Paidge Ave. Brooklyn, NY

**FREE PRODUCT (List the last four gauging events)**

| Well | Offsite or Onsite | Thickness | Date |
|---|---|---|---|
| **MW-2** | **Onsite** | 0.06 | 06/21/10 |
| | | 0.08 | 07/02/10 |
| | | 0.08 | 08/13/10 |
| | | 0.07 | 09/01/10 |
| | | | |
| **MW-4** | **Onsite** | 0.06 | 06/21/10 |
| | | 0.02 | 07/02/10 |
| | | 0.15 | 08/13/10 |
| | | 0.03 | 09/01/10 |
| | | | |
| **MW-26** | **Onsite** | 0.01 | 06/21/10 |
| | | 0.00 | 07/02/10 |
| | | 0.03 | 08/13/10 |
| | | 0.08 | 09/01/10 |
| | | | |
| **MW-31** | **Onsite** | 0.82 | 06/21/10 |
| | | 0.80 | 07/02/10 |
| | | 0.75 | 08/13/10 |
| | | 0.28 | 09/01/10 |
| | | | |
| **RW-34** | **Onsite** | 0.03 | 06/21/10 |
| | | 0.02 | 07/02/10 |
| | | 0.10 | 08/13/10 |
| | | 0.03 | 09/01/10 |
| | | | |
| **RW-36** | **Onsite** | 0.25 | 06/21/10 |
| | | 0.20 | 07/02/10 |
| | | 0.09 | 08/13/10 |
| | | 0.22 | 09/01/10 |
| | | | |
| **RW-37** | **Onsite** | 0.02 | 06/21/10 |
| | | 0.05 | 07/02/10 |
| | | 0.03 | 08/13/10 |
| | | 0.01 | 09/01/10 |
| | | | |
| **RW-40** | **Onsite** | 0.05 | 06/21/10 |
| | | 0.00 | 07/02/10 |
| | | 0.03 | 08/13/10 |
| | | 0.00 | 09/01/10 |
| | | | |
| **MW-41** | **Onsite** | 0.29 | 06/21/10 |
| | | 0.06 | 07/02/10 |
| | | 0.08 | 08/13/10 |
| | | 0.03 | 09/01/10 |
| | | | |
| **MW-45** | **Onsite** | NM | 06/21/10 |
| | | 0.04 | 07/02/10 |
| | | NM | 08/13/10 |
| | | 0.04 | 09/01/10 |
| | | | |
| **TW-01** | **Onsite** | NM | 06/21/10 |



Confidential Business Information Shell/Motiva 0007073

SITE LOCATION INFORMATION
Incident No.: 97094981
Address: 25 Paidge Ave. Brooklyn, NY

| Well | Offsite or Onsite | Thickness | Date |
|---|---|---|---|
| **TW-01** | **Onsite** | 0.07 | 07/02/10 |
| | | 0.02 | 08/13/10 |
| | | 0.01 | 09/01/10 |
| | | | |
| **TW-05** | **Onsite** | 0.06 | 06/21/10 |
| | | 0.14 | 07/02/10 |
| | | 0.08 | 08/13/10 |
| | | 0.02 | 09/01/10 |
| | | | |
| **TW-06** | **Onsite** | 0.18 | 06/21/10 |
| | | 0.24 | 07/02/10 |
| | | 0.06 | 08/13/10 |
| | | NM | 09/01/10 |

Notes: NM: Not measured
NS: Not sampled
ND: Not detected

**CHEMICALS OF CONCERN**: Benzene and MTBE

**SITE HISTORY**
Chronological List of the Major Events
(date-event)

1. 1999 began operation of LNAPL recovery system
2. Annual groundwater monitoring performed yearly between 06/03and 06/09
3. Wells MW-21 and MW-22 were abandoned in October 2008 as part of the bulkhead construction project. During the construction MW-7 has been buried and is not accessible.
4. MW-7, MW-21, and MW-22 replaced 02/10
5. MW-42, MW-43, and MW-44 installed 02/10
6. 550 gallon AST removed 02/10
7. Annual groundwater sampling conducted 04/10
8. Quarterly groundwater sampling conducted 07/10

**REGULATORY COMPLIANCE**

1. Annual groundwater sampling in accordance with bulk facility license
2. UST closure and land farming soil remediation 1990
3. Investigative soil boring program November 1995
4. SVE/Pump/SPG feasibility testing June 1996.
5. Product recovery system installation October 1999.
6. Product recovery system operation from 1999 through 2007.
7. NYDEC letter dated January 3, 2008 approved deactivation of the LPH recovery system and the implementation of monthly hand-bailing, as the method of product recovery.



Confidential Business Information Shell/Motiva 0007074

# HSE Standard 325
# Guidance for Groundwater Monitoring Plans
# For Release Detection At Distribution Terminals

**Objective**

Control measures are needed for early detection of potential new releases and preventing offsite migration of contamination consistent with Shell OP US (SOP US) and Motiva Enterprises LLC HSE Standard 325 Revised 12/02 (Standard 325). Control measures may include:

- Groundwater monitoring wells along downgradient property boundary with routine sampling
- Groundwater monitoring wells along upgradient and sidegradient property boundaries (where potential exists for offsite sources) with routine sampling
- Routine visual inspections of aboveground pipelines and connections
- Routine monitoring of interstitial area with double bottom aboveground tanks

This document provides information regarding a specific plan to comply with Standard 325 including roles and responsibilities for terminal personnel and SOP US Environmental Engineers (EEs). The SOP US EE and the appropriate terminal personnel should identify and note which of the following mechanisms will be utilized to comply with Standard 325. A copy of the plan will be maintained at the terminal in a binder referred to as the "Perimeter Monitoring binder".

## I Groundwater Gauging and Analytical Sampling

a) Identify Designated Monitoring Wells

- Designated monitoring wells – the first step is to select monitoring wells that will be included in the sampling plan and list them. The selection will be based on proximity to downgradient property boundary or offsite sources of contamination.
- Note any new monitoring wells that have to be installed.
- Establish Perimeter Monitoring binder with well completion reports and well construction diagrams, if available.

b) Groundwater Gauging and Analytical Sampling Frequency

- Document groundwater gauging frequency of designated monitoring wells. Gauging activities should be conducted on a quarterly basis, unless an alternate schedule is selected based on site-specific conditions. If an alternate schedule is selected, the rationale should be documented in the terminal files and noted in the sampling plan. The basis for an alternate schedule might include regulatory requirements, geologic conditions, facility design, or operational practices. Groundwater gauging should be coordinated by the EE if there is an open environmental incident. Groundwater gauging should be



Confidential Business Information

conducted by terminal personnel if there is not an open environmental incident. Note who will perform the gauging.

- Document groundwater analytical sampling frequency of designated monitoring wells. Sampling activities should be conducted on an annual basis unless an alternate schedule is selected based on site specific conditions. If an alternate schedule is selected, then the rationale should be documented in the terminal files and noted in the sampling plan. The basis for an alternate schedule might include regulatory requirements, geologic conditions, facility design, or operational practices. Groundwater analytical sampling should be coordinated by the EE if there is an open environmental incident. If there isn't an open environmental incident, groundwater analytical sampling should be coordinated by the EE or by terminal personnel. Note who will perform the groundwater analytical sampling.

c) Groundwater Gauging Methods

- Proposed method is clear plastic disposable bailer. The disposable bailer will be used to extract a sample of water from each well. Visually observe whether product is present in the bailer and record observation. Enter results on the attached excel spreadsheet entitled Groundwater Gauging Data. Water sample should be released back down the well and the bailer re-used if free product is not detected. Bailer should be rinsed off in a bucket with Alconox (or similar) soap and water after gauging each well.

d) Groundwater Analytical Sampling Methods

- Document sampling protocol to be used, i.e., purge or no-purge, specific or non-specific sample collection protocol. No-purge sampling will be used to collect groundwater samples for lab analysis unless regulatory requirements dictate sampling procedures. Additionally, it will not be necessary to follow any particular sample collection protocol if terminal personnel are collecting samples solely for the purpose of compliance with Standard 325. In this case, the bailer will be lowered into the well, the bailer will be allowed to fill with water, the bailer will be removed from well and water from the bailer will be used to fill VOA jars. Filled VOA jars should be completely filled with water. Ensure that VOA jars do not have air bubbles by gently turning jar upside down and looking for bubbles.

  Chemicals to be analyzed include BTEX and MTBE. Ethanol should be included if ethanol is stored at the terminal. If an alternate set of parameters is selected, then the rationale should be documented in the terminal files and noted in the sampling plan. The basis for an alternate schedule might include regulatory requirements, geologic conditions, facility design, or operational practices.

  - If groundwater analytical sampling is being coordinated by the EE and there is an active incident number, results should be entered into the Groundwater Analytical and Gauging Data spreadsheet included within the terminal site summary documents. The site summary documents are sent to the terminal personnel on a regular basis. Terminal personnel should



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save these files electronically as well as print out a hard copy and insert into the Perimeter Monitoring binder.

- If terminal personnel are conducting groundwater gauging, results should be entered into the Groundwater Gauging Data spreadsheet and filed electronically as well as hard copy into the Perimeter Monitoring binder. See attached excel spreadsheets.
- If terminal personnel are conducting groundwater analytical sampling, results should be sent to the EE. The EE will then be responsible for entering the data in the Groundwater Analytical and Gauging Data spreadsheet and reviewing for comparison to background and action levels.
- Occasionally a well is sampled and it is observed to be dry. If this condition is encountered, please follow these steps:

  1) Measure the total depth of the well and compare this depth to the construction depth. If the measured depth is shallower than the constructed depth, there may be an obstacle in the well that is preventing measurement of the water table. The obstacle may be a tool, pump, silt or mechanical failure of the well. Call the EE.
  2) If the measured depth and well construction depth is the same, then the water table has probably fallen below the bottom of the well screen. Call the EE.

## II Monitoring of Double Bottom Tanks

a) Monitoring Frequency

- Document inspection frequency of the double bottom tank area and/or interstitial monitoring devices.
- Monitoring frequency should be conducted in accordance with the inspection requirements listed in the operational plan for the terminal. If an alternate schedule is selected the rationale should be documented in the terminal files and noted in the sampling plan for the terminal. The basis for an alternate schedule might include regulatory requirements, geologic conditions, facility design, or operational practices.

b) Monitoring Method

- The inspection should be done by terminal personnel and should check for the presence of product or staining. If the double bottom tanks are equipped with interstitial monitoring devices, these should be checked for the presence of liquid (water or product).

## III Monitoring of Product Piping

a) Monitoring Frequency

- Document inspection frequency of the product piping.



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- Frequency should be conducted in accordance with the inspection requirements listed in the operational plan for the terminal. If an alternate schedule is selected, the rationale should be documented in the terminal files and noted in the sampling plan for the terminal. The basis for an alternate schedule might include regulatory requirements, geologic conditions, facility design, or operational practices. No additional inspection or testing is required for buried lines if downgradient groundwater monitoring wells are strategically located to detect potential releases from the system.

b) Monitoring Method

- Terminal personnel should conduct the inspection and check for the presence of product or staining.

**IV Database**

A database should be established for each facility. The database should be in Excel format. A spreadsheet template is attached.

a) Well gauging and sampling will be documented in the spreadsheet to record data measured in the field from each designated well. If there is an active environmental incident, the EE will provide the terminal manager with analytical and gauging data through submittal of the terminal site summary document. The site summary document contains an excel spreadsheet dedicated to perimeter monitoring analytical and gauging data entitled Groundwater Analytical and Gauging Data. If there is not an active incident, and terminal personnel are available to help conduct gauging events, the data should be documented in the Perimeter Monitoring Gauging data spreadsheet included as an attachment.

b) Monitoring activities for double bottoms will be documented in the terminal operating records as described in their procedures. If records are maintained in an alternate location, then the sampling plan should indicate location for the records.

c) Monitoring activities for product pipelines will be documented in the terminal operating records as described in their procedures. If records are maintained in an alternate location, then the sampling plan should indicate location for the records.

**V Action (Trigger) Levels**

Action levels need to be established in order for the terminal personnel to know when to make notification that a potential release may have occurred. Background levels have to be established for each well and documented in the database. Adequate historical data may already exist so background levels can be established. If this data does not exist, then four quarters of gauging and a groundwater analytical



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sampling event should be conducted in order to establish background levels. The EE will assist in establishing background concentrations and the action level for each well.

a) For groundwater analytical sampling events, the following gauging and analytical results will require action:

1. Presence of free product in wells that have not had product before.
2. Increase (such as 50% increase to allow for slight changes due to groundwater fluctuations) in product thickness in wells that product has been present historically. A significant change in color, viscosity, etc should also be considered an actionable item.
3. Increase in groundwater dissolved concentrations above either the action levels established in the sampling plan and soil and groundwater risk assessment or more than 50% increase of the background average for that well.

b) For Groundwater gauging events, the following results will require action:

1. Presence of free product in wells that have not had product before.
2. Change in appearance (color, viscosity, etc.) of free product in wells that have had product historically. If there is any question as to whether a change has occurred, notify per section d) below.

c) For Monitoring of Double Bottom Tanks and Monitoring of Piping, the following will require action:

1. Presence of liquid (water or product) in the interstitial pipe.
2. Presence of product or staining in or around piping, tanks, or loading rack area.

d) Notification

1. If any of the conditions in (V(a), (b) and (c)) above, are encountered, the terminal manager, EE, and Motiva Compliance Coordinator should be notified immediately for further evaluation.

## VI Equipment Requirements

The EE and terminal manager should evaluate the need for any equipment to be secured. Some potential items that may be required are as follows:

Interface Probe for Well Depth monitoring
Organic Vapor Analyzer (OVA) for headspace monitoring
36-inch clear plastic bailer
Decontamination fluid and bucket
Tape measure with weighted end



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## VII Expense Handling

- If there is an active environmental incident and the requirements to comply with the monitoring program are already being met or the additional work is minimal, then the expense will be charged to the environmental incident.
- If there is not an active environmental incident or the requirements to comply with the monitoring program is significantly[1] greater than what was required for management of the environmental incident, then the increased expense will be charged to terminal expense.

Terminal Manager and EE should sign and date this document and maintain at the terminal facility for periodic review.

[1] By way of example, if the terminal monitoring program requires the installation of additional wells for compliance they will be charged to expense.



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## SOP US/Motiva CM&D – Brooklyn Terminal
## Groundwater Monitoring Plan

This plan provides for early detection of potential new releases and preventing offsite migration of constituents consistent with Shell OP US (SOP US) and Motiva Enterprises LLC HSE Standard 325 Revised 12/02 (Standard 325).

Control measures may include:

**Groundwater Monitoring**

| Method | List Wells# | Frequency | Parameters | Action Level | Methods | Recordkeeping |
|---|---|---|---|---|---|---|
| Visual Monitoring | MW-3, 27, 7, 8, 9, 21, 22, 13, 24 | Quarterly | Product or Sheen on water | - Product or Sheen in Well<br>- Increase in thickness overtime | Electronic interface probe | Spreadsheet |
| Analytical Monitoring | MW-3, 27, 7, 8, 9, 21, 22, 13, 24 | Annual | - BTEX<br>- MTBE<br>- Ethanol<br>- TPH | - BTEX at MCL<br>*<br>- MTBE at MCL | No purge | Spreadsheet |

\# Attach plat plan/map with location of monitoring wells selected for release detection monitoring.
* Note: Action levels are consistent with values listed in the Site Risk Assessment.

Observations and analytical Results go to the terminal manager who gets the data entered into the terminal spreadsheet (Excel format). The terminal will maintain the master spreadsheet with a copy being kept by the SOP US EE who supports the terminal.

**Monitoring of Double Bottom Tanks**

| List Tanks | Responsibility | Frequency | Method | Action Level | Recordkeeping |
|---|---|---|---|---|---|
| None | | | | | |

**Monitoring of Product Piping**

| Piping | Responsibility | Frequency | Method | Action level | Recordkeeping |
|---|---|---|---|---|---|
| Above ground | Terminal personnel | Each Shift | Visual | - Product or staining in or around piping, tanks, or loading rack area. | Operating Records |
| Below ground | None | | | | |

If any of the conditions above action levels, the terminal manager, SOP US EE, and the Motiva Compliance Coordinator should be notified immediately for further evaluation.

Terminal Manager — Date: 5/2/05

SOP US Environmental Engineer — Date: 5/2/05

## HSE Standard 325
## Perimeter Monitoring Plan

Perimeter Well Groundwater Monitoring Summary
Motiva Enterprises, LLC- Brooklyn, NY Terminal
Updated Through 3rd Quarter 2010

| Perimeter MW ID | Date | Depth of Well | Depth to Product | Depth to Water | Product Thickness | New Product* | Product Increase >50% | Benzene (ppb) | | | MTBE (ppb) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Background or Action Level | Actual | Action Level Triggered | Background or Action Level | Actual | Action Level Triggered |
| 1 | 6/26/07 | | | 2.87 | | | | 0.70 | <1.0 | no | 10.00 | <1.0 | no |
| 1 | 5/12/08 | | | 3.10 | | | | 0.70 | <1.0 | no | 10.00 | <1.0 | no |
| 1 | 5/6/09 | | | 3.05 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 1 | 8/14/09 | | | 3.19 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 1 | 11/23/09 | | | 3.48 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 1 | 2/2/10 | | | 3.62 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 1 | 4/15/10 | | | 2.90 | | | | 0.70 | <5.0 | no | 10.00 | <5.0 | no |
| 1 | 5/3/10 | | | 2.21 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 1 | 6/21/10 | | | 3.10 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 1 | 7/2/10 | | | 2.49 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 1 | 8/13/10 | | | 3.70 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 1 | 9/1/10 | | | 3.32 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| | | | | | | | | | | | | | |
| 3 | 6/26/07 | | | 2.74 | | | | 0.70 | <1.0 | no | 10.00 | <1.0 | no |
| 3 | 5/12/08 | | | 2.70 | | | | 0.70 | <1.0 | no | 10.00 | <1.0 | no |
| 3 | 5/6/09 | | | 2.59 | | | | 0.70 | <1.0 | no | 10.00 | <1.0 | no |
| 3 | 8/14/09 | | | 2.58 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 3 | 11/23/09 | | | 2.81 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 3 | 2/2/10 | | | 3.05 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 3 | 4/15/10 | | | 2.53 | | | | 0.70 | <5.0 | no | 10.00 | <5.0 | no |
| 3 | 5/3/10 | | | 2.42 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 3 | 6/21/10 | | | 2.90 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 3 | 7/2/10 | | | 3.08 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 3 | 8/13/10 | | | 3.36 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 3 | 9/1/10 | | | 3.01 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| | | | | | | | | | | | | | |
| 6 | 6/26/07 | | | 4.10 | | | | 0.70 | <1.0 | no | 10.00 | <1.0 | no |
| 6 | 5/12/08 | | | 2.80 | | | | 0.70 | <1.0 | no | 10.00 | <1.0 | no |
| 6 | 5/6/09 | | | 3.06 | | | | 0.70 | <1.0 | no | 10.00 | <1.0 | no |
| 6 | 8/14/09 | | | 4.96 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 6 | 11/23/09 | | | 4.24 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 6 | 2/2/10 | | | 4.45 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 6 | 4/15/10 | | | 5.08 | | | | 0.70 | <5.0 | no | 10.00 | <5.0 | no |
| 6 | 5/3/10 | | | 4.59 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 6 | 6/21/10 | | | 5.39 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 6 | 7/2/10 | | | 6.93 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 6 | 8/13/10 | | | 3.87 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 6 | 9/1/10 | | | 5.28 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| | | | | | | | | | | | | | |
| 7 | 6/26/07 | | | 4.53 | | | | 0.70 | <1.0 | no | 10.00 | <1.0 | no |
| 7 | 5/12/08 | | | 4.20 | | | | 0.70 | <1.0 | no | 10.00 | <1.0 | no |
| 7 | 11/4/08 | Well Abandon During Bulkhead Construction | | | | | | | | | | | |
| 7R | 4/15/10 | | | 5.80 | | | | 5.60 | 16.90 | yes | 10.50 | 31.50 | yes |
| 7R | 5/3/10 | | | 5.45 | | | | 5.60 | NS | NS | 10.50 | NS | NS |
| 7R | 6/21/10 | | | 5.92 | | | | 5.60 | NS | NS | 10.50 | NS | NS |
| 7R | 7/2/10 | | | 6.15 | | | | 5.60 | NS | NS | 10.50 | NS | NS |
| 7R | 7/27/10 | | | 5.97 | | | | 4.23 | <5.0 | no | 14.28 | 25.6 | yes |
| 7R | 8/13/10 | | | 4.04 | | | | 4.23 | NS | NS | 14.28 | NS | NS |
| 7R | 9/1/10 | | | 5.78 | | | | 4.23 | NS | NS | 14.28 | NS | NS |
| | | | | | | | | | | | | | |
| 8 | 6/26/07 | | | 5.58 | | | | 0.70 | <1.0 | no | 10.00 | 5.00 | no |
| 8 | 5/12/08 | | | 4.63 | | | | 0.70 | <1.0 | no | 10.00 | 6.20 | no |
| 8 | 5/15/09 | | | 5.62 | | | | 0.80 | 2.40 | yes | 10.00 | 6.60 | no |
| 8 | 8/14/09 | | | 5.97 | | | | 0.80 | NS | NS | 10.00 | NS | NS |
| 8 | 11/23/09 | | | 5.24 | | | | 0.80 | NS | NS | 10.00 | NS | NS |
| 8 | 2/2/10 | | | 5.34 | | | | 0.80 | NS | NS | 10.00 | NS | NS |
| 8 | 4/15/10 | | | 6.48 | | | | 11.83 | 44.90 | yes | 13.85 | 37.60 | yes |
| 8 | 5/3/10 | | | 6.10 | | | | 11.83 | NS | NS | 13.85 | NS | NS |
| 8 | 6/21/10 | | | 6.40 | | | | 11.83 | NS | NS | 13.85 | NS | NS |
| 8 | 7/2/10 | | | 6.79 | | | | 11.83 | NS | NS | 13.85 | NS | NS |
| 8 | 7/27/10 | | | 6.64 | | | | 14.32 | 24.30 | yes | 18.98 | 39.50 | yes |
| 8 | 8/13/10 | | | 4.82 | | | | 14.32 | NS | NS | 18.98 | NS | NS |
| 8 | 9/1/10 | | | 6.44 | | | | 14.32 | NS | NS | 18.98 | NS | NS |
| | | | | | | | | | | | | | |

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# HSE Standard 325
## Perimeter Monitoring Plan
### Perimeter Well Groundwater Monitoring Summary
### Motiva Enterprises, LLC- Brooklyn, NY Terminal
### Updated Through 3rd Quarter 2010

| Perimeter MW ID | Date | Depth of Well | Depth to Product | Depth to Water | Product Thickness | New Product* | Product Increase >50% | Benzene (ppb) | | | MTBE (ppb) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Background or Action Level | Actual | Action Level Triggered | Background or Action Level | Actual | Action Level Triggered |
| 9 | 6/26/07 | | | 5.41 | | | | 0.70 | <1.0 | no | 10.00 | <1.0 | no |
| 9 | 5/12/08 | | | 4.40 | | | | 0.70 | <1.0 | no | 10.00 | <1.0 | no |
| 9 | 5/15/09 | | | 5.63 | | | | 0.70 | <1.0 | no | 10.00 | 4.70 | no |
| 9 | 8/14/09 | | | 5.91 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 9 | 11/23/09 | | | 5.25 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 9 | 2/2/10 | | | 5.33 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 9 | 4/15/10 | | | 6.46 | | | | 3.13 | 12.50 | yes | 10.00 | 15.20 | yes |
| 9 | 5/3/10 | | | 6.05 | | | | 3.13 | NS | NS | 10.00 | NS | NS |
| 9 | 6/21/10 | | | 6.30 | | | | 3.13 | NS | NS | 10.00 | NS | NS |
| 9 | 7/2/10 | | | 6.69 | | | | 3.13 | NS | NS | 10.00 | NS | NS |
| 9 | 7/27/10 | | | 6.59 | | | | 3.13 | <5.0 | no | 10.00 | <5.0 | no |
| 9 | 8/13/10 | | | 4.79 | | | | 3.13 | NS | NS | 10.00 | NS | NS |
| 9 | 9/1/10 | | | 6.41 | | | | 3.13 | NS | NS | 10.00 | NS | NS |
| | | | | | | | | | | | | | |
| 13 | 6/26/07 | | | 7.62 | | | | 0.70 | <1.0 | no | 10.00 | <1.0 | no |
| 13 | 5/12/08 | | | 6.75 | | | | 0.70 | <1.0 | no | 10.00 | <1.0 | no |
| 13 | 5/6/09 | | | 6.59 | | | | 0.70 | <1.0 | no | 10.00 | <1.0 | no |
| 13 | 8/14/09 | | | 7.25 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 13 | 11/23/09 | | | 7.18 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 13 | 2/2/10 | | | 7.28 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 13 | 4/15/10 | | | 7.37 | | | | 0.70 | <5.0 | no | 10.00 | <5.0 | no |
| 13 | 5/3/10 | | | 6.52 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 13 | 6/21/10 | | | 7.31 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 13 | 7/2/10 | | | 7.61 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 13 | 8/13/10 | | | 7.17 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 13 | 9/1/10 | | | 7.28 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| | | | | | | | | | | | | | |
| 14 | 6/26/07 | | | 6.68 | | | | 0.70 | <1.0 | no | 10.00 | <1.0 | no |
| 14 | 5/12/08 | | | 6.00 | | | | 0.70 | <1.0 | no | 10.00 | <1.0 | no |
| 14 | 5/6/09 | | | 6.62 | | | | 0.70 | <1.0 | no | 10.00 | <1.0 | no |
| 14 | 8/14/09 | | | 6.33 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 14 | 11/23/09 | | | 6.27 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 14 | 2/2/10 | | | 6.43 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 14 | 4/15/10 | | | 6.55 | | | | 0.70 | <5.0 | no | 10.00 | <5.0 | no |
| 14 | 5/3/10 | | | 5.61 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 14 | 6/21/10 | | | 6.56 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 14 | 7/2/10 | | | 6.82 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 14 | 8/13/10 | | | 6.86 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 14 | 9/1/10 | | | 6.22 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| | | | | | | | | | | | | | |
| 21 | 6/26/07 | | | 5.31 | | | | 2.36 | 7.07 | yes | 42.00 | 10.70 | no |
| 21 | 5/12/08 | | | 4.88 | | | | 1.77 | <1.0 | no | 54.80 | 93.20 | yes |
| 21 | 9/10/08 | | | 4.97 | | | | 1.77 | NS | NS | 54.80 | NS | NS |
| 21 | 11/4/08 | Well Abandon During Bulkhead Construction | | | | | | 1.77 | NS | NS | 54.80 | NS | NS |
| 21R | 4/15/10 | | | 3.95 | | | | 48.69 | 139 | yes | 34.63 | <5.0 | no |
| 21R | 5/3/10 | | | 3.29 | | | | 48.69 | NS | NS | 34.63 | NS | NS |
| 21R | 6/21/10 | | | 3.86 | | | | 48.69 | NS | NS | 34.63 | NS | NS |
| 21R | 7/2/10 | | | 3.99 | | | | 48.69 | NS | NS | 34.63 | NS | NS |
| 21R | 7/27/10 | | | 3.95 | | | | 99.67 | 160 | yes | 35.80 | 14.2 | no |
| 21R | 8/13/10 | | | 3.70 | | | | 99.67 | NS | NS | 35.80 | NS | NS |
| 21R | 9/1/10 | | | 3.93 | | | | 99.67 | NS | NS | 35.80 | NS | NS |
| | | | | | | | | | | | | | |
| 22 | 6/26/07 | | | 5.14 | | | | 347.00 | 444 | yes | 21.77 | 13.80 | no |
| 22 | 5/12/08 | | | 4.05 | | | | 327.75 | 270 | no | 21.23 | 19.60 | no |
| 22 | 9/10/08 | | | 4.65 | | | | 327.75 | NS | NS | 21.23 | NS | NS |
| 22 | 11/4/08 | Well Abandon During Bulkhead Construction | | | | | | 327.75 | NS | NS | 21.23 | NS | NS |
| 22R | 4/15/10 | | | 4.06 | | | | 366.67 | 386 | no | 25.40 | 42.80 | yes |
| 22R | 5/3/10 | | | 3.10 | | | | 366.67 | NS | NS | 25.40 | NS | NS |
| 22R | 6/21/10 | | | 3.84 | | | | 366.67 | NS | NS | 25.40 | NS | NS |
| 22R | 7/2/10 | | | 4.17 | | | | 366.67 | NS | NS | 25.40 | NS | NS |
| 22R | 7/27/10 | | | 3.94 | | | | 331.00 | 337 | no | 31.27 | 31.4 | no |
| 22R | 8/13/10 | | | 3.50 | | | | 331.00 | NS | NS | 31.27 | NS | NS |
| 22R | 9/1/10 | | | 3.98 | | | | 331.00 | NS | NS | 31.27 | NS | NS |
| | | | | | | | | | | | | | |
| 23 | 6/26/07 | | | 4.19 | | | | 0.70 | <1.0 | no | 10.00 | 5.64 | no |
| 23 | 5/12/08 | | | 3.73 | | | | 0.70 | <1.0 | no | 10.00 | 2.70 | no |
| 23 | 5/6/09 | | | 3.50 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 23 | 8/14/09 | | | 3.97 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 23 | 11/23/09 | | | 3.94 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 23 | 2/2/10 | | | 4.04 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 23 | 4/15/10 | | | 3.98 | | | | 0.70 | <5.0 | no | 10.00 | <5.0 | no |
| 23 | 5/3/10 | | | 3.65 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 23 | 6/21/10 | | | 4.13 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 23 | 7/2/10 | | | 4.33 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 23 | 8/13/10 | | | 4.50 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 23 | 9/1/10 | | | 3.84 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| | | | | | | | | | | | | | |

Confidential Business Information

# HSE Standard 325
## Perimeter Monitoring Plan
### Perimeter Well Groundwater Monitoring Summary
### Motiva Enterprises, LLC- Brooklyn, NY Terminal
### Updated Through 3rd Quarter 2010

| Perimeter MW ID | Date | Depth of Well | Depth to Product | Depth to Water | Product Thickness | New Product* | Product Increase >50% | Benzene (ppb) | | | MTBE (ppb) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Background or Action Level | Actual | Action Level Triggered | Background or Action Level | Actual | Action Level Triggered |
| 24 | 6/26/07 | | | 4.13 | | | | 16.80 | <1.0 | no | 86.00 | 5.13 | no |
| 24 | 5/12/08 | | | 3.80 | | | | 21.50 | 144 | yes | 82.50 | 621 | yes |
| 24 | 5/6/09 | | | 4.43 | | | | 86.00 | 11.30 | yes | 263.00 | 37.10 | yes |
| 24 | 8/14/09 | | | 3.87 | | | | 77.65 | NS | NS | 221.08 | NS | NS |
| 24 | 11/23/09 | | | 3.88 | | | | 77.65 | NS | NS | 221.08 | NS | NS |
| 24 | 2/2/10 | | | 3.95 | | | | 77.65 | NS | NS | 221.08 | NS | NS |
| 24 | 4/15/10 | | | 3.82 | | | | 77.65 | <5.0 | no | 221.08 | 6.63 | no |
| 24 | 5/3/10 | | | 3.66 | | | | 77.65 | NS | NS | 221.60 | NS | NS |
| 24 | 6/21/10 | | | 4.01 | | | | 77.65 | NS | NS | 221.60 | NS | NS |
| 24 | 7/2/10 | | | 4.18 | | | | 77.65 | NS | NS | 221.60 | NS | NS |
| 24 | 8/13/10 | | | 4.38 | | | | 77.65 | NS | NS | 221.60 | NS | NS |
| 24 | 9/1/10 | | | 3.82 | | | | 77.65 | NS | NS | 221.60 | NS | NS |
| | | | | | | | | | | | | | |
| 28 | 6/26/07 | | | 1.62 | | | | 0.70 | <1.0 | no | 10.00 | 5.75 | no |
| 28 | 5/12/08 | | | 1.65 | | | | 0.70 | <1.0 | no | 10.00 | 6.40 | no |
| 28 | 4/29/09 | | | 1.95 | | | | 0.70 | <1.0 | no | 10.00 | 3.90 | no |
| 28 | 8/14/09 | | | 1.54 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 28 | 11/23/09 | | | 1.73 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 28 | 2/2/10 | | | 1.92 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 28 | 4/15/10 | | | 1.43 | | | | 0.70 | <5.0 | no | 10.00 | <5.0 | no |
| 28 | 5/3/10 | | | 1.26 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 28 | 6/21/10 | | | 1.75 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 28 | 7/2/10 | | | 1.85 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 28 | 8/13/10 | | | 2.11 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 28 | 9/1/10 | | | 1.79 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| | | | | | | | | | | | | | |
| 42 | 4/15/10 | | | 3.54 | | | | 0.70 | <5.0 | no | 10.00 | <5.0 | no |
| 42 | 5/3/10 | | | 3.45 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 42 | 6/21/10 | | | 3.91 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 42 | 7/2/10 | | | 4.03 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 42 | 8/13/10 | | | 4.23 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 42 | 9/1/10 | | | 3.69 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| | | | | | | | | | | | | | |
| 43 | 4/15/10 | | | 3.47 | | | | 0.70 | <5.0 | no | 17.50 | 17.50 | no |
| 43 | 5/3/10 | | | 3.41 | | | | 0.70 | NS | NS | 17.50 | NS | NS |
| 43 | 6/21/10 | | | 3.74 | | | | 0.70 | NS | NS | 17.50 | NS | NS |
| 43 | 7/2/10 | | | 3.91 | | | | 0.70 | NS | NS | 17.50 | NS | NS |
| 43 | 8/13/10 | | | 4.11 | | | | 0.70 | NS | NS | 17.50 | NS | NS |
| 43 | 9/1/10 | | | 3.56 | | | | 0.70 | NS | NS | 17.50 | NS | NS |
| | | | | | | | | | | | | | |
| 44 | 4/15/10 | | | 3.58 | | | | 0.70 | <5.0 | no | 10.00 | <5.0 | no |
| 44 | 5/3/10 | | | 3.37 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 44 | 6/21/10 | | | 3.68 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 44 | 7/2/10 | | | 3.85 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 44 | 8/13/10 | | | 4.04 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 44 | 9/1/10 | | | 3.50 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| | | | | | | | | | | | | | |

NB1: All measurements in feet

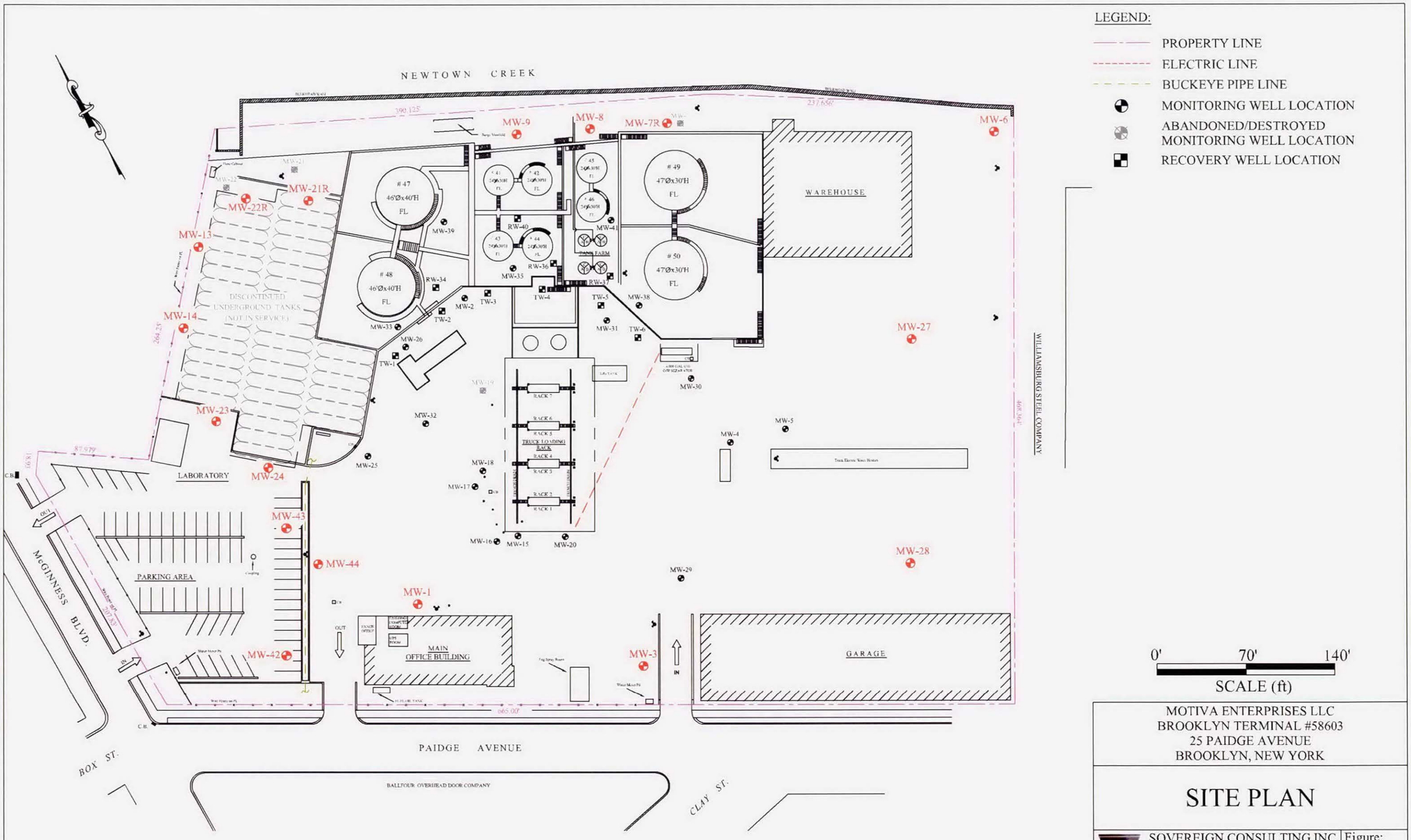
NB2: Immediate notification is to be made to the terminal manager, EE, and Motiva Compliance Coordinator in the event new product is detected, a 50% increase in product is noted, or dissolved concentration levels are greater than 50% of established background levels.

*New product in a well where product has not been observed before OR new product indicated by a major change in color, viscosity, etc.

NM = Not Measured

NS = Not Sampled

Confidential Business Information




LEGEND:

- PROPERTY LINE
- ELECTRIC LINE
- BUCKEYE PIPE LINE
- MONITORING WELL LOCATION
- ABANDONED/DESTROYED MONITORING WELL LOCATION
- RECOVERY WELL LOCATION

0' 70' 140'

SCALE (ft)

MOTIVA ENTERPRISES LLC
BROOKLYN TERMINAL #58603
25 PAIDGE AVENUE
BROOKLYN, NEW YORK

# SITE PLAN

SOVEREIGN CONSULTING INC.
290 Executive Drive, Suite 300
Cranberry Twp., Pennsylvania 16066
Phone:(724)553-5084 Fax:(724)553-5089
www.sovcon.com

Figure: 1

DRAWN: 10/30/2009 REVISED: 10/01/2010

# DOCUMENT INFO

15

DocID: 00000430

Filename: 58603-2010-12-30-FIG-01 (Field Activity Reports - SCI).pdf

SOVEREIGN CONSULTING

Work Day: Tues. Work Date: 01/12/10

Client/Owner: Motiva Enterprises LLC Page 1 of 2

Well Gauge Report

Address: 25 Paidge Avenue, Brooklyn, NY SCI Job #: EQ017

| Well ID | Time of Reading | Well Diameter (in.) | Total Depth | Depth to Product | Depth to Water | Volume Purged (gal.) | Comments/Product Removed |
|---|---|---|---|---|---|---|---|
| MW-1 | 805 | 4 | | — | 3.49 | — | |
| -3 | 815 | 4 | | — | 2.87 | — | |
| -29 | 825 | 4 | | — | 1.96 | — | |
| -30 | 835 | 4 | | — | 2.56 | — | |
| -4 | 845 | 4 | | 2.49 | 2.54 | — | |
| -5 | 850 | 4 | | — | 1.95 | — | |
| -28 | 855 | 4 | | — | 6.64 | — | |
| -27 | 900 | 4 | | — | 2.59 | — | |
| -6 | 915 | 4 | | — | 3.87 | — | |
| -13 | 930 | 4 | | — | 4.43 | — | |
| -14 | 945 | 4 | | — | 6.64 | — | |
| -23 | 955 | 4 | | — | 4.16 | — | |
| -24 | 959 | 4 | | — | 4.02 | — | |
| -25 | 1010 | 4 | | — | 3.12 | — | |
| TW-1 | 1030 | 6 | | 4.30 | 4.33 | — | |
| MW-26 | 1045 | 4 | | 4.25 | 4.27 | — | |
| TW-2 | 1100 | 6 | | — | 4.17 | — | |
| MW-2 | 1115 | 4 | | 4.05 | 4.09 | — | |
| TW-4 | 1120 | 6 | | N/A → | | — | Heavily filled w/ water (run-off) |
| TW-5 | 1125 | 6 | | N/A → | | — | " |
| MW-31 | 1130 | 4 | | 3.85 | 4.56 | — | 0.75 gal. hapl |

Well Volumes (Gallons / Linear Foot): 2" = 0.17, 4" = 0.66, 6" = 1.50, 8" = 2.60, 12" = 5.81

SOVEREIGN CONSULTING

Work Day: Tues. Work Date: 01/12/10

Client/Owner: Motiva Enterprises LLC Page 2 of 2

Well Gauge Report

Address: 25 Paidge Avenue, Brooklyn, NY SCI Job #: EQ017

| Well ID | Time of Reading | Well Diameter | Total Depth | Depth to Product | Depth to Water | Volume Purged (gal.) | Comments/Product Removed |
|---|---|---|---|---|---|---|---|
| TW-6 | 1135 | 6 | | N/A → | | - | Manway filled w/ water (run-off) |
| MW-20 | 1145 | 4 | | - | 3.24 | - | |
| -15 | 1200 | 4 | | - | 3.39 | - | |
| -16 | 1205 | 4 | | - | 3.32 | - | |
| -17 | 1215 | 4 | | - | 3.59 | - | |
| -18 | 1225 | 4 | | - | 3.56 | - | |
| -19 | 1235 | 4 | | - | 4.29 | - | |
| -32 | 1245 | 4 | | - | 4.45 | - | |
| -9 | 1300 | 4 | | - | 5.67 | - | |
| -8 | 1305 | 4 | | - | 5.54 | - | |
| -36 | 1310 | 6 | | 8.88 | 8.95 | - | |
| -35 | 1320 | 4 | | - | 6.49 | - | |
| -40 | 1330 | 6 | | 8.76 | 8.87 | - | 0.25 gallons (NAPL) |
| TW-3 | 1335 | 6 | | N/A → | | - | Manway filled w/ water (run-off) |
| -34 | 1345 | 4 | | 7.31 | 7.33 | - | |
| -33 | 1350 | 4 | | - | 5.71 | - | |
| -39 | 1355 | 4 | | - | 6.65 | - | |
| -41 | 1405 | 4 | | 8.01 | 8.04 | - | |
| -37 | 1410 | 6 | | 7.74 | 7.75 | - | |
| -38 | 1415 | 4 | | - | 7.28 | - | |
| | | | | | | | |

Well Volumes (Gallons / Linear Foot): 2" = 0.17, 4" = 0.66, 6" = 1.50, 8" = 2.60, 12" = 5.81

Elizabeth, NJ 07202
(908) 820-8800
(800) 734-0910
FAX: (908) 820-8412

# LORCO PETROLEUM SERVICES

www.lorcopetroleum.com

STANDARD COLLECTION ORDER FORM

747404

SALES ORDER #

## GENERATOR/LOCATION

NAME

INFORMATION/ATTENTION LINE | ACCOUNT APPROVAL CODE

DELIVERY ADDRESS

CITY | STATE | ZIP

PHONE NUMBER | PURCHASE ORDER NUMBER

TIME IN | TIME OUT

## BILL TO (IF DIFFERENT FROM LOCATION)

NAME

INFORMATION/ATTENTION LINE | ACCOUNT APPROVAL CODE

DELIVERY ADDRESS

CITY | STATE | ZIP

PHONE NUMBER | PURCHASE ORDER NUMBER

MANIFEST NUMBER

## SHIPPING INFORMATION

This is to certify that the below named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation

| NO | TYPE | QTY | UNIT | US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number) | SALES REPRESENTATIVE |
|---|---|---|---|---|---|
| | | | | | |

## SERVICE SECTION

| SALES CODE | DESCRIPTION | WASTE CODE | QUANTITY | UNIT PRICE | PRICE | TAX | LINE TOTAL |
|---|---|---|---|---|---|---|---|
| 40500 | USED OIL REMOVAL | | | | | | |
| 40300 | ANTI-FREEZE REMOVAL | | | | | | |
| 40400 | OILY WATER DISPOSAL | | | | | | |
| 41100 | SLUDGE DISPOSAL | | | | | | |
| 41000 | GASOLINE/WATER | | | | | | |
| 40900 | DRUM DISPOSAL | | | | | | |
| 41507 | TANK ENTRY | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 40611 | NEW 55 GAL DRUM/ 17H | | | | | | |
| 42001 | DEXSIL TEST KIT | | | | | | |
| 41506 | TRANSPORTATION | | | | | | |
| | | | | | | | |
| 41508 | TRUCK AND OPERATOR | | | | | | |
| | | | | | | | |
| | | | | | TOTAL | | |

PARTS WASHER SERVICE INTERVAL _____ DAYS

USED OIL CUSTOMER SERVICED EVERY 30 DAYS UNLESS OTHERWISE INDICATED.

USED OIL SERVICE INTERVAL _____ DAYS.

GENERATOR WARRANTS AND REPRESENTS THAT THE MATERIALS PROVIDED LORCO HEREUNDER HAVE NOT BEEN MIXED, COMBINED, OR OTHERWISE BLENDED IN ANY QUANTITY WITH MATERIALS CONTAINING POLYCHLORINATED BIPHENYLS (PCB) OR ANY OTHER MATERIAL DEFINED AS HAZARDOUS WASTE UNDER APPLICABLE LAWS, INCLUDING BUT NOT LIMITED TO 40 CFR PART 261. GENERATOR AGREES TO INDEMNIFY AND HOLD LORCO HARMLESS FOR ANY DAMAGES, COSTS, ATTORNEY'S FEES, ETC. ARISING OUT OF OR IN ANY WAY RELATED TO A BREACH OF THE ABOVE WARRANTY BY THE GENERATOR.

Generator certifies that the waste is ☐ used oil ☐ used antifreeze ☐ oily water ☐ oil filter ☐ parts washer solvent

☐ Other _____ Description

In accordance the N.J.A.C. 7:26-12.1 et seq. LORCO has the required permits to accept the above described waste.

X _____ Title

Print Name

X _____ Date

Signature

GENERATOR/CUSTOMER

**CONDITIONALLY EXEMPT SMALL QUANTITY GENERATOR CERTIFICATION**

I certify that this generator generates less than 100 kilograms of hazardous waste per month as defined at 40 CFR 261 and does not accumulate more than 1,000 kilograms of such waste during the month.

X _____

GENERATOR'S SIGNATURE

**NON CONDITIONALLY EXEMPT LARGE QUANTITY GENERATOR CERTIFICATION**

DEXSIL CDT TEST RESULTS

X _____ PPM

CHARGE MY ACCOUNT FOR THIS TRANSACTION UNLESS OTHERWISE INDICATED IN THE PAYMENT SECTION $ _____

CUSTOMER ARE SUBJECT TO AN INTEREST RATE OF THE LESSER OF 1½% PER MONTH (18% PER ANNUM) OR THE MAXIMUM RATE ALLOWED BY LAW ON ANY INVOICES THAT ARE NOT PAID WITHIN 30 DAYS. IN THE EVENT OF DEFAULT, LORCO SHALL BE ENTITLED TO RECOVER COSTS OF COLLECTION, INCLUDING REASONABLE ATTORNEYS FEES. INITIAL _____

## PAYMENT RECEIVED SECTION

| CASH ☐ | TOTAL RECEIVED |
|---|---|
| CHECK NUMBER | |

In accordance with NJAC 7:26-6.7b + 40CFR PART 279 LORCO has notified the US EPA of its location and used oil management activities.

X _____

Print Name

X _____ Date

Signature

LORCO REPRESENTATIVE

Shell/Motiva 0007089

# Job Clearance Form

CONTRACTOR INSTRUCTIONS PRIOR TO START OF WORK: Review form, take a moment to discuss hazards and control measures on this form. Sign when done. Contractor is responsible for ensuring that all personnel understand potential safety concerns and controls.

| Station # | Station Address | Work Order Number | Date: |
|---|---|---|---|
| | | | |

| Contractor Company Name | Contractor person in charge (print name) | Number of Workers | JSA Reference Number (if required) | Start Time: | End Time: | Labor: | Travel Time: | Travel Distance: |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

Problem/Work Description:

Return Call: yes / no

Damage Claim: yes / no

## PPE REQUIRED (CHECK AND FILL BLANK BOXES)

- [ ] SAFETY VEST
- [x] HARD HAT
- [ ] SHOES & BOOTS
- [ ] HEARING PROTECTION
- [ ] RESPIRATOR
- [ ] PROTECTIVE CLOTHING
- [ ] GLOVES
- [ ] SAFETY GLASSES/GOGGLES
- [ ] WELDING PPE
- [ ] OTHER

Complete the following steps before commencing any work. Review hazards and controls with all personnel involved in the job. Use the space provided to document any hazards identified and controls required.

| Task / Step | Hazards (not covered by JSA) | Controls required to eliminate risk, including PPE, to be used |
|---|---|---|
| | | |

Work documentation requirements: Lower Risk - no JSA required. Medium Risk / Higher Risk tasks - JSA required. Higher Risk - JSA required & appropriate checklist completed (see below).

Examples of Higher / Medium tasks:

- [ ] Working in heights - in all cases on open sites - on closed sites if no JSA present
- [ ] Trenching or excavation related to underground tank / product lines
- [ ] Heavy lifting
- [ ] Work in confined spaces (e.g. tank, interceptor or deep manhole entry)
- [ ] Hot work with risk of product or vapour ignition
- [ ] PQ system degreasing, installation or maintenance

This form must be completed for each job and updated and re-signed if circumstances change or additional hazards identified.

## SIGN IN

Operating sites: to be signed by the Site Representative

Non-operating sites: to be signed by Contractor Representative

GENERAL SAFETY CHECKS

- Have all site personnel been informed?
- Has fuel delivery service been informed?
- Is a fuel delivery due?
- Have fire drills procedures been agreed - vac parking out?
- Are work areas cordoned off to protect workers, site staff & public?
- Other

| Contractor representative name | Signature | Time |
|---|---|---|
| | | |

| Site representative name | Signature |
|---|---|
| | |

## SIGN OUT AND OPERATOR VERIFICATION OF WORK

GENERAL SAFETY CHECKS

- Has the work area been left tidy and safe?
- Are site personnel aware of status of work on leaving / entering location?
- Are signage & equipment removed and communicated?
- All incidents, near incidents, unsafe situations reported?
- Other

| Site representative name | Signature |
|---|---|
| | |

Contractor signature

Site representative comments:

PARTS ORDERED: Details of parts ordered and invoice reference:

The contractor through its authorized representative shall sign, issue and be solely responsible for all job clearance forms and the obligations arising there under applicable to the work.
This form covers important reminders and is not intended to relieve the contractor from safely performing the work in compliance with all applicable laws and regulations.
The site operator may require the cessation of work for a person and the contractor or any of its workers arriving to comply with the requirements of any applicable item of this form or other applicable safety requirements.

Shell/Motiva 0007090

SOVEREIGN CONSULTING

Work Day: Tuesday Work Date: 02-02-10

Client/Owner: **Motiva Enterprises LLC** Page 1 of 2

**Well Gauge Report** Address: **25 Paidge Avenue, Brooklyn, NY** SCI Job #: **EQ017**

| Well ID | Time of Reading | Well Diameter | Total Depth | Depth to Product | Depth to Water | Volume Purged (gal.) | Comments/Product Removed |
|---|---|---|---|---|---|---|---|
| 1 | | | | | 3.62 | | |
| 3 | | | | | 3.05 | | |
| 29 | | | | | 2.12 | | |
| 4 | | | | 2.64 | 2.69 | | |
| 30 | | | | | 2.68 | | |
| 5 | | | | | 2.07 | | |
| 28 | | | | | 1.92 | | |
| 27 | | | | | 2.66 | | |
| 6 | | | | | 4.45 | | |
| 13 | | | | | 7.28 | | |
| 14 | | | | | 6.43 | | |
| 23 | | | | | 4.04 | | |
| 24 | | | | | 3.95 | | |
| 25 | | | | | 3.06 | | |
| TRW 1 | | | | 4.42 | 4.44 | | |
| 26 | | | | 4.26 | 4.27 | | |
| TRW 2 | | | | | 4.31 | | |
| 2 | | | | 4.24 | 4.35 | | 0.25 gallons |
| TRW 3 | | | | Under | Water | | |
| TRW 4 | | | | Under | Water | | |
| TRW 5 | | | | Under | Water | | |

Well Volumes (Gallons / Linear Foot): 2" = 0.17, 4" = 0.66, 6" = 1.50, 8" = 2.60, 12" = 5.81

SOVEREIGN CONSULTING

Work Day: Tuesday Work Date: 02-02-10

Client/Owner: **Motiva Enterprises LLC** Page 2 of 2

**Well Gauge Report** Address: **25 Paidge Avenue, Brooklyn, NY** SCI Job #: **EQ017**

| Well ID | Time of Reading | Well Diameter | Total Depth | Depth to Product | Depth to Water | Volume Purged (gal.) | Comments/Product Removed |
|---|---|---|---|---|---|---|---|
| 31 | | | | 4.23 | 4.79 | | 0.75 gallons |
| TAW 6 | | | | Under | Water. | | |
| 20 | | | | | 3.35 | | |
| 15 | | | | | 3.48 | | |
| 16 | | | | | 3.28 | | |
| 17 | | | | | 3.46 | | |
| 18 | | | | | 3.43 | | |
| 19 | | | | | 4.34 | | |
| 32 | | | | | 4.59 | | |
| 9 | | | | | 5.33 | | |
| 8 | | | | | 5.34 | | |
| 34 | | | | | 7.35 | | |
| 33 | | | | | 5.72 | | |
| 39 | | | | | 7.49 | | |
| 40 | | | | 9.31 | 9.42 | | 0.25 gallons |
| 35 | | | | | 6.53 | | |
| 36 | | | | 9.35 | 9.39 | | |
| 41 | | | | 8.05 | 8.07 | | |
| 37 | | | | 7.86 | 7.89 | | |
| 38 | | | | | 7.38 | | |
| | | | | | | | |

Well Volumes (Gallons / Linear Foot): 2" = 0.17, 4" = 0.66, 6" = 1.50, 8" = 2.60, 12" = 5.81

FIELD FORM (Revised 01/05/06)

| | | |
|---|---|---|
| **Date:** 2/1/10 | **Field Form #:** 5876 | **Site:** 25 Paidge Ave |
| **Day:** Mon. | **Client:** SOVEREIGN | Brooklyn, NY |
| | **Region:** II | MOTIVA |

**Work Description:** Meet ~~[illegible]~~ Org B & Aaron Y from Sovereign to mark-out proposed boring locations for replacement of buckage monitoring wells (to be installed 02-10)

| ☐ Unit Cost ☒ T&M | | Time | | | | |
|---|---|---|---|---|---|---|
| **Personnel** | **Title** | **Start** | **On-Site** | **Off-site** | **Finish** | **Total** |
| Jean Abbott | PM | 0600 | 0730 | 1030 | 1200 | 6 |
| | | | | | | |
| | | | | | | |

| UNIT COSTS | | | MATERIALS | |
|---|---|---|---|---|
| **No.** | **Task No.** | **Description** | **No.** | **Description** |
| | 1.1 | Survey Monitoring Wells (site) | | Lock |
| | 1.2 | Sensitive Receptor Survey (site) | | 2" Gripper Plug |
| | 2.1.1 | Drilling Oversight (half day) | | 4" Gripper Plug |
| | 2.2.2 | Drilling Oversight (full day) | | 2" EnviroCap |
| | 2.3.1 | GeoProbe (half day) | | 4" EnviroCap |
| | 2.3.2 | GeoProbe (full day) | | Disposable Bailer |
| | 4.1.1 | GW Monitoring 1-5 wells (per site) | | 55 Gallon Drum |
| | 4.1.2 | GW Monitoring 6-10 wells (per site) | | Tedlar Air Bag |
| | 4.1.3 | GW Monitoring Add. Wells >10(per well) | | Generator |
| | 4.2.1 | Potable Sampling During O&M (well) | | Cones |
| | 4.2.2 | Potable Sampling Separate Visit (well) | | Drum Sampler |
| | 4.3.1 | Product Bailing During O&M (well) | | ORM (lbs.) |
| | 4.3.2 | Product Bailing Separate Visit (site) | | ORM Socks (#) |
| | 4.4 | MW Pad Replacement (well) | | Concrete |
| | 5.1 | O&M-unscheduled site visit (visit) | | |
| | 5.2 | O&M - SVE/AS no treatment (visit) | | |
| | 5.3 | O&M - SVE/AS with treatment(visit) | | |
| | 5.4 | Product Recovery System (visit) | | |
| | 5.5 | Carbon Replacement Liquid (per lb.) | | |
| | 5.6 | Carbon Replacement Vapor (per lb.) | | |
| | 7.1.1 | Construction Monitoring Half Day | | |
| | 7.1.2 | Construction Monitoring Full Day | | |
| | 7.2.1 | Environmental Monitoring Half Day | | |
| | 7.2.2 | Environmental Monitoring Full Day | | |
| | 8.0 | Hydraulic Lift Oversight (event) | | |
| | 9.0 | Waste/Fuel Oil Oversight (event) | | |
| | 11.8.1 | Field Vehicle (per hour) | | |
| | 11.8.2 | Field Vehicle (half day) | | |
| 1 | 11.8.3 | Field Vehicle (full day) | | |
| | 11.8.4 | Field Vehicle (Week) | | |
| | 11.9 | Field Vehicle - Heavy Duty (per day) | | |

*LONGSHORE ENVIRONMENTAL INC.*

FIELD FORM (Revised 01/05/06)

| | | |
|---|---|---|
| **Date:** 02-02-10 | **Field Form #:** 5881 | **Site:** 25 Paidge Av |
| **Day:** Tuesday | **Client:** Motiva | Brooklyn NY |
| | **Region:** II | |

| |
|---|
| **Work Description:** Well Gauging and Recovery Product |
| |
| |

| ☐ Unit Cost ☐ T&M | | Time | | | | |
|---|---|---|---|---|---|---|
| **Personnel** | **Title** | **Start** | **On-Site** | **Off-site** | **Finish** | **Total** |
| Edgar Lucero | FT | .600 | 8.00 | 16.15 | 14.00 | 8.00 |
| Arturo Franco | " | " | " | " | " | " |
| | | | | | | |

| UNIT COSTS | | | MATERIALS | |
|---|---|---|---|---|
| **No.** | **Task No.** | **Description** | **No.** | **Description** |
| | 1.1 | Survey Monitoring Wells (site) | | Lock |
| | 1.2 | Sensitive Receptor Survey (site) | | 2" Gripper Plug |
| | 2.1.1 | Drilling Oversight (half day) | | 4" Gripper Plug |
| | 2.2.2 | Drilling Oversight (full day) | | 2" EnviroCap |
| | 2.3.1 | GeoProbe (half day) | | 4" EnviroCap |
| | 2.3.2 | GeoProbe (full day) | | Disposable Bailer |
| | 4.1.1 | GW Monitoring 1-5 wells (per site) | | 55 Gallon Drum |
| | 4.1.2 | GW Monitoring 6-10 wells (per site) | | Tedlar Air Bag |
| | 4.1.3 | GW Monitoring Add. Wells >10(per well) | | Generator |
| | 4.2.1 | Potable Sampling During O&M (well) | | Cones |
| | 4.2.2 | Potable Sampling Separate Visit (well) | | Drum Sampler |
| | 4.3.1 | Product Bailing During O&M (well) | | ORM (lbs.) |
| | 4.3.2 | Product Bailing Separate Visit (site) | | ORM Socks (#) |
| | 4.4 | MW Pad Replacement (well) | | Concrete |
| | 5.1 | O&M-unscheduled site visit (visit) | | |
| | 5.2 | O&M - SVE/AS no treatment (visit) | | |
| | 5.3 | O&M - SVE/AS with treatment(visit) | | |
| | 5.4 | Product Recovery System (visit) | | |
| | 5.5 | Carbon Replacement Liquid (per lb.) | | |
| | 5.6 | Carbon Replacement Vapor (per lb.) | | |
| | 7.1.1 | Construction Monitoring Half Day | | |
| | 7.1.2 | Construction Monitoring Full Day | | |
| | 7.2.1 | Environmental Monitoring Half Day | | |
| | 7.2.2 | Environmental Monitoring Full Day | | |
| | 8.0 | Hydraulic Lift Oversight (event) | | |
| | 9.0 | Waste/Fuel Oil Oversight (event) | | |
| | 11.8.1 | Field Vehicle (per hour) | | |
| | 11.8.2 | Field Vehicle (half day) | | |
| | 11.8.3 | Field Vehicle (full day) | | |
| | 11.8.4 | Field Vehicle (Week) | | |
| | 11.9 | Field Vehicle - Heavy Duty (per day) | | |

*LONGSHORE ENVIRONMENTAL INC.*

Location Shell Brooklyn Terminal Date 2-4-10

Project / Client weather: sunny ~32°

Vcarbone-Sovcon; Rich D.-Lorco

07:30 Arrived onsite.
Met Frank, Plant Manager

07:55 Lorco Arrived - Rich D.

0830 Conduct tailgate H+S Mtg., discuss task and personal fitness
Go over 12 line Safety Rules PPE and appropriate JSA's.
Frank Signoriello goes over Safe work permit, muster points, etc.

0908 Lorco set up and begins pumping out 550 gal. foreman remedition tank.
tank had less than 6" of product. Did not stick tank only visual.
Bottom of tank has 10" of ice

0925 Lorco finishes tank pump cleanout estimates 60 gallons including the wash water.

1130 Island pump & tank arrived. complete tailgate H+S w/ Vendor



Location Shell Brooklyn Terminal Date 2-4-10

Project / Client weather: sunny, windy ~34°

Vcarbone-Sovcon: Tom W., Jorge V. & Tom S. IPT

1150 Walked site w/ Frank plant manager to look at all piping to be removed. There is about 500' of piping and compressor lines that the terminal wants removed.

1215 Tom & Jorge break for lunch.

1240 Tom + Jorge return from lunch. Removed piping at tank and begin working along outside dike wall to disconnect piping to recovery wells.

1430 Crew done for the day.
Called Doug/Gregg to discuss work and need for a 3rd day on Monday.
working from ladder will not require working @ Heights because feet are not above 6' even on 12-ft ladder. But will have to maintain ladder safety protocol while working.

1450 RPL offsite

6

Location Shell Brooklyn Terminal Date 2-5-10

Project / Client weather: overcast ~30° light wind

P. Cabone - Sovcon; Jorge V, Hugo M., Marek K. IPT

0725 Arrive onsite.

0745 IPT Arrived.

0755 Conduct tailgate H&S mtg. go over 12 life savings rules, applicable JSA's, sign Safe Work Permits for working at Heights and Hoisting and rigging.

0930 Completed AST and portable dike removal and loaded it onto dump truck.

0950 Begin removing piping from product system and air-hose (compressor line).

1145 Break for lunch.

1230 Return to piping removal work.

1410 Complete days work and begin cleaning up. Spoke w/ Frank Signoriello about leaving ~150' section in place on pipe rack cause it is not safe to remove without walking a pipe. He said OK.

1415 IPT offsite.

1425 RPC offsite.

7

Location Shell Brooklyn Terminal Date 2-8-10

Project / Client weather: clear, cold ~24°

P. Cabone - Sovcon;

0720 Arrive onsite.

0750 IPT arrived.

0805 Conduct Tailgate H&S mtg. review work, cover 12 life savings rules, JSA's and Safe Work System Permits, working on ladders

0830 Begin removing system piping along dike wall.

0925 Stop for break and phone call to subcontractor office.

0945 Return to work.

1130 Complete piping removal and pick up tools, ladders and debris.

1150 RPC turned in permit to Frank's desk.

RPC offsite

**Sovereign Consulting Inc.**
**Tailgate Safety Meeting Form**
(To be submitted with field notes to Project Manager each day)

| | |
|---|---|
| **Project Name:** Shell Brooklyn Terminal | **Date:** 2-4-10 |
| **Location:** 25 Paidge Ave. Brooklyn, NY | **Weather:** cold ~30° sunny |
| **Project Manager [Print]:** Rich Carbone | **Temp:** |
| **Contractors/Subcontractors:** Sovereign, Inland Pump & Tank, Lovco | |
| **Scope of Work:** closure of AST | |

| **Task Hazards:** (check all that apply) * requires Permit to Work | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☑ | Excavations* | ☐ | Haz. Substances | ☒ | Sanitation | ☐ |
| Confined Spaces* | ☐ | Explosion | ☒ | Heavy Equipment | ☒ | Sharp Objects | ☒ |
| Cutting/Welding* | ☐ | Falling Objects | ☒ | Ladders* | ☐ | Tools | ☒ |
| Electrical | ☐ | Fire | ☒ | Noise | ☒ | Traffic | ☒ |
| Environmental Hazard | ☒ | Insects/Biological | ☐ | Slip/Trip Hazards | ☒ | Weather | ☒ |
| Elevated Work* | ☐ | Flying Debris | ☐ | Overhead | ☒ | Other (describe below) | ☐ |

**Engineering Controls / Work Practices:**

| **Levels of Protection / Personal Protective Equipment:** | | | |
|---|---|---|---|
| Level A | ☒ | Eye & Face Protection ☒ | Safety Glasses ☒ Face Shield ☒ |
| Level B | ☐ | Foot Protection ☒ | Steel Toes ☒ Hip Boots/Waders ☐ |
| Level C | ☐ | Hand Protection ☒ | Nitrile Gloves ☒ Leather Gloves ☒ Full Arm Chemical ☐ |
| Level D | ☒ | Head Protection ☒ | Hard Hat ☒ |
| | | Hearing Protection ☒ | Ear Muffs/Plugs ☒ |
| | | Other ☐ | Barricades ☒ High Visibility Safety Vests ☒ Cones/Flags ☒ |
| | | | Amber Light/Vehicle Hazards ☐ Crash Truck ☒ Tyvek/Coveralls ☐ |

| **Air Monitoring/Sampling** | | **Emergency Response** | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☐ | Emergency Alarms | ☐ | First Aid Kit | ☒ | Cell Phone | ☒ |
| FID/PID | ☐ | Emergency Contacts | ☒ | Spill Kit | ☐ | Fire Extinguisher | ☒ |
| Detector Tubes | ☐ | Evacuation Routes | ☐ | Hospital Route | ☒ | Pedestrian Safety | ☐ |
| Dust Monitor | ☐ | Explosion/Fire | ☐ | Work Area | ☒ | Vapor/Dust Suppression | ☐ |
| Personal Air | ☐ | Medical Emergency | ☐ | Smoking/Break Area | ☐ | | |

**Are site workers Fit To Work?** Yes ☒ No ☐

**Comments:**

**Name & Title of Person Conducting Tailgate Safety Meeting:** Rich Carbone, Sr. Proj Mgr.

**Signature:** [signature] **Date:** 2-4-10



Shell/Motiva 0007097

**SHELL**
**Life Saving Rules**

Work with a valid Work Permit when required

Verify isolation before work begins and use the specified life protecting equipment

Obtain authorisation before overriding or disabling safety critical equipment

Conduct gas tests when required

Obtain authorisation before entering a confined space

Protect yourself against a fall when working at height

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth within this project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

**SIGN IN**

MEETING ATTENDEES

| Name [Print] | Company | Signature |
|---|---|---|
| Rich Cebana | Sovereign | [signature] |
| Rich Dirienzo | Lorco | [signature] |
| Jorge Veliz | IPT | [signature] |
| TOMASZ VESOLOWSKI | IPT | TWesolowski |
| Thomas Sawatt | IPT | [signature] |

| | | | |
|---|---|---|---|
| Have all personnel been informed of work to be completed? | YES | NO | NA |
| Has fuel delivery service been informed? | YES | NO | NA |
| Is fuel delivery due today? | YES | NO | NA |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | NA |
| Are work areas controlled to protect workers, site staff, and the public? | YES | NO | NA |
| Do all workers have their API Safety Key card? | YES | NO | NA |
| Have all reviewed and understand the Shell 12 Life-Saving Rules | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| | | | | |

**SIGN OUT**

| | | | |
|---|---|---|---|
| Has the work area been left tidy and safe? | YES | NO | NA |
| Are site personnel aware of status of work? | YES | NO | NA |
| Are changes to equipment documented and communicated? | YES | NO | NA |
| All incidents, near misses, unsafe situations reported? | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| | | | | |

**SHELL**
**Life Saving Rules**

Do not walk under a suspended load

No alcohol or drugs while working or driving

Wear your seat belt

Do not smoke outside designated smoking areas

While driving, do not use your phone and do not exceed speed limits

Follow prescribed Journey Management Plan



Shell/Motiva 0007098

**Sovereign Consulting Inc.**
**Tailgate Safety Meeting Form**
(To be submitted with field notes to Project Manager each day)

| | |
|---|---|
| **Project Name:** Shell Brooklyn Terminal | **Date:** 2-5-10 |
| **Location:** 25 Paidge Ave. Brooklyn, N.Y. | **Weather:** overcast ~30° light wind |
| **Project Manager [Print]:** Rich Carbone | **Temp:** |
| **Contractors/Subcontractors:** Island Pump & Tank | |

**Scope of Work:** Remove AST and associated product recovery piping inside tank/dike area.

| **Task Hazards:** (check all that apply) *requires Permit to Work | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☒ | Excavations* | ☐ | Haz. Substances | ☒ | Sanitation | ☐ |
| Confined Spaces* | ☐ | Explosion | ☒ | Heavy Equipment | ☒ | Sharp Objects | ☒ |
| Cutting/Welding* | ☐ | Falling Objects | ☒ | Ladders* | ☒ | Tools | ☒ |
| Electrical | ☐ | Fire | ☒ | Noise | ☒ | Traffic | ☒ |
| Environmental Hazard | ☒ | Insects/Biological | ☐ | Slip/Trip Hazards | ☒ | Weather | ☒ |
| Elevated Work* | ☒ | Flying Debris | ☒ | Overhead | ☒ | Other (describe below) | ☐ |

**Engineering Controls / Work Practices:** work from ladders only with A-frame and extra personnel spotting and supporting ladders

| **Levels of Protection / Personal Protective Equipment:** | | | |
|---|---|---|---|
| Level A | ☐ | Eye & Face Protection ☒ | Safety Glasses ☒ Face Shield ☐ |
| Level B | ☐ | Foot Protection ☒ | Steel Toes ☒ Hip Boots/Waders ☐ |
| Level C | ☐ | Hand Protection ☒ | Nitrile Gloves ☒ Leather Gloves ☒ Full Arm Chemical ☐ |
| Level D | ☒ | Head Protection ☒ | Hard Hat ☒ |
| | | Hearing Protection ☒ | Ear Muffs/Plugs ☒ |
| | | Other ☐ | Barricades ☐ High Visibility Safety Vests ☒ Cones/Flags ☒ |
| | | | Amber Light/Vehicle Hazards ☐ Crash Truck ☒ Tyvek/Coveralls ☐ |

| **Air Monitoring/Sampling** | | **Emergency Response** | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☐ | Emergency Alarms | ☒ | First Aid Kit | ☒ | Cell Phone | ☒ |
| FID/PID | ☐ | Emergency Contacts | ☒ | Spill Kit | ☐ | Fire Extinguisher | ☒ |
| Detector Tubes | ☐ | Evacuation Routes | ☒ | Hospital Route | ☒ | Pedestrian Safety | ☐ |
| Dust Monitor | ☐ | Explosion/Fire | ☒ | Work Area | ☒ | Vapor/Dust Suppression | ☐ |
| Personal Air | ☐ | Medical Emergency | ☒ | Smoking/Break Area | ☐ | | |

**Are site workers Fit To Work?** Yes ☒ No ☐ _____

**Comments:**

**Name & Title of Person Conducting Tailgate Safety Meeting:** Rich Carbone, Sr. Proj. Mgr.

**Signature:** _____ **Date:** 2-5-10



Shell/Motiva 0007099

**SHELL**
**Life-Saving Rules**

Work with a valid Work Permit when required

Verify isolation before work begins and use the specified life protecting equipment

Obtain authorisation before overriding or disabling safety critical equipment

Conduct gas tests when required

Obtain authorisation before entering a confined space

Protect yourself against a fall when working at height

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth within this project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

**SIGN IN**

MEETING ATTENDEES

| Name [Print] | Company | Signature |
|---|---|---|
| Jorge V | IPT | |
| Hugo M | IPT | |
| Marek Kryszek | IPT | Marek Kryszek |
| Rick Cerbone | Sovereign | |
| | | |

| | | | |
|---|---|---|---|
| Have all personnel been informed of work to be completed? | YES | NO | NA |
| Has fuel delivery service been informed? | YES | NO | NA |
| Is fuel delivery due today? | YES | NO | NA |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | NA |
| Are work areas controlled to protect workers, site staff, and the public? | YES | NO | NA |
| Do all workers have their API Safety Key card? | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| | | | | |

**SIGN OUT**

| | | | |
|---|---|---|---|
| Has the work area been left tidy and safe? | YES | NO | NA |
| Are site personnel aware of status of work? | YES | NO | NA |
| Are changes to equipment documented and communicated? | YES | NO | NA |
| All incidents, near misses, unsafe situations reported? | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| | | | | |

**SHELL**
**Life-Saving Rules**

Do not walk under a suspended load

No alcohol or drugs while working or driving

Wear your seat belt

Do not smoke outside designated smoking areas

While driving, do not use your phone and do not exceed speed limits

Follow prescribed Journey Management Plan



Shell/Motiva 0007100

**Sovereign Consulting Inc.**
**Tailgate Safety Meeting Form**
(To be submitted with field notes to Project Manager each day)

| | |
|---|---|
| **Project Name:** Shell Brooklyn Terminal | **Date:** 2-8-10 |
| **Location:** 25 Paidge Ave., Brooklyn, N.Y. | **Weather:** clear, cold |
| **Project Manager [Print]:** R. Carbone | **Temp:** ~24° |
| **Contractors/Subcontractors:** Island Pump + Tank | |
| **Scope of Work:** remove remainder of product recovery piping | |

| **Task Hazards:** (check all that apply) *requires Permit to Work | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☒ | Excavations* | ☐ | Haz. Substances | ☒ | Sanitation | ☐ |
| Confined Spaces* | ☐ | Explosion | ☐ | Heavy Equipment | ☒ | Sharp Objects | ☒ |
| Cutting/Welding* | ☐ | Falling Objects | ☒ | Ladders* | ☒ | Tools | ☒ |
| Electrical | ☐ | Fire | ☒ | Noise | ☒ | Traffic | ☒ |
| Environmental Hazard | ☒ | Insects/Biological | ☐ | Slip/Trip Hazards | ☒ | Weather | ☒ |
| Elevated Work* | ☒ | Flying Debris | ☒ | Overhead | ☒ | Other (describe below) | ☐ |

**Engineering Controls / Work Practices:**

| **Levels of Protection / Personal Protective Equipment:** | | | |
|---|---|---|---|
| Level A | ☐ | Eye & Face Protection ☒ | Safety Glasses ☒ Face Shield ☒ |
| Level B | ☐ | Foot Protection ☒ | Steel Toes ☒ Hip Boots/Waders ☐ |
| Level C | ☐ | Hand Protection ☒ | Nitrile Gloves ☒ Leather Gloves ☒ Full Arm Chemical ☐ |
| Level D | ☒ | Head Protection ☒ | Hard Hat ☒ |
| | | Hearing Protection ☒ | Ear Muffs/Plugs ☒ |
| | | Other ☐ | Barricades ☐ High Visibility Safety Vests ☒ Cones/Flags ☐ |
| | | | Amber Light/Vehicle Hazards ☐ Crash Truck ☐ Tyvek/Coveralls ☐ |

| **Air Monitoring/Sampling** | | **Emergency Response** | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☐ | Emergency Alarms | ☐ | First Aid Kit | ☒ | Cell Phone | ☒ |
| FID/PID | ☐ | Emergency Contacts | ☒ | Spill Kit | ☐ | Fire Extinguisher | ☒ |
| Detector Tubes | ☐ | Evacuation Routes | ☐ | Hospital Route | ☐ | Pedestrian Safety | ☐ |
| Dust Monitor | ☐ | Explosion/Fire | ☐ | Work Area | ☐ | Vapor/Dust Suppression | ☐ |
| Personal Air | ☐ | Medical Emergency | ☐ | Smoking/Break Area | ☐ | | |

**Are site workers Fit To Work?** Yes ☒ No ☐

**Comments:** none

**Name & Title of Person Conducting Tailgate Safety Meeting:** R. Carbone, Sr. Proj. Mgr.

**Signature:** R. Carbone **Date:** 2-8-10



Shell/Motiva 0007101

**SHELL**
**Life-Saving Rules**

Work with a valid Work Permit when required

Verify isolation before work begins and use the specified life protecting equipment

Obtain authorisation before overriding or disabling safety critical equipment

Conduct gas tests when required

Obtain authorisation before entering a confined space

Protect yourself against a fall when working at height

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth within this project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

**SIGN IN**

MEETING ATTENDEES

| Name [Print] | Company | Signature |
|---|---|---|
| A. Carbare | Sovereign | |
| Jorge Villa | JPT | |
| Hugo Mavrigui | JPT | |
| Marek Kyzioł | IOT | |
| | | |

| | | | |
|---|---|---|---|
| Have all personnel been informed of work to be completed? | YES | NO | NA |
| Has fuel delivery service been informed? | YES | NO | NA |
| Is fuel delivery due today? | YES | NO | NA |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | NA |
| Are work areas controlled to protect workers, site staff, and the public? | YES | NO | NA |
| Do all workers have their API Safety Key card? | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| | | | | |

**SIGN OUT**

| | | | |
|---|---|---|---|
| Has the work area been left tidy and safe? | YES | NO | NA |
| Are site personnel aware of status of work? | YES | NO | NA |
| Are changes to equipment documented and communicated? | YES | NO | NA |
| All incidents, near misses, unsafe situations reported? | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| | | | | |

**SHELL**
**Life-Saving Rules**

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Wear your seat belt

Do not smoke outside designated smoking areas

While driving, do not use your phone and do not exceed speed limits

Follow prescribed Journey Management Plan



Shell/Motiva 0007102

Lorco Petroleum Services
450 South Front St.
Elizabeth, NJ 07202
(908) 820-8800
(800) 734-0910
FAX: (908) 820-8412

**LORCO PETROLEUM SERVICES**

www.lorcopetroleum.com

STANDARD COLLECTION ORDER FORM

**748118**

## GENERATOR/LOCATION

SALES ORDER # 3197591

NAME: Motiva Shell Terminal

INFORMATION/ATTENTION LINE:

ACCOUNT APPROVAL CODE:

DELIVERY ADDRESS: 25 Bridge Ave

CITY: Brooklyn STATE: NY ZIP:

PHONE NUMBER: —

PURCHASE ORDER NUMBER:

TIME IN: 9am / 9am TIME OUT: 9:30 / 10:30

## BILL TO (IF DIFFERENT FROM LOCATION)

NAME: Sovereign

INFORMATION/ATTENTION LINE:

ACCOUNT APPROVAL CODE:

DELIVERY ADDRESS:

CITY: STATE: ZIP:

PHONE NUMBER:

PURCHASE ORDER NUMBER:

MANIFEST NUMBER: C027445

## SHIPPING INFORMATION

This is to certify that the below named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation

| NO. | TYPE | QTY. | UNIT | US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number) | SALES REPRESENTATIVE |
|---|---|---|---|---|---|
| | | | | | |

## SERVICE SECTION

| SALES CODE | DESCRIPTION | WASTE CODE | QUANTITY | UNIT PRICE | PRICE | TAX | LINE TOTAL |
|---|---|---|---|---|---|---|---|
| 40500 | USED OIL REMOVAL | | | | | | |
| 40300 | ANTI-FREEZE REMOVAL | | | | | | |
| 40400 | OILY WATER DISPOSAL | | | | | | |
| 41100 | SLUDGE DISPOSAL | | | | | | |
| 41000 | GASOLINE/WATER | | 60 | Gallons | | | |
| 40900 | DRUM DISPOSAL | | | | | | |
| 41507 | TANK ENTRY | | | | | | |
| | | wasted out | | 300 gallon | tank | | |
| | | | | | | | |
| 40611 | NEW 55 GAL DRUM / 17H | with | pressure | washer. | Tank | has | |
| 42001 | DEXSIL TEST KIT | | | | | | |
| 41506 | TRANSPORTATION | 10" | of Tar | in it | | | |
| | | | | | | | |
| 41508 | TRUCK AND OPERATOR | | | | | | |
| | | | | | | | |
| | | | | TOTAL | | | |

PARTS WASHER SERVICE INTERVAL _____ DAYS.
USED OIL CUSTOMER SERVICED EVERY 30 DAYS UNLESS OTHERWISE INDICATED.
USED OIL SERVICE INTERVAL _____ DAYS.

**CONDITIONALLY EXEMPT SMALL QUANTITY GENERATOR CERTIFICATION**

I certify that this generator generates less than 100 kilograms of hazardous waste per month, as defined at 40 C.F.R. 261, and does not accumulate more than 1,000 kilograms of such waste during the month.

X _____
GENERATOR'S SIGNATURE

CHARGE MY ACCOUNT FOR THIS TRANSACTION UNLESS OTHERWISE INDICATED IN THE PAYMENT SECTION. INVOICES REFLECTING CHARGES TO CUSTOMER ARE SUBJECT TO AN INTEREST RATE OF THE LESSER OF 1½% PER MONTH (18% PER ANNUM) OR THE MAXIMUM RATE ALLOWED BY LAW ON ANY INVOICES THAT ARE NOT PAID WITHIN 30 DAYS. IN THE EVENT OF DEFAULT, LORCO SHALL BE ENTITLED TO RECOVER COSTS OF COLLECTION, INCLUDING REASONABLE ATTORNEY'S FEES. INITIAL _____

$

GENERATOR WARRANTS AND REPRESENTS THAT THE MATERIALS PROVIDED LORCO HEREUNDER HAVE NOT BEEN MIXED, COMBINED, OR OTHERWISE BLENDED IN ANY QUANTITY WITH MATERIALS CONTAINING POLYCHLORINATED BIPHENYLS (PCB) OR ANY OTHER MATERIAL DEFINED AS HAZARDOUS WASTE UNDER APPLICABLE LAWS, INCLUDING BUT NOT LIMITED TO 40 CFR PART 261, GENERATOR AGREES TO INDEMNIFY AND HOLD LORCO HARMLESS FOR ANY DAMAGES, COSTS, ATTORNEY'S FEES, ETC. ARISING OUT OF OR IN ANY WAY RELATED TO A BREACH OF THE ABOVE WARRANTY BY THE GENERATOR.

Generator certifies that the waste is ☐ used oil ☐ used antifreeze ☐ oily water ☐ oil filter ☐ parts washer solvent

☐ Other _____
Description

In accordance the N.J.A.C. 7:26-12.1 et seq, LORCO has the required permits to accept the above described waste.

X [signature]
Print Name Title

X [signature]
Signature Date

GENERATOR/CUSTOMER

**NON CONDITIONALLY EXEMPT LARGE QUANTITY GENERATOR CERTIFICATION**

DEXSIL CDT TEST RESULTS

X _____ PPM

## PAYMENT RECEIVED SECTION

| CASH ☐ | TOTAL RECEIVED |
|---|---|
| CHECK NUMBER | |

In accordance with NJAC7:26-6.7b + 40CFR PART 279 LORCO has notified the US EPA of its location and used oil management activities.

X [signature]
Print Name

X [signature] 2-4-10
Signature Date

LORCO REPRESENTATIVE

Motiva Brooklyn
25 Paidge Ave.
Brooklyn, NY

02/23/10
(Tues.)

Longshore Env. on-site @ 08:00 / off site @ 16:00 + MS Vehicle
MA/NZ/JAF/EL/CV, Van w/trailer, Boxtruck
Raining + Windy ~ 40°F
Working Pre-clearing / Drilling

Sovereign Consulting Inc.; Paul Yeseonis
- Tahoe (rental vehicle)

Boring Locations → Parking Lot (2), Driveway
exit (1), fence line (2)
Waterfront (1)

Boring Log → MW-7R

| Depth | Recov | ~~Gra~~ PPM | Description |
|---|---|---|---|
| 0-5' | Grab | | ~6-in coarse stone, ~1-ft brown f-m sand 3.5-ft dk gray f-m sand & fill material slight odor, wet @ ~4.5-ft b.g. |

(65)

Motiva
25 Paidge Ave
Brooklyn, NY

02/23/10
(Tues.)

Boring Log → MW-22R (E)

| Depth | Recov | PPM | Description |
|---|---|---|---|
| 0-5' | Grab | | ~6-in coarse gravel, ~1-ft med. brown f-m sand, 2-ft dk gray f-m sand + fill material (brick, wood) 1.5-ft gray f-m sand, little silt, no odor, wet @ ~4-ft |

Boring Log → MW-23R (W)

| Depth | Recov | PPM | Description |
|---|---|---|---|
| 0-5' | Grab | | ~6-in coarse stone, ~2-ft med. brown f-m sand, 2-ft dk brown f-m sand & gravel (fine-coarse), 4-in dk gray f-m sand & silt, no odor, wet |

(66)

Motiva 02/23/10
25 Paidge Ave. (Tues.)
Brooklyn, NY

Boring Log → B.E.-1 (S)

| Depth | Recov | PPM | Description |
|---|---|---|---|
| 0-5' | Grab | N/M | brick (old foundation) minimal soil, no odor |

~6-in asphalt / wet @ ~4.5-ft

Boring Log → Buckeye Pipeline-2 (

| Depth | Recov | PPM | Description |
|---|---|---|---|

(M)

(67)

Motiva 2/24/10
25 Paidge Ave. (Wed)
Brooklyn, NY

Longshore Env. on-site @ 0700 / offsite @
M, NE, JF, EL, CV / '06 Van, '07 Truck (RS), Big
Boxtruck, trailer w/ Geoprobe, Compressor
Overcast ~35°F, Drizzle
Work, Pre-clear (2) borehole locations

Boring Log → Buckeye Pipeline-2 (N)

| Depth | Recov | PPM | Description |
|---|---|---|---|
| 0-5' | Grab | N/M | ~6-in asphalts, ~6-in road base, 4-ft of fill material consisting of f-r brown sand, silt, some red brick, trace f-c gravel, no odor, wet @ ~4-ft |

Boring Log → Buckeye Pipeline (E) #3

| Depth | Recov. | PPM | Description |
|---|---|---|---|
| 0-5' | Grab | N/M | ~10-in asphalt, 4-ft of brick, ~4-in ~~asphalt~~ concrete, no odor, wet @ ~3.5-ft |

(68)

# TIME & MATERIAL FIELDSHEET

**Date:** Tuesday, February 23, 2010 **Project #:** EQ017
**Page:** 1 of 1 **Project Address:** 25 Paidge Avenue, Brooklyn, New York
**Client:** Shell Oil Products, U.S.

## Employee Time

| Employee Name | Appr. # | Task ID | Prep Time | Travel Time | On-Site Time | Total Time |
|---|---|---|---|---|---|---|
| Paul Yesconis | 711 | 16 | | 4 | 8 | 12 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |


**SOVEREIGN CONSULTING, INC.**
290 Executive Drive, Suite 300
Cranberry Twp., PA 16066
www.sovcon.com


## SOVEREIGN OWNED OR LEASED EQUIPMENT AND MATERIALS LIST

| Item # | Item | Qty | Units |
|---|---|---|---|
| OE104 | Chevy Van | | hrs |
| OE124 | Ford F-150 | | hrs |
| OE115 | Interface Probe | | day |
| OE143 | Multi-Gas PID | | day |
| SR620 | Mobile Phone | | day |
| SR800 | 4" Bailer | | each |
| SR800 | 2" Bailer | | each |
| SR800 | 1" Bailer | | each |
| SR812 | QED Filters | | each |
| SR816 | LDPE Tubing | | ft |
| SR817 | Silicon Flex Hose | | ft |
| SR820 | Gloves (box) (100) | 1 | each |

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR835 | Sorbent Sock | | each |
| SR836 | Sorbent Pads | | each |
| SR837 | Sorbent Boom | | each |
| SR935 | 55 Gallon Drum | | each |
| SR960 | Gripper Plug - 1" | | each |
| SR961 | Gripper Plug - 2" | | each |
| SR962 | Gripper Plug - 4" | | each |
| SR983 | Brass Padlock | | each |

## FEI Rental Equipment* (Need PO)

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR105 | Interface Probe | | day |
| SR110 | DO Meter | | day |
| SR130 | Sub Pump 2" | | day |
| SR205 | Hand Auger | | day |
| SR300 | Air Sampling Pump | | day |
| SR310 | PID | | day |
| SR335 | 4-Gas Meter | | day |
| SR420 | Level Logger | | day |
| SR635 | Survey Equipment | | day |
| SR645 | GW Multi-Meter | | day |
| SR655 | Peristaltic Pump | | day |

## RENTAL EQUIPMENT AND ADDITIONAL MATERIALS

List items rented or purchased to complete work

Enterprise Rental Truck

## Subcontractor Labor

Name & Description of Work

Longshore Environmental

## WORK DESCRIPTION

Conducted H&S tailgate meeting.
One crew cleared four (4) boring locations via Air-Knife.
Second crew sampled three locations and install two 4" wells to approximately 13' bgs.

**Project Manager / Supervisor Approval:** JHM 3-2-10 DSJ DSB **Date:** 3/4/10

Revised February 12, 2010

Shell-Brooklyn Terminal (EQ017)

2/23/10

Weather: Rain / Windy, 35°

On-site - Paul Yescavage (SCE) Longshore Env.

Purpose: Airknife / Well Install

0745: PRY arrived on-site

0800: Conduct H&S tailgate meeting with Longshore. Hotwork Permit issued by Terminal Manager.

0900: Set-up at first location to Airknife (MW-7R).

1000: Cleared MW-7R to 5' bgs
Set-up to begin sampling (DT) with GeoProbe.

1030: Sampled to 13' bgs with Dual Tube.
Connected 6.25" HSAs to drill to 13.0'.

1100: Drilled to 13.0'. Set well at 13.0' bgs

1130: 10'-4" PVC screen (0.020")
2.5'-4" pvc Riser
No.2 Sand (2.5'-13.0')

1230: Set-up at MW-21(R) and start sampling

1315: Sampled to 13'. HSA (6.25") to 12.5'.
Set well at 12.5'. Used 10' of 4" pvc screen (0.020").

1335: Break for Lunch

145

Shell-Brooklyn Terminal (EQ017)

2/23/10

1405: Finish constructing well. Move soil cuttings to drums staged on asphalt to be later moved by forklift to drum staging area

1430: Clean up area around MW-21(R).

1445: Set-up at MW-22R

1510: Encountered refusal at 9.0' with dual Tube

1530: Cleared four locations with air-knife. Will return tomorrow to finish air-knifing boring / well locations

1600: Clean-up site and departed

Paul Yescavage

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Shell/Motiva 0007107

# BOREHOLE CLEARANCE CHECKLIST
## Shell Oil Products US - Environmental Services

1. **If "NO" is answered on any of the items below, the consultant should contact the appropriate Shell Project Management Staff (PM) and discuss the issue(s) before proceeding with the subsurface investigation.**
2. **Document the reason for a "NO" answer on a second sheet and attach to this form.**
3. **Contact your supervisor for instructions and document instructed actions and results of actions documented.**

Site Address: 25 Paidge Ave, Brooklyn, NY Contractor Project #: EQ017 Date: 2/23/10

Borehole #s Reviewed: 6 Clearance Performed By: Paul Yesensis
*Project Manager*

## PRE-MOBILIZATION

| YES | NO | N/A | |
|---|---|---|---|
| ☒ | ☐ | ☐ | Does each borehole location allow for clear entry and exit, adequate workspace, and sufficient clearance (vertical and horizontal) for raising the mast and operating the drill rig and ate all proposed boring locations and associated areas of pavement cutting clear of pavement joints, curbs, crash posts, or other engineered structures? |
| ☒ | ☐ | ☐ | Have borehole locations been reviewed and approved by the appropriate Regulatory Agency, PM, Engineering & Maintenance personnel, fueling contractors or facility managers? |
| ☒ | ☐ | ☐ | Are all of the proposed borehole locations and associated areas of pavement cutting at least 5 feet from any subsurface utilities shown on client's building plans, shown on public right-of-way street improvement or other public property engineering plans and/or identified during a geophysical survey? |
| ☐ | ☒ | ☐ | Are any proposed boring locations within 10-feet of a marked natural gas line and/or a straight line from the meter to the gas main in the utility corridor? |
| ☒ | ☐ | ☐ | Have all appropriate underground utility companies been notified with required lead time (typically 48 hours) and marked out their utilities in the vicinity of the borehole locations or otherwise notified us that they do not have any utilities near the proposed borehole locations? |
| ☒ | ☐ | ☐ | Was a private utility locator contacted? |
| ☒ | ☐ | ☐ | Are all proposed borehole locations and associated areas of pavement cutting at least 5 feet from a visual line connecting any two similar looking manhole covers and at least 5 feet from a visual line perpendicular to the street from the water, gas, and electrical meters? |
| ☒ | ☐ | ☐ | Does the pavement in the vicinity of each proposed borehole location lack signs of previous excavation (e.g. no pavement subsidence, no differences in pavement texture or relief, no pavement patching)? |

## PRE-DRILLING

| YES | NO | N/A | |
|---|---|---|---|
| ☒ | ☐ | ☐ | Have all underground utilities been marked by a utility locating service, or, given notification that they do not have any utilities near the proposed borehole locations? |
| ☐ | ☐ | ☒ | If a boring location is within 10-feet of a marked gas line or a straight line drawn from the meter to the gas main in a utility corridor, does the driller have a casing present for drilling? |
| ☒ | ☐ | ☐ | Has the Facility/Station Manager indicated no knowledge of any subsurface utilities within 5 feet of the proposed borehole locations? (Review locations with the Facility/Station Manager). |
| ☒ | ☐ | ☐ | Has a tailgate safety meeting been conducted with all site personnel documenting the identification of potential hazards, the location of fuel shut-off valves, and the reviewing and signing of the Site Specific Health and Safety Plan? |
| ☒ | ☐ | ☐ | Before drilling in a Non-Critical or Critical Area (excluding areas within 10 feet of an UST Pit), has a hole been hand dug or air knifed a hole to 5 feet below grade and is the diameter of the hole at least 3 inches greater than the outer diameter of the lead drilling auger? |
| ☐ | ☐ | ☒ | Before drilling in a Critical Area (including areas within 10 feet of an UST Pit), has a hole been hand dug or air knifed a hole to 10 feet below grade and is the diameter of the hole at least 3 inches greater than the outer diameter of the lead drilling auger? |
| ☐ | ☐ | ☒ | Does the soil encountered in the hand-dug or air knifed hole appear to be native material (i.e., free of clean gravel, clean sand, aggregate base [gravelly sand with ~10% fines], or other non-native looking material)? |

While this checklist must be followed, adherence to it does not relieve Contractor of liability or modify any of contractor's obligations in its agreement with the Company.



Last Revised October 19, 2005

Shell/Motiva 0007108

HSE
COMMITMENT TO PERFORMANCE. PRIDE IN EXCELLENCE.

HW 02131

# Hot Work Permit

- ✓ *This permit is to authorize hot work. This permit does NOT authorize Confined Space Entry.*
- ✓ *This permit is valid only under the conditions listed below and is only good for 12 hrs.*
- ✓ *The permit must be returned to a Motiva Representative once the job is complete or at the end of the shift for closure.*

## Section 1. Permit Conditions

| | | |
|---|---|---|
| Describe work & location | Holes Drilling at Parking lot, Cleaning | |
| Person(s) performing work | Name: Nick, Cesar, Edgar, Arturo | Company: Long Stone |
| Fire Watch | Name: Paul | Company: Long & Stone/Spencer |

Hard hats, safety glasses, foot protection and company/contractor radio required in all operating, construction and maintenance areas. Work in Tank Farm, Dock, and Rack requires use of intrinsically safe equipment.

## Section 2. Contractor Oversight

| | |
|---|---|
| A Motiva Operator will check Contractor every 4 hours. | List name(s) of who is assigned to perform checks? Nick / Frank / Julio Robelo |

## Section 3. Hazard Recognition – Physical

* Indicates guidance material available

| | | | | |
|---|---|---|---|---|
| Lock-out/Tag-out required? If yes, attach LOTO Equipment Plan | YES* ☐ | NO ☑ | List electrical sources & controls: | Generator, GFCI, Jack Hammer, Compressor |
| Subsurface concerns? | YES* ☐ | NO ☑ | List how equipment was cleared: | LEL Meter |
| Abrasive blasting? | YES* ☐ | NO ☑ | List any ignition sources: | Generator, Compressor |
| Working at heights over 4'? | YES* ☐ | NO ☑ | List other work groups in area: | None |
| Cutting, Welding, Torching? | YES* ☐ | NO ☑ | List spark precautions: | Fire Extinguisher |
| Grounding/GFCI required? | YES ☑ | NO ☐ | List laceration hazards: | Jack Hammer, Hand Tools |
| Fire Extinguisher required? | YES ☑ | | List unusual slip/trip/fall hazards: | Uneven Surfaces, Holes |

## Section 4. Hazard Recognition – Materials & Chemicals (Review MSDSs)

| | | | |
|---|---|---|---|
| Equipment last contained: | N/A | | |
| List chemicals used in job: | None | | |
| Mechanical ventilation needed? | YES ☐ | NO ☑ | Other comments: |
| Respiratory protection needed? | YES ☐ | NO ☑ | (Use Respiratory Protection Guidance to determine) |

## Section 5. Hazard Control and Additional Personal Protective Equipment (Check boxes that apply)

| | | | | |
|---|---|---|---|---|
| Signs posted ☐ | Area barricaded ☐ | Hearing protection ☑ | Goggles ☐ | Face shield w/safety glasses ☑ |
| Communication method: 2 way Radio | Rubber boots ☐ | Electrical Safety Shoes ☐ | | Life Vest ☐ |
| Gloves: Leather ☑ Nitrile ☐ Electrical ☐ | Welder's helmet ☐ | Harness ☐ | Clothing: Tyvek ☐ NOMEX ☑ | |

## Section 6. Emergency Response

| | | | |
|---|---|---|---|
| Emergency procedures and alarms reviewed? | YES ☑ NO ☐ | Muster Point: | Outside Exit Gate |
| Who will take attendance? | Frank / Nick | Other comments: | |

## Section 7. MultiRAE Monitor Air Testing Results (Attach additional sheets as needed)

| Serial # / Unit # | Calibration Procedure | Comments |
|---|---|---|
| 095-5M7239 | Full Calibration ☑ Bump Test ☐ | |

| Time | Oxygen (%) | LEL (%) | VOC (ppm) | Other Indicate | Tester |
|---|---|---|---|---|---|
| 07:30 | 20.9 | 0 | 0 | | Frank S. |
| | | | | | |
| | | | | | |

## Section 8. Permit Approval & Permit Closure – Check Here if Self-Permitting ☐

| | | | |
|---|---|---|---|
| Valid from: *(date/time)* | 2/23/10 08:00 | Valid to: *(date/time not to exceed 12 hrs)* | 2/23/10 20:00 |
| Pre-job site inspection performed? | YES ☑ | Equipment Ready for work? | YES ☑ |
| Person Performing Work (Print Name): | Nick Cesar Edgar Arturo | Signature: | |
| Permit Authorizer (Print Name): | Robelo Monsan | Signature: | |
| Post-job site inspection performed? | YES ☐ | Site work approved for closure? | YES ☐ NO ☐ |
| Permit Closer Name: | | Permit Closer Signature: | Date / Time: |

FOR QUESTIONS, PLEASE CALL YOUR SAFETY REPRESENTATIVE

**Sovereign Consulting Inc.**
**Tailgate Safety Meeting Form**
(To be submitted with field notes to Project Manager each day)

| | |
|---|---|
| **Project Name:** Shell - Brooklyn Terminal | **Date:** 2/23/10 |
| **Location:** 25 Paidge Ave | **Weather:** Cloudy / Rain |
| **Project Manager [Print]:** Doug Byers | **Temp:** 35° |
| **Contractors/Subcontractors:** Longshore Env. | |
| **Scope of Work:** Air knife / Well Install | |

| **Task Hazards:** (check all that apply) *requires Permit to Work | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☒ | Excavations* | ☐ | Haz. Substances | ☒ | Sanitation | ☐ |
| Confined Spaces* | ☐ | Explosion | ☐ | Heavy Equipment | ☒ | Sharp Objects | ☐ |
| Cutting/Welding* | ☐ | Falling Objects | ☐ | Ladders* | ☐ | Tools | ☒ |
| Electrical | ☐ | Fire | ☐ | Noise | ☒ | Traffic | ☒ |
| Environmental Hazard | ☐ | Insects/Biological | ☐ | Slip/Trip Hazards | ☒ | Weather | ☒ |
| Elevated Work* | ☐ | Flying Debris | ☒ | Overhead | ☐ | Other (describe below) | ☐ |

**Engineering Controls / Work Practices:** Hot Work Permit / Proper PPE

| **Levels of Protection / Personal Protective Equipment:** | | | |
|---|---|---|---|
| Level A | ☐ | Eye & Face Protection ☒ | Safety Glasses ☐ Face Shield ☐ |
| Level B | ☐ | Foot Protection ☒ | Steel Toes ☐ Hip Boots/Waders ☐ |
| Level C | ☐ | Hand Protection ☒ | Nitrile Gloves ☐ Leather Gloves ☐ Full Arm Chemical ☐ |
| Level D | ☒ | Head Protection ☒ | Hard Hat ☐ |
| | | Hearing Protection ☒ | Ear Muffs/Plugs ☐ |
| | | Other ☐ | Barricades ☐ High Visibility Safety Vests ☐ Cones/Flags ☐ |
| | | | Amber Light/Vehicle Hazards ☐ Crash Truck ☐ Tyvek/Coveralls ☐ |

| **Air Monitoring/Sampling** | | **Emergency Response** | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☒ | Emergency Alarms | ☐ | First Aid Kit | ☒ | Cell Phone | ☐ |
| FID/PID | ☒ | Emergency Contacts | ☐ | Spill Kit | ☒ | Fire Extinguisher 2016 | ☒ |
| Detector Tubes | ☐ | Evacuation Routes | ☐ | Hospital Route | ☐ | Pedestrian Safety | ☐ |
| Dust Monitor | ☐ | Explosion/Fire | ☐ | Work Area | ☐ | Vapor/Dust Suppression | ☐ |
| Personal Air | ☐ | Medical Emergency | ☐ | Smoking/Break Area | ☒ | | |

**Are site workers Fit To Work?** Yes ☒ No ☐

**Comments:**

**Name & Title of Person Conducting Tailgate Safety Meeting:** Paul Vescovi

**Signature:** [signature] **Date:** 2/23/10



Shell/Motiva 0007110

**Life-Saving Rules**

Work with a valid Work Permit when required

Verify isolation before work begins and use the specified life protecting equipment

Obtain authorisation before overriding or disabling safety critical equipment

Conduct gas tests when required

Obtain authorisation before entering a confined space

Protect yourself against a fall when working at height

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth within this project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

### SIGN IN

MEETING ATTENDEES

| Name [Print] | Company | Signature |
|---|---|---|
| Kett Abbott | Longshore | [signature] |
| Nick Zarcone | Long Shore | [signature] |
| EDGAR LUCERO | Long Shore | [signature] |
| JUAN FRONG | Longshore | [signature] |
| Paul Yesconis | SCI | [signature] |

| | | | |
|---|---|---|---|
| Have all personnel been informed of work to be completed? | YES | NO | NA |
| Has fuel delivery service been informed? | YES | NO | NA |
| Is fuel delivery due today? | YES | NO | NA |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | NA |
| Are work areas controlled to protect workers, site staff, and the public? | YES | NO | NA |
| Do all workers have their API Safety Key card? | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Paul Yesconis | [signature] | (0715) 2/23/10 | NA | → |

### SIGN OUT

| | | | |
|---|---|---|---|
| Has the work area been left tidy and safe? | YES | NO | NA |
| Are site personnel aware of status of work? | YES | NO | NA |
| Are changes to equipment documented and communicated? | YES | NO | NA |
| All incidents, near misses, unsafe situations reported? | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Paul Yesconis | [signature] | (1600) 2/23/10 | NA | → |

**Life-Saving Rules**

Do not walk under a suspended load

No alcohol or drugs while working or driving

Wear your seat belt

Do not smoke outside designated smoking areas

While driving, do not use your phone and do not exceed speed limits

Follow prescribed Journey Management Plan

# TIME & MATERIAL FIELDSHEET

**Date:** Wednesday, February 24, 2010 **Project #:** EQ017
**Page:** 1 of 1 **Project Address:** 25 Paidge Avenue, Brooklyn, New York
**Client:** Shell Oil Products, U.S.

## Employee Time

| Employee Name | Appr. # | Task ID | Prep Time | Travel Time | On-Site Time | Total Time |
|---|---|---|---|---|---|---|
| Paul Yesconis | 711 | 16 | | 4 | 8 | 12 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |


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290 Executive Drive, Suite 300
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www.sovcon.com


## SOVEREIGN OWNED OR LEASED EQUIPMENT AND MATERIALS LIST

| Item # | Item | Qty | Units | Item # | Item | Qty | Units |
|---|---|---|---|---|---|---|---|
| OE104 | Chevy Van | | hrs | SR835 | Sorbent Sock | | each |
| OE124 | Ford F-150 | | hrs | SR836 | Sorbent Pads | | each |
| OE115 | Interface Probe | | day | SR837 | Sorbent Boom | | each |
| OE143 | Multi-Gas PID | | day | SR935 | 55 Gallon Drum | | each |
| SR620 | Mobile Phone | | day | SR980 | Gripper Plug - 1" | | each |
| SR800 | 4" Bailer | | each | SR981 | Gripper Plug - 2" | | each |
| SR800 | 2" Bailer | | each | SR982 | Gripper Plug - 4" | | each |
| SR800 | 1" Bailer | | each | SR983 | Brass Padlock | | each |
| SR812 | QED Filters | | each | | | | |
| SR816 | LDPE Tubing | | ft | | | | |
| SR817 | Silicon Flex Hose | | ft | | | | |
| SR820 | Gloves (box) (100) | | each | | | | |

## FEI Rental Equipment* (Need PO)

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR105 | Interface Probe | | day |
| SR110 | DO Meter | | day |
| SR130 | Sub Pump 2" | | day |
| SR205 | Hand Auger | | day |
| SR300 | Air Sampling Pump | | day |
| SR310 | PID | | day |
| SR335 | 4-Gas Meter | | day |
| SR420 | Level Logger | | day |
| SR635 | Survey Equipment | | day |
| SR645 | GW Multi-Meter | | day |
| SR655 | Peristaltic Pump | | day |
| | | | |

## RENTAL EQUIPMENT AND ADDITIONAL MATERIALS

List items rented or purchased to complete work

Enterprise Rental Truck

## Subcontractor Labor

Name & Description of Work

Longshore Environmental - Air-Kinife and drilling

## WORK DESCRIPTION

Conducted H&S tailgate meeting.
One crew cleared two (2) boring locations via Air-Knife.
Second crew sampled three locations and install three (3) 4" wells to approximately 13' bgs.

**Project Manager / Supervisor Approval:** JAm 3-2-10 DEJ **Date:** 3/4/10

Revised February 12, 2010

2010-02-24 - Brooklyn Terminal.xls

Shell-Brooklyn Terminal (EQ017)

2/24/10

Weather: Cloudy/Drizzle 39°

On-site: Paul Yescunis (SCI), Longshore (5)

Purpose: Airknife / Well Install

0730: Conducted H&S tailgate meeting. Covered JSAs for: Saw Cutting, Utility Clearance, GeoProbe & Well Install.

0800: Set-up at MW-22R.

0815: Begin drilling well with 6.25" HSAs.

0900: Set well at MW-22R at 9.0' bgs

Screen: 4" pvc (0.020") 2'-9' bgs (7')

Riser: 4" pvc 0.5'-2.0'

Sand Pack: 1.9'-9.0'

0930: Set-up at ~~[illegible]~~ PRO MW-42 to start sampling.

1100: Drilled to 13.0' and set well screen (4") at 13.0' bgs.

Screen: 4" PVC (0.020") 3'-13' (10')

Riser: 4" pvc (0.5'-3.0')

Sand Pack: (2.5'-13.0') No. 2 Fil Pro Sand

1138: Set-up at MW-43 and begin sampling.

1205: Sampled to 13' with Dual Tube. Break for lunch



Shell-Brooklyn Terminal (EQ017)

2/24/10

1330: Completed well at MW-43. Set screen at 13.0' bgs

Screen (4") = 0.020" (3.0'-13.0')

Riser (4") pvc

Sand Pack (NO.2): (2.5'-13.0')

1335: Matt A. crew finished clearing the last borehole. Clearing of MW-42 and proposed MW-44 was very difficult due to the large amounts of bricks.

1345: Set-up at MW-44 to begin sampling.

1500: Sampled to 13.0' bgs. Tried to HSA but concrete at 5.0' cannot be passed. Will return tomorrow and use larger HSA rig to break through concrete.

1505: Departed Site.

HSE
COMMITMENT TO PERFORMANCE. PRIDE IN EXCELLENCE.

HW 02132

# Hot Work Permit

- ✓ *This permit is to authorize hot work. This permit does NOT authorize Confined Space Entry.*
- ✓ *This permit is valid only under the conditions listed below and is only good for 12 hrs.*
- ✓ *The permit must be returned to a Motiva Representative once the job is complete or at the end of the shift for closure.*

## Section 1. Permit Conditions

| | | |
|---|---|---|
| Describe work & location | Holes Drilling AT Parking lot & EXIT GATE, Cleaning | |
| Person(s) performing work | Name: Nick, Cesar, Edgar, Arturo, Paul | Company: Long Shore |
| Fire Watch | Name: Paul | Company: Same |

Hard hats, safety glasses, foot protection and company/contractor radio required in all operating, construction and maintenance areas. Work in Tank Farm, Dock, and Rack requires use of intrinsically safe equipment.

## Section 2. Contractor Oversight

| | |
|---|---|
| A Motiva Operator will check Contractor every 4 hours. | List name(s) of who is assigned to perform checks? NE JM RM |

## Section 3. Hazard Recognition - Physical

Indicates guidance material available

| | | | | | |
|---|---|---|---|---|---|
| Lock-out/Tag-out required? If yes, attach LOTO Equipment Plan | YES* ☐ | NO ☑ | List electrical sources & controls: | Generator or Compressor, Jack Hammer |
| Subsurface concerns? | YES* ☐ | NO ☑ | List how equipment was cleared: | LEL METER |
| Abrasive blasting? | YES* ☐ | NO ☑ | List any ignition sources: | Compressor, Generator |
| Working at heights over 4'? | YES* ☐ | NO ☑ | List other work groups in area: | None |
| Cutting, Welding, Torching? | YES* ☐ | NO ☑ | List spark precautions: | Fire Extinguishers, F. Hours |
| Grounding/GFCI* required? | YES ☑ | NO ☐ | List laceration hazards: | Jack Hammer, Hand Tools |
| Fire Extinguisher required? | YES ☑ | | List unusual slip/trip/fall hazards: | Uneven Ground / Wet/Rain |

## Section 4. Hazard Recognition - Materials & Chemicals (Review MSDSs)

| | | | |
|---|---|---|---|
| Equipment last contained: | N/A. | | |
| List chemicals used in job: | None | | |
| Mechanical ventilation needed? | YES ☐ | NO ☑ | Other comments: |
| Respiratory protection needed? | YES ☐ | NO ☑ | (Use Respiratory Protection Guidance to determine) |

## Section 5. Hazard Control and Additional Personal Protective Equipment (Check boxes that apply)

| | | | | |
|---|---|---|---|---|
| Signs posted ☐ | Area barricaded ☐ | Hearing protection ☑ | Goggles ☐ | Face shield w/safety glasses ☑ |
| Communication method: 2 way Radio | Rubber boots ☐ | Electrical Safety Shoes ☐ | | Life Vest ☐ |
| Gloves: Leather ☑ Nitrile ☐ Electrical ☐ | Welder's helmet ☐ | Harness ☐ | Clothing: Tyvek ☐ NOMEX ☐ | |

## Section 6. Emergency Response

| | | | |
|---|---|---|---|
| Emergency procedures and alarms reviewed? | YES ☑ | NO ☐ | Muster Point: OUTSIDE EXIT GATE |
| Who will take attendance? | Frank S. / Nick | Other comments: | |

## Section 7. MultiRAE Monitor Air Testing Results (Attach additional sheets as needed)

| Serial # / Unit # | Calibration Procedure | Comments |
|---|---|---|
| 095-517289 | Full Calibration ☑ Bump Test ☐ | |

| Time | Oxygen (%) | LEL (%) | VOC (ppm) | Other Indicate | Tester |
|---|---|---|---|---|---|
| 07:30 | 20.9 | 0 | 0 | | RM |
| | | | | | |
| | | | | | |

## Section 8. Permit Approval & Permit Closure - Check Here if Self-Permitting ☐

| | | | |
|---|---|---|---|
| Valid from: *(date/time)* | 2/24/10 08:00 | Valid to: *(date/time not to exceed 12 hrs)* | 2/24/10 20:00 |
| Pre-job site inspection performed? | YES ☑ | Equipment Ready for work? | YES ☑ |
| Person Performing Work (Print Name): | R. Morgan | Signature: | |
| Permit Authorizer (Print Name): | R. Morgan | Signature: | |
| Post-job site inspection performed? | YES ☐ | Site work approved for closure? | YES ☐ NO ☐ |
| Permit Closer Name: | Permit Closer Signature: | Date / Time: | |

FOR QUESTIONS, PLEASE CALL YOUR SAFETY REPRESENTATIVE

Shell/Motiva 0007114

**Sovereign Consulting Inc.**
**Tailgate Safety Meeting Form**
(To be submitted with field notes to Project Manager each day)

| | |
|---|---|
| **Project Name:** Shell - Brooklyn, NY | **Date:** 2/24/10 |
| **Location:** Brooklyn, NY | **Weather:** Rain/Cloudy |
| **Project Manager [Print]:** D. Byers | **Temp:** 39° |
| **Contractors/Subcontractors:** Longshore | |

**Scope of Work:** Air knife / Well Install

| **Task Hazards:** (check all that apply) *requires Permit to Work | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☒ | Excavations* | ☐ | Haz. Substances | ☐ | Sanitation | ☐ |
| Confined Spaces* | ☐ | Explosion | ☐ | Heavy Equipment | ☒ | Sharp Objects | ☐ |
| Cutting/Welding* | ☐ | Falling Objects | ☐ | Ladders* | ☐ | Tools | ☐ |
| Electrical | ☐ | Fire | ☐ | Noise | ☒ | Traffic | ☒ |
| Environmental Hazard | ☐ | Insects/Biological | ☐ | Slip/Trip Hazards | ☐ | Weather | ☐ |
| Elevated Work* | ☐ | Flying Debris | ☐ | Overhead | ☐ | Other (describe below) | ☐ |

**Engineering Controls / Work Practices:** Hot Work Permit / Proper PPE

| **Levels of Protection / Personal Protective Equipment:** | | | |
|---|---|---|---|
| Level A | ☐ | Eye & Face Protection ☒ | Safety Glasses ☐ Face Shield ☐ |
| Level B | ☐ | Foot Protection ☒ | Steel Toes ☐ Hip Boots/Waders ☐ |
| Level C | ☐ | Hand Protection ☒ | Nitrile Gloves ☐ Leather Gloves ☐ Full Arm Chemical ☐ |
| Level D | ☒ | Head Protection ☒ | Hard Hat ☐ |
| | | Hearing Protection ☐ | Ear Muffs/Plugs ☐ |
| | | Other ☐ | Barricades ☐ High Visibility Safety Vests ☒ Cones/Flags ☐ |
| | | | Amber Light/Vehicle Hazards ☐ Crash Truck ☐ Tyvek/Coveralls ☐ |

| **Air Monitoring/Sampling** | | **Emergency Response** | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☒ | Emergency Alarms | ☐ | First Aid Kit | ☒ | Cell Phone | ☒ |
| FID/PID | ☒ | Emergency Contacts | ☐ | Spill Kit | ☐ | Fire Extinguisher | ☒ |
| Detector Tubes | ☐ | Evacuation Routes | ☐ | Hospital Route | ☐ | Pedestrian Safety | ☐ |
| Dust Monitor | ☐ | Explosion/Fire | ☐ | Work Area | ☐ | Vapor/Dust Suppression | ☐ |
| Personal Air | ☐ | Medical Emergency | ☐ | Smoking/Break Area | ☐ | | |

**Are site workers Fit To Work?** Yes ☒ No ☐

**Comments:**

**Name & Title of Person Conducting Tailgate Safety Meeting:** Paul Yescanis

**Signature:** Paul Yescanis **Date:** 2/24/10



Shell/Motiva 0007115

**Life-Saving Rules**

Work with a valid Work Permit when required

Verify isolation before work begins and use the specified life protecting equipment

Obtain authorisation before overriding or disabling safety critical equipment

Conduct gas tests when required

Obtain authorisation before entering a confined space

Protect yourself against a fall when working at height

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth within this project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

### SIGN IN

MEETING ATTENDEES

| Name [Print] | Company | Signature |
|---|---|---|
| Matthew Abbott | LongShore Env. | [signature] |
| Nick Zarino | Longshore | [signature] |
| Edgar Lucero | Long Shore | Edgar Lucero |
| Cesar Vega | Long Shore | [signature] |
| Juan Franco | Long shore | [signature] |
| Paul Yesconis | SCI | [signature] |

| | | | |
|---|---|---|---|
| Have all personnel been informed of work to be completed? | YES | NO | NA |
| Has fuel delivery service been informed? | YES | NO | NA |
| Is fuel delivery due today? | YES | NO | NA |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | NA |
| Are work areas controlled to protect workers, site staff, and the public? | YES | NO | NA |
| Do all workers have their API Safety Key card? | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Paul Yesconis | [signature] | (0715) 2/24/10 | NA | → |

### SIGN OUT

| | | | |
|---|---|---|---|
| Has the work area been left tidy and safe? | YES | NO | NA |
| Are site personnel aware of status of work? | YES | NO | NA |
| Are changes to equipment documented and communicated? | YES | NO | NA |
| All incidents, near misses, unsafe situations reported? | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Paul Yesconis | [signature] | (1600) 2/24/10 | NA | → |

**Life-Saving Rules**

Do not walk under a suspended load

No alcohol or drugs while working or driving

Wear your seat belt

Do not smoke outside designated smoking areas

While driving, do not use your phone and do not exceed speed limits

Follow prescribed Journey Management Plan

# TIME & MATERIAL FIELDSHEET

**Date:** Thursday, February 25, 2010 **Project #:** EQ017
**Page:** 1 of 1 **Project Address:** 25 Paidge Avenue, Brooklyn, New York
**Client:** Shell Oil Products, U.S.

## Employee Time

| Employee Name | Appr. # | Task ID | Prep Time | Travel Time | On-Site Time | Total Time |
|---|---|---|---|---|---|---|
| Paul Yesconis | 711 | 16 | | 8 | 4 | 12 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

**SOVEREIGN CONSULTING, INC.**
290 Executive Drive, Suite 300
Cranberry Twp., PA 16066
www.sovcon.com

## SOVEREIGN OWNED OR LEASED EQUIPMENT AND MATERIALS LIST

| Item # | Item | Qty | Units |
|---|---|---|---|
| OE104 | Chevy Van | | hrs |
| OE124 | Ford F-150 | | hrs |
| OE115 | Interface Probe | | day |
| OE143 | Multi-Gas PID | | day |
| SR620 | Mobile Phone | | day |
| SR800 | 4" Bailer | | each |
| SR800 | 2" Bailer | | each |
| SR800 | 1" Bailer | | each |
| SR812 | QED Filters | | each |
| SR816 | LDPE Tubing | | ft |
| SR817 | Silicon Flex Hose | | ft |
| SR820 | Gloves (box) (100) | | each |

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR835 | Sorbent Sock | | each |
| SR836 | Sorbent Pads | | each |
| SR837 | Sorbent Boom | | each |
| SR935 | 55 Gallon Drum | | each |
| SR960 | Gripper Plug - 1" | | each |
| SR981 | Gripper Plug - 2" | | each |
| SR982 | Gripper Plug - 4" | | each |
| SR983 | Brass Padlock | | each |
| | | | |
| | | | |
| | | | |
| | | | |

## FEI Rental Equipment (Need PO)

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR105 | Interface Probe | | day |
| SR110 | DO Meter | | day |
| SR130 | Sub Pump 2" | | day |
| SR205 | Hand Auger | | day |
| SR300 | Air Sampling Pump | | day |
| SR310 | PID | | day |
| SR335 | 4-Gas Meter | | day |
| SR420 | Level Logger | | day |
| SR635 | Survey Equipment | | day |
| SR645 | GW Multi-Meter | | day |
| SR655 | Peristaltic Pump | | day |
| | | | |

## RENTAL EQUIPMENT AND ADDITIONAL MATERIALS

List items rented or purchased to complete work

Enterprise Rental Truck

## Subcontractor Labor

Name & Description of Work

Longshore Environmental - Drilling

## WORK DESCRIPTION

Conducted H&S tailgate meeting.

Install one (1) - 4" well to approximately 13' bgs.
Fill top of each well location with cold patch until weather allows for the installation of manholes.
Travel back to Pittsburgh

**Project Manager / Supervisor Approval:** JAM 3-2-10 DSJ DSB **Date:** 3/4/10

Shell- Brooklyn Terminal (EQ017)

2/25/10

Weather: Snow, 35°↓

On-site: Paul Yesconis (SCI), Longshore Env(2)

Purpose: Finish drilling MW-44.

0700: Longshore arrived on-site.

0715: Conduct H&S tailgate Meeting

0745: Set up drilling at MW-44 and try to auger (6.25') threw the concrete at 5.0'.

0845: Was able to auger threw concrete HSA to 13'.

0945: Set well at 13.0' bgs.

- Screen (4") - 0.020" : 3'-13' bgs
- Riser (4") PVC : 0.5'-3.0' bgs
- Sand (No.2) : 2.5'-13.0'
- Bentonite (3/8") : 1.0'-2.5'

1000: Longshore is staying on-site to place asphalt cold patch over wells located in the parking lot and "Exit" lane adjacent to pipeline. Longshore will return next week to finish to of each well with manholes and concrete pads. Place all ~~sic~~ soil drums in warehouse next to bulkhead.

1015: PM departed site





Shell/Motiva 0007118

# PROJECT: WELL LOG

| WELL NO. | PROJECT NO. | LOCATION | SHEET |
|---|---|---|---|
| MW-7R | EQ017 | Brooklyn Terminal | 1 OF 1 |
| TIME START 0900 AK (1000 Drilling) | DRILLING CONTRACTOR Longshore | DRILLING EQUIPMENT GeoProbe | DATE 2/23/10 |
| TIME STOP 1100 (Drilling) 1130 (Well Cm) | DRILLER Nick | DRILLING METHOD HSA - 6.25" / SAMPLING METHOD DT | FIRST WATER |
| TOTAL DEPTH 13' (DT) | CASING 4" PVC | SCREEN 4" PVC Screen (0.020") | SCREEN LENGTH 10' |
| PROJECT MGR. D. Byers | FILTER PACK No. 2 FilPro Sand (2.5'-13.0') | SEAL | FINAL DTW |

| DEPTH BELOW SURFACE | SAMPLER TYPE | SAMPLE NO. | INCHES DRIVEN/ RECOVERED | BLOWS PER 6 IN. | USCS | LOG OF MATERIAL | WELL CONSTRUCTION |
|---|---|---|---|---|---|---|---|
| 0 | AK | | | | | 0.0-5.0: Air knife | 4" |
| 1 | | | | | | | |
| 2 | | | | | | | 2.5' |
| 3 | | | | | | | No. 2 Sand |
| 4 | | | | | | | |
| 5 | DT | S-1 | 1.5/5.0 | NA | | (5.0-10.0) | |
| 6 | | | | | | 0.8' - Clayey Gravel, Dk grayish brn, wet (450 ppm) | |
| 7 | | | | | | 0.7' - Silty Gravel & Fine to Coarse Sand, Stained black with hydrocarbon impact (500 ppm) | 4" |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | DT | S-2 | 0.0/3.0' | NA | | (10.0'-13.0') No Recovery (Very Soft) Black Production Liner | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | 13.0' |
| 4 | End of Boring at 13.0' (DT) HSA (6.25") to 13' bgs | | | | | | |
| 5 | | | | | | Sand (No. 2) = Bentonite (3/8 Chips) = | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |

LOGGED BY: P. Yescomis OFFICE: DATE: 2/23/10

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# PROJECT: WELL LOG

| | | | |
|---|---|---|---|
| WELL NO. MW-21(R) | PROJECT NO. EQ017 | LOCATION Brooklyn Terminal | SHEET 1 OF 1 |
| TIME START 1230 | DRILLING CONTRACTOR Longshore | DRILLING EQUIPMENT GeoProbe 6610 | DATE 2/23/10 |
| TIME STOP 1?? | DRILLER Nick | DRILLING METHOD HSA - 6.25" / SAMPLING METHOD Dual Tube | FIRST WATER 4' |
| TOTAL DEPTH 13.0' DT / 12.5' HSA | CASING 4" PVC | SCREEN 4" PVC (0.020") | SCREEN LENGTH 10' |
| PROJECT MGR. D. Byers | FILTER PACK No. 2 Silica (2.0'-13.0') | SEAL Bentonite Chips (3/8") (2.0'-3.0') | FINAL DTW |

| DEPTH BELOW SURFACE | SAMPLER TYPE | SAMPLE NO. | INCHES DRIVEN/ RECOVERED | BLOWS PER 6 IN. | USCS | LOG OF MATERIAL | WELL CONSTRUCTION |
|---|---|---|---|---|---|---|---|
| 0 | AK | NA | NA | NA | | (0.0-5.0) Airknife | |
| 5 | DT | S-1 | 0.6/5.0 | NA | | (5.0-10.0): No Recovery (Very Soft) | |
| 10 | DT | S-2 | 0.4/3.0' | NA | | (10.0-13.0'): Fine to Coarse Sand, with mud gravel (Could be sloughed from above). very moist. Dk grayish brown (110 ppm) | |
| 13 | End Sampling at 13.0' HSA (6.25") to 12.5' | | | | | | |

4" No.2 sand 4"

LOGGED BY: P. Yescanis OFFICE: Cranberry Twp, PA DATE: 2/23/10

# PROJECT:

# WELL LOG

| WELL NO. | PROJECT NO. | LOCATION | SHEET |
|---|---|---|---|
| MW-22R | EQ017 | Brooklyn Terminal (25 Paidge Ave) | 1 OF 1 |

| TIME START | DRILLING CONTRACTOR | DRILLING EQUIPMENT | DATE |
|---|---|---|---|
| 0815 (2/24/10) 1500 (2/23/10) | Longshore Env. | GeoProbe 6610 DT | 2/23-2/24/10 |

| TIME STOP | DRILLER | DRILLING METHOD | SAMPLING METHOD | FIRST WATER |
|---|---|---|---|---|
| 1530 (2/23/10) | Nick | HSA-6.25" | Dual Tube | |

| TOTAL DEPTH | CASING | SCREEN | SCREEN LENGTH |
|---|---|---|---|
| 9' bgs | 4" pvc (0.5'-2.0') | 4" pvc (0.020") - (2.0'-9.0') | 7' |

| PROJECT MGR. | FILTER PACK | SEAL | FINAL DTW |
|---|---|---|---|
| D. Byers | No.2 Filpro Sand (1.9'-9.0') | Bentonite Chips (3/8) | |

| DEPTH BELOW SURFACE | SAMPLER TYPE | SAMPLE NO. | INCHES DRIVEN/ RECOVERED | BLOWS PER 6 IN. | USCS | LOG OF MATERIAL | WELL CONSTRUCTION |
|---|---|---|---|---|---|---|---|
| 0 | AK | | | | | (0.0-5.0) Airknife | |
| 1 | | | | | | | 4" |
| 2 | | | | | | | No.2 Sand |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | DT | S-1 | 1.0/4.0 | NA | | (5.0'-9.0') | |
| 6 | | | | | | 1.0'- Gravel (Med) with Fine to Coarse sand, wet. Dark grey 5Y 4/1 (600 ppm) | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | Refusal at 9.0' | | | | | HSA (6.25") to 9' and set well (4") | |
| 10 | | S-2 | | | | (10.2-13.0) | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |

LOGGED BY: P. Yescenas OFFICE: DATE: 2/23 - 2/24/10

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# PROJECT: WELL LOG

| | | | |
|---|---|---|---|
| WELL NO. MW-42 | PROJECT NO. EQ017 | LOCATION Brooklyn Terminal (25 Paidge Ave) | SHEET 1 OF 1 |
| TIME START 0942 | DRILLING CONTRACTOR Longshore Env | DRILLING EQUIPMENT Geoprobe 6610 DT | DATE 2/24/10 |
| TIME STOP | DRILLER Nick Zarcone | DRILLING METHOD HSA (6.25") / SAMPLING METHOD Dual Tube | FIRST WATER |
| TOTAL DEPTH 13' | CASING 4" PVC | SCREEN 4" PVC (0.020") 3.0'-13.0' | SCREEN LENGTH 10' |
| PROJECT MGR. D. Byers | FILTER PACK No. 2 Fil Pro Sand (2.5'-13.0') | SEAL Bentonite Chips (3/8") (1.0'-2.5') | FINAL DTW |

| DEPTH BELOW SURFACE | SAMPLER TYPE | SAMPLE NO. | INCHES DRIVEN/ RECOVERED | BLOWS PER 6 IN. | USCS | LOG OF MATERIAL |
|---|---|---|---|---|---|---|
| 0 | AK | NA | NA | NA | | (0.0-5.0) Air knife |
| 5 | DT | S-1 | 2.5/5.0' | NA | | (5.0-10.0): 0.5' - Fine to Coarse Sand with gravel and brick Fragments, DK gray to brn, wet. 2.0' - Fine sand and silt, light gray to brownish gray, very moist to wet Non-plastic (0.0ppm) |
| 10 | DT | S-2 | 3.0/3.0 | NA | | (10.0-13.0'): 2.4' - Clay, high plasticity, Light gray, wet 0.6' - Clay with organic material (roots), light gray (0.0ppm) |
| 13 | Ended DT Sampling at 13.0' HSA to 12.0' | | | | | * No PID reading 5'-13' |

WELL CONSTRUCTION: 4" | No. 2 Sand | 4"

LOGGED BY: P. Yesconis OFFICE: Cranberry Twp, PA DATE: 2/24/10



Shell/Motiva 0007122

# PROJECT:

# WELL LOG

| | | | |
|---|---|---|---|
| WELL NO. MW-43 | PROJECT NO. EQ017 | LOCATION Brooklyn Terminal (25 Paidge Ave) | SHEET 1 OF 1 |
| TIME START 1140 | DRILLING CONTRACTOR Longshore Env. | DRILLING EQUIPMENT GeoProbe 6610 DT | DATE 2/24/10 |
| TIME STOP 1330 | DRILLER Nick | DRILLING METHOD HSA -6.25" / SAMPLING METHOD Dual Tube | FIRST WATER |
| TOTAL DEPTH 13' | CASING PVC - 4" (0.5-3.0') | SCREEN 4" PVC (0.020") (3-13') | SCREEN LENGTH 10' |
| PROJECT MGR. D. Byers | FILTER PACK No.2 FilPro Sand | SEAL Bentonite Chips (3/8") | FINAL DTW |

| DEPTH BELOW SURFACE | SAMPLER TYPE | SAMPLE NO. | INCHES DRIVEN/ RECOVERED | BLOWS PER 6 IN. | USCS | LOG OF MATERIAL | WELL CONSTRUCTION |
|---|---|---|---|---|---|---|---|
| 0 | | | | | | 0.0-5.0) Air knife | |
| 1 | | | | | | | |
| 2 | | | | | | | 4" |
| 3 | | | | | | | No.2 Sand |
| 4 | | | | | | | |
| 5 | DT | S-1 | 0.0/5.0 | NA | | (5.0-10.0): | |
| 6 | | | | | | 0.8'- Silt, bluish grayish, moist. Non-plastic, stiff (<1.0 ppm) | |
| 7 | | | | | | (0.0ppm) | 4" |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | DT | S-2 | 3.0/3.0 | NA | | (10.0'-13.0'): | |
| 1 | | | | | | | |
| 2 | | | | | | 0.8'- Silty clay, saturated, Brownish gray (0.0ppm) | |
| 13 | | | | | | 2.2'- Clay (Marine) with shells and organic material (roots), very moist (0.0ppm | 13.0' |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |

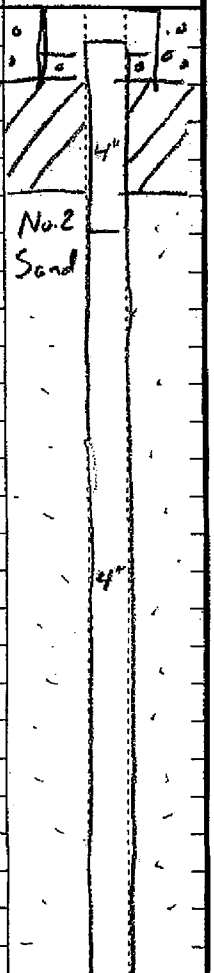
LOGGED BY: P. Yescas OFFICE: DATE: 2/24/10

# PROJECT: WELL LOG

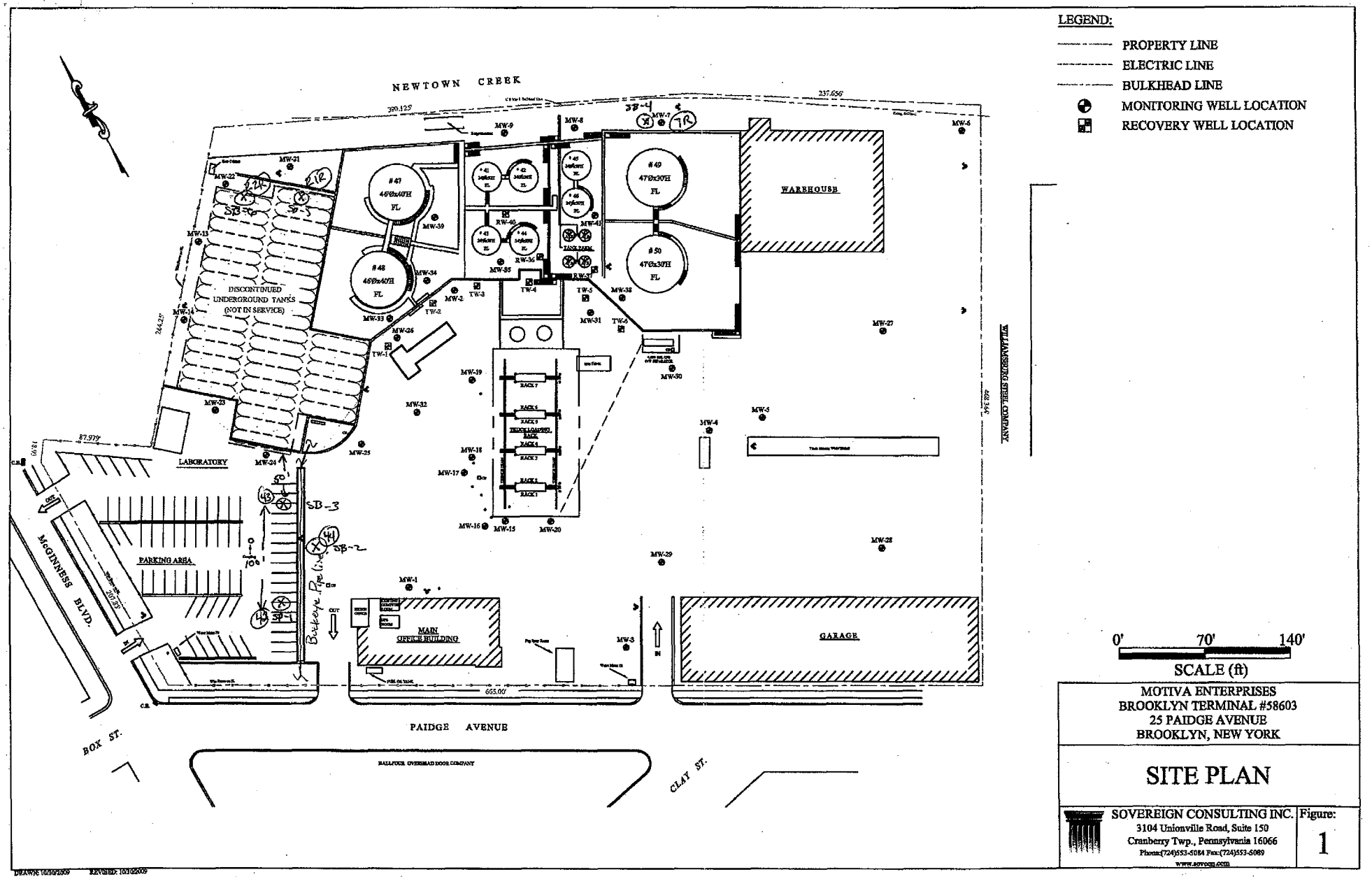
| WELL NO. MW-44 | PROJECT NO. EQ017 | LOCATION Brooklyn Terminal (25 Paidge Ave) | SHEET 1 OF 1 |
|---|---|---|---|
| TIME START 1345 | DRILLING CONTRACTOR Longshore Env | DRILLING EQUIPMENT B-57 (Mobile Drill) | DATE 2/24/10 |
| TIME STOP | DRILLER | DRILLING METHOD HSA-6.25 / SAMPLING METHOD Dual Tube | FIRST WATER |
| TOTAL DEPTH | CASING 4" PVC (0.5'-3.0') | SCREEN 4" PVC Screen (0.020") 3'-13' | SCREEN LENGTH 10' |
| PROJECT MGR. D. Byers | FILTER PACK No. 2 Sand F. Pro (8 bags) | SEAL | FINAL DTW |

| DEPTH BELOW SURFACE | SAMPLER TYPE | SAMPLE NO. | INCHES DRIVEN/ RECOVERED | BLOWS PER 6 IN. | USCS | LOG OF MATERIAL |
|---|---|---|---|---|---|---|
| | Ak | NA | NA | NA | | (0.0-5.0) Air knife |
| 5 | DT | S-1 | 3.2/5.0 | NA | | (5.0-10.0): |
| | | | | | | 1.2' - Silty clay, DK gray, slightly plastic wet |
| | | | | | | 2.0' - Silt with Fine sand, DK gray, non-plastic wet, med to stiff. |
| 10 | DT | S-2 | 3.0/3.0 | NA | | (10.0'-13.0'): |
| | | | | | | 3.0' - Clay (marsh) with organic material (roots), dark gray, high plasticity, soft |
| | End of DT sampling at 13.0' | | | | | HSA-6.25" to 13.0' |

WELL CONSTRUCTION




LOGGED BY: _____ OFFICE: _____ DATE: _____




MOTIVA ENTERPRISES
BROOKLYN TERMINAL #58603
25 PAIDGE AVENUE
BROOKLYN, NEW YORK

# SITE PLAN

SOVEREIGN CONSULTING INC.
3104 Unionville Road, Suite 150
Cranberry Twp., Pennsylvania 16066
Phone:(724)553-5084 Fax:(724)553-5089
www.sovcon.com

Figure: 1

Shell/Motiva 0007125

HSE
COMMITMENT TO PERFORMANCE. PRIDE IN EXCELLENCE.

# HW 02133
# Hot Work Permit

- ✓ *This permit is to authorize hot work. This permit does NOT authorize Confined Space Entry.*
- ✓ *This permit is valid only under the conditions listed below and is only good for 12 hrs.*
- ✓ *The permit must be returned to a Motiva Representative once the job is complete or at the end of the shift for closure.*

## Section 1. Permit Conditions

| | | |
|---|---|---|
| Describe work & location | Drilling at parking lot | |
| Person(s) performing work | Name: Edgar Arturo | Company: Long Shore |
| Fire Watch | Name: Raul | Company: Long Shore |

Hard hats, safety glasses, foot protection and company/contractor radio required in all operating, construction and maintenance areas. Work in Tank Farm, Dock, and Rack requires use of intrinsically safe equipment.

## Section 2. Contractor Oversight

| | |
|---|---|
| A Motiva Operator will check Contractor every 4 hours. | List name(s) of who is assigned to perform checks? Julio M / Nickel / Frank S. |

## Section 3. Hazard Recognition – Physical

* Indicates guidance material available

| | | | | | |
|---|---|---|---|---|---|
| Lock-out/Tag-out required? If yes, attach LOTO Equipment Plan | YES* ☐ | NO ☑ | List electrical sources & controls: | Drill Rig Cabinet | |
| Subsurface concerns? | YES* ☐ | NO ☑ | List how equipment was cleared: | C.E.C | |
| Abrasive blasting? | YES* ☐ | NO ☑ | List any ignition sources: | Drill | |
| Working at heights over 4'? | YES* ☐ | NO ☑ | List other work groups in area: | Cars | |
| Cutting, Welding, Torching? | YES* ☐ | NO ☑ | List spark precautions: | Fire extinguisher | |
| Grounding/GFCI required? | YES ☐ | NO ☑ | List laceration hazards: | tools | |
| Fire Extinguisher required? | YES ☑ | | List unusual slip/trip/fall hazards: | wet, snow, uneven ground | |

## Section 4. Hazard Recognition – Materials & Chemicals (Review MSDSs)

| | | | |
|---|---|---|---|
| Equipment last contained: | | | |
| List chemicals used in job: | | | |
| Mechanical ventilation needed? | YES ☐ | NO ☑ | Other comments: |
| Respiratory protection needed? | YES ☐ | NO ☑ | (Use Respiratory Protection Guidance to determine) |

## Section 5. Hazard Control and Additional Personal Protective Equipment (Check boxes that apply)

| | | | | |
|---|---|---|---|---|
| Signs posted ☐ | Area barricaded ☐ | Hearing protection ☑ | Goggles ☐ | Face shield w/safety glasses ☐ |
| Communication method: Radio | Rubber boots ☐ | Electrical Safety Shoes ☐ | | Life Vest ☐ |
| Gloves: Leather ☑ Nitrile ☐ Electrical ☐ | Welder's helmet ☐ | Harness ☐ | Clothing: Tyvek ☐ NOMEX ☐ | |

## Section 6. Emergency Response

| | | | |
|---|---|---|---|
| Emergency procedures and alarms reviewed? | YES ☑ NO ☐ | Muster Point: | exit gate |
| Who will take attendance? | Operator / Frank S. | Other comments: | |

## Section 7. MultiRAE Monitor Air Testing Results (Attach additional sheets as needed)

| Serial # / Unit # | Calibration Procedure | Comments |
|---|---|---|
| 095172789 | Full Calibration ☑ Bump Test ☐ | |

| Time | Oxygen (%) | LEL (%) | VOC (ppm) | Other Indicate | Tester |
|---|---|---|---|---|---|
| 0715 | 20.9 | 0 | 0 | | RM |
| | | | | | |
| | | | | | |

## Section 8. Permit Approval & Permit Closure – Check Here if Self-Permitting ☐

| | | | |
|---|---|---|---|
| Valid from: *(date/time)* | 9-25-10 0740 | Valid to: *(date/time not to exceed 12 hrs)* | 9-25-10 1940 |
| Pre-Job site inspection performed? | YES ☑ | Equipment Ready for work? | YES ☑ |
| Person Performing Work (Print Name): | Raul | Signature: | |
| Permit Authorizer (Print Name): | Julio Martinez | Signature: | |
| Post-job site inspection performed? | YES ☐ | Site work approved for closure? | YES ☐ NO ☐ |
| Permit Closer Name: | Permit Closer Signature: | Date / Time: | |

FOR QUESTIONS, PLEASE CALL YOUR SAFETY REPRESENTATIVE

**Sovereign Consulting Inc.**
**Tailgate Safety Meeting Form**
(To be submitted with field notes to Project Manager each day)

| | |
|---|---|
| **Project Name:** Brooklyn Terminal (EQ017) | **Date:** 2/25/10 |
| **Location:** 25 Paidge Avenue | **Weather:** Snow/Rain |
| **Project Manager [Print]:** D. Byers | **Temp:** 35°F |
| **Contractors/Subcontractors:** Longshore Env. | |
| **Scope of Work:** HSA / Well Install | |

| **Task Hazards:** (check all that apply) *requires Permit to Work | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☒ | Excavations* | ☐ | Haz. Substances | ☒ | Sanitation | ☐ |
| Confined Spaces* | ☐ | Explosion | ☐ | Heavy Equipment | ☒ | Sharp Objects | ☐ |
| Cutting/Welding* | ☐ | Falling Objects | ☒ | Ladders* | ☐ | Tools | ☑ |
| Electrical | ☐ | Fire | ☐ | Noise | ☒ | Traffic | ☒ |
| Environmental Hazard | ☒ | Insects/Biological | ☐ | Slip/Trip Hazards | ☑ | Weather | ☒ |
| Elevated Work* | ☐ | Flying Debris | ☐ | Overhead | ☐ | Other (describe below) | ☐ |

**Engineering Controls / Work Practices:** Proper PPE, Traffic Cones, HOT Work Permit

| **Levels of Protection / Personal Protective Equipment:** | | | |
|---|---|---|---|
| Level A | ☐ | Eye & Face Protection ☒ | Safety Glasses ☒ Face Shield ☐ |
| Level B | ☐ | Foot Protection ☒ | Steel Toes ☒ Hip Boots/Waders ☐ |
| Level C | ☐ | Hand Protection ☒ | Nitrile Gloves ☒ Leather Gloves ☒ Full Arm Chemical ☐ |
| Level D | ☒ | Head Protection ☒ | Hard Hat ☒ |
| | | Hearing Protection ☒ | Ear Muffs/Plugs ☒ |
| | | Other ☐ | Barricades ☐ High Visibility Safety Vests ☑ Cones/Flags ☑ |
| | | | Amber Light/Vehicle Hazards ☐ Crash Truck ☐ Tyvek/Coveralls ☐ |

| **Air Monitoring/Sampling** | | **Emergency Response** | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☒ | Emergency Alarms | ☐ | First Aid Kit | ☒ | Cell Phone | ☒ |
| FID/PID | ☒ | Emergency Contacts | ☐ | Spill Kit | ☐ | Fire Extinguisher | ☒ |
| Detector Tubes | ☐ | Evacuation Routes | ☐ | Hospital Route | ☐ | Pedestrian Safety | ☐ |
| Dust Monitor | ☐ | Explosion/Fire | ☐ | Work Area | ☐ | Vapor/Dust Suppression | ☐ |
| Personal Air | ☐ | Medical Emergency | ☐ | Smoking/Break Area | ☑ | | |

**Are site workers Fit To Work?** Yes ☑ No ☐

**Comments:**

**Name & Title of Person Conducting Tailgate Safety Meeting:** Paul Yesconis

**Signature:** Paul Yesconis **Date:** 2/25/10



Shell/Motiva 0007127

**Life-Saving Rules**

Work with a valid Work Permit when required

Verify isolation before work begins and use the specified fire protecting equipment

Obtain authorisation before overriding or disabling safety critical equipment

Conduct gas tests when required

Obtain authorisation before entering a confined space

Protect yourself against a fall when working at height

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth within this project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

**SIGN IN**

MEETING ATTENDEES

| Name [Print] | Company | Signature |
|---|---|---|
| EDGAR LUCERO | Long Shore | Edgar Lucero. |
| JUAN FRANCO | Long Shore | |
| | | |
| | | |
| | | |

| | | | |
|---|---|---|---|
| Have all personnel been informed of work to be completed? | YES | NO | NA |
| Has fuel delivery service been informed? | YES | NO | NA |
| Is fuel delivery due today? | YES | NO | NA |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | NA |
| Are work areas controlled to protect workers, site staff, and the public? | YES | NO | NA |
| Do all workers have their API Safety Key card? | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| | | | | |

**SIGN OUT**

| | | | |
|---|---|---|---|
| Has the work area been left tidy and safe? | YES | NO | NA |
| Are site personnel aware of status of work? | YES | NO | NA |
| Are changes to equipment documented and communicated? | YES | NO | NA |
| All incidents, near misses, unsafe situations reported? | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| | | | | |

**Life-Saving Rules**

Do not walk under a suspended load

No alcohol or drugs while working or driving

Wear your seat belt

Do not smoke outside designated smoking areas

While driving, do not use your phone and do not exceed speed limits

Follow prescribed Journey Management Plan



Shell/Motiva 0007128

SOVEREIGN CONSULTING

Work Day: Tuesday Work Date: 03-02-10

Client/Owner: **Motiva Enterprises LLC** Page ____ of ____

**Well Gauge Report** Address: **25 Paidge Avenue, Brooklyn, NY** SCI Job #: **EQ017**

| Well ID | Time of Reading | Well Diameter | Total Depth | Depth to Product | Depth to Water | Volume Purged (gal.) | Comments/Product Removed |
|---|---|---|---|---|---|---|---|
| 1 | | | | | 2.46 | | |
| 3 | | | | | 1.28 | | |
| 29 | | | | | 1.04 | | |
| 30 | | | | | Under | Water. | |
| 4 | | | | | 1.59 | | |
| 5 | | | | | 1.06 | | |
| 28 | | | | | 0.91 | | |
| 27 | | | | | 1.54 | | |
| 6 | | | | | 2.34 | | |
| 21R | | | | | 2.96 | | Replacement well in Area of MW-21 |
| 22R | | | | | 2.81 | | " MW-22 |
| 13 | | | | | 6.49 | | |
| 14 | | | | | 5.44 | | |
| 23 | | | | | 2.18 | | |
| 24 | | | | | 3.14 | | |
| A | | | | | 2.90 | | Bucket well (South - parking lot) |
| B | | | | | 2.91 | | Bucket well (North - parking lot) |
| C | | | | | 2.87 | | Bucket well (Middle - driveway) |
| TRW1 | | | | | Under | Water | |
| 26 | | | | 2.85 | 2.86 | | |
| TRW2 | | | | | 2.79 | | |

See Paul Y. for ID's

Well Volumes (Gallons / Linear Foot): 2" = 0.17, 4" = 0.66, 6" = 1.50, 8" = 2.60, 12" = 5.81

SOVEREIGN CONSULTING

Work Day: Tuesday Work Date: 03-02-10

Client/Owner: **Motiva Enterprises LLC** Page ____ of ____

**Well Gauge Report**

Address: **25 Paidge Avenue, Brooklyn, NY** SCI Job #: **EQ017**

| Well ID | Time of Reading | Well Diameter | Total Depth | Depth to Product | Depth to Water | Volume Purged (gal.) | Comments/Product Removed |
|---|---|---|---|---|---|---|---|
| 25 | | | | | 2.21 | | |
| 2 | | | | 2.56 | 2.81 | | .25 |
| TRW3 | | | | | Under | Water | |
| TRW4 | | | | | Under | Water | |
| TRW5 | | | | | Under | Water | |
| 31 | | | | 2.39 | 2.93 | | .75 |
| 20 | | | | | 2.18 | | |
| 15 | | | | | 2.45 | | |
| 16 | | | | | 2.12 | | |
| 17 | | | | | 2.27 | | |
| 18 | | | | | 2.26 | | |
| 19 | | | | | 2.72 | | |
| 32 | | | | | 2.77 | | |
| 9 | | | | | 2.97 | | |
| 8 | | | | | 3.04 | | |
| TR | | | | | 2.52 | | Replacement well in area of TW-2 |
| 34 | | | | | 6.33 | | |
| 33 | | | | | 4.85 | | |
| 39 | | | | | 4.68 | | |
| 40 | | | | 6.92 | 7.04 | | .25 |
| 35 | | | | | 5.61 | | |

Well Volumes (Gallons / Linear Foot): 2" = 0.17, 4" = 0.66, 6" = 1.50, 8" = 2.60, 12" = 5.81

## Sovereign Consulting Inc.
## Tailgate Safety Meeting Form
(To be submitted with field notes to Project Manager each day)

| | |
|---|---|
| **Project Name:** Motiva LLC | **Date:** 03-02-10 |
| **Location:** 25 Paige Ave Brooklyn NY | **Weather:** Sunny |
| **Project Manager [Print]:** Doug Byers (Sovereign) | **Temp:** 38°F |
| **Contractors/Subcontractors:** Langhore Env. | |
| **Scope of Work:** well gauging / prod. recov. / develop (6) new wells | |

**Task Hazards:** (check all that apply) *requires Permit to Work

| | | | |
|---|---|---|---|
| Cold Heat Stress ☐ | Excavations* ☐ | Haz. Substances ☐ | Sanitation ☐ |
| Confined Spaces* ☐ | Explosion ☐ | Heavy Equipment ☐ | Sharp Objects ☐ |
| Cutting/Welding* ☐ | Falling Objects ☐ | Ladders* ☐ | Tools ☒ |
| Electrical ☐ | Fire ☐ | Noise ☐ | Traffic ☒ |
| Environmental Hazard ☐ | Insects/Biological ☐ | Slip/Trip Hazards ☒ | Weather ☐ |
| Elevated Work* ☐ | Flying Debris ☐ | Overhead ☐ | Other (describe below) ☐ |

**Engineering Controls / Work Practices:**

| **Levels of Protection / Personal Protective Equipment:** | | |
|---|---|---|
| Level A ☐ | Eye & Face Protection ☒ | Safety Glasses ☒ Face Shield ☐ |
| Level B ☐ | Foot Protection ☒ | Steel Toes ☒ Hip Boots/Waders ☐ |
| Level C ☐ | Hand Protection ☒ | Nitrile Gloves ☒ Leather Gloves ☐ Full Arm Chemical ☐ |
| Level D ☒ | Head Protection ☒ | Hard Hat ☒ |
| | Hearing Protection ☐ | Ear Muffs/Plugs ☐ |
| | Other ☒ | Barricades ☐ High Visibility Safety Vests ☒ Cones/Flags ☒ |
| | | Amber Light/Vehicle Hazards ☐ Crash Truck ☐ Tyvek/Coveralls ☐ |

| **Air Monitoring/Sampling** | | **Emergency Response** | | | |
|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter ☐ | Emergency Alarms ☐ | First Aid Kit ☐ | Cell Phone ☐ |
| FID/PID ☐ | Emergency Contacts ☐ | Spill Kit ☐ | Fire Extinguisher ☐ |
| Detector Tubes ☐ | Evacuation Routes ☐ | Hospital Route ☐ | Pedestrian Safety ☐ |
| Dust Monitor ☐ | Explosion/Fire ☐ | Work Area ☐ | Vapor/Dust Suppression ☐ |
| Personal Air ☐ | Medical Emergency ☐ | Smoking/Break Area ☐ | |

**Are site workers Fit To Work?** Yes ☑ No ☐

**Comments:**

**Name & Title of Person Conducting Tailgate Safety Meeting:** Edgar Lucero

**Signature:** <see reverse> **Date:**



Shell/Motiva 0007131

**SHELL**
**Life-Saving Rules**

Work with a valid Work Permit when required

Verify isolation before work begins and use the specified life-protecting equipment

Obtain authorisation before overriding or disabling safety critical equipment

Conduct gas tests when required

Obtain authorisation before entering a confined space

Protect yourself against a fall when working at height

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth within this project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

**SIGN IN**

MEETING ATTENDEES

| Name [Print] | Company | Signature |
|---|---|---|
| Juan A Franco | Long shore | |
| Edgar Lucero | Long shore | |
| | | |
| | | |
| | | |

| | | | |
|---|---|---|---|
| Have all personnel been informed of work to be completed? | (YES) | NO | NA |
| Has fuel delivery service been informed? | YES | NO | (NA) |
| Is fuel delivery due today? | YES | NO | (NA) |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | (NA) |
| Are work areas controlled to protect workers, site staff, and the public? | YES | NO | (NA) |
| Do all workers have their API Safety Key card? | (YES) | NO | NA |
| Have all reviewed and understand the Shell 12 Life-Saving Rules | (YES) | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| | | | | |

**SIGN OUT**

| | | | |
|---|---|---|---|
| Has the work area been left tidy and safe? | YES | NO | NA |
| Are site personnel aware of status of work? | YES | NO | NA |
| Are changes to equipment documented and communicated? | YES | NO | NA |
| All incidents, near misses, unsafe situations reported? | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| | | | | |

**SHELL**
**Life-[illegible]ng Rules**

Do not walk under a suspended load

No alcohol or drugs when working or driving

Wear your belt

Do not smoke outside designated smoking areas

While driving, do not use your phone and do not exceed speed limits

Follow prescribed Journey Management Plan



Shell/Motiva 0007132

FIELD FORM (Revised 01/05/06)

| | | |
|---|---|---|
| Date: 03-02-10 | Field Form #: 5918 | Site: 25 Paige Av |
| Day: Tuesday | Client: SOV | Brooklyn NY |
| | Region: II | |

| |
|---|
| Work Description: Well Gauging and Recovery Product |
| |
| |

| ☐ Unit Cost ☒ T&M | | Time | | | | |
|---|---|---|---|---|---|---|
| Personnel | Title | Start | On-Site | Off-site | Finish | Total |
| Edgar Lucero | | 06.00 | 8:30 | 1400 | 1800 | 1200 |
| Juan Franco | | " " | " " | " " | " " | " " |
| | | | | | | |

| UNIT COSTS | | | MATERIALS | |
|---|---|---|---|---|
| No. | Task No. | Description | No. | Description |
| | 1.1 | Survey Monitoring Wells (site) | | Lock |
| | 1.2 | Sensitive Receptor Survey (site) | | 2" Gripper Plug |
| | 2.1.1 | Drilling Oversight (half day) | | 4" Gripper Plug |
| | 2.2.2 | Drilling Oversight (full day) | | 2" EnviroCap |
| | 2.3.1 | GeoProbe (half day) | | 4" EnviroCap |
| | 2.3.2 | GeoProbe (full day) | | Disposable Bailer |
| | 4.1.1 | GW Monitoring 1-5 wells (per site) | | 55 Gallon Drum |
| | 4.1.2 | GW Monitoring 6-10 wells (per site) | | Tedlar Air Bag |
| | 4.1.3 | GW Monitoring Add. Wells >10(per well) | | Generator |
| | 4.2.1 | Potable Sampling During O&M (well) | | Cones |
| | 4.2.2 | Potable Sampling Separate Visit (well) | | Drum Sampler |
| | 4.3.1 | Product Bailing During O&M (well) | | ORM (lbs.) |
| | 4.3.2 | Product Bailing Separate Visit (site) | | ORM Socks (#) |
| | 4.4 | MW Pad Replacement (well) | | Concrete |
| | 5.1 | O&M-unscheduled site visit (visit) | | |
| | 5.2 | O&M - SVE/AS no treatment (visit) | | |
| | 5.3 | O&M - SVE/AS with treatment(visit) | | |
| | 5.4 | Product Recovery System (visit) | | |
| | 5.5 | Carbon Replacement Liquid (per lb.) | | |
| | 5.6 | Carbon Replacement Vapor (per lb.) | | |
| | 7.1.1 | Construction Monitoring Half Day | | |
| | 7.1.2 | Construction Monitoring Full Day | | |
| | 7.2.1 | Environmental Monitoring Half Day | | |
| | 7.2.2 | Environmental Monitoring Full Day | | |
| | 8.0 | Hydraulic Lift Oversight (event) | | |
| | 9.0 | Waste/Fuel Oil Oversight (event) | | |
| | 11.8.1 | Field Vehicle (per hour) | | |
| | 11.8.2 | Field Vehicle (half day) | | |
| | 11.8.3 | Field Vehicle (full day) | | |
| | 11.8.4 | Field Vehicle (Week) | | |
| | 11.9 | Field Vehicle - Heavy Duty (per day) | | |

*LONGSHORE ENVIRONMENTAL INC.*

SOVEREIGN CONSULTING

Work Day: MONDAY Work Date: 03-15-10

Client/Owner: Motiva Enterprises LLC Page 1 of 3

Well Gauge Report

Address: 25 Paidge Avenue, Brooklyn, NY SCI Job #: EQ017

| Well ID | Time of Reading | Well Diameter | Total Depth | Depth to Product | Depth to Water | Volume Purged (gal.) | Comments/Product Removed |
|---|---|---|---|---|---|---|---|
| MW-3 | 10:50 | 4 | 11.26 | - | 1.43 | - | |
| MW-29 | 10:55 | 4 | 9.58 | - | 0.59 | - | |
| MW-30 | 11:00 | 4 | 9.42 | - | - | - | FLOODED |
| MW-4 | 11:25 | 4 | 11.26 | - | 0.98 | - | TRACE PRODUCT |
| MW-5 | 11:30 | 4 | 9.39 | - | - | - | FLOODED |
| MW-28 | 11:35 | 4 | 10.91 | - | 0.53 | - | |
| MW-27 | 11:45 | 4 | 14.51 | - | - | - | FLOODED |
| MW-6 | 11:40 | 4 | 10.84 | - | 1.86 | - | |
| TRW-6 | 11:50 | 6 | - | - | - | - | FLOODED |
| MW-31 | 12:00 | 4 | 8.80 | 1.69 | 1.75 | - | |
| TRW-5 | 12:05 | 6 | - | - | - | - | FLOODED |
| MW-20 | 12:10 | 4 | 11.20 | - | 1.68 | - | |
| MW-15 | 12:15 | 4 | 12.59 | - | 1.89 | - | |
| MW-16 | 12:22 | 4 | - | - | - | - | OBSTRUCTED |
| MW-1 | 12:20 | 4 | 11.18 | - | 2.29 | - | |
| MW-17 | 12:25 | 4 | 12.19 | - | 1.66 | - | |
| MW-18 | 12:30 | 4 | 11.80 | - | 1.61 | - | |
| MW-19 | 12:40 | 4 | 11.50 | - | 1.92 | - | |
| MW-2 | 12:50 | 4 | 8.87 | - | 1.81 | - | TRACE PRODUCT |
| TRW-3 | 13:00 | 6 | - | - | - | - | FLOODED |
| MW-25 | 13:05 | 4 | 10.59 | - | 1.59 | - | |

Well Volumes (Gallons / Linear Foot): 2" = 0.17, 4" = 0.66, 6" = 1.50, 8" = 2.60, 12" = 5.81

SOVEREIGN CONSULTING

Work Day: MONDAY Work Date: 03-15-10

Client/Owner: Motiva Enterprises LLC Page 2 of 3

Well Gauge Report

Address: 25 Paidge Avenue, Brooklyn, NY SCI Job #: EQ017

| Well ID | Time of Reading | Well Diameter | Total Depth | Depth to Product | Depth to Water | Volume Purged (gal.) | Comments/Product Removed |
|---|---|---|---|---|---|---|---|
| TRW-1 | 13:10 | 6 | - | - | - | - | FLOODED |
| MW-26 | 13:15 | 4 | 10.59 | - | - | - | FLOODED |
| TRW-2 | 13:20 | 6 | 10.01 | - | 2.04 | - | |
| MW-25 | 13:25 | 4 | 14.44 | - | 1.62 | - | |
| MW-44 | 13:30 | 4 | 12.12 | - | 2.47 | - | |
| MW-24 | 13:35 | 4 | 12.61 | - | 2.69 | - | |
| MW-43 | 13:40 | 4 | 12.64 | - | 2.64 | - | |
| MW-42 | 13:45 | 4 | 12.50 | - | 2.50 | - | |
| MW-14 | 13:50 | 4 | 14.19 | - | 5.09 | - | |
| MW-13 | 13:55 | 4 | 14.13 | - | 5.99 | - | |
| MW-22R | 14:00 | 4 | 8.50 | - | 2.53 | - | |
| MW-23R | 14:05 | 4 | 12.10 | - | 2.49 | - | |
| RW-34 | 14:10 | 6 | 7.30 | - | 4.04 | - | |
| MW-33 | 14:05 | 4 | 10.68 | - | 5.69 | - | TRACE PRODUCT |
| MW-39 | 14:15 | 4 | 8.49 | - | 5.43 | - | |
| RW-40 | 14:20 | 6 | 11.57 | 6.16 | 7.41 | - | |
| RW-36 | 14:25 | 6 | 10.69 | 6.73 | 6.82 | - | |
| MW-35 | 14:35 | 4 | 7.74 | - | 5.02 | - | |
| MW-41 | 14:40 | 4 | 9.53 | 5.94 | 5.95 | - | |
| RW-37 | 14:45 | 6 | 10.51 | 6.08 | 6.09 | - | |
| MW-38 | 14:50 | 4 | 8.19 | - | 5.71 | - | |

Well Volumes (Gallons / Linear Foot): 2" = 0.17, 4" = 0.66, 6" = 1.50, 8" = 2.60, 12" = 5.81

SOVEREIGN CONSULTING

Work Day: MONDAY Work Date: 03/15/10

Client/Owner: Motiva Enterprises LLC Page 3 of 3

Well Gauge Report

Address: 25 Paidge Avenue, Brooklyn, NY SCI Job #: EQ017

| Well ID | Time of Reading | Well Diameter | Total Depth | Depth to Product | Depth to Water | Volume Purged (gal.) | Comments/Product Removed |
|---|---|---|---|---|---|---|---|
| MW-7R | 15:05 | 4 | 12.40 | - | 3.78 | - | |
| MW-8 | 15:00 | 4 | 8.00 | - | 4.41 | - | |
| MW-9 | 14:55 | 4 | 7.83 | - | 4.26 | - | |
| TRW-4 | 15:10 | 6 | - | - | - | - | |
| MW-23 | 15:15 | 4 | 12.89 | - | 1.89 | - | |
| | | | | | | | |
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Well Volumes (Gallons / Linear Foot): 2" = 0.17, 4" = 0.66, 6" = 1.50, 8" = 2.60, 12" = 5.81

# ENVIRONMENTAL WELL, REMEDIATION COMPOUND, and SITE INSPECTION FORM

COST CENTER # - 58603

DATE - 03/15/10

ADDRESS - 25 Paidge Ave (Brooklyn Terminal)

CITY & STATE - Brooklyn, NY

| Well ID | Observations Upon Arrival: Manway Cover Type, Size & Condition | Well Cap Type & Condition | Well Lock Condition (if present) | Well Pad Condition | Note Repairs Made: Detailed Explanation of Maintenance Recommended and Performed | Repair Date and PM Initials |
|---|---|---|---|---|---|---|
| MW-1 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | good | | |
| MW-3 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | good | | |
| MW-29 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | fair | | |
| MW-28 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | fair | | |
| MW-30 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | poor | well casing is broken about 10" below grade | |
| MW-4 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | fair | | |
| MW-5 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | fair | | |
| MW-6 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | good | | |
| MW-27 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | poor | | |
| MW-9 | 8-in flushmount boltdown - excellent | 4" j-plug | none | excellent | | |
| MW-8 | 8-in flushmount boltdown - excellent | 4" j-plug | none | excellent | | |
| MW-23 | 8" flush-mount finger-grip - ok | 4-in j-plug | none | fair | | |
| MW-13 | 6-in steel stand pipe | 4" j-plug | fair | fair | | |

| Remediation Compound | Type and Condition of Enclosure | Condition of Area Inside Enclosure | Equipment Condition | Emergency Contact Info Visible? | Cleaning? Repairs Recommended and Conducted | Repair Date and PM Initials |
|---|---|---|---|---|---|---|
| | | | | | | |

| Number of Drums On-site | Drum Condition | Labeled Correctly and Writing Legible | Drums Scheduled for Pickup | Drums Located to Min Business Interference | Detailed Explanation of Any Issues Resolved | Date Drums Removed from Site and PM Initials |
|---|---|---|---|---|---|---|
| | | | | | | |

[1]Groundwater monitoring well covers must be painted in accordance with applicable regulations.

All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).

Environmental Well, Remediation Compound, and Site Inspection Form
Original Version 1.0, April 2005, Owner - John Sexton

Field Personnel Signature

# ENVIRONMENTAL WELL, REMEDIATION COMPOUND, and SITE INSPECTION FORM

COST CENTER # - 58603

DATE - 03/15/10

ADDRESS - 25 Paidge Ave (Brooklyn Terminal)

CITY & STATE - Brooklyn, NY

| Well ID[1] | Observations Upon Arrival: Manway Cover Type, Size, & Condition | Well Cap Type & Condition | Well Lock Condition (if present) | Well Pad Condition | Note Repairs Made, Detailed Explanation of Maintenance Recommended and Performed | Repair Date and PM Initials |
|---|---|---|---|---|---|---|
| MW-14 | 6-in steel stand pipe | 4" j-plug | fair | fair | | |
| MW-24 | steel plate (manhole cover plowed off) - ok | 4" j-plug | none | poor | | |
| MW-25 | 8" flush-mount finger-grip - ok | 4" j-plug | none | fair (a little low) | | |
| MW-26 | 24" vault - ok | 4" j-plug | none | fair | | |
| TRW-1 | 24" vault - ok | 6" rubber cap | none | asphalt | | |
| TRW-2 | 24" vault - ok | 6" j-plug | none | asphalt | | |
| MW-2 | 24" vault - ok | 4" j-plug | none | good | | |
| TRW-5 | 24" vault - ok | 6" rubber cap | none | asphalt | | |
| TRW-4 | 24" vault - ok | 6" rubber cap | none | asphalt | | |
| TRW-3 | 24" vault - ok | 6" rubber cap | none | asphalt | | |
| MW-31 | 10" flushmount boltdown stripped | 4" j-plug | none | good | | |
| TRW-6 | 24" vault - ok | 6" rubber cap | none | asphalt | | |
| MW-16 | 8" flush-mount finger-grip - ok | 4" j-plug | none | fair | | |
| MW-17 | 8" flush-mount finger-grip - ok | 6" j-plug | none | fair | | |

| Remediation Compound | Type and Condition of Enclosure | Condition of Area Inside Enclosure | Equipment Condition | Emergency Contact Info Visible | Cleaning / Repairs Recommended and Conducted | Repair Date and PM Initials |
|---|---|---|---|---|---|---|
| | | | | | | |

| Number of Drums On-site | Drum Condition | Labeled Correctly and Writing Legible | Drums Scheduled for Pickup | Drums Located to Min Business Interference | Detailed Explanation of Any Issues Resolved | Date Drums Removed from Site and PM Initials |
|---|---|---|---|---|---|---|
| | | | | | | |

[1]Groundwater monitoring well covers must be painted in accordance with applicable regulations.

All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).

Environmental Well, Remediation Compound, and Site Inspection Form
Original Version 1.0, April 2005, Owner - John Sexton

Field Personnel Signature

# ENVIRONMENTAL WELL, REMEDIATION COMPOUND, and SITE INSPECTION FORM

COST CENTER # - 58603

DATE - 03/15/10

ADDRESS - 25 Paidge Ave (Brooklyn Terminal)

CITY & STATE - Brooklyn, NY

| Well ID | Observations Upon Arrival: Manway Cover, Type, Size & Condition | Well Cap Type & Condition | Well Lock Condition (if present) | Well Pad Condition | Note Repairs Made: Detailed Explanation of Maintenance Recommended and Performed | Repair Date and PM Initials |
|---|---|---|---|---|---|---|
| MW-20 | 8" flush-mount finger-grip - ok | 4" j-plug | none | part of larger concrete pad | | |
| MW-18 | 8" flush-mount finger-grip - ok | 6" j-plug | none | poor | | |
| MW-19 | 8" flush-mount finger-grip - ok | 6" j-plug | none | fair | | |
| MW-32 | steel plate - manhole cover missing | 4" j-plug | none | asphalt (manhole too low) | | |
| MW-15 | 8" flush-mount finger-grip - ok | 4" j-plug | none | part of larger concrete pad | | |
| MW-33 | 8-in steel stand pipe | 4" j-plug | fair | fair | | |
| RW-34 | 8-in steel stand pipe | 6" j-plug | fair | fair | | |
| MW-39 | 6-in steel stand pipe | 4" j-plug | fair | fair | | |
| RW-40 | 8-in steel stand pipe | 6" j-plug | fair | fair | | |
| MW-35 | 6-in steel stand pipe | 4" j-plug | fair | fair | | |
| RW-36 | 8-in steel stand pipe | 6" j-plug | fair | fair | | |
| MW-41 | 6-in steel stand pipe | 4" j-plug | fair | fair | | |
| RW-37 | 8-in steel stand pipe | 6" j-plug | fair | fair | | |
| MW-38 | 6-in steel stand pipe | 4" j-plug | fair | fair | | |

| Remediation Compound | Type and Condition of Enclosure | Condition of Area Inside Enclosure | Equipment Condition | Emergency Contact Info Visible | Cleaning / Repairs Recommended and Conducted | Repair Date and PM Initials |
|---|---|---|---|---|---|---|
| | | | | | | |

| Number of Drums On-site | Drum Condition | Labeled Correctly and Writing Legible | Drums Scheduled for Pickup | Drums Located to Mill Business Interference | Detailed Explanation of Any Issues Resolved | Date Drums Removed from Site and PM Initials |
|---|---|---|---|---|---|---|
| | | | | | | |

[1]Groundwater monitoring well covers must be painted in accordance with applicable regulations.

All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).

Environmental Well, Remediation Compound, and Site Inspection Form
Original Version 1.0, April 2005, Owner - John Sexton

Field Personnel Signature

# ENVIRONMENTAL WELL, REMEDIATION COMPOUND, and SITE INSPECTION FORM

COST CENTER # - 58603

DATE - 03/15/10

ADDRESS - 25 Paidge Ave (Brooklyn Terminal)

CITY & STATE - Brooklyn, NY

| Well ID | Observations Upon Arrival: Manway Cover Type, Size & Condition | Well Cap Type & Condition | Well Lock Condition (if present) | Well Pad Condition | Note Repairs Made: Detailed Explanation of Maintenance Recommended and Performed | Repair Date and PM Initials |
|---|---|---|---|---|---|---|
| MW-7R | 8-in flushmount boltdown - excellent | 4-in j-plug | none | excellent | | |
| MW-22R | 8-in flushmount boltdown - excellent | 4-in j-plug | none | excellent | | |
| MW-23R | 8-in flushmount boltdown - excellent | 4-in j-plug | none | excellent | | |
| MW-42 | 8-in flushmount boltdown - excellent | 4-in j-plug | none | excellent | | |
| MW-43 | 8-in flushmount boltdown - excellent | 4-in j-plug | none | excellent | | |
| MW-44 | 8-in flushmount boltdown - excellent | 4-in j-plug | none | excellent | | |
| | | | | | | |
| | | | | | | |
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| | | | | | | |
| | | | | | | |
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| | | | | | | |

| Remediation Compound | Type and Condition of Enclosure | Condition of Area Inside Enclosure | Equipment Condition | Emergency Contact Info Visible | Cleaning / Repairs Recommended and Conducted | Repair Date and PM Initials |
|---|---|---|---|---|---|---|
| | | | | | | |

| Number of Drums On-site | Drum Condition | Labeled Correctly and Writing Legible | Drums Scheduled for Pickup | Drums Updated to Mini-Business Interference | Detailed Explanation of Any Issues Resolved | Date Drums Removed from Site and PM Initials |
|---|---|---|---|---|---|---|
| | | | | | | |

[1]Groundwater monitoring well covers must be painted in accordance with applicable regulations.

All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).

Environmental Well, Remediation Compound, and Site Inspection Form
Original Version 1.0, April 2005, Owner - John Sexton

Field Personnel Signature

**Sovereign Consulting Inc.**
**Tailgate Safety Meeting Form**
(To be submitted with field notes to Project Manager each day)

| | |
|---|---|
| **Project Name:** Motiva Terminal | **Date:** 03/15/10 |
| **Location:** 25 Paidge Avenue Brooklyn NY | **Weather:** windy & overcast |
| **Project Manager [Print]:** Greg Bosjlgic (sp?) | **Temp:** ~45°F |
| **Contractors/Subcontractors:** Langabar Env. | |
| **Scope of Work:** Well gauging | |

| **Task Hazards:** (check all that apply) *requires Permit to Work | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☐ | Excavations* | ☐ | Haz. Substances | ☐ | Sanitation | ☐ |
| Confined Spaces* | ☐ | Explosion | ☐ | Heavy Equipment | ☐ | Sharp Objects | ☐ |
| Cutting/Welding* | ☐ | Falling Objects | ☐ | Ladders* | ☐ | Tools (hand) | ☐ |
| Electrical | ☐ | Fire | ☐ | Noise | ☒ | Traffic (trucks) | ☒ |
| Environmental Hazard | ☐ | Insects/Biological | ☐ | Slip/Trip Hazards (uneven) | ☒ | Weather (wind) | ☒ |
| Elevated Work* | ☐ | Flying Debris | ☐ | Overhead | ☐ | Other (describe below) | ☐ |

**Engineering Controls / Work Practices:**

| **Levels of Protection / Personal Protective Equipment:** | | | | | | | |
|---|---|---|---|---|---|---|---|
| Level A | ☐ | Eye & Face Protection | ☒ | Safety Glasses | ☒ | Face Shield | ☐ |
| Level B | ☐ | Foot Protection | ☒ | Steel Toes | ☒ | Hip Boots/Waders | ☐ |
| Level C | ☐ | Hand Protection | ☒ | Nitrile Gloves | ☒ | Leather Gloves | ☐ Full Arm Chemical ☐ |
| Level D | ☒ | Head Protection | ☒ | Hard Hat | ☒ | | |
| | | Hearing Protection | ☐ | Ear Muffs/Plugs | ☐ | | |
| | | Other | ☒ | Barricades | ☐ | High Visibility Safety Vests | ☒ Cones/Flags ☐ |
| | | | | Amber Light/Vehicle Hazards | ☐ | Crash Truck | ☐ Tyvek/Coveralls ☐ |

| **Air Monitoring/Sampling** | | **Emergency Response** | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☐ | Emergency Alarms | ☐ | First Aid Kit | ☐ | Cell Phone (none) | ☒ |
| FID/PID | ☐ | Emergency Contacts | ☐ | Spill Kit | ☐ | Fire Extinguisher | ☐ |
| Detector Tubes | ☐ | Evacuation Routes | ☒ | Hospital Route | ☒ | Pedestrian Safety | ☐ |
| Dust Monitor | ☐ | Explosion/Fire | ☐ | Work Area | ☐ | Vapor/Dust Suppression | ☐ |
| Personal Air | ☐ | Medical Emergency | ☐ | Smoking/Break Area | ☐ | | |

**Are site workers Fit To Work?** Yes ☒ No ☐

**Comments:**

**Name & Title of Person Conducting Tailgate Safety Meeting:** Matt Abbott

**Signature:** [signature] **Date:** 3/15/10

FIELD FORM (Revised 01/05/06)

| | | |
|---|---|---|
| Date: 3/15/10 | Field Form #: 5937 | Site: 25 Paidge Ave. |
| Day: Mon. | Client: SOVEREIGN | Brooklyn, NY |
| | Region: II | |

| |
|---|
| Work Description: gauge Depth to Bottom of all Site wells |

| ☐ Unit Cost ☒ T&M | | Time | | | | |
|---|---|---|---|---|---|---|
| Personnel | Title | Start | On-Site | Off-site | Finish | Total |
| Matt Abbati | Jr | 1000 | 1130 | 1500 | 1700 | 7 |
| | | | | | | |
| | | | | | | |

| UNIT COSTS | | | MATERIALS | |
|---|---|---|---|---|
| No. | Task No. | Description | No. | Description |
| | 1.1 | Survey Monitoring Wells (site) | | Lock |
| | 1.2 | Sensitive Receptor Survey (site) | | 2" Gripper Plug |
| | 2.1.1 | Drilling Oversight (half day) | | 4" Gripper Plug |
| | 2.2.2 | Drilling Oversight (full day) | | 2" EnviroCap |
| | 2.3.1 | GeoProbe (half day) | | 4" EnviroCap |
| | 2.3.2 | GeoProbe (full day) | | Disposable Bailer |
| | 4.1.1 | GW Monitoring 1-5 wells (per site) | | 55 Gallon Drum |
| | 4.1.2 | GW Monitoring 6-10 wells (per site) | | Tedlar Air Bag |
| | 4.1.3 | GW Monitoring Add. Wells >10(per well) | | Generator |
| | 4.2.1 | Potable Sampling During O&M (well) | | Cones |
| | 4.2.2 | Potable Sampling Separate Visit (well) | | Drum Sampler |
| | 4.3.1 | Product Bailing During O&M (well) | | ORM (lbs.) |
| | 4.3.2 | Product Bailing Separate Visit (site) | | ORM Socks (#) |
| | 4.4 | MW Pad Replacement (well) | | Concrete |
| | 5.1 | O&M-unscheduled site visit (visit) | | |
| | 5.2 | O&M - SVE/AS no treatment (visit) | | |
| | 5.3 | O&M - SVE/AS with treatment(visit) | | |
| | 5.4 | Product Recovery System (visit) | | |
| | 5.5 | Carbon Replacement Liquid (per lb.) | | |
| | 5.6 | Carbon Replacement Vapor (per lb.) | | |
| | 7.1.1 | Construction Monitoring Half Day | | |
| | 7.1.2 | Construction Monitoring Full Day | | |
| | 7.2.1 | Environmental Monitoring Half Day | | |
| | 7.2.2 | Environmental Monitoring Full Day | | |
| | 8.0 | Hydraulic Lift Oversight (event) | | |
| | 9.0 | Waste/Fuel Oil Oversight (event) | | |
| | 11.8.1 | Field Vehicle (per hour) | | |
| | 11.8.2 | Field Vehicle (half day) | | |
| 1 | 11.8.3 | Field Vehicle (full day) | | |
| | 11.8.4 | Field Vehicle (Week) | | |
| | 11.9 | Field Vehicle - Heavy Duty (per day) | | |

*LONGSHORE ENVIRONMENTAL INC.*

## Sovereign Consulting Inc.
## Tailgate Safety Meeting Form
(To be submitted with field notes to Project Manager each day)

| | |
|---|---|
| **Project Name:** Motiva Terminal - Brooklyn | **Date:** 4/6/10 |
| **Location:** 25 Paidge Ave, Brooklyn NY | **Weather:** Partly Overcast, threat of Thunderstorms |
| **Project Manager [Print]:** Greg Basilicis | **Temp:** 65° |
| **Contractors/Subcontractors:** Lonkhorst Env. Inc. | |
| **Scope of Work:** sample soils for pre-classification | |

**Task Hazards:** (check all that apply) *requires Permit to Work

| | | | |
|---|---|---|---|
| Cold Heat Stress ☐ | Excavations* ☐ | Haz. Substances ☐ | Sanitation ☐ |
| Confined Spaces* ☐ | Explosion ☐ | Heavy Equipment ☒ | Sharp Objects ☒ |
| Cutting/Welding* ☐ | Falling Objects ☐ | Ladders* ☐ | Tools ☒ |
| Electrical ☐ | Fire ☐ | Noise ☒ | Traffic ☒ |
| Environmental Hazard ☐ | Insects/Biological ☐ | Slip/Trip Hazards ☒ | Weather ☐ |
| Elevated Work* ☐ | Flying Debris ☐ | Overhead ☐ | Other (describe below) ☐ |

**Engineering Controls / Work Practices:** Hearing PPE, keep worksite orderly, stand down if lightning observed

**Levels of Protection / Personal Protective Equipment:**

| | | |
|---|---|---|
| Level A ☐ | Eye & Face Protection ☒ | Safety Glasses ☒ Face Shield ☐ |
| Level B ☐ | Foot Protection ☒ | Steel Toes ☒ Hip Boots/Waders ☐ |
| Level C ☐ | Hand Protection ☒ | Nitrile Gloves ☒ Leather Gloves ☒ Full Arm Chemical ☐ |
| Level D ☒ | Head Protection ☒ | Hard Hat ☒ |
| | Hearing Protection ☒ | Ear Muffs/Plugs ☒ |
| | Other ☒ | Barricades ☐ High Visibility Safety Vests ☒ Cones/Flags ☒ |
| | | Amber Light/Vehicle Hazards ☐ Crash Truck ☐ Tyvek/Coveralls ☐ |

| Air Monitoring/Sampling | | Emergency Response | | | |
|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☒ | Emergency Alarms | ☐ | First Aid Kit ☐ | Cell Phone ☐ |
| FID/PID | ☐ | Emergency Contacts | ☐ | Spill Kit ☐ | Fire Extinguisher ☐ |
| Detector Tubes | ☐ | Evacuation Routes | ☐ | Hospital Route ☐ | Pedestrian Safety ☐ |
| Dust Monitor | ☐ | Explosion/Fire | ☐ | Work Area ☐ | Vapor/Dust Suppression ☐ |
| Personal Air | ☐ | Medical Emergency | ☐ | Smoking/Break Area ☐ | |

**Are site workers Fit To Work?** Yes ☒ No ☐

**Comments:** CO: 50 ppm QRAE 4 Gas Meter
H2S: 24 ppm
LEL: 50 %
O2: 20.9 %

**Name & Title of Person Conducting Tailgate Safety Meeting:**

**Signature:** [signature] **Date:** 4/6/10



Shell/Motiva 0007143

**SHELL**
**Life-Saving Rules**

Work with a valid Work Permit when required

Verify isolation before work begins and use the specified life-protecting equipment

Obtain authorisation before overriding or disabling safety critical equipment

Conduct gas tests when required

Obtain authorisation before creating a confined space

Protect yourself against a fall when working at height

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth within this project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

### SIGN IN

MEETING ATTENDEES

| Name [Print] | Company | Signature |
|---|---|---|
| Daniel Latham | Longshore Environmental | [signature] |
| Nick [illegible] | ↓ | [signature] |
| Matt Abbott | ↓ | [signature] |
| | | |
| | | |

| | | | |
|---|---|---|---|
| Have all personnel been informed of work to be completed? | YES | NO | NA |
| Has fuel delivery service been informed? | YES | NO | NA |
| Is fuel delivery due today? | YES | NO | NA |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | NA |
| Are work areas controlled to protect workers, site staff, and the public? | YES | NO | NA |
| Do all workers have their API Safety Key card? | YES | NO | NA |
| Have all reviewed and understand the Shell 12 Life-Saving Rules | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| [signature] | Matthew Abbott | 4/[illegible]/10 | Nick | [signature] |
| Longshore | | | Motiva | |

### SIGN OUT

| | | | |
|---|---|---|---|
| Has the work area been left tidy and safe? | YES | NO | NA |
| Are site personnel aware of status of work? | YES | NO | NA |
| Are changes to equipment documented and communicated? | YES | NO | NA |
| All incidents, near misses, unsafe situations reported? | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| [signature] | Matthew Abbott | 04/06/10 | Julio M | [signature] |
| Longshore | | | Motiva | |

**SHELL**
**Life-[illegible]**

Do not walk under a suspended load

No alcohol or drugs while working or driving

Wear [illegible]

Do not smoke outside designated smoking [illegible]

While driving, do not [illegible] your phone and do not exceed speed limits

Follow prescribed Journey Management Plan

SOVEREIGN CONSULTING

# Job Safety Analysis
# Worksheet Acknowledgement

**SCI Project #:** _____ **Date:** 4/6/10

**Site Location:** Motiva Terminal - Brooklyn 25 Ridge Ave, Brooklyn, NY

**List JSA(s) Reviewed:** General Site Activities

Geoprobe Soil Sampling / Temporary Well Pt.

| Name (Print) | Company | Signature |
|---|---|---|
| Daniel Latham | Longshore | [signature] |
| Nick Zurrea | ↓ | [signature] |
| Matthew Abbott | ↓ | [signature] |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

**Sovereign Representative:** _____

CO: 50 LEL: 50

$O_2$: ~~23~~ 20.9

$H_2S$: 24 ppm

FIELD FORM (Revised 01/05/06)

| | | |
|---|---|---|
| Date: 4/6/10 | Field Form #: 5963 | Site: 25 Ridge Ave |
| Day: Tues | Client: Sovereign | Brooklyn |
| | Region: (2) | |

**Work Description:** Soil Sample with mark (12) holes to 5'
(2) holes to 15' to check for Concrete Slab.

| ☐ Unit Cost ☐ T&M | | Time | | | | |
|---|---|---|---|---|---|---|
| Personnel | Title | Start | On-Site | Off-site | Finish | Total |
| Matt Assist | Hydro | 0500 | 0730 | 1230 | 0130 | 8.5 |
| Nick 2 | Oper | 0500 | 0730 | 1230 | 0130 | 8.5 |
| Dan L | Helper | 0500 | 0730 | 1230 | 0130 | 8.5 |

| UNIT COSTS | | | MATERIALS | |
|---|---|---|---|---|
| No. | Task No. | Description | No. | Description |
| | 1.1 | Survey Monitoring Wells (site) | | Lock |
| | 1.2 | Sensitive Receptor Survey (site) | | 2" Gripper Plug |
| | 2.1.1 | Drilling Oversight (half day) | | 4" Gripper Plug |
| | 2.2.2 | Drilling Oversight (full day) | | 2" EnviroCap |
| | 2.3.1 | GeoProbe (half day) | | 4" EnviroCap |
| | 2.3.2 | GeoProbe (full day) | | Disposable Bailer |
| | 4.1.1 | GW Monitoring 1-5 wells (per site) | | 55 Gallon Drum |
| | 4.1.2 | GW Monitoring 6-10 wells (per site) | | Tedlar Air Bag |
| | 4.1.3 | GW Monitoring Add. Wells >10(per well) | | Generator |
| | 4.2.1 | Potable Sampling During O&M (well) | | Cones |
| | 4.2.2 | Potable Sampling Separate Visit (well) | | Drum Sampler |
| | 4.3.1 | Product Bailing During O&M (well) | | ORM (lbs.) |
| | 4.3.2 | Product Bailing Separate Visit (site) | | ORM Socks (#) |
| | 4.4 | MW Pad Replacement (well) | | Concrete |
| | 5.1 | O&M-unscheduled site visit (visit) | (5) | 4' mark lines |
| | 5.2 | O&M - SVE/AS no treatment (visit) | | |
| | 5.3 | O&M - SVE/AS with treatment(visit) | | |
| | 5.4 | Product Recovery System (visit) | | |
| | 5.5 | Carbon Replacement Liquid (per lb.) | | |
| | 5.6 | Carbon Replacement Vapor (per lb.) | | |
| | 7.1.1 | Construction Monitoring Half Day | | |
| | 7.1.2 | Construction Monitoring Full Day | | |
| | 7.2.1 | Environmental Monitoring Half Day | | |
| | 7.2.2 | Environmental Monitoring Full Day | | |
| | 8.0 | Hydraulic Lift Oversight (event) | | |
| | 9.0 | Waste/Fuel Oil Oversight (event) | | |
| | 11.8.1 | Field Vehicle (per hour) | | |
| | 11.8.2 | Field Vehicle (half day) | | |
| | 11.8.3 | Field Vehicle (full day) | | |
| | 11.8.4 | Field Vehicle (Week) | | |
| | 11.9 | Field Vehicle - Heavy Duty (per day) | | |

*LONGSHORE ENVIRONMENTAL INC.*

tracking # = 4720 9568 8668

# Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
- ☑ XENCO (_____)
- ☐ CALSCIENCE (_____)
- ☐ TEST AMERICA (_____)
- ☐ SPL (_____)
- ☐ OTHER (_____)

Please Check Appropriate Box:
- ☑ ENV. SERVICES
- ☐ MOTIVA RETAIL
- ☐ SHELL RETAIL
- ☐ MOTIVA SD&CM
- ☐ CONSULTANT
- ☐ LUBES
- ☐ SHELL PIPELINE
- ☐ OTHER _____

Print Bill To Contact Name: Tom Turner

INCIDENT # (ENV SERVICES): ☐ CHECK IF NO INCIDENT # APPLIES

PO #:

SAP #: 1 0 0 6 2 3

DATE: 3/1/2010

PAGE: 1 of 1

CONSULTANT COMPANY: Sovereign Consulting Inc.

ADDRESS: 3104 Unionville Road, Suite 150

CITY: Cranberry Twp, PA 16066

TELEPHONE: 724-553-5084 | FAX: | E-MAIL: gbosiljcic@sovcon.com

SITE ADDRESS (Street, City and State): 25 Paidge Avenue, Brooklyn NY

CONSULTANT PROJECT CONTACT (Report to): Greg Bosiljcic - 724-553-5084

CONSULTANT PROJECT NO.: EQ24

SAMPLER NAME(S) (Print): Matthew Abbott - Longshore Environmental Inc.

LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS):
- ☑ STANDARD (14 DAY)
- ☐ 5 DAYS
- ☐ 3 DAYS
- ☐ 2 DAYS
- ☐ 24 HOURS
- ☐ RESULTS NEEDED ON WEEKEND

DELIVERABLES:
- ☑ LEVEL 1
- ☐ LEVEL 2
- ☐ LEVEL 3
- ☐ LEVEL 4
- ☐ OTHER (SPECIFY) _____

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :
- ☑ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMBURSEMENT RATE APPLIES
- ☐ PROVIDE LEDO DISK

REQUESTED ANALYSIS

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | TOTAL METALS - 6010 | TCLP METALS - 1311/6010 | PAINT FILTER - 9095 | PCB - 8082 | PAH - 8270 | TPH GRO - 8015 | TPH - DRO - 8015 | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Soil Classification ( F#'s 1-12) | 4/6/10 | 11:00 | Soil | | | | | Ice | 2 | X | X | X | X | X | | | |
| | Soil Classification ( Electric Trench) | 4/6/10 | 11:05 | Soil | | | | | Ice | 2 | X | X | X | X | X | | | |
| | TPH - 1 (F#'s 1-4) | 4/6/10 | 10:30 | Soil | | | | | Ice | 1 | | | | | | X | X | |
| | TPH - 2 (F#'s 5-8) | 4/6/10 | 11:00 | Soil | | | | | Ice | 1 | | | | | | X | X | |
| | TPH - 3 (F#'s 9-12) | 4/6/10 | 11:30 | Soil | | | | | Ice | 1 | | | | | | X | X | |
| | TPH - 4 (Electric Trench) | 4/6/10 | 11:15 | Soil | | | | | Ice | 1 | | | | | | X | X | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |

| | | | |
|---|---|---|---|
| Relinquished by: (Signature) | Received by: (Signature) | Date: 4/6/10 | Time: 1600 |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |

05/2/08 Revision

Shell/Motiva 0007147

DATE (DAY OF WEEK): 04-15-10 (THURSDAY)
CLIENT: MOTIVA ENTERPRISES LLC - 25 PAIDGE AVENUE, BROOKLYN NY
SCI JOB # EQ017

| WELL ID | TIME OF READING | WELL DIA. (IN) | TOTAL DEPTH (FT) | DEPTH TO PRODUCT (FT) | DEPTH TO WATER (FT) | VOLUME PURGED (GAL) | D.O. (UG/L) | TEMP (DEG. C) |
|---|---|---|---|---|---|---|---|---|
| MW-1 | 7:00 | 4 | 11.24 | - | 2.90 | 17 | 6.12 | 14.03 |
| MW-3 | 7:15 | 4 | 11.36 | - | 2.53 | 17 | 3.10 | 13.75 |
| MW-29 | 7:30 | 4 | 9.67 | - | 1.53 | 16 | 2.44 | 15.08 |
| MW-30 | 10:20 | 4 | 9.42 | - | 2.14 | 14 | 1.94 | 16.17 |
| MW-4 | 7:32 | 4 | 11.17 | 2.11 | 2.16 | - | - | - |
| MW-5 | 7:45 | 4 | 9.35 | - | 1.37 | 16 | 1.75 | 14.47 |
| MW-28 | 7:55 | 4 | 10.94 | - | 1.43 | 19 | 1.58 | 15.60 |
| MW-27 | 8:00 | 4 | 14.29 | - | 2.23 | 24 | 1.91 | 16.16 |
| MW-6 | 8:10 | 4 | 10.84 | - | 5.08 | 11 | 6.20 | 12.66 |
| MW-21R | 8:50 | 4 | 12.08 | - | 3.95 | 16 | 2.41 | 11.74 |
| MW-22R | 9:00 | 4 | 8.46 | - | 4.06 | 9 | 2.42 | 11.78 |
| MW-13 | 9:10 | 4 | 14.08 | - | 2.37 | 23 | 2.31 | 11.79 |
| MW-14 | 9:20 | 4 | 14.13 | - | 6.55 | 15 | 2.93 | 12.72 |
| MW-23 | 9:30 | 4 | 12.56 | - | 3.98 | 17 | 2.07 | 13.99 |
| MW-24 | 9:40 | 4 | 12.67 | - | 3.82 | 18 | 2.05 | 13.75 |
| MW-25 | 10:30 | 4 | 14.54 | - | 2.89 | 23 | 1.30 | 14.77 |
| MW-42 | 10:00 | 4 | 12.60 | - | 3.54 | 18 | 1.84 | 13.92 |
| MW-43 | 9:50 | 4 | 12.42 | - | 3.47 | 18 | 1.97 | 14.91 |
| MW-44 | 10:10 | 4 | 12.47 | - | 3.58 | 18 | 1.39 | 14.63 |
| TRW-1 | 10:11 | 6 | NA | NA | NA | NA | NA | NA |
| MW-26 | 10:13 | 4 | 10.62 | 3.68 | 3.70 | - | - | - |
| TRW-2 | 10:40 | 6 | 10.23 | - | 3.76 | 29 | 1.44 | 13.62 |
| MW-2 | 10:42 | 4 | 10.85 | 3.77 | 3.79 | - | - | - |
| TRW-3 | 10:43 | 6 | NA | NA | NA | NA | NA | NA |
| TRW-4 | 10:43 | 6 | NA | NA | NA | NA | NA | NA |
| TRW-5 | 10:43 | 6 | NA | NA | NA | NA | NA | NA |
| MW-31 | 10:44 | 4 | 8.86 | 3.68 | 3.78 | - | - | - |
| MW-20 | 10:50 | 4 | 11.61 | - | 2.75 | 18 | 1.39 | 15.49 |
| MW-15 | 11:00 | 4 | 12.56 | - | 2.94 | 19 | 1.40 | 15.56 |
| MW-16 | 11:10 | 4 | 15.19 | - | 2.24 | 26 | 1.23 | 16.68 |
| MW-17 | 11:20 | 4 | 12.24 | - | 3.17 | 18 | 1.66 | 15.47 |
| MW-18 | 12:30 | 4 | 11.74 | - | 3.01 | 17 | 1.88 | 16.38 |
| MW-19 | 11:30 | 4 | 11.52 | - | 3.57 | 16 | 1.50 | 15.55 |
| MW-32 | 11:40 | 4 | 10.66 | - | 3.62 | 14 | 1.70 | 16.47 |
| MW-9 | 8:40 | 4 | 7.70 | - | 6.46 | 2 | 2.89 | 11.80 |
| MW-8 | 8:30 | 4 | 8.03 | - | 6.48 | 3 | 2.42 | 10.85 |
| MW-7R | 8:20 | 4 | 12.49 | - | 5.80 | 13 | 2.65 | 10.31 |
| RW-34 | 11:41 | 6 | 10.81 | 7.11 | 7.16 | - | - | - |
| MW-33 | 11:50 | 4 | 7.33 | - | 5.62 | 3 | 1.78 | 14.87 |
| MW-39 | 12:00 | 4 | 8.45 | - | 7.07 | 3 | 1.42 | 15.09 |
| RW-40 | 12:02 | 6 | 11.66 | 9.09 | 9.11 | - | - | - |
| MW-35 | 12:10 | 4 | 7.79 | - | 6.47 | 3 | 1.21 | 15.42 |
| RW-36 | 12:12 | 6 | 10.48 | 8.68 | 8.76 | - | - | - |
| MW-41 | 12:14 | 4 | 9.49 | 8.01 | 8.21 | - | - | - |
| RW-37 | 12:13 | 6 | 10.40 | 7.58 | 7.62 | - | - | - |
| MW-38 | 12:20 | 4 | 8.17 | - | 6.83 | 3 | 1.68 | 17.57 |
| TRW-6 | 12:22 | 6 | 9.33 | 2.82 | 2.85 | 13 | - | - |
| MW-45 | 12:23 | 4 | 11.96 | 3.18 | 3.24 | - | - | - |

SOVEREIGN CONSULTING - GROUND WATER SAMPLING DATA SUMMARY SHEET

PAGE 1 OF 1

DATE (DAY OF WEEK): 04-15-10 (THURSDAY)

CLIENT: MOTIVA ENTERPRISES LLC - 25 PAIDGE AVENUE, BROOKLYN NY

SCI JOB # EQ017

| WELL ID | TIME OF READING | WELL DIA. (IN) | TOTAL DEPTH (FT) | DEPTH TO PRODUCT (FT) | DEPTH TO WATER (FT) | VOLUME PURGED (GAL) | D.O. (UG/L) | TEMP (DEG. C) |
|---|---|---|---|---|---|---|---|---|
| MW-1 | 7:00 | 4 | 11.24 | - | 2.90 | 17 | 6.12 | 14.03 |
| MW-3 | 7:15 | 4 | 11.36 | - | 2.53 | 17 | 3.10 | 13.75 |
| MW-29 | 7:30 | 4 | 9.67 | - | 1.53 | 16 | 2.44 | 15.08 |
| MW-30 | 10:20 | 4 | 9.42 | - | 2.14 | 14 | 1.94 | 16.17 |
| MW-4 | 7:32 | 4 | 11.17 | 2.11 | 2.16 | - | - | - |
| MW-5 | 7:45 | 4 | 9.35 | - | 1.37 | 16 | 1.75 | 14.47 |
| MW-28 | 7:55 | 4 | 10.94 | - | 1.43 | 19 | 1.58 | 15.60 |
| MW-27 | 8:00 | 4 | 14.29 | - | 2.23 | 24 | 1.91 | 16.16 |
| MW-6 | 8:10 | 4 | 10.84 | - | 5.08 | 11 | 6.20 | 12.66 |
| MW-21R | 8:50 | 4 | 12.08 | - | 3.95 | 16 | 2.41 | 11.74 |
| MW-22R | 9:00 | 4 | 8.46 | - | 4.06 | 9 | 2.42 | 11.78 |
| MW-13 | 9:10 | 4 | 14.08 | - | 2.37 | 23 | 2.31 | 11.79 |
| MW-14 | 9:20 | 4 | 14.13 | - | 6.55 | 15 | 2.93 | 12.72 |
| MW-23 | 9:30 | 4 | 12.56 | - | 3.98 | 17 | 2.07 | 13.99 |
| MW-24 | 9:40 | 4 | 12.67 | - | 3.82 | 18 | 2.05 | 13.75 |
| MW-25 | 10:30 | 4 | 14.54 | - | 2.89 | 23 | 1.30 | 14.77 |
| MW-42 | 10:00 | 4 | 12.60 | - | 3.54 | 18 | 1.84 | 13.92 |
| MW-43 | 9:50 | 4 | 12.42 | - | 3.47 | 18 | 1.97 | 14.91 |
| MW-44 | 10:10 | 4 | 12.47 | - | 3.58 | 18 | 1.39 | 14.63 |
| TRW-1 | 10:11 | 6 | NA | NA | NA | NA | NA | NA |
| MW-26 | 10:13 | 4 | 10.62 | 3.68 | 3.70 | - | - | - |
| TRW-2 | 10:40 | 6 | 10.23 | - | 3.76 | 29 | 1.44 | 13.62 |
| MW-2 | 10:42 | 4 | 10.85 | 3.77 | 3.79 | - | - | - |
| TRW-3 | 10:43 | 6 | NA | NA | NA | NA | NA | NA |
| TRW-4 | 10:43 | 6 | NA | NA | NA | NA | NA | NA |
| TRW-5 | 10:43 | 6 | NA | NA | NA | NA | NA | NA |
| MW-31 | 10:44 | 4 | 8.86 | 3.68 | 3.78 | - | - | - |
| MW-20 | 10:50 | 4 | 11.61 | - | 2.75 | 18 | 1.39 | 15.49 |
| MW-15 | 11:00 | 4 | 12.56 | - | 2.94 | 19 | 1.40 | 15.56 |
| MW-16 | 11:10 | 4 | 15.19 | - | 2.24 | 26 | 1.23 | 16.68 |
| MW-17 | 11:20 | 4 | 12.24 | - | 3.17 | 18 | 1.66 | 15.47 |
| MW-18 | 12:30 | 4 | 11.74 | - | 3.01 | 17 | 1.88 | 16.38 |
| MW-19 | 11:30 | 4 | 11.52 | - | 3.57 | 16 | 1.50 | 15.55 |
| MW-32 | 11:40 | 4 | 10.66 | - | 3.62 | 14 | 1.70 | 16.47 |
| MW-9 | 8:40 | 4 | 7.70 | - | 6.46 | 2 | 2.89 | 11.80 |
| MW-8 | 8:30 | 4 | 8.03 | - | 6.48 | 3 | 2.42 | 10.85 |
| MW-7R | 8:20 | 4 | 12.49 | - | 5.80 | 13 | 2.65 | 10.31 |
| RW-34 | 11:41 | 6 | 10.81 | 7.11 | 7.16 | - | - | - |
| MW-33 | 11:50 | 4 | 7.33 | - | 5.62 | 3 | 1.78 | 14.87 |
| MW-39 | 12:00 | 4 | 8.45 | - | 7.07 | 3 | 1.42 | 15.09 |
| RW-40 | 12:02 | 6 | 11.66 | 9.09 | 9.11 | - | - | - |
| MW-35 | 12:10 | 4 | 7.79 | - | 6.47 | 3 | 1.21 | 15.42 |
| RW-36 | 12:12 | 6 | 10.48 | 8.68 | 8.76 | - | - | - |
| MW-41 | 12:14 | 4 | 9.49 | 8.01 | 8.21 | - | - | - |
| RW-37 | 12:13 | 6 | 10.40 | 7.58 | 7.62 | - | - | - |
| MW-38 | 12:20 | 4 | 8.17 | - | 6.83 | 3 | 1.68 | 17.57 |
| TRW-6 | 12:22 | 6 | 9.33 | 2.82 | 2.85 | 13 | - | - |
| MW-45 | 12:23 | 4 | 11.96 | 3.18 | 3.24 | - | - | - |

# Shell Oil Products Chain Of Custody Record

**LAB (LOCATION)**

- ☑ XENCO (_____)
- ☐ CALSCIENCE (_____)
- ☐ TEST AMERICA (_____)
- ☐ SPL (_____)
- ☐ OTHER (_____)

**Please Check Appropriate Box:**

| | | |
|---|---|---|
| ☑ ENV. SERVICES | ☐ MOTIVA RETAIL | ☐ SHELL RETAIL |
| ☐ MOTIVA SD&CM | ☐ CONSULTANT | ☐ LUBES |
| ☐ SHELL PIPELINE | ☐ OTHER _____ | |

**Print Bill To Contact Name:** Doug Weimer

**INCIDENT # (ENV SERVICES):** 97094981 ☐ CHECK IF NO INCIDENT # APPLIES

DATE: 3/1/2010

PAGE: 1 of 4

**PO #:**

**SAP #:** 100823

CONSULTANT COMPANY: **Sovereign Consulting Inc.**

ADDRESS: 3104 Unionville Road, Suite 150

CITY: Cranberry Twp, PA 16066

TELEPHONE: 724-553-5084 FAX: E-MAIL: gbosiljcic@sovcon.com

**SITE ADDRESS (Street, City and State):** 25 Paidge Avenue, Brooklyn NY

CONSULTANT PROJECT CONTACT (Report to): Greg Bosiljcic - 724-553-5084

CONSULTANT PROJECT NO.: EQ24

SAMPLER NAME(S) (Print): Nick Zarcone - Longshore Environmental 631-472-1732

LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

DELIVERABLES: ☑ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY) _____

TEMPERATURE ON RECEIPT C° Cooler #1 Cooler #2 Cooler #3

**SPECIAL INSTRUCTIONS OR NOTES :**

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ PROVIDE LEDD DISK

**REQUESTED ANALYSIS**

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | EPA 8260 (FULL LIST) | MTBE | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-1 | 4/15/10 | 7:00 | GW | X | | | | Ice | 3 | X | X | |
| | MW-3 | 4/15/10 | 7:15 | GW | X | | | | Ice | 3 | X | X | |
| | MW-29 | 4/15/10 | 7:30 | GW | X | | | | Ice | 3 | X | X | |
| | MW-5 | 4/15/10 | 7:45 | GW | X | | | | Ice | 3 | X | X | |
| | MW-28 | 4/15/10 | 7:55 | GW | X | | | | Ice | 3 | X | X | |
| | MW-27 | 4/15/10 | 8:00 | GW | X | | | | Ice | 3 | X | X | |
| | MW-6 | 4/15/10 | 8:10 | GW | X | | | | Ice | 3 | X | X | |
| | MW-7R | 4/15/10 | 8:20 | GW | X | | | | Ice | 3 | X | X | |
| | MW-8 | 4/15/10 | 8:30 | GW | X | | | | Ice | 3 | X | X | |
| | MW-9 | 4/15/10 | 8:40 | GW | X | | | | Ice | 3 | X | X | |

| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
|---|---|---|---|
| | | 04/15/10 | 1600 |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |

05/2/06 Revision

Shell/Motiva 0007150

# Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
- ☑ XENCO (_____)
- ☐ CALSCIENCE (_____)
- ☐ TEST AMERICA (_____)
- ☐ SPL (_____)
- ☐ OTHER (_____)

Please Check Appropriate Box:
- ☑ ENV. SERVICES
- ☐ MOTIVA RETAIL
- ☐ SHELL RETAIL
- ☐ MOTIVA SD&CM
- ☐ CONSULTANT
- ☐ LUBES
- ☐ SHELL PIPELINE
- ☐ OTHER

Print Bill To Contact Name: Doug Weimer

INCIDENT # (ENV SERVICES): 9 7 0 9 4 9 8 1

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 3/1/2010

PAGE: 2 of 4

PO #:

SAP #: 1 0 0 6 2 3

CONSULTANT COMPANY: Sovereign Consulting Inc.

ADDRESS: 3104 Unionville Road, Suite 150

CITY: Cranberry Twp, PA 16066

TELEPHONE: 724-553-5084

FAX:

E-MAIL: qbosilicic@sovcon.com

SITE ADDRESS (Street, City and State): 25 Paidge Avenue, Brooklyn NY

CONSULTANT PROJECT CONTACT (Report to): Greg Bosiljcic - 724-553-5084

CONSULTANT PROJECT NO.: EQ24

SAMPLER NAME(S) (Print): Nick Zarcone - Longshore Environmental 631-472-1732

LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

DELIVERABLES: ☑ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY) _____

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :

- ☑ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMBURSEMENT RATE APPLIES
- ☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | EPA 8260 (FULL LIST) | MTBE | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-21R | 4/15/10 | 8:50 | GW | X | | | | Ice | 3 | X | X | |
| | MW-22R | 4/15/10 | 9:00 | GW | X | | | | Ice | 3 | X | X | |
| | MW-13 | 4/15/10 | 9:10 | GW | X | | | | Ice | 3 | X | X | |
| | MW-14 | 4/15/10 | 9:20 | GW | X | | | | Ice | 3 | X | X | |
| | MW-23 | 4/15/10 | 9:30 | GW | X | | | | Ice | 3 | X | X | |
| | MW-24 | 4/15/10 | 9:40 | GW | X | | | | Ice | 3 | X | X | |
| | MW-43 | 4/15/10 | 9:50 | GW | X | | | | Ice | 3 | X | X | |
| | MW-42 | 4/15/10 | 10:00 | GW | X | | | | Ice | 3 | X | X | |
| | MW-44 | 4/15/10 | 10:10 | GW | X | | | | Ice | 3 | X | X | |
| | MW-30 | 4/15/10 | 10:20 | GW | X | | | | Ice | 3 | X | X | |

| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
|---|---|---|---|
| | | 04/15/10 | 1600 |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |

05/2/06 Revision

Shell/Motiva 0007151

# Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
- ☑ XENCO (_____)
- ☐ CALSCIENCE (_____)
- ☐ TEST AMERICA (_____)
- ☐ SPL (_____)
- ☐ OTHER (_____)

Please Check Appropriate Box:
- ☑ ENV. SERVICES
- ☐ MOTIVA RETAIL
- ☐ SHELL RETAIL
- ☐ MOTIVA SD&CM
- ☐ CONSULTANT
- ☐ LUBES
- ☐ SHELL PIPELINE
- ☐ OTHER _____

Print Bill To Contact Name: Doug Weimer

INCIDENT # (ENV SERVICES): 9 7 0 9 4 9 8 1

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 3/1/2010

PAGE: 3 of 4

PO #:

SAP #: 1 0 0 6 2 3

CONSULTANT COMPANY: Sovereign Consulting Inc.

ADDRESS: 3104 Unionville Road, Suite 150

CITY: Cranberry Twp, PA 16066

TELEPHONE: 724-553-5084 | FAX: | E-MAIL: gbosiljcic@sovcon.com

SITE ADDRESS (Street, City and State): 25 Paidge Avenue, Brooklyn NY

CONSULTANT PROJECT CONTACT (Report to): Greg Bosiljcic - 724-553-5084

CONSULTANT PROJECT NO.: EQ24

SAMPLER NAME(S) (Print): Nick Zarcone - Longshore Environmental 631-472-1732

LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS):
- ☑ STANDARD (14 DAY)
- ☐ 5 DAYS
- ☐ 3 DAYS
- ☐ 2 DAYS
- ☐ 24 HOURS
- ☐ RESULTS NEEDED ON WEEKEND

DELIVERABLES:
- ☑ LEVEL 1
- ☐ LEVEL 2
- ☐ LEVEL 3
- ☐ LEVEL 4
- ☐ OTHER (SPECIFY) _____

TEMPERATURE ON RECEIPT C° | Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :
- ☑ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMBURSEMENT RATE APPLIES
- ☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | EPA 8260 (FULL LIST) | MTBE | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-25 | 4/15/10 | 10:30 | GW | X | | | | Ice | 3 | X | X | |
| | TRW-2 | 4/15/10 | 10:40 | GW | X | | | | Ice | 3 | X | X | |
| | MW-20 | 4/15/10 | 10:50 | GW | X | | | | Ice | 3 | X | X | |
| | MW-15 | 4/15/10 | 11:00 | GW | X | | | | Ice | 3 | X | X | |
| | MW-16 | 4/15/10 | 11:10 | GW | X | | | | Ice | 3 | X | X | |
| | MW-17 | 4/15/10 | 11:20 | GW | X | | | | Ice | 3 | X | X | |
| | MW-19 | 4/15/10 | 11:30 | GW | X | | | | Ice | 3 | X | X | |
| | MW-32 | 4/15/10 | 11:40 | GW | X | | | | Ice | 3 | X | X | |
| | MW-33 | 4/15/10 | 11:50 | GW | X | | | | Ice | 3 | X | X | |
| | MW-39 | 4/15/10 | 12:00 | GW | X | | | | Ice | 3 | X | X | |

| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
|---|---|---|---|
| | | 04/15/10 | 1600 |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |

05/2/06 Revision

Shell/Motiva 0007152

# Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
- ☑ XENCO (_____)
- ☐ CALSCIENCE (_____)
- ☐ TEST AMERICA (_____)
- ☐ SPL (_____)
- ☐ OTHER (_____)

Please Check Appropriate Box:
- ☑ ENV. SERVICES
- ☐ MOTIVA RETAIL
- ☐ SHELL RETAIL
- ☐ MOTIVA SD&CM
- ☐ CONSULTANT
- ☐ LUBES
- ☐ SHELL PIPELINE
- ☐ OTHER _____

Print Bill To Contact Name: Doug Weimer

INCIDENT # (ENV SERVICES): 9 7 0 9 4 9 8 1

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 3/1/2010

PAGE: 4 of 4

PO #:

SAP #: 1 0 0 6 2 3

CONSULTANT COMPANY: Sovereign Consulting Inc.

ADDRESS: 3104 Unionville Road, Suite 150

CITY: Cranberry Twp, PA 16066

TELEPHONE: 724-553-5084

FAX:

E-MAIL: gbosiljcic@sovcon.com

SITE ADDRESS (Street, City and State): 25 Paidge Avenue, Brooklyn NY

CONSULTANT PROJECT CONTACT (Report to): Greg Bosiljcic - 724-553-5084

CONSULTANT PROJECT NO.: EQ24

SAMPLER NAME(S) (Print): Nick Zarcone - Longshore Environmental 631-472-1732

LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS):
- ☑ STANDARD (14 DAY)
- ☐ 5 DAYS
- ☐ 3 DAYS
- ☐ 2 DAYS
- ☐ 24 HOURS
- ☐ RESULTS NEEDED ON WEEKEND

DELIVERABLES:
- ☑ LEVEL 1
- ☐ LEVEL 2
- ☐ LEVEL 3
- ☐ LEVEL 4
- ☐ OTHER (SPECIFY) _____

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :
- ☑ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMBURSEMENT RATE APPLIES
- ☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | EPA 8260 (FULL LIST) | MTBE | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-35 | 4/15/10 | 12:10 | GW | X | | | | Ice | 3 | X | X | |
| | MW-38 | 4/15/10 | 12:20 | GW | X | | | | Ice | 3 | X | X | |
| | MW-18 | 4/15/10 | 12:30 | GW | X | | | | Ice | 3 | X | X | |
| | TRIP BLANK | 4/15/10 | 5:00 | GW | X | | | | Ice | 3 | X | X | |
| | FIELD BLANK | 4/15/10 | 7:00 | GW | X | | | | Ice | 3 | X | X | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

| | | | |
|---|---|---|---|
| Relinquished by: (Signature) | Received by: (Signature) | Date: 04/15/10 | Time: 1600 |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |

05/2/06 Revision

Shell/Motiva 0007153

## Sovereign Consulting Inc.
## Tailgate Safety Meeting Form
(To be submitted with field notes to Project Manager each day)

| | |
|---|---|
| **Project Name:** GWS & well Gauging | **Date:** 4/15/10 |
| **Location:** 25 Ridge Ave | **Weather:** ~~58 F~~ clear sky |
| **Project Manager [Print]:** Matt Abbott | **Temp:** 58° F |
| **Contractors/Subcontractors:** | |
| **Scope of Work:** GWS & well Gauging | |

| **Task Hazards:** (check all that apply) *requires Permit to Work | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☐ | Excavations* | ☐ | Haz. Substances | ☐ | Sanitation | ☐ |
| Confined Spaces* | ☐ | Explosion | ☐ | Heavy Equipment | ☐ | Sharp Objects | ☐ |
| Cutting/Welding* | ☐ | Falling Objects | ☐ | Ladders* | ☑ | Tools | ☐ |
| Electrical | ☐ | Fire | ☐ | Noise | ☑ | Traffic | ☑ |
| Environmental Hazard | ☐ | Insects/Biological | ☐ | Slip/Trip Hazards | ☑ | Weather | ☐ |
| Elevated Work* | ☐ | Flying Debris | ☐ | Overhead | ☐ | Other (describe below) | ☐ |

**Engineering Controls / Work Practices:**

| **Levels of Protection / Personal Protective Equipment:** | | | |
|---|---|---|---|
| Level A ☐ | Eye & Face Protection ☑ | Safety Glasses ☑ | Face Shield ☐ |
| Level B ☐ | Foot Protection ☑ | Steel Toes ☑ | Hip Boots/Waders ☐ |
| Level C ☐ | Hand Protection ☑ | Nitrile Gloves ☐ | Leather Gloves ☑ Full Arm Chemical ☐ |
| Level D ☑ | Head Protection ☑ | Hard Hat ☑ | |
| | Hearing Protection ☑ | Ear Muffs/Plugs ☑ | |
| | Other ☐ | Barricades ☑ | High Visibility Safety Vests ☑ Cones/Flags ☑ |
| | | Amber Light/Vehicle Hazards ☐ | Crash Truck ☑ Tyvek/Coveralls ☐ |

| **Air Monitoring/Sampling** | | **Emergency Response** | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☐ | Emergency Alarms | ☐ | First Aid Kit | ☑ | Cell Phone none | ☐ |
| FID/PID | ☐ | Emergency Contacts | ☐ | Spill Kit | ☐ | Fire Extinguisher | ☑ |
| Detector Tubes | ☐ | Evacuation Routes | ☐ | Hospital Route | ☑ | Pedestrian Safety | ☐ |
| Dust Monitor | ☐ | Explosion/Fire | ☐ | Work Area | ☐ | Vapor/Dust Suppression | ☐ |
| Personal Air | ☐ | Medical Emergency | ☐ | Smoking/Break Area | ☐ | | |

**Are site workers Fit To Work?** Yes ☑ No ☐

**Comments:** Water out for other Contractors working !!

Nick Zarcone Geoprobe Oper / Env. Tech
**Name & Title of Person Conducting Tailgate Safety Meeting:**

**Signature:** _____ **Date:** 4/15/10



Shell/Motiva 0007154

SOVEREIGN CONSULTING

# Job Safety Analysis

## Worksheet Acknowledgement

**SCI Project #:** _____ **Date:** 4/15/10

**Site Location:** 25 Ridge Ave

**List JSA(s) Reviewed:** GW sampling

| Name (Print) | Company | Signature |
|---|---|---|
| Nick Zarcone | Long Shore | |
| EDGAR LUCERO | long shore | Edgar Lucero |
| Juan A. Fronco | Long Shore | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

**Sovereign Representative:** _____

| Activity<br>List the tasks required to perform the activity in the sequence they are carried out. | Hazards<br>Against each task list the hazards that could cause injury when the task is performed. | Risk control measures<br>List the control measures required to eliminate or minimize the risk of injury arising from the identified hazard. | Who is responsible?<br>Write the name of the person responsible (supervisor or above) to implement the control measure identified. |
|---|---|---|---|
| LNAPL Recovery | Exposure to site contaminants. | Be certain to wear the proper PPE as specified in the site specific HASP. Do not touch sample with unprotected skin. | Sovereign Field Personnel |
| | | | |
| Decontamination (soap and water wash, water rinse). | Exposure to site contaminants. | Additional PPE includes nitrile gloves.<br><br>Do not touch groundwater with unprotected skin. Avoid contact with all decontamination materials including Alconox. | Sovereign Field Personnel |
| | | | |

| | | | | | |
|---|---|---|---|---|---|
| SIGNED: | | | | | |
| Contractor/Subcontractor | Nick Zucca | Date: 4/15/10 | Project Mgr.: | | Date: ..../...../..... |

Edgar Lucero 4-15-10

Juan A Franco 4-15-10

N. Sclia 4/16/10



Shell/Motiva 0007156

| Activity<br>List the tasks required to perform the activity in the sequence they are carried out. | Hazards<br>Against each task list the hazards that could cause injury when the task is performed. | Risk control measures<br>List the control measures required to eliminate or minimize the risk of injury arising from the identified hazard. | Who is responsible?<br>Write the name of the person responsible (supervisor or above) to implement the control measure identified. |
|---|---|---|---|
| Manhole/Grate cover removal | | Additional PPE includes leather, cut-resistant gloves.<br><br>Inspect tools prior to use. Stop work if correct tools and/or procedures are not available. | Sovereign Field Personnel |
| | Back Strain | Use proper posture when lifting (keeps your back straight, lift with your knees), take breaks as needed to prevent fatigue to arm and shoulder muscles. | |
| | Pinch Points, Abrasion | Place the J-Hook point into opening(s) in the top of the manhole/grate cover and slide the cover out of its seating ring. Do not lift straight up.<br><br>When task is complete, place the J-Hook point into the opening(s) in the top of the manhole/grate cover and slide it back into place within the seating ring. Do not lift straight up. Be careful not to place fingers between manhole/grate cover and seating ring when moving cover. | |
| | Stinging insects | Prior to lifting, look for bees, wasps. Utilize Alconox spray or wasp spray to disable bees and wasps. | |
| | | | |



Shell/Motiva 0007157

| **Activity**<br>List the tasks required to perform the activity in the sequence they are carried out. | **Hazards**<br>Against each task list the hazards that could cause injury when the task is performed. | **Risk control measures**<br>List the control measures required to eliminate or minimize the risk of injury arising from the identified hazard. | **Who is responsible?**<br>Write the name of the person responsible (supervisor or above) to implement the control measure identified. |
|---|---|---|---|
| Load/unload equipment from vehicle, manual lifting | Back strain, pinch points, abrasion | Additional PPE includes leather, cut-resistant gloves.<br><br>Utilize proper lifting procedures (keep your back straight, lift with your legs and knees) when unloading equipment from the vehicle. Utilize material handling devices when possible to move equipment (lift gates, pallet jacks, hand trucks, etc.). If necessary, use a ramp for loading/unloading wheeled devices, ensuring the ramp is properly supported prior to use. Communicate with co-workers who are assisting you to avoid back strain and pinch points. Do not carry heavy equipment over long distances without use of a cart, etc. | Sovereign Field Personnel |
| | Faulty or inappropriate equipment | Inspect equipment (including hand tools) prior to use. Put faulty equipment out of service. | |
| | | | |



Shell/Motiva 0007158

# ENVIRONMENTAL WELL, REMEDIATION COMPOUND, and SITE INSPECTION FORM

COST CENTER # - 58603

DATE - 04/15/10

ADDRESS - 25 Paidge Ave (Brooklyn Terminal)

CITY & STATE - Brooklyn, NY

| Well ID[1] | Observations Upon Arrival: Manway Cover, Type, Size, & Condition | Observations Upon Arrival: Well Cap Type & Condition | Observations Upon Arrival: Well Lock Condition (if present) | Observations Upon Arrival: Well Pad Condition | Note Repairs Made Detailed Explanation of Maintenance Recommended and Performed | Repair Date and PM Initials |
|---|---|---|---|---|---|---|
| MW-1 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | good | | |
| MW-3 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | good | | |
| MW-29 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | fair | | |
| MW-28 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | fair | | |
| MW-30 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | poor | well casing is broken about 10" below grade | |
| MW-4 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | fair | | |
| MW-5 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | fair | | |
| MW-6 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | good | | |
| MW-27 | 10" flush-mount bolt-down - bolts stripped | 4" j-plug | none | poor | | |
| MW-9 | 8-in flushmount boltdown - excellent | 4" j-plug | none | excellent | | |
| MW-8 | 8-in flushmount boltdown - excellent | 4" j-plug | none | excellent | | |
| MW-23 | 8" flush-mount finger-grip - ok | 4-in j-plug | none | fair | | |
| MW-13 | 6-in steel stand pipe | 4" j-plug | fair | fair | | |

| Remediation Compound | Type and Condition of Enclosure | Condition of Area Inside Enclosure | Equipment Condition | Emergency Contact Info Visible | Cleaning / Repairs Recommended and Conducted | Repair Date and PM Initials |
|---|---|---|---|---|---|---|
| | | | | | | |

| Number of Drums On-site | Drum Condition | Labeled Correctly and Writing Legible | Drums Scheduled for Pickup | Drums Located to Min Business Interference | Detailed Explanation of Any Issues Resolved | Date Drums Removed from Site and PM Initials |
|---|---|---|---|---|---|---|
| | | | | | | |

[1]Groundwater monitoring well covers must be painted in accordance with applicable regulations.

All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).



Field Personnel Signature

Shell/Motiva 0007159

# ENVIRONMENTAL WELL, REMEDIATION COMPOUND, and SITE INSPECTION FORM

COST CENTER # - 58603

DATE - 04/15/10

ADDRESS - 25 Paidge Ave (Brooklyn Terminal)

CITY & STATE - Brooklyn, NY

| Well ID | Observations Upon Arrival | | | | Note Repairs Made Detailed Explanation of Maintenance Recommended and Performed | Repair Date and PM Initials |
|---|---|---|---|---|---|---|
| | Manway Cover, Type, Size, & Condition | Well Cap Type & Condition | Well Lock Condition (if present) | Well Pad Condition | | |
| MW-14 | 6-in steel stand pipe | 4" j-plug | fair | fair | | |
| MW-24 | steel plate (manhole cover plowed off) - ok | 4" j-plug | none | poor | | |
| MW-25 | 8" flush-mount finger-grip - ok | 4" j-plug | none | fair (a little low) | | |
| MW-26 | 24" vault - ok | 4" j-plug | none | fair | | |
| TRW-1 | 24" vault - ok | 6" rubber cap | none | asphalt | | |
| TRW-2 | 24" vault - ok | 6" j-plug | none | asphalt | | |
| MW-2 | 24" vault - ok | 4" j-plug | none | good | | |
| TRW-5 | 24" vault - ok | 6" rubber cap | none | asphalt | | |
| TRW-4 | 24" vault - ok | 6" rubber cap | none | asphalt | | |
| TRW-3 | 24" vault - ok | 6" rubber cap | none | asphalt | | |
| MW-31 | 10" flushmount boltdown - stripped | 4" j-plug | none | good | | |
| TRW-6 | 24" vault - ok | 6" rubber cap | none | asphalt | | |
| MW-16 | 8" flush-mount finger-grip - ok | 4" j-plug | none | fair | | |
| MW-17 | 8" flush-mount finger-grip - ok | 6" j-plug | none | poor | casing is cracked - result of construction on new canopy | |

| Remediation Compound | Type and Condition of Enclosure | Condition of Area Inside Enclosure | Equipment Condition | Emergency Contact Info Visible | Cleaning / Repairs Recommended and Conducted | Repair Date and PM Initials |
|---|---|---|---|---|---|---|
| | | | | | | |

| Number of Drums On-site | Drum Condition | Labeled Correctly and Writing Legible | Drums Scheduled for Pickup | Drums Located to Min Business Interference | Detailed Explanation of Any Issues Resolved | Date Drums Removed from Site and PM Initials |
|---|---|---|---|---|---|---|
| | | | | | | |

[1]Groundwater monitoring well covers must be painted in accordance with applicable regulations.

All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).



Field Personnel Signature

Shell/Motiva 0007160

# ENVIRONMENTAL WELL, REMEDIATION COMPOUND, and SITE INSPECTION FORM

COST CENTER # - 58603

ADDRESS - 25 Paidge Ave (Brooklyn Terminal)

DATE - 04/15/10

CITY & STATE - Brooklyn, NY

| Well ID[1] | Observations Upon Arrival | | | | Note Repairs Made Detailed Explanation of Maintenance Recommended and Performed | Repair Date and PM Initials |
|---|---|---|---|---|---|---|
| | Manway Cover, Type, Size, & Condition | Well Cap Type & Condition | Well Lock Condition (if present) | Well Pad Condition | | |
| MW-20 | 8" flush-mount finger-grip - ok | 4" j-plug | none | part of larger concrete pad | | |
| MW-18 | 8" flush-mount finger-grip - ok | 6" j-plug | none | poor | | |
| MW-19 | 8" flush-mount finger-grip - ok | 6" j-plug | none | fair | | |
| MW-32 | steel plate - manhole cover missing | 4" j-plug | none | asphalt (manhole too low) | | |
| MW-15 | 8" flush-mount finger-grip - ok | 4" j-plug | none | part of larger concrete pad | | |
| MW-33 | 6-in steel stand pipe | 4" j-plug | fair | fair | | |
| RW-34 | 8-in steel stand pipe | 6" j-plug | fair | fair | | |
| MW-39 | 6-in steel stand pipe | 4" j-plug | fair | fair | | |
| RW-40 | 8-in steel stand pipe | 6" j-plug | fair | fair | | |
| MW-35 | 6-in steel stand pipe | 4" j-plug | fair | fair | | |
| RW-36 | 8-in steel stand pipe | 6" j-plug | fair | fair | | |
| MW-41 | 6-in steel stand pipe | 4" j-plug | fair | fair | | |
| RW-37 | 8-in steel stand pipe | 6" j-plug | fair | fair | | |
| MW-38 | 6-in steel stand pipe | 4" j-plug | fair | fair | | |

| Remediation Compound | Type and Condition of Enclosure | Condition of Area Inside Enclosure | Equipment Condition | Emergency Contact Info Visible | Cleaning / Repairs Recommended and Conducted | Repair Date and PM Initials |
|---|---|---|---|---|---|---|
| | | | | | | |

| Number of Drums On-site | Drum Condition | Labeled Correctly and Writing Legible | Drums Scheduled for Pickup | Drums Located to Min Business Interference | Detailed Explanation of Any Issues Resolved | Date Drums Removed from Site and PM Initials |
|---|---|---|---|---|---|---|
| | | | | | | |

[1]Groundwater monitoring well covers must be painted in accordance with applicable regulations.

All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).



Field Personnel Signature

Shell/Motiva 0007161

# ENVIRONMENTAL WELL, REMEDIATION COMPOUND, and SITE INSPECTION FORM

COST CENTER # - 58603

ADDRESS - 25 Paidge Ave (Brooklyn Terminal)

DATE - 04/15/10

CITY & STATE - Brooklyn, NY

| Well ID[1] | Observations Upon Arrival: Manway Cover, Type, Size, & Condition | Well Cap Type & Condition | Well Lock Condition (if present) | Well Pad Condition | Note Repairs Made Detailed Explanation of Maintenance Recommended and Performed | Repair Date and PM Initials |
|---|---|---|---|---|---|---|
| MW-7R | 8-in flushmount boltdown - excellent | 4-in j-plug | none | excellent | | |
| MW-22R | 8-in flushmount boltdown - excellent | 4-in j-plug | none | excellent | | |
| MW-23R | 8-in flushmount boltdown - excellent | 4-in j-plug | none | excellent | | |
| MW-42 | 8-in flushmount boltdown - excellent | 4-in j-plug | none | excellent | | |
| MW-43 | 8-in flushmount boltdown - excellent | 4-in j-plug | none | excellent | | |
| MW-44 | 8-in flushmount boltdown - excellent | 4-in j-plug | none | excellent | | |
| MW-45 | 12-in flushmount boltdown - fair | 4-in j-plug | none | fair | *Well is located next to UST @ Northeast Corner of Tank Pad* | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

| Remediation Compound | Type and Condition of Enclosure | Condition of Area Inside Enclosure | Equipment Condition | Emergency Contact Info Visible | Cleaning / Repairs Recommended and Conducted | Repair Date and PM Initials |
|---|---|---|---|---|---|---|
| | | | | | | |

| Number of Drums On-site | Drum Condition | Labeled Correctly and Writing Legible | Drums Scheduled for Pickup | Drums Located to Min Business Interference | Detailed Explanation of Any Issues Resolved | Date Drums Removed from Site and PM Initials |
|---|---|---|---|---|---|---|
| | | | | | | |

[1]Groundwater monitoring well covers must be painted in accordance with applicable regulations.

All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).



Field Personnel Signature

Shell/Motiva 0007162

SOVEREIGN CONSULTING - WELL GAUGING/HAND-BAILING DATA SUMMARY SHEET
PAGE 1 OF 1

DATE (DAY OF WEEK): 04-22-10 (THURSDAY)
CLIENT: MOTIVA ENTERPRISES LLC - 25 PAIDGE AVENUE, BROOKLYN NY
*SCI JOB # EQ017*

| WELL ID | TIME OF READING | WELL DIA. (IN) | TOTAL DEPTH (FT) | DEPTH TO PRODUCT (FT) | DEPTH TO WATER (FT) | PRODUCT THICHKESS (FT) | PRODUCT RECOVERED (GAL) |
|---|---|---|---|---|---|---|---|
| MW-1 | 8:15 | 4 | 11.24 | - | 2.92 | - | - |
| MW-3 | 8:20 | 4 | 11.36 | - | 2.61 | - | - |
| MW-29 | 8:25 | 4 | 9.67 | NM | NM | NM | NM |
| MW-30 | 8:30 | 4 | 9.42 | - | 2.03 | - | - |
| MW-4 | 8:35 | 4 | 11.17 | 2.13 | 2.15 | 0.02 | - |
| MW-5 | 8:40 | 4 | 9.35 | - | 1.59 | - | - |
| MW-28 | 8:45 | 4 | 10.94 | - | 1.43 | - | - |
| MW-27 | 9:00 | 4 | 14.29 | - | 2.13 | - | - |
| MW-6 | 9:05 | 4 | 10.84 | 2.56 | 4.75 | 2.19 | - |
| MW-21R | 9:15 | 4 | 12.08 | - | 3.89 | - | - |
| MW-22R | 9:20 | 4 | 8.46 | - | 3.92 | - | - |
| MW-13 | 9:25 | 4 | 14.08 | - | 7.32 | - | - |
| MW-14 | 9:30 | 4 | 14.13 | - | 6.94 | - | - |
| MW-23 | 9:40 | 4 | 12.56 | - | 4.10 | - | - |
| MW-24 | 9:50 | 4 | 12.67 | - | 3.91 | - | - |
| MW-25 | 10:00 | 4 | 14.54 | - | 2.93 | - | - |
| MW-42 | 10:05 | 4 | 12.60 | - | 3.78 | - | - |
| MW-43 | 10:10 | 4 | 12.42 | - | 3.64 | - | - |
| MW-44 | 10:15 | 4 | 12.47 | - | 3.59 | - | - |
| TRW-1 | 10:25 | 6 | NA | NM | NM | NM | NM |
| MW-26 | 10:35 | 4 | 10.62 | 3.71 | 3.72 | 0.01 | - |
| TRW-2 | 10:40 | 6 | 10.23 | - | 3.61 | - | - |
| MW-2 | 10:45 | 4 | 10.85 | - | 3.53 | - | - |
| TRW-3 | 11:00 | 6 | NA | NM | NM | NM | NM |
| TRW-4 | 11:10 | 6 | NA | NM | NM | NM | NM |
| TRW-5 | 11:20 | 6 | NA | NM | NM | NM | NM |
| MW-31 | 11:30 | 4 | 8.86 | 3.26 | 3.43 | 0.17 | 0.25 |
| MW-20 | 11:40 | 4 | 11.61 | - | 2.76 | - | - |
| MW-15 | 11:45 | 4 | 12.56 | - | 2.94 | - | - |
| MW-16 | 11:50 | 4 | 15.19 | - | 2.86 | - | - |
| MW-17 | 11:55 | 4 | 12.24 | - | 2.58 | - | - |
| MW-18 | 12:05 | 4 | 11.74 | - | 3.06 | - | - |
| MW-19 | 12:10 | 4 | 11.52 | - | 3.58 | - | - |
| MW-32 | 12:15 | 4 | 10.66 | - | 3.66 | - | - |
| MW-9 | 12:20 | 4 | 7.70 | - | 6.12 | - | - |
| MW-8 | 12:25 | 4 | 8.03 | - | 6.18 | - | - |
| MW-7R | 12:30 | 4 | 12.49 | - | 5.67 | - | - |
| RW-34 | 12:32 | 6 | 10.81 | 7.09 | 7.14 | 0.05 | - |
| MW-33 | 12:37 | 4 | 7.33 | - | 5.59 | - | - |
| MW-39 | 12:40 | 4 | 8.45 | - | 6.60 | - | - |
| RW-40 | 12:42 | 6 | 11.66 | 8.56 | 8.79 | 0.23 | 0.25 |
| MW-35 | 12:45 | 4 | 7.79 | - | 6.46 | - | - |
| RW-36 | 12:47 | 6 | 10.48 | 8.62 | 8.65 | 0.03 | - |
| MW-41 | 12:50 | 4 | 9.49 | 8.24 | 8.41 | 0.17 | 0.25 |
| RW-37 | 12:52 | 6 | 10.40 | 7.56 | 7.58 | 0.02 | - |
| MW-38 | 12:55 | 4 | 8.17 | - | 6.84 | - | - |
| TRW-6 | 12:57 | 6 | 9.33 | NM | NM | NM | NM |
| MW-45 | 13:00 | 4 | 11.96 | NM | NM | NM | NM |

**Sovereign Consulting Inc.**
**Tailgate Safety Meeting Form**
(To be submitted with field notes to Project Manager each day)

| | |
|---|---|
| **Project Name:** Motiva Terminal | **Date:** 04/22/10 |
| **Location:** 25 Paidge Ave. Brooklyn | **Weather:** Clear |
| **Project Manager [Print]:** Greg Bosiljcic (Sovereign) | **Temp:** ~60°F |
| **Contractors/Subcontractors:** Longshore | |
| **Scope of Work:** Well Gauging / Product Recovery → Hand-Bailing | |

**Task Hazards:** (check all that apply) *requires Permit to Work

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☐ | Excavations* | ☐ | Haz. Substances | ☐ | Sanitation | ☐ |
| Confined Spaces* | ☐ | Explosion | ☐ | Heavy Equipment | ☐ | Sharp Objects | ☐ |
| Cutting/Welding* | ☐ | Falling Objects | ☐ | Ladders* | ☐ | Tools | ☒ |
| Electrical | ☐ | Fire | ☐ | Noise | ☐ | Traffic | ☒ |
| Environmental Hazard | ☒ | Insects/Biological | ☐ | Slip/Trip Hazards | ☒ | Weather | ☐ |
| Elevated Work* | ☐ | Flying Debris | ☐ | Overhead | ☐ | Other (describe below) | ☐ |

**Engineering Controls / Work Practices:** Cones around work areas

**Levels of Protection / Personal Protective Equipment:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Level A | ☐ | Eye & Face Protection | ☒ | Safety Glasses | ☒ | Face Shield | ☐ |
| Level B | ☐ | Foot Protection | ☒ | Steel Toes | ☒ | Hip Boots/Waders | ☐ |
| Level C | ☐ | Hand Protection | ☒ | Nitrile Gloves | ☒ | Leather Gloves ☐ | Full Arm Chemical ☐ |
| Level D | ☒ | Head Protection | ☒ | Hard Hat | ☒ | | |
| | | Hearing Protection | ☒ | Ear Muffs/Plugs | ☐ | | |
| | | Other | ☒ | Barricades ☐ | High Visibility Safety Vests ☒ | Cones/Flags | ☒ |
| | | | | Amber Light/Vehicle Hazards ☐ | Crash Truck ☐ | Tyvek/Coveralls | ☐ |

| Air Monitoring/Sampling | | Emergency Response | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☐ | Emergency Alarms | ☐ | First Aid Kit | ☐ | Cell Phone (none) | ☒ |
| FID/PID | ☐ | Emergency Contacts | ☐ | Spill Kit | ☐ | Fire Extinguisher | ☐ |
| Detector Tubes | ☐ | Evacuation Routes | ☐ | Hospital Route | ☐ | Pedestrian Safety | ☐ |
| Dust Monitor | ☐ | Explosion/Fire | ☐ | Work Area | ☐ | Vapor/Dust Suppression | ☐ |
| Personal Air | ☐ | Medical Emergency | ☐ | Smoking/Break Area | ☐ | | |

**Are site workers Fit To Work?** Yes ☒ No ☐

**Comments:**

**Name & Title of Person Conducting Tailgate Safety Meeting:** Edgar Lucero

**Signature:** **Date:** 04/22/10

**SHELL**
**Life-Saving Rules**

Work with a valid Work Permit when required

Verify isolation before work begins and use the specified life protecting equipment

Obtain authorisation before overriding or disabling safety critical equipment

Conduct gas tests when required

Obtain authorisation before entering a confined space

Protect yourself against a fall when working at height

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth within this project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

**SIGN IN**

MEETING ATTENDEES

| Name [Print] | Company | Signature |
|---|---|---|
| EDGAR LUCERO | Long Shore | Edgar Lucero |
| | | |
| | | |
| | | |
| | | |

| | | | |
|---|---|---|---|
| Have all personnel been informed of work to be completed? | (YES) | NO | NA |
| Has fuel delivery service been informed? | YES | NO | (NA) |
| Is fuel delivery due today? | YES | NO | (NA) |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | (NA) |
| Are work areas controlled to protect workers, site staff, and the public? | (YES) | NO | NA |
| Do all workers have their API Safety Key card? | (YES) | NO | NA |
| Have all reviewed and understand the Shell 12 Life-Saving Rules | (YES) | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| | | | | |

**SIGN OUT**

| | | | |
|---|---|---|---|
| Has the work area been left tidy and safe? | YES | NO | NA |
| Are site personnel aware of status of work? | YES | NO | NA |
| Are changes to equipment documented and communicated? | YES | NO | NA |
| All incidents, near misses, unsafe situations reported? | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| | | | | |

**SHELL**
**Life-Saving Rules**

Do not walk under a suspended load

No alcohol or drugs when working or driving

Wear your seat belt

Do not smoke outside designated smoking areas

While driving, do not use your phone and do not exceed speed limit

Follow prescribed Journey Management Plan



Shell/Motiva 0007165

SOVEREIGN CONSULTING

# Job Safety Analysis

## Worksheet Acknowledgement

**SCI Project #:** EQ017 **Date:** 04/20/10

**Site Location:** BR Terminal - 25 Paidge Ave

**List JSA(s) Reviewed:** SCI - GEN

SCI - GWS

| Name (Print) | Company | Signature |
|---|---|---|
| EDGAR LUCERO | Long Shore Env | Edgar Lucero |
| | | |
| | | |
| | | |
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| | | |
| | | |
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| | | |
| | | |
| | | |

**Sovereign Representative:** _____

SOVEREIGN CONSULTING

# Job Safety Analysis

## Worksheet Acknowledgement

**SCI Project #:** SCI - GWS **Date:** 5/3/10

**Site Location:** 25 Paidge Ave Brooklyn

**List JSA(s) Reviewed:** Job Safety Analysis Worksheet (SCI-GWS)

| Name (Print) | Company | Signature |
|---|---|---|
| Nick Zarcone | Long Shore | |
| Juan A. Franco | Long Shore | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

**Sovereign Representative:** _____

SOVEREIGN CONSULTING - WELL GAUGING/HAND-BAILING DATA SUMMARY SHEET

DATE (DAY OF WEEK): 05-03-10 (Monday)



CLIENT: MOTIVA ENTERPRISES LLC - 25 PAIDGE AVENUE, BROOKLYN NY

SCI JOB # EQ017

| WELL ID | TIME OF READING | WELL DIA. (IN) | TOTAL DEPTH (FT) | DEPTH TO PRODUCT (FT) | DEPTH TO WATER (FT) | PRODUCT THICHKESS (FT) | PRODUCT RECOVERED (GAL) |
|---|---|---|---|---|---|---|---|
| MW-1 | 9:30 | 4 | 11.24 | - | 2.21 | - | - |
| MW-3 | 9:35 | 4 | 11.36 | - | 2.42 | - | - |
| MW-29 | 9:37 | 4 | 9.67 | - | 1.00 | - | - |
| MW-30 | 9:40 | 4 | 9.42 | - | 0.60 | - | - |
| MW-4 | 9:45 | 4 | 11.17 | 1.91 | 1.95 | 0.04 | - |
| MW-5 | 9:50 | 4 | 9.35 | NM | NM | NM | - |
| MW-28 | 9:55 | 4 | 10.94 | - | 1.26 | - | - |
| MW-27 | 10:00 | 4 | 14.29 | - | 0.80 | - | - |
| MW-6 | 10:05 | 4 | 10.84 | - | 4.59 | - | - |
| MW-21R | 10:15 | 4 | 12.08 | - | 3.29 | - | - |
| MW-22R | 10:20 | 4 | 8.46 | - | 3.10 | - | - |
| MW-13 | 10:25 | 4 | 14.08 | - | 6.52 | - | - |
| MW-14 | 10:30 | 4 | 14.13 | - | 5.61 | - | - |
| MW-23 | 10:35 | 4 | 12.56 | - | 3.65 | - | - |
| MW-24 | 10:40 | 4 | 12.67 | - | 3.66 | - | - |
| MW-25 | 10:45 | 4 | 14.54 | NM | NM | NM | - |
| MW-42 | 10:50 | 4 | 12.60 | - | 3.45 | - | - |
| MW-43 | 10:55 | 4 | 12.42 | - | 3.41 | - | - |
| MW-44 | 11:00 | 4 | 12.47 | - | 3.37 | - | - |
| TRW-1 | 11:05 | 6 | NA | NM | NM | NM | - |
| MW-26 | 11:07 | 4 | 10.62 | NM | NM | NM | - |
| TRW-2 | 11:10 | 6 | 10.23 | - | 3.35 | - | - |
| MW-2 | 11:15 | 4 | 10.85 | 3.28 | 3.31 | 0.03 | - |
| TRW-3 | 11:20 | 6 | NA | NM | NM | NM | - |
| TRW-4 | 11:25 | 6 | NA | NM | NM | NM | - |
| TRW-5 | 11:30 | 6 | NA | NM | NM | NM | - |
| MW-31 | 11:35 | 4 | 8.86 | 3.09 | 3.15 | 0.06 | - |
| MW-20 | 11:40 | 4 | 11.61 | - | 2.61 | - | - |
| MW-15 | 11:45 | 4 | 12.56 | - | 2.48 | - | - |
| MW-16 | 11:47 | 4 | 15.19 | - | 1.86 | - | - |
| MW-17 | 11:50 | 4 | 12.24 | NM | NM | NM | - |
| MW-18 | 11:55 | 4 | 11.74 | - | 2.12 | - | - |
| MW-19 | 11:57 | 4 | 11.52 | - | 2.98 | - | - |
| MW-32 | 12:00 | 4 | 10.66 | - | 2.95 | - | - |
| MW-9 | 12:05 | 4 | 7.70 | - | 6.05 | - | - |
| MW-8 | 12:07 | 4 | 8.03 | - | 6.10 | - | - |
| MW-7R | 12:10 | 4 | 12.49 | - | 5.45 | - | - |
| RW-34 | 12:13 | 6 | 10.81 | 6.81 | 6.85 | 0.04 | - |
| MW-33 | 12:15 | 4 | 7.33 | - | 5.35 | - | - |
| MW-39 | 12:17 | 4 | 8.45 | - | 6.71 | - | - |
| RW-40 | 12:20 | 6 | 11.66 | 8.59 | 10.55 | 1.96 | 2.00 |
| MW-35 | 12:22 | 4 | 7.79 | - | 6.47 | - | - |
| RW-36 | 12:25 | 6 | 10.48 | 8.64 | 8.78 | 0.14 | 0.25 |
| MW-41 | 12:30 | 4 | 9.49 | 8.11 | 8.28 | 0.17 | 0.25 |
| RW-37 | 12:35 | 6 | 10.40 | 7.48 | 7.50 | 0.02 | - |
| MW-38 | 12:37 | 4 | 8.17 | - | 6.63 | - | - |
| TRW-6 | 12:39 | 6 | 9.33 | NM | NM | NM | - |
| MW-45 | 12:40 | 4 | 11.96 | NM | NM | NM | - |

## Sovereign Consulting Inc.
## Tailgate Safety Meeting Form
(To be submitted with field notes to Project Manager each day)

| | |
|---|---|
| **Project Name:** | **Date:** 5/3/10 |
| **Location:** 74 East Ave Lawrence | **Weather:** Rain |
| **Project Manager [Print]:** Matt Abbott | **Temp:** 69° F |
| **Contractors/Subcontractors:** Long Shore Env. Nick Zirone | |
| **Scope of Work:** well Gauging & Product Recovery | |

| **Task Hazards:** (check all that apply) *requires Permit to Work | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☐ | Excavations* | ☐ | Haz. Substances | ☐ | Sanitation | ☐ |
| Confined Spaces* | ☐ | Explosion | ☐ | Heavy Equipment | ☐ | Sharp Objects | ☐ |
| Cutting/Welding* | ☐ | Falling Objects | ☐ | Ladders* | ☑ | Tools | ☑ |
| Electrical | ☐ | Fire | ☐ | Noise | ☑ | Traffic | ☑ |
| Environmental Hazard | ☐ | Insects/Biological | ☐ | Slip/Trip Hazards | ☑ | Weather | ☑ |
| Elevated Work* | ☐ | Flying Debris | ☐ | Overhead | ☐ | Other (describe below) | ☐ |

**Engineering Controls / Work Practices:**

| **Levels of Protection / Personal Protective Equipment:** | | | |
|---|---|---|---|
| Level A | ☐ | Eye & Face Protection ☑ | Safety Glasses ☑ Face Shield ☐ |
| Level B | ☐ | Foot Protection ☑ | Steel Toes ☑ Hip Boots/Waders ☐ |
| Level C | ☐ | Hand Protection ☑ | Nitrile Gloves ☑ Leather Gloves ☑ Full Arm Chemical ☐ |
| Level D | ☑ | Head Protection ☑ | Hard Hat ☑ |
| | | Hearing Protection ☑ | Ear Muffs/Plugs ☑ |
| | | Other ☐ | Barricades ☑ High Visibility Safety Vests ☑ Cones/Flags ☑ |
| | | | Amber Light/Vehicle Hazards ☐ Crash Truck ☑ Tyvek/Coveralls ☐ |

| **Air Monitoring/Sampling** | | **Emergency Response** | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☐ | Emergency Alarms | ☐ | First Aid Kit | ☑ | Cell Phone none | ☐ |
| FID/PID | ☐ | Emergency Contacts | ☐ | Spill Kit | ☑ | Fire Extinguisher | ☑ |
| Detector Tubes | ☐ | Evacuation Routes | ☐ | Hospital Route | ☑ | Pedestrian Safety | ☐ |
| Dust Monitor | ☐ | Explosion/Fire | ☐ | Work Area | ☐ | Vapor/Dust Suppression | ☐ |
| Personal Air | ☐ | Medical Emergency | ☐ | Smoking/Break Area | ☐ | | |

**Are site workers Fit To Work?** Yes ☑ No ☐

**Comments:** Raining water rising – Take our time –

**Name & Title of Person Conducting Tailgate Safety Meeting:**

Nick Zirone

**Signature:** _____ **Date:** 5/3/10



Shell/Motiva 0007169

**SHELL**
**Life-Saving Rules**

Work with a valid Work Permit when required

Verify isolation before work begins and use the specified life protecting equipment

Obtain authorisation before overriding or disabling safety critical equipment

Conduct gas tests when required

Obtain authorisation before entering a confined space

Protect yourself against a fall when working at height

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth within this project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

**SIGN IN**

MEETING ATTENDEES

| Name [Print] | Company | Signature |
|---|---|---|
| Nick Zarine | Long Shore | |
| Juan A. Fiore | Long Shore | |
| | | |
| | | |
| | | |

| | | | |
|---|---|---|---|
| Have all personnel been informed of work to be completed? | YES | NO | NA |
| Has fuel delivery service been informed? | YES | NO | NA |
| Is fuel delivery due today? | YES | NO | NA |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | NA |
| Are work areas controlled to protect workers, site staff, and the public? | YES | NO | NA |
| Do all workers have their API Safety Key card? | YES | NO | NA |
| Have all reviewed and understand the Shell 12 Life-Saving Rules | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Nick Zarine | | 5/3/10 0930 | Yeong Lee | Yeong Lee |

**SIGN OUT**

| | | | |
|---|---|---|---|
| Has the work area been left tidy and safe? | YES | NO | NA |
| Are site personnel aware of status of work? | YES | NO | NA |
| Are changes to equipment documented and communicated? | YES | NO | NA |
| All incidents, near misses, unsafe situations reported? | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Nick Zarine | | 5/3/10 | Gustavo | |

**SHELL**
**Life-Saving Rules**

Do not walk under a suspended load

No alcohol or drugs when working or driving

Wear your seat belt

Do not smoke outside designated smoking areas

While driving, do not use your phone and do not exceed speed limit

Follow prescribed Journey Management Plan



Shell/Motiva 0007170

Lorco Petroleum Services
450 South Front St.
Elizabeth, NJ 07202
(908) 820-8800
(800) 734-0910
FAX: (908) 820-8412

**LORCO PETROLEUM SERVICES**

www.lorcopetroleum.com

STANDARD COLLECTION ORDER FORM

765152

## GENERATOR/LOCATION

SALES ORDER # 320-210

NAME

INFORMATION/ATTENTION LINE | ACCOUNT APPROVAL CODE

DELIVERY ADDRESS

CITY | STATE | ZIP

PHONE NUMBER | PURCHASE ORDER NUMBER

TIME IN | TIME OUT

## BILL TO (IF DIFFERENT FROM LOCATION)

NAME

INFORMATION/ATTENTION LINE | ACCOUNT APPROVAL CODE

DELIVERY ADDRESS

CITY | STATE | ZIP

PHONE NUMBER | PURCHASE ORDER NUMBER

MANIFEST NUMBER

## SHIPPING INFORMATION

This is to certify that the below named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation

| NO. | TYPE | QTY. | UNIT | US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number) | SALES REPRESENTATIVE |
|---|---|---|---|---|---|
| | | | | | |

## SERVICE SECTION

| ITEM # | DESCRIPTION | WASTE CODE | QUANTITY | UNIT PRICE | PRICE | TAX | LINE TOTAL |
|---|---|---|---|---|---|---|---|
| 40500 | USED OIL REMOVAL | | | | | | |
| 40300 | ANTIFREEZE REMOVAL | | | | | | |
| 40400 | OILY WATER DISPOSAL | | | | | | |
| 41100 | SLUDGE DISPOSAL | | | | | | |
| 41000 | GASOLINE/WATER | | | | | | |
| 40900 | DRUM DISPOSAL | | | | | | |
| 40611 | NEW 55 GAL DRUMS / 17H | | | | | | |
| 40515 | OIL WATER SEPARATOR SERVICE | | | | | | |
| 41513 | TANK WASHER | | | | | | |
| 41507 | TANK ENTRY | | | | | | |
| 41500 | TRANSPORTATION | | | | | | |
| 41508 | TRUCK AND OPERATOR | | | | | | |
| 41514 | ADDITIONAL LABOR | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | TOTAL | | |

PARTS WASHER SERVICE INTERVAL _____ DAYS.
USED OIL CUSTOMER SERVICED EVERY 30 DAYS UNLESS OTHERWISE INDICATED.
USED OIL SERVICE INTERVAL _____ DAYS.

GENERATOR WARRANTS AND REPRESENTS THAT THE MATERIALS PROVIDED LORCO HEREUNDER HAVE NOT BEEN MIXED, COMBINED, OR OTHERWISE BLENDED IN ANY QUANTITY WITH MATERIALS CONTAINING POLYCHLORINATED BIPHENYLS (PCB) OR ANY OTHER MATERIAL DEFINED AS HAZARDOUS WASTE UNDER APPLICABLE LAWS, INCLUDING BUT NOT LIMITED TO 40 CFR PART 261, GENERATOR AGREES TO INDEMNIFY AND HOLD LORCO HARMLESS FOR ANY DAMAGES, COSTS, ATTORNEY'S FEES, ETC. ARISING OUT OF OR IN ANY WAY RELATED TO A BREACH OF THE ABOVE WARRANTY BY THE GENERATOR.

Generator certifies that the waste is ☐ used oil ☐ used antifreeze ☐ oily water ☐ oil filter ☐ parts washer solvent

☐ Other _____
Description

In accordance the N.J.A.C. 7:26-12.1 et seq, LORCO has the required permits to accept the above described waste.

X _____
Print Name | Title

X _____
Signature | Date

GENERATOR/CUSTOMER

**CONDITIONALLY EXEMPT SMALL QUANTITY GENERATOR CERTIFICATION**

I certify that this generator generates less than 100 kilograms of hazardous waste per month, as defined at 40 C.F.R. 261, and does not accumulate more than 1,000 kilograms of such waste during the month

X _____
GENERATOR'S SIGNATURE

**NON CONDITIONALLY EXEMPT LARGE QUANTITY GENERATOR CERTIFICATION**

DEXSIL CDT TEST RESULTS

X _____ PPM

CHARGE MY ACCOUNT FOR THIS TRANSACTION UNLESS OTHERWISE INDICATED IN THE PAYMENT SECTION. INVOICES REFLECTING CHARGES TO CUSTOMER ARE SUBJECT TO AN INTEREST RATE OF THE LESSER OF 1½% PER MONTH (18% PER ANNUM) OR THE MAXIMUM RATE ALLOWED BY LAW ON ANY INVOICES THAT ARE NOT PAID WITHIN 30 DAYS. IN THE EVENT OF DEFAULT, LORCO SHALL BE ENTITLED TO RECOVER COSTS OF COLLECTION, INCLUDING REASONABLE ATTORNEY'S FEES. INITIAL _____

$

**PAYMENT RECEIVED SECTION**

| CASH ☐ | TOTAL RECEIVED |
|---|---|
| CHECK NUMBER | |

In accordance with NJAC7:26-6.7b + 40CFR PART 279 LORCO has notified the US EPA of its location and used oil management activities.

X _____
Print Name

X _____
Signature | Date

LORCO REPRESENTATIVE

# Job Clearance Form

CONTRACTOR INSTRUCTIONS PRIOR TO START OF WORK: Review form, check appropriate boxes, sign and print name at bottom of this form & ensure (store) manager or site representative of the day is aware of the job to be performed and Motiva safety procedures and obtain signature.

| Station # | Station Address: | Work Order Number: | Date: |
|---|---|---|---|
| 58103 | 25 Reding Ave | | 5-14-10 |

| Contractor Company Name: | Contractor person in charge (print name): | Number of Workers: | JSA Reference Number: (if required) | Start Time: | End Time: | Labor: | Travel Time: | Travel Distance: |
|---|---|---|---|---|---|---|---|---|
| Lonco | Keyon J | 1 | | | | | | |

**Problem/Work Description:** Remove 6 Drums off- Site

**Return Call:** yes / no

**Damage Claim:** yes / no

## PPE REQUIRED (CHECK AND/OR FILL IN BLANK SPACES)

- [x] SAFETY VEST
- [x] PROTECTIVE CLOTHING
- [x] HARD HAT
- [x] GLOVES
- [x] SHOES & BOOTS
- [x] SAFETY GLASSES/GOGGLES
- [ ] HEARING PROTECTION
- [ ] WELDING PPE
- [ ] RESPIRATOR
- [ ] OTHER

Contractor to complete this section below if circumstances on site or specific to this job, may generate additional hazards, that are not described in the JSA (also see back of page for additional guidance and if more space required to document)

| TASK STEP | Hazards not covered by JSA | How to control or eliminate risk - include PPE to be Worn |
|---|---|---|
| | | |

**Work documentation requirements**

**Lower Risk** - no JSA required

**Medium Risk / Higher Risk tasks** - JSA required

**Higher Risk** - JSA required & appropriate check list completed (see below)

**Examples of Higher / Medium tasks**

- [ ] Works at heights: in all cases on open sites - on closed sites if no JSA present
- [ ] Trenching or excavation related to underground tank / product lines
- [ ] Heavy lifting
- [ ] Work in confined spaces (e.g. tank, interceptor or deep manhole entry)
- [ ] Hot work with risk of product or vapour ignition
- [ ] LPG system degassing, installation or maintenance

This form must be completed for each job and updated and re-signed if circumstances change or additional hazards identified.

## SIGN IN

**Operating sites:** to be signed by the Site Representative

**Non-operating sites:** to be signed by Contractor Representative only

**GENERAL SAFETY CHECKS**

- Have all site personnel been informed ?
- Has fuel delivery service been informed?
- Is a fuel delivery due?
- Have isolation procedures been agreed - lock out/tag out?
- Are work areas cordoned off to protect workers, site staff & public?
- Other:

| Contractor representative name | Signature |
|---|---|
| Keyon Johnson | Keyon Johnson |

| Site representative name | Signature |
|---|---|
| Matthew Abbott | Matthew Abbott CS Rep for Motiva Enterprises LLC |

## SIGN OUT AND OPERATOR VERIFICATION OF WORK

**GENERAL SAFETY CHECKS**

- Has the work area been left tidy and safe?
- Are site personnel aware of status of work including remaining isolation?
- Are changes to equipment documented and communicated?
- All incidents, near incidents, unsafe situations reported?
- Other

**Site representative comments**

| Site representative name | Signature |
|---|---|
| Matthew Abbott | Matthew Abbott CS Rep for Motiva Enterprises LLC |

**Contractor signature**

Keyon Johnson

**PARTS - Ordered, Replaced and/or Disposed Of (include model and serial #s as appropriate)**

The contractor through its authorized representative shall sign, issue and be solely responsible for all job clearance forms and the obligations arising there under applicable to the work.
This form covers important reminders and is not intended to release the contractor from safely performing the work in compliance with all applicable laws and regulations.
The store operator may require the contractor to stop work if it appears that the contractor or any of its workers are failing to comply with the requirements in the applicable items of this form or other applicable safety requirements.

Shell/Motiva 0007172

**Sovereign Consulting Inc.**
**Tailgate Safety Meeting Form**
(To be submitted with field notes to Project Manager each day)

| | |
|---|---|
| **Project Name:** Motiva Terminal | **Date:** 05/14/10 |
| **Location:** 25 Paidge Ave Brooklyn NY | **Weather:** Clear, Humid |
| **Project Manager [Print]:** Greg Basiljcic (Sovereign) | **Temp:** ~70°F |
| **Contractors/Subcontractors:** LoRco, Longshore | |
| **Scope of Work:** drum pick-up for transport & disposal | |

| **Task Hazards:** (check all that apply) *requires Permit to Work | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☐ | Excavations* | ☐ | Haz. Substances | ☐ | Sanitation | ☐ |
| Confined Spaces* | ☐ | Explosion | ☐ | Heavy Equipment | ☒ | Sharp Objects | ☐ |
| Cutting/Welding* | ☐ | Falling Objects | ☐ | Ladders* | ☐ | Tools | ☐ |
| Electrical | ☐ | Fire | ☐ | Noise | ☐ | Traffic | ☒ |
| Environmental Hazard | ☐ | Insects/Biological | ☐ | Slip/Trip Hazards | ☐ | Weather | ☐ |
| Elevated Work* | ☐ | Flying Debris | ☐ | Overhead | ☐ | Other (describe below) | ☐ |

**Engineering Controls / Work Practices:** Forklift / Truck Traffic

| **Levels of Protection / Personal Protective Equipment:** | | | |
|---|---|---|---|
| Level A | ☐ | Eye & Face Protection ☒ | Safety Glasses ☒ Face Shield ☐ |
| Level B | ☐ | Foot Protection ☒ | Steel Toes ☒ Hip Boots/Waders ☐ |
| Level C | ☐ | Hand Protection ☒ | Nitrile Gloves ☒ Leather Gloves ☐ Full Arm Chemical ☐ |
| Level D | ☒ | Head Protection ☒ | Hard Hat ☑ |
| | | Hearing Protection ☐ | Ear Muffs/Plugs ☐ |
| | | Other ☒ | Barricades ☐ High Visibility Safety Vests ☒ Cones/Flags ☐ |
| | | | Amber Light/Vehicle Hazards ☐ Crash Truck ☐ Tyvek/Coveralls ☐ |

| **Air Monitoring/Sampling** | | **Emergency Response** | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☐ | Emergency Alarms | ☐ | First Aid Kit | ☐ | Cell Phone (none) | ☑ |
| PID/PID | ☐ | Emergency Contacts | ☐ | Spill Kit | ☐ | Fire Extinguisher | ☐ |
| Detector Tubes | ☐ | Evacuation Routes | ☑ | Hospital Route | ☐ | Pedestrian Safety | ☐ |
| Dust Monitor | ☐ | Explosion/Fire | ☐ | Work Area | ☐ | Vapor/Dust Suppression | ☐ |
| Personal Air | ☐ | Medical Emergency | ☐ | Smoking/Break Area | ☐ | | |

**Are site workers Fit To Work?** Yes ☑ No ☐

**Comments:** Motiva Personnel will load LoRco truck w/ drums utilizing a forklift

**Name & Title of Person Conducting Tailgate Safety Meeting:** Matthew A. Abbott

**Signature:** Matthew A. Abbott **Date:** 05/14/10



Shell/Motiva 0007173

**SHELL**
**Life-Saving Rules**

Work with a valid Work Permit when required

Verify isolation before work begins and use the specified life protecting equipment

Obtain authorisation before overriding or disabling safety critical equipment

Conduct gas tests when required

Obtain authorisation before entering a confined space

Protect yourself against a fall when working at height

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth within this project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

**SIGN IN**

MEETING ATTENDEES

| Name [Print] | Company | Signature |
|---|---|---|
| Matthew L. Abbott | Longshore Env. | [signature] |
| Kueyon Johnson | Lorco | [signature] |
| | | |
| | | |
| | | |

| | | | |
|---|---|---|---|
| Have all personnel been informed of work to be completed? | YES | NO | NA |
| Has fuel delivery service been informed? | YES | NO | NA |
| Is fuel delivery due today? | YES | NO | NA |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | NA |
| Are work areas controlled to protect workers, site staff, and the public? | YES | NO | NA |
| Do all workers have their API Safety Key card? | YES | NO | NA |
| Have all reviewed and understand the Shell 12 Life-Saving Rules | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Matthew L. Abbott | [signature] | 05/14/10 | | |

Longshore

**SIGN OUT**

| | | | |
|---|---|---|---|
| Has the work area been left tidy and safe? | YES | NO | NA |
| Are site personnel aware of status of work? | YES | NO | NA |
| Are changes to equipment documented and communicated? | YES | NO | NA |
| All incidents, near misses, unsafe situations reported? | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| | | | | |

**SHELL**
**Life-Saving Rules**

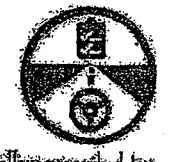
Do not walk under a suspended load

No alcohol or drugs w working or driving

Wear your seat bel

Do not smoke outsi designated smoking

While driving, do not your phone and do t exceed speed limit



Follow prescribed Jou Management Plan



Shell/Motiva 0007174

SOVEREIGN CONSULTING

# Job Safety Analysis

## Worksheet Acknowledgement

**SCI Project #:** EQ017 **Date:** 05/14/10

**Site Location:** Motiva BK Terminal - 25 Paidge Ave.

**List JSA(s) Reviewed:** SCI - Drum/Hose

| Name (Print) | Company | Signature |
|---|---|---|
| Matthew A. Abbott | Longshore | |
| Keyon Johnson | Lonco | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

**Sovereign Representative:** _____

* extra visit outside of normal ~~budget~~ * budget

FIELD FORM (Revised 01/05/06)

| | | |
|---|---|---|
| **Date:** 05/14/10 | **Field Form #:** 5810 | **Site:** 25 Paidge Ave. |
| **Day:** Fri. | **Client:** SOVEREIGN | Brooklyn, NY |
| | **Region:** II | Motiva Terminal |

**Work Description:** Site visit to meet CORCO for drum pick-up → CORCO 2.5 hrs late

| ☐ Unit Cost ☒ T&M | | Time | | | | |
|---|---|---|---|---|---|---|
| **Personnel** | **Title** | **Start** | **On-Site** | **Off-site** | **Finish** | **Total** |
| Matthew Abbott | ET | 10⁰⁰ | 11.15 | 13⁰⁰ | 17⁰⁰ | 7 |
| | | | | | | |
| | | | | | | |

| UNIT COSTS | | | MATERIALS | |
|---|---|---|---|---|
| **No.** | **Task No.** | **Description** | **No.** | **Description** |
| | 1.1 | Survey Monitoring Wells (site) | | Lock |
| | 1.2 | Sensitive Receptor Survey (site) | | 2" Gripper Plug |
| | 2.1.1 | Drilling Oversight (half day) | | 4" Gripper Plug |
| | 2.2.2 | Drilling Oversight (full day) | | 2" EnviroCap |
| | 2.3.1 | GeoProbe (half day) | | 4" EnviroCap |
| | 2.3.2 | GeoProbe (full day) | | Disposable Bailer |
| | 4.1.1 | GW Monitoring 1-5 wells (per site) | | 55 Gallon Drum |
| | 4.1.2 | GW Monitoring 6-10 wells (per site) | | Tedlar Air Bag |
| | 4.1.3 | GW Monitoring Add. Wells >10(per well) | | Generator |
| | 4.2.1 | Potable Sampling During O&M (well) | | Cones |
| | 4.2.2 | Potable Sampling Separate Visit (well) | | Drum Sampler |
| | 4.3.1 | Product Bailing During O&M (well) | | ORM (lbs.) |
| | 4.3.2 | Product Bailing Separate Visit (site) | | ORM Socks (#) |
| | 4.4 | MW Pad Replacement (well) | | Concrete |
| | 5.1 | O&M-unscheduled site visit (visit) | | |
| | 5.2 | O&M - SVE/AS no treatment (visit) | | |
| | 5.3 | O&M - SVE/AS with treatment(visit) | | |
| | 5.4 | Product Recovery System (visit) | | |
| | 5.5 | Carbon Replacement Liquid (per lb.) | | |
| | 5.6 | Carbon Replacement Vapor (per lb.) | | |
| | 7.1.1 | Construction Monitoring Half Day | | |
| | 7.1.2 | Construction Monitoring Full Day | | |
| | 7.2.1 | Environmental Monitoring Half Day | | |
| | 7.2.2 | Environmental Monitoring Full Day | | |
| | 8.0 | Hydraulic Lift Oversight (event) | | |
| | 9.0 | Waste/Fuel Oil Oversight (event) | | |
| | 11.8.1 | Field Vehicle (per hour) | | |
| | 11.8.2 | Field Vehicle (half day) | | |
| 1 | 11.8.3 | Field Vehicle (full day) | | |
| | 11.8.4 | Field Vehicle (Week) | | |
| | 11.9 | Field Vehicle - Heavy Duty (per day) | | |

*LONGSHORE ENVIRONMENTAL INC.*

SOVEREIGN CONSULTING - WELL GAUGING/HAND-BAILING DATA SUMMARY SHEET
PAGE 1 OF 1

DATE (DAY OF WEEK): 06-21-10 (MONDAY)
CLIENT: MOTIVA ENTERPRISES LLC - 25 PAIDGE AVENUE, BROOKLYN NY
SCI JOB # EQ017

| WELL ID | TIME OF READING | WELL DIA. (IN) | TOTAL DEPTH (FT) | DEPTH TO PRODUCT (FT) | DEPTH TO WATER (FT) | PRODUCT THICKNESS (FT) | PRODUCT RECOVERED (GAL) | NOTES |
|---|---|---|---|---|---|---|---|---|
| MW-1 | 9:15 | 4 | 11.24 | | 3.10 | | | |
| MW-2 | 10:15 | 4 | 10.85 | 3.74 | 3.80 | 0.06 | | |
| MW-3 | 9:30 | 4 | 11.36 | | 2.90 | | | |
| MW-4 | 10:55 | 4 | 11.17 | 2.33 | 2.39 | 0.06 | | |
| MW-5 | 11:00 | 4 | 9.35 | | 1.85 | | | |
| MW-6 | 11:09 | 4 | 10.84 | | 5.39 | | | |
| MW-7R | 12:10 | 4 | 12.49 | | 5.92 | | | |
| MW-8 | 12:05 | 4 | 8.03 | | 6.40 | | | |
| MW-9 | 12:15 | 4 | 7.70 | | 6.30 | | | |
| MW-13 | 7:40 | 4 | 14.08 | | 7.31 | | | |
| MW-14 | 7:35 | 4 | 14.13 | | 6.56 | | | |
| MW-15 | 9:55 | 4 | 12.56 | | 2.16 | | | |
| MW-16 | 9:57 | 4 | 15.19 | | 3.04 | | | |
| MW-17 | 10:00 | 4 | 12.24 | | 2.66 | | | |
| MW-18 | 10:05 | 4 | 11.52 | | 3.14 | | | |
| MW-19 | | 4 | 11.74 | | | | | buried |
| MW-20 | 9:50 | 4 | 11.52 | | 3.03 | | | |
| MW-21R | 7:45 | 4 | 12.08 | | 3.86 | | | |
| MW-22R | 7:50 | 4 | 8.46 | | 3.84 | | | |
| MW-23 | 7:30 | 4 | 12.56 | | 4.13 | | | |
| MW-24 | 7:55 | 4 | 12.67 | | 4.01 | | | |
| MW-25 | 8:00 | 4 | 14.54 | | 3.09 | | | |
| MW-26 | 10:10 | 4 | 10.62 | 3.85 | 3.86 | 0.01 | | |
| MW-27 | 11:07 | 4 | 14.29 | | 2.38 | | | |
| MW-28 | 11:05 | 4 | 10.94 | | 1.75 | | | |
| MW-29 | 9:45 | 4 | 9.67 | | 1.88 | | | |
| MW-30 | 10:50 | 4 | 9.42 | | 2.23 | | | |
| MW-31 | 10:25 | 4 | 8.86 | 3.58 | 4.40 | 0.82 | 1.00 | |
| MW-32 | 10:07 | 4 | 10.66 | | 4.19 | | | |
| MW-33 | 11:50 | 4 | 7.33 | | 5.62 | | | |
| RW-34 | 11:45 | 6 | 10.81 | 7.14 | 7.17 | 0.03 | | |
| MW-35 | 11:40 | 4 | 7.79 | | 6.48 | | | |
| RW-36 | 11:30 | 6 | 10.48 | 8.95 | 9.20 | 0.25 | 0.25 | |
| RW-37 | 11:25 | 6 | 10.40 | 7.68 | 7.70 | 0.02 | | |
| MW-38 | 11:15 | 4 | 8.17 | | 7.02 | | | |
| MW-39 | 11:55 | 4 | 8.45 | | 6.75 | | | |
| RW-40 | 11:35 | 6 | 11.66 | 9.01 | 9.06 | 0.05 | | |
| MW-41 | 11:20 | 4 | 9.49 | 8.08 | 8.37 | 0.29 | 0.25 | |
| MW-42 | 8:10 | 4 | 12.60 | | 3.91 | | | |
| MW-43 | 8:30 | 4 | 12.42 | | 3.74 | | | |
| MW-44 | 8:20 | 4 | 12.47 | | 3.68 | | | |
| MW-45 | | 4 | 11.96 | | | | | debris |
| TRW-1 | - | 6 | - | | | | | flooded |
| TRW-2 | 10:12 | 6 | 10.23 | | 3.88 | | | |
| TRW-3 | - | 6 | - | | | | | flooded |
| TRW-4 | - | 6 | - | | | | | flooded |
| TRW-5 | 10:30 | 6 | 10.19 | 3.06 | 3.12 | 0.06 | | |
| TRW-6 | 10:45 | 6 | 10.05 | 2.83 | 3.01 | 0.18 | | |

Log Number

# SOIL SAFE, INC.

## NON-HAZARDOUS MATERIAL MANIFEST

### GENERATOR

Generator Name _____ Generator Site/Location _____

Address _____ Address _____

_____ _____

Phone No. _____ Phone No. _____

Description of Material

Approval Number

Non-Regulated Petroleum Contaminated Soil

Non DOT/RCRA Regulated

**GROSS**

**TARE**

**NET**

**TONNAGE**

**I hereby certify that the above named material does not contain free liquid as defined by 40 CFR Part 260.10 or any applicable state law, is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.**

Generator Authorized Agent Name _____ Signature _____ Shipment Date _____

### TRANSPORTER

Transporter Name _____ Driver Name (Print) _____

Address _____ Vehicle License No. / State / EPA No. _____

_____ Truck Number _____

I hereby certify that the above named material was picked up at the generator site listed above.

Driver Signature _____ Shipment Date _____

I hereby certify that the above named material was delivered without incident to the destination listed below.

Driver Signature _____ Delivery Date _____

### DESTINATION

Site Name **Soil Safe, Inc. - Bridgeport** Phone No. **1-856-467-8030**

Address **378 Route 130 Logan Township, NJ 08085**

No left turn on Rt. 130 North into the facility.

Business hours are: Monday through Friday 7 AM to 5 PM. 5 PM to 10 PM By Appointment only. Saturday by appointment only.

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

Name of Authorized Agent _____ Signature _____ Receipt Date _____

White - Facility Green - Facility Yellow - Generator Pink - Broker Goldenrod - Contractor Blue - Trucking Co.

Log Number

# SOIL SAFE, INC.

## NON-HAZARDOUS MATERIAL MANIFEST

### GENERATOR

Generator Name _____ Generator Site/Location _____

Address _____ Address _____

_____ _____

Phone No. _____ Phone No. _____

| Approval Number | Description of Material | | |
|---|---|---|---|
| | Non-Regulated Petroleum Contaminated Soil<br>Non DOT/RCRA Regulated | | GROSS<br>TARE<br>NET<br>TONNAGE |

**I hereby certify that the above named material does not contain free liquid as defined by 40 CFR Part 260.10 or any applicable state law, is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.**

_____

Generator Authorized Agent Name Signature Shipment Date

### TRANSPORTER

Transporter Name _____ Driver Name (Print) _____

Address _____ Vehicle License No. / State / EPA No. _____

_____ Truck Number _____

I hereby certify that the above named material was picked up at the generator site listed above.

I hereby certify that the above named material was delivered without incident to the destination listed below.

_____ _____

Driver Signature Shipment Date Driver Signature Delivery Date

### DESTINATION

Site Name **Soil Safe, Inc. - Bridgeport** Phone No. **1-856-467-8030**

Address **378 Route 130 Logan Township, NJ 08085**

No left turn on Rt. 130 North into the facility.
Business hours are: Monday through Friday 7 AM to 5 PM. 5 PM to 10 PM By Appointment only. Saturday by appointment only.

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

_____

Name of Authorized Agent Signature Receipt Date

White - Facility Green - Facility Yellow - Generator Pink - Broker Goldenrod - Contractor Blue - Trucking Co.

Log Number

# SOIL SAFE, INC.

## NON-HAZARDOUS MATERIAL MANIFEST

### GENERATOR

Generator Name _____ Generator Site/Location _____

Address _____ Address _____

_____ _____

Phone No. _____ Phone No. _____

Approval Number

Description of Material

Non-Regulated Petroleum Contaminated Soil

Non DOT/RCRA Regulated

GROSS

TARE

NET

TONNAGE

**I hereby certify that the above named material does not contain free liquid as defined by 40 CFR Part 260.10 or any applicable state law, is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.**

Generator Authorized Agent Name Signature Shipment Date

### TRANSPORTER

Transporter Name _____ Driver Name (Print) _____

Address _____ Vehicle License No. / State / EPA No. _____

_____ Truck Number _____

I hereby certify that the above named material was picked up at the generator site listed above.

Driver Signature Shipment Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

Driver Signature Delivery Date

### DESTINATION

Site Name **Soil Safe, Inc. - Bridgeport** Phone No. **1-856-467-8030**

Address **378 Route 130 Logan Township, NJ 08085**

No left turn on Rt. 130 North into the facility.

Business hours are: Monday through Friday 7 AM to 5 PM. 5 PM to 10 PM By Appointment only. Saturday by appointment only.

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

Name of Authorized Agent Signature Receipt Date

White - Facility Green - Facility Yellow - Generator Pink - Broker Goldenrod - Contractor Blue - Trucking Co.

Log Number

# SOIL SAFE, INC.

## NON-HAZARDOUS MATERIAL MANIFEST

### GENERATOR

Generator Name _____ Generator Site/Location _____

Address _____ Address _____

_____ _____

Phone No. _____ Phone No. _____

Approval Number

Description of Material

Non-Regulated Petroleum Contaminated Soil

Non DOT/RCRA Regulated

**GROSS**

**TARE**

**NET**

**TONNAGE**

**I hereby certify that the above named material does not contain free liquid as defined by 40 CFR Part 260.10 or any applicable state law, is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.**

Generator Authorized Agent Name Signature Shipment Date

### TRANSPORTER

Transporter Name _____ Driver Name (Print) _____

Address _____ Vehicle License No. / State / EPA No. _____

_____ Truck Number _____

I hereby certify that the above named material was picked up at the generator site listed above.

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I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

Name of Authorized Agent Signature Receipt Date

White - Facility Green - Facility Yellow - Generator Pink - Broker Goldenrod - Contractor Blue - Trucking Co

# Sovereign Consulting Inc.
## Tailgate Safety Meeting Form
(To be submitted with field notes to Project Manager each day)

| | | | |
|---|---|---|---|
| **Project Name:** | Motiva Terminal | **Date:** | 6/~~21~~ 22/10 |
| **Location:** | 25 Paidge Ave. Brooklyn, NY | **Weather:** | Clear |
| **Project Manager [Print]:** | Greg Basilicia (Sovereign) | **Temp:** | ~80°F |
| **Contractors/Subcontractors:** | Longshore Env. | | |
| **Scope of Work:** | Well Gauging / Oversee Soil Load-out | | |

**Task Hazards:** (check all that apply) *requires Permit to Work

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold/Heat Stress | ☑ | Excavations* | ☐ | Haz. Substances | ☐ | Sanitation | ☐ |
| Confined Spaces* | ☐ | Explosion | ☐ | Heavy Equipment | ☑ | Sharp Objects | ☐ |
| Cutting/Welding* | ☐ | Falling Objects | ☐ | Ladders* | ☐ | Tools | ☑ |
| Electrical | ☐ | Fire | ☐ | Noise | ☐ | Traffic | ☑ |
| Environmental Hazard | ☐ | Insects/Biological | ☐ | Slip/Trip Hazards | ☐ | Weather | ☑ |
| Elevated Work* | ☐ | Flying Debris | ☐ | Overhead | ☐ | Other (describe below) | ☐ |

**Engineering Controls / Work Practices:** take breaks / drink $H_2O$

**Levels of Protection / Personal Protective Equipment:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Level A | ☐ | Eye & Face Protection | ☑ | Safety Glasses | ☑ | Face Shield | ☐ |
| Level B | ☐ | Foot Protection | ☑ | Steel Toes | ☐ | Hip Boots/Waders | ☐ |
| Level C | ☐ | Hand Protection | ☑ | Nitrile Gloves | ☑ | Leather Gloves | ☐ |
| Level D | ☑ | Head Protection | ☑ | Hard Hat | ☑ | Full Arm Chemical | ☐ |
| | | Hearing Protection | ☐ | Ear Muffs/Plugs | ☐ | | |
| | | Other | ☑ | Barricades | ☐ | High Visibility Safety Vests | ☑ |
| | | | | Cones/Flags | ☑ | Amber Light/Vehicle Hazards | ☐ |
| | | | | Crash Truck | ☐ | Tyvek/Coveralls | ☐ |

| Air Monitoring/Sampling | | Emergency Response | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☑ | Emergency Alarms | ☑ | First Aid Kit | ☑ | Cell Phone (none) | ☑ |
| FID/PID | ☑ | Emergency Contacts | ☑ | Spill Kit | ☑ | Fire Extinguisher | ☑ |
| Detector Tubes | ☐ | Evacuation Routes | ☑ | Hospital Route | ☑ | Pedestrian Safety | ☑ |
| Dust Monitor | ☐ | Explosion/Fire | ☑ | Work Area | ☑ | Vapor/Dust Suppression | ☑ |
| Personal Air | ☐ | Medical Emergency | ☑ | Smoking/Break Area | ☑ | | |

**Are site workers Fit To Work?** Yes ☑ No ☐

**Comments:**

**Name & Title of Person Conducting Tailgate Safety Meeting:** Matthew L. Abbott

**Signature:** [signature] **Date:** 06/21/10

**SHELL**
**Life-Saving Rules**

Work with a valid Work Permit when required

Verify isolation before work begins and use the specified life-protecting equipment

Obtain authorisation before overriding or disabling safety critical equipment

Conduct gas tests when required

Obtain authorisation before entering a confined space

Protect yourself against a fall when working at height

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth within this project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

### SIGN IN

MEETING ATTENDEES

| Name [Print] | Company | Signature |
|---|---|---|
| Matthew LeAbbé | Longshore Env. | |
| | | |
| | | |
| | | |
| | | |

| | | | |
|---|---|---|---|
| Have all personnel been informed of work to be completed? | YES | NO | NA |
| Has fuel delivery service been informed? | YES | NO | NA |
| Is fuel delivery due today? | YES | NO | NA |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | NA |
| Are work areas controlled to protect workers, site staff, and the public? | YES | NO | NA |
| Do all workers have their API Safety Key card? | YES | NO | NA |
| Have all reviewed and understand the Shell 12 Life-Saving Rules | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Matthew LeAbbé | | 05/21/14 0700 | | |

Longshore

### SIGN OUT

| | | | |
|---|---|---|---|
| Has the work area been left tidy and safe? | YES | NO | NA |
| Are site personnel aware of status of work? | YES | NO | NA |
| Are changes to equipment documented and communicated? | YES | NO | NA |
| All incidents, near misses, unsafe situations reported? | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| | | | | |

**SHELL**
**Life-Savin**
**R**

Do not walk unde a suspended load

No alcohol or drugs w working or driving

Wear yo[illegible]

Do not smoke outs designated smoking

While driving, do not your phone and do n exceed speed limit

Follow prescribed Isol Management Plan



Shell/Motiva 0007183

SOVEREIGN CONSULTING

# Job Safety Analysis

## Worksheet Acknowledgement

**SCI Project #:** EQ17 **Date:** 06/21/10

**Site Location:** 25 Paidge Ave, Brooklyn NY

**List JSA(s) Reviewed:** General Site Activities

Soil Screening / Soil Segregating Activities

Well Gauging Activities

| Name (Print) | Company | Signature |
|---|---|---|
| Matthew A. Abbott | Langan | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

**Sovereign Representative:** _____

FIELD FORM (Revised 01/05/06)

| | | |
|---|---|---|
| Date: 6/21/10 | Field Form #: 5841 | Site: 25 Paidge Ave |
| Day: Mon | Client: SOV | Brooklyn, NY |
| | Region: II | |

| |
|---|
| Work Description: Soil removal oversight / well gauging |
| |
| |

| ☐ Unit Cost ☒ T&M | | Time | | | | |
|---|---|---|---|---|---|---|
| Personnel | Title | Start | On-Site | Off-site | Finish | Total |
| [illegible] Abbott | ET | 0500 | 0630 | 1300 | 1500 | 10 |
| | | | | | | |
| | | | | | | |

| UNIT COSTS | | | MATERIALS | |
|---|---|---|---|---|
| No. | Task No. | Description | No. | Description |
| | 1.1 | Survey Monitoring Wells (site) | | Lock |
| | 1.2 | Sensitive Receptor Survey (site) | | 2" Gripper Plug |
| | 2.1.1 | Drilling Oversight (half day) | | 4" Gripper Plug |
| | 2.2.2 | Drilling Oversight (full day) | | 2" EnviroCap |
| | 2.3.1 | GeoProbe (half day) | | 4" EnviroCap |
| | 2.3.2 | GeoProbe (full day) | | Disposable Bailer |
| | 4.1.1 | GW Monitoring 1-5 wells (per site) | | 55 Gallon Drum |
| | 4.1.2 | GW Monitoring 6-10 wells (per site) | | Tedlar Air Bag |
| | 4.1.3 | GW Monitoring Add. Wells >10(per well) | | Generator |
| | 4.2.1 | Potable Sampling During O&M (well) | | Cones |
| | 4.2.2 | Potable Sampling Separate Visit (well) | | Drum Sampler |
| | 4.3.1 | Product Bailing During O&M (well) | | ORM (lbs.) |
| | 4.3.2 | Product Bailing Separate Visit (site) | | ORM Socks (#) |
| | 4.4 | MW Pad Replacement (well) | | Concrete |
| | 5.1 | O&M-unscheduled site visit (visit) | | |
| | 5.2 | O&M - SVE/AS no treatment (visit) | | |
| | 5.3 | O&M - SVE/AS with treatment(visit) | | |
| | 5.4 | Product Recovery System (visit) | | |
| | 5.5 | Carbon Replacement Liquid (per lb.) | | |
| | 5.6 | Carbon Replacement Vapor (per lb.) | | |
| | 7.1.1 | Construction Monitoring Half Day | | |
| | 7.1.2 | Construction Monitoring Full Day | | |
| | 7.2.1 | Environmental Monitoring Half Day | | |
| | 7.2.2 | Environmental Monitoring Full Day | | |
| | 8.0 | Hydraulic Lift Oversight (event) | | |
| | 9.0 | Waste/Fuel Oil Oversight (event) | | |
| | 11.8.1 | Field Vehicle (per hour) | | |
| | 11.8.2 | Field Vehicle (half day) | | |
| | 11.8.3 | Field Vehicle (full day) | | |
| | 11.8.4 | Field Vehicle (Week) | | |
| | 11.9 | Field Vehicle - Heavy Duty (per day) | | |

*LONGSHORE ENVIRONMENTAL INC.*

SOVEREIGN CONSULTING - WELL GAUGING/HAND-BAILING DATA SUMMARY SHEET
PAGE 1 OF 1

DATE (DAY OF WEEK): 07-02-10 (FRIDAY)
CLIENT: MOTIVA ENTERPRISES LLC - 25 PAIDGE AVENUE, BROOKLYN NY
SCI JOB # EQ017

| WELL ID | TIME OF READING | WELL DIA. (IN) | TOTAL DEPTH (FT) | DEPTH TO PRODUCT (FT) | DEPTH TO WATER (FT) | PRODUCT THICKNESS (FT) | PRODUCT RECOVERED (GAL) | NOTES |
|---|---|---|---|---|---|---|---|---|
| MW-1 | 9:15 | 4 | 11.24 | | 2.49 | | | |
| MW-2 | 10:15 | 4 | 10.85 | 4.08 | 4.16 | 0.08 | | |
| MW-3 | 9:30 | 4 | 11.36 | | 3.08 | | | |
| MW-4 | 10:55 | 4 | 11.17 | 2.58 | 2.60 | 0.02 | | |
| MW-5 | 11:00 | 4 | 9.35 | | 2.04 | | | |
| MW-6 | 11:09 | 4 | 10.84 | | 6.93 | | | |
| MW-7R | 12:10 | 4 | 12.49 | | 6.15 | | | |
| MW-8 | 12:05 | 4 | 8.03 | | 6.79 | | | |
| MW-9 | 12:15 | 4 | 7.70 | | 6.69 | | | |
| MW-13 | 7:40 | 4 | 14.08 | | 7.61 | | | |
| MW-14 | 7:35 | 4 | 14.13 | | 6.82 | | | |
| MW-15 | 9:55 | 4 | 12.56 | | 3.35 | | | |
| MW-16 | 9:57 | 4 | 15.19 | | 3.16 | | | |
| MW-17 | 10:00 | 4 | 12.24 | | 2.88 | | | |
| MW-18 | 10:05 | 4 | 11.52 | | 3.35 | | | |
| MW-19 | | 4 | 11.74 | | | | | destroyed? |
| MW-20 | 9:50 | 4 | 11.52 | | 3.15 | | | |
| MW-21R | 7:45 | 4 | 12.08 | | 3.99 | | | |
| MW-22R | 7:50 | 4 | 8.46 | | 4.17 | | | |
| MW-23 | 7:30 | 4 | 12.56 | | 4.33 | | | |
| MW-24 | 7:55 | 4 | 12.67 | | 4.18 | | | |
| MW-25 | 8:00 | 4 | 14.54 | | 3.26 | | | |
| MW-26 | 10:10 | 4 | 10.62 | | 4.10 | 4.10 | | |
| MW-27 | 11:07 | 4 | 14.29 | | 2.55 | | | |
| MW-28 | 11:05 | 4 | 10.94 | | 1.85 | | | |
| MW-29 | 9:45 | 4 | 9.67 | | 2.08 | | | |
| MW-30 | 10:50 | 4 | 9.42 | | 2.47 | | | |
| MW-31 | 10:25 | 4 | 8.86 | 3.83 | 4.63 | 0.80 | 1.00 | |
| MW-32 | 10:07 | 4 | 10.66 | | 4.54 | | | |
| MW-33 | 11:50 | 4 | 7.33 | | 5.69 | | | |
| RW-34 | 11:45 | 6 | 10.81 | 7.16 | 7.18 | 0.02 | | |
| MW-35 | 11:40 | 4 | 7.79 | | 6.48 | | | |
| RW-36 | 11:30 | 6 | 10.48 | 10.16 | 10.36 | 0.20 | 0.25 | |
| RW-37 | 11:25 | 6 | 10.40 | 7.73 | 7.78 | 0.05 | | |
| MW-38 | 11:15 | 4 | 8.17 | | 7.14 | | | |
| MW-39 | 11:55 | 4 | 8.45 | | 7.42 | | | |
| RW-40 | 11:35 | 6 | 11.66 | | 9.71 | 9.71 | | |
| MW-41 | 11:20 | 4 | 9.49 | 8.76 | 8.82 | 0.06 | | |
| MW-42 | 8:10 | 4 | 12.60 | | 4.03 | | | |
| MW-43 | 8:30 | 4 | 12.42 | | 3.91 | | | |
| MW-44 | 8:20 | 4 | 12.47 | | 3.85 | | | |
| MW-45 | | 4 | 11.96 | 3.48 | 3.52 | 0.04 | | |
| TRW-1 | - | 6 | - | 4.28 | 4.35 | 0.07 | | |
| TRW-2 | 10:12 | 6 | 10.23 | | 4.13 | | | |
| TRW-3 | - | 6 | - | | | | | flooded |
| TRW-4 | - | 6 | - | | | | | flooded |
| TRW-5 | 10:30 | 6 | 10.19 | 3.54 | 3.68 | 0.14 | 0.25 | |
| TRW-6 | 10:45 | 6 | 10.05 | 3.10 | 3.34 | 0.24 | 0.25 | |

## Sovereign Consulting Inc.
## Tailgate Safety Meeting Form
(To be submitted with field notes to Project Manager each day)

**Project Name:** Motiva Terminal (EQ017) **Date:** 07/02/10

**Location:** 25 Paidge Ave, Brooklyn NY **Weather:** Clear

**Project Manager [Print]:** Greg Basilicio (Sovo) **Temp:** ~80°F

**Contractors/Subcontractors:** Lockshore Env.

**Scope of Work:** Well gauging / product recovery

| **Task Hazards:** (check all that apply) *requires Permit to Work | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☐ | Excavations* | ☐ | Haz. Substances | ☐ | Sanitation | ☐ |
| Confined Spaces* | ☐ | Explosion | ☐ | Heavy Equipment | ☐ | Sharp Objects | ☐ |
| Cutting/Welding* | ☐ | Falling Objects | ☐ | Ladders* | ☐ | Tools | ☐ |
| Electrical | ☐ | Fire | ☐ | Noise | ☐ | Traffic | ☒ |
| Environmental Hazard | ☒ | Insects/Biological | ☐ | Slip/Trip Hazards | ☐ | Weather | ☐ |
| Elevated Work* | ☐ | Flying Debris | ☐ | Overhead | ☐ | Other (describe below) | ☒ |
| | | | | | | Driving (Bulkhead) | |

**Engineering Controls / Work Practices:** Buddy System

| **Levels of Protection / Personal Protective Equipment:** | | | | | | | |
|---|---|---|---|---|---|---|---|
| Level A | ☐ | Eye & Face Protection | ☒ | Safety Glasses ☐ | Face Shield ☒ | | |
| Level B | ☐ | Foot Protection | ☒ | Steel Toes ☒ | Hip Boots/Waders ☐ | | |
| Level C | ☐ | Hand Protection | ☒ | Nitrile Gloves ☒ | Leather Gloves ☐ | Full Arm Chemical ☐ | |
| Level D | ☒ | Head Protection | ☒ | Hard Hat ☒ | | | |
| | | Hearing Protection | ☐ | Ear Muffs/Plugs ☐ | | | |
| | | Other | ☒ | Barricades ☐ | High Visibility Safety Vests ☒ | Cones/Flags ☐ | |
| | | Life Vest | ☒ | Amber Light/Vehicle Hazards ☐ | Crash Truck ☐ | Tyvek/Coveralls ☐ | |

| **Air Monitoring/Sampling** | | **Emergency Response** | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☐ | Emergency Alarms | ☐ | First Aid Kit | ☐ | Cell Phone (None) | ☒ |
| FID/PID | ☐ | Emergency Contacts | ☐ | Spill Kit | ☐ | Fire Extinguisher | ☐ |
| Detector Tubes | ☐ | Evacuation Routes | ☒ | Hospital Route | ☐ | Pedestrian Safety | ☐ |
| Dust Monitor | ☐ | Explosion/Fire | ☐ | Work Area | ☒ | Vapor/Dust Suppression | ☐ |
| Personal Air | ☐ | Medical Emergency | ☐ | Smoking/Break Area | ☒ | | |

N/A

**Are site workers Fit To Work?** Yes ☑ No ☐

**Comments:**

**Name & Title of Person Conducting Tailgate Safety Meeting:** Edgar Lucero

**Signature:** [signature] **Date:** 07/02/10



Shell/Motiva 0007187

**SHELL**
**Life-Saving Rules**

Work with a valid Work Permit when required

Verify isolation before work begins and use the specified life protecting equipment

Obtain authorisation before overriding or disabling safety critical equipment

Conduct gas tests when required

Obtain authorisation before entering a confined space

Protect yourself against a fall when working at height

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth within this project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

**SIGN IN**

MEETING ATTENDEES

| Name [Print] | Company | Signature |
|---|---|---|
| Edgar Lucero | Longshore Env | Edgar Lucero |
| Arturo Franco | " | Arturo Franco |
| | | |
| | | |
| | | |

| | | | |
|---|---|---|---|
| Have all personnel been informed of work to be completed? | (YES) | NO | NA |
| Has fuel delivery service been informed? | YES | NO | (NA) |
| Is fuel delivery due today? | YES | NO | (NA) |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | (NA) |
| Are work areas controlled to protect workers, site staff, and the public? | (YES) | NO | NA |
| Do all workers have their API Safety Key card? | (YES) | NO | NA |
| Have all reviewed and understand the Shell 12 Life-Saving Rules | (YES) | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Edgar Lucero | Edgar Lucero | 07/02/10 | | |

**SIGN OUT**

| | | | |
|---|---|---|---|
| Has the work area been left tidy and safe? | YES | NO | NA |
| Are site personnel aware of status of work? | YES | NO | NA |
| Are changes to equipment documented and communicated? | YES | NO | NA |
| All incidents, near misses, unsafe situations reported? | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Edgar Lucero | Edgar Lucero | 07/02/10 | | |

**SHELL**
**Life-Savin Rules**

Do not walk under a suspended load

No alcohol or drugs when working or driving

Wear your seat belt

Do not smoke outside designated smoking areas

While driving, do not use your phone and do not exceed speed limit

Follow prescribed Journey Management Plan



Shell/Motiva 0007188

SOVEREIGN CONSULTING

# Job Safety Analysis
# Worksheet Acknowledgement

**SCI Project #:** 70-017 **Date:** 07/02/10

**Site Location:** 25 Baidge Ave, Brooklyn NY

**List JSA(s) Reviewed:** General Site Activities
Well Gauging / LNAPL Recovery

| Name (Print) | Company | Signature |
|---|---|---|
| Edyer Lucero | Langhorn | |
| Arturo Franco | ↓ | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

**Sovereign Representative:** _____

# Shell Oil Products Chain Of Custody Record

**LAB (LOCATION)**

- [x] XENCO (_____)
- [ ] CALSCIENCE (_____)
- [ ] TEST AMERICA (_____)
- [ ] SPL (_____)
- [ ] OTHER (_____)

**Please Check Appropriate Box:**

- [x] ENV. SERVICES
- [ ] MOTIVA RETAIL
- [ ] SHELL RETAIL
- [ ] MOTIVA SD&CM
- [ ] CONSULTANT
- [ ] LUBES
- [ ] SHELL PIPELINE
- [ ] OTHER _____

**Print Bill To Contact Name:** Doug Weimer

**INCIDENT # (ENV SERVICES):** 97094981

- [ ] CHECK IF NO INCIDENT # APPLIES

DATE: 7/27/2010

PAGE: 1 of 1

**PO #:**

**SAP #:** 100623

CONSULTANT COMPANY: **Sovereign Consulting Inc.**

ADDRESS: 290 Executive Dr, Suite 300

CITY: Cranberry Twp, PA 16066

TELEPHONE: 724-553-5084 | FAX: | E-MAIL: gbosiljcic@sovcon.com

SITE ADDRESS (Street, City and State): 25 Paidge Avenue, Brooklyn NY

CONSULTANT PROJECT CONTACT (Report to): Greg Bosiljcic - 724-553-5084

CONSULTANT PROJECT NO.: EQ24

SAMPLER NAME(S) (Print): Matthew Abbott - Longshore Environmental 631-472-1732

*LAB USE ONLY*

TURNAROUND TIME (CALENDAR DAYS):

- [x] STANDARD (14 DAY)
- [ ] 5 DAYS
- [ ] 3 DAYS
- [ ] 2 DAYS
- [ ] 24 HOURS
- [ ] RESULTS NEEDED ON WEEKEN

DELIVERABLES:

- [x] LEVEL 1
- [ ] LEVEL 2
- [ ] LEVEL 3
- [ ] LEVEL 4
- [ ] OTHER (SPECIFY) _____

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

**SPECIAL INSTRUCTIONS OR NOTES :**

- [x] SHELL CONTRACT RATE APPLIES
- [ ] STATE REIMBURSEMENT RATE APPLIES
- [ ] PROVIDE LEDD DISK

**REQUESTED ANALYSIS**

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | EPA 8260 (FULL LIST) | MTBE | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-7R | 7/27/10 | 7:45 | GW | X | | | | Ice | 3 | X | X | |
| | MW-8 | 7/27/10 | 7:55 | GW | X | | | | Ice | 3 | X | X | |
| | MW-9 | 7/27/10 | 8:05 | GW | X | | | | Ice | 3 | X | X | |
| | MW-21R | 7/27/10 | 8:15 | GW | X | | | | Ice | 3 | X | X | |
| | MW-22R | 7/27/10 | 8:25 | GW | X | | | | Ice | 3 | X | X | |
| | TRIP BLANK | 7/27/10 | 5:00 | GW | X | | | | Ice | 3 | X | X | |
| | FIELD BLANK | 7/27/10 | 7:30 | GW | X | | | | Ice | 3 | X | X | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
|---|---|---|---|
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |

05/2/06 Revision

Shell/Motiva 0007190

SOVEREIGN CONSULTING - GROUND WATER SAMPLING DATA SUMMARY SHEET
PAGE 1 OF 1

DATE (DAY OF WEEK): 07-27-10 (Tues.)
CLIENT: MOTIVA ENTERPRISES LLC - 25 PAIDGE AVENUE, BROOKLYN NY
SCI JOB # EQ017

| WELL ID | TIME OF READING | WELL DIA. (IN) | TOTAL DEPTH (FT) | DEPTH TO PRODUCT (FT) | DEPTH TO WATER (FT) | VOLUME PURGED (GAL) | D.O. (UG/L) | TEMP (DEG. C) |
|---|---|---|---|---|---|---|---|---|
| MW-1 | | 4 | | | | 0 | | |
| MW-2 | | 4 | | | | 0 | | |
| MW-3 | | 4 | | | | 0 | | |
| MW-4 | | 4 | | | | 0 | | |
| MW-5 | | 4 | | | | 0 | | |
| MW-6 | | 4 | | | | 0 | | |
| MW-7R | 7:45 | 4 | 12.33 | | 5.97 | 13 | 0.19 | 20.90 |
| MW-8 | 7:55 | 4 | 8.02 | | 6.64 | 3 | 0.22 | 19.43 |
| MW-9 | 8:05 | 4 | 7.69 | | 6.59 | 2 | 0.22 | 19.73 |
| MW-13 | | 4 | | | | 0 | | |
| MW-14 | | 4 | | | | 0 | | |
| MW-15 | | 4 | | | | 0 | | |
| MW-16 | | 4 | | | | 0 | | |
| MW-17 | | 4 | | | | 0 | | |
| MW-18 | | 4 | | | | 0 | | |
| MW-19 | | 4 | | | | 0 | | |
| MW-20 | | 4 | | | | 0 | | |
| MW-21R | 8:15 | 4 | 12.06 | | 3.95 | 16 | 0.19 | 24.83 |
| MW-22R | 8:25 | 4 | 8.50 | | 3.94 | 9 | 0.20 | 23.09 |
| MW-23 | | 4 | | | | 0 | | |
| MW-24 | | 4 | | | | 0 | | |
| MW-25 | | 4 | | | | 0 | | |
| MW-26 | | 4 | | | | 0 | | |
| MW-27 | | 4 | | | | 0 | | |
| MW-28 | | 4 | | | | 0 | | |
| MW-29 | | 4 | | | | 0 | | |
| MW-30 | | 4 | | | | 0 | | |
| MW-31 | | 4 | | | | 0 | | |
| MW-32 | | 4 | | | | 0 | | |
| MW-33 | | 4 | | | | 0 | | |
| RW-34 | | 6 | | | | 0 | | |
| MW-35 | | 4 | | | | 0 | | |
| RW-36 | | 6 | | | | 0 | | |
| RW-37 | | 6 | | | | 0 | | |
| MW-38 | | 4 | | | | 0 | | |
| MW-39 | | 4 | | | | 0 | | |
| RW-40 | | 6 | | | | 0 | | |
| MW-41 | | 4 | | | | 0 | | |
| MW-42 | | 4 | | | | 0 | | |
| MW-43 | | 4 | | | | 0 | | |
| MW-44 | | 4 | | | | 0 | | |
| MW-45 | | 4 | | | | 0 | | |
| TRW-1 | | 6 | | | | 0 | | |
| TRW-2 | | 6 | | | | 0 | | |
| TRW-3 | | 6 | | | | 0 | | |
| TRW-4 | | 6 | | | | 0 | | |
| TRW-5 | | 6 | | | | 0 | | |
| TRW-6 | | 6 | | | | 0 | | |

## Sovereign Consulting Inc.
## Tailgate Safety Meeting Form
(To be submitted with field notes to Project Manager each day)

| | | | |
|---|---|---|---|
| **Project Name:** | Motiva Terminal | **Date:** | 07/27/10 |
| **Location:** | 25 Paidge Ave, Brooklyn, NY | **Weather:** | |
| **Project Manager [Print]:** | Greg Bosiljcic | **Temp:** | |
| **Contractors/Subcontractors:** | Longshore | | |
| **Scope of Work:** | GW sample (5) wells | | |

**Task Hazards:** (check all that apply) *requires Permit to Work

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☐ | Excavations* | ☐ | Haz. Substances | ☐ | Sanitation | ☐ |
| Confined Spaces* | ☐ | Explosion | ☐ | Heavy Equipment | ☐ | Sharp Objects | ☐ |
| Cutting/Welding* | ☐ | Falling Objects | ☐ | Ladders* | ☐ | Tools | ☐ |
| Electrical | ☐ | Fire | ☐ | Noise | ☐ | Traffic (+ Pedestrian) | ☒ |
| Environmental Hazard | ☐ | Insects/Biological | ☐ | Slip/Trip Hazards | ☒ | Weather | ☐ |
| Elevated Work* | ☐ | Flying Debris | ☐ | Overhead | ☐ | Other (describe below) | ☒ |

Water

**Engineering Controls / Work Practices:** wear life vests when near bulkhead

**Levels of Protection / Personal Protective Equipment:**

| | | | |
|---|---|---|---|
| Level A | ☐ | Eye & Face Protection | ☑ Safety Glasses ☐ Face Shield ☐ |
| Level B | ☐ | Foot Protection | ☑ Steel Toes ☐ Hip Boots/Waders ☐ |
| Level C | ☐ | Hand Protection | ☑ Nitrile Gloves ☐ Leather Gloves ☐ Full Arm Chemical ☐ |
| Level D | ☒ | Head Protection | ☑ Hard Hat ☐ |
| | | Hearing Protection | ☐ Ear Muffs/Plugs ☐ |
| | | Other | ☑ Barricades ☐ High Visibility Safety Vests ☐ Cones/Flags ☐ |
| | | | Amber Light/Vehicle Hazards ☐ Crash Truck ☐ Tyvek/Coveralls ☐ |

| Air Monitoring/Sampling | | Emergency Response | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☐ | Emergency Alarms | ☐ | First Aid Kit | ☐ | Cell Phone | ☐ |
| FID/PID | ☐ | Emergency Contacts | ☐ | Spill Kit | ☐ | Fire Extinguisher | ☐ |
| Detector Tubes | ☐ | Evacuation Routes | ☐ | Hospital Route | ☐ | Pedestrian Safety | ☐ |
| Dust Monitor | ☐ | Explosion/Fire | ☐ | Work Area | ☐ | Vapor/Dust Suppression | ☐ |
| Personal Air | ☐ | Medical Emergency | ☐ | Smoking/Break Area | ☐ | | |

**Are site workers Fit To Work?** Yes ☑ No ☐

**Comments:**

**Name & Title of Person Conducting Tailgate Safety Meeting:**

**Signature:** [signature] **Date:** 7/27/10



Shell/Motiva 0007192

**SHELL**
**Life-Saving Rules**

Work with a valid Work Permit when required

Verify isolation before work begins and use the specified life protecting equipment

Obtain authorisation before operating or disabling safety critical equipment

Conduct gas tests when required

Obtain authorisation before entering a confined space

Protect yourself against a fall when working at height

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth within this project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

**SIGN IN**

MEETING ATTENDEES

| Name [Print] | Company | Signature |
|---|---|---|
| Matthew Abbott | Longshore Env. | |
| Jane Hawkins | Longshore Env. | |
| | | |
| | | |
| | | |

| | | | |
|---|---|---|---|
| Have all personnel been informed of work to be completed? | YES | NO | NA |
| Has fuel delivery service been informed? | YES | NO | NA |
| Is fuel delivery due today? | YES | NO | NA |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | NA |
| Are work areas controlled to protect workers, site staff, and the public? | YES | NO | NA |
| Do all workers have their API Safety Key card? | YES | NO | NA |
| Have all reviewed and understand the Shell 12 Life-Saving Rules | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Matthew Abbott | | 7/27/10 0730 | | |

**SIGN OUT**

| | | | |
|---|---|---|---|
| Has the work area been left tidy and safe? | YES | NO | NA |
| Are site personnel aware of status of work? | YES | NO | NA |
| Are changes to equipment documented and communicated? | YES | NO | NA |
| All incidents, near misses, unsafe situations reported? | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Matthew Abbott | | 07/27/10 0830 | | |

**SHELL**
**Life-Saving Rules**

Do not walk under a suspended load

No alcohol or drugs when working or driving

Wear your safety belt

Do not smoke outside designated smoking areas

While driving, do not use your phone and do not exceed speed limit

Follow prescribed Journey Management Plan



Shell/Motiva 0007193

SOVEREIGN CONSULTING

# Job Safety Analysis

# Worksheet Acknowledgement

**SCI Project #:** EQ-017 **Date:** 7/27/10

**Site Location:** 25 Paidge Ave, Brooklyn NY

**List JSA(s) Reviewed:** General Site Activities

Ground-Water Sampling

| Name (Print) | Company | Signature |
|---|---|---|
| Matthew L. Hibbard | Longshore Env | [signature] |
| Jane Hawkins | Longshore Env | Jane Hawkins |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

**Sovereign Representative:** _____

FIELD FORM (Revised 01/05/06)

| Date: 07/27/10 | Field Form #: 6005 | Site: 25 Paidge Ave. |
|---|---|---|
| Day: Tues. | Client: ~~Key~~ SOV | Brooklyn, NY |
| | Region: TT | |

| Work Description: GW sampling → (5) wells (MW's 7R, 8, 9, 20R, 22R) |
|---|
| |
| |

☑ Unit Cost ☐ T&M

| Personnel | Title | Time | | | | |
|---|---|---|---|---|---|---|
| | | Start | On-Site | Off-site | Finish | Total |
| Matthew L. Abbott | ET | 0500 | 0730 | 0830 | 0900 | 4 |
| Jane Hawkins | " | " | " | " | " | 4 |
| | | | | | | |

| UNIT COSTS | | | MATERIALS | |
|---|---|---|---|---|
| No. | Task No. | Description | No. | Description |
| | 1.1 | Survey Monitoring Wells (site) | | Lock |
| | 1.2 | Sensitive Receptor Survey (site) | | 2" Gripper Plug |
| | 2 1.1 | Drilling Oversight (half day) | | 4" Gripper Plug |
| | 2 2.2 | Drilling Oversight (full day) | | 2" EnviroCap |
| | 2 3.1 | GeoProbe (half day) | | 4" EnviroCap |
| | 2 3.2 | GeoProbe (full day) | | Disposable Bailer |
| 1 | 4 1.1 | GW Monitoring 1-5 wells (per site) | | 55 Gallon Drum |
| | 4 1.2 | GW Monitoring 6-10 wells (per site) | | Tedlar Air Bag |
| | 4 1.3 | GW Monitoring Add. Wells >10(per well) | | Generator |
| | 4 2.1 | Potable Sampling During O&M (well) | | Cones |
| | 4 2.2 | Potable Sampling Separate Visit (well) | | Drum Sampler |
| | 4 3.1 | Product Bailing During O&M (well) | | ORM (lbs.) |
| | 4 3.2 | Product Bailing Separate Visit (site) | | ORM Socks (#) |
| | 4.4 | MW Pad Replacement (well) | | Concrete |
| | 5.1 | O&M-unscheduled site visit (visit) | | |
| | 5.2 | O&M - SVE/AS no treatment (visit) | | |
| | 5.3 | O&M - SVE/AS with treatment(visit) | | |
| | 5.4 | Product Recovery System (visit) | | |
| | 5.5 | Carbon Replacement Liquid (per lb.) | | |
| | 5.6 | Carbon Replacement Vapor (per lb.) | | |
| | 7 1.1 | Construction Monitoring Half Day | | |
| | 7 1.2 | Construction Monitoring Full Day | | |
| | 7 2.1 | Environmental Monitoring Half Day | | |
| | 7 2.2 | Environmental Monitoring Full Day | | |
| | 8.0 | Hydraulic Lift Oversight (event) | | |
| | 9.0 | Waste/Fuel Oil Oversight (event) | | |
| | 11 8.1 | Field Vehicle (per hour) | | |
| | 11 8.2 | Field Vehicle (half day) | | |
| | 11 8.3 | Field Vehicle (full day) | | |
| | 11 8.4 | Field Vehicle (Week) | | |
| | 11 9 | Field Vehicle - Heavy Duty (per day) | | |

*LONGSHORE ENVIRONMENTAL INC.*

SOVEREIGN CONSULTING - WELL GAUGING/HAND-BAILING DATA SUMMARY SHEET

PAGE 1 OF 1

DATE (DAY OF WEEK): Fri. 8/13/10

CLIENT: MOTIVA ENTERPRISES LLC - 25 PAIDGE AVENUE, BROOKLYN NY

SCI JOB # EQ017

| WELL ID | TIME OF READING | WELL DIA. (IN) | TOTAL DEPTH (FT) | DEPTH TO PRODUCT (FT) | DEPTH TO WATER (FT) | PRODUCT THICKNESS (FT) | PRODUCT RECOVERED (GAL) | NOTES |
|---|---|---|---|---|---|---|---|---|
| MW-1 | 8:50 | 4 | 11.24 | | 3.70 | | | |
| MW-2 | 9:38 | 4 | 10.85 | 3.96 | 4.04 | 0.08 | | |
| MW-3 | 8:52 | 4 | 11.36 | | 3.36 | | | |
| MW-4 | 8:56 | 4 | 11.17 | 2.80 | 2.95 | 0.15 | | |
| MW-5 | 8:57 | 4 | 9.35 | | 2.27 | | | |
| MW-6 | 9:02 | 4 | 10.84 | | 3.87 | | | |
| MW-7R | 10:27 | 4 | 12.49 | | 4.04 | | | |
| MW-8 | 10:30 | 4 | 8.03 | | 4.82 | | | |
| MW-9 | 10:32 | 4 | 7.70 | | 4.79 | | | |
| MW-13 | 9:14 | 4 | 14.08 | | 7.17 | | | |
| MW-14 | 9:15 | 4 | 14.13 | | 6.86 | | | |
| MW-15 | 9:50 | 4 | 12.56 | | 3.71 | | | |
| MW-16 | 9:51 | 4 | 15.19 | | 3.42 | | | |
| MW-17 | 9:54 | 4 | 12.24 | | 3.25 | | | |
| MW-18 | 9:56 | 4 | 11.52 | | 3.80 | | | |
| MW-19 | - | 4 | 11.74 | | - | | | destroyed |
| MW-20 | 9:49 | 4 | 11.52 | | 3.55 | | | |
| MW-21R | 9:09 | 4 | 12.08 | | 3.70 | | | |
| MW-22R | 9:11 | 4 | 8.46 | | 3.50 | | | |
| MW-23 | 9:19 | 4 | 12.56 | | 4.50 | | | |
| MW-24 | 9:20 | 4 | 12.67 | | 4.38 | | | |
| MW-25 | - | 4 | 14.54 | | - | | | flooded |
| MW-26 | 9:35 | 4 | 10.62 | 3.93 | 3.96 | 0.03 | | |
| MW-27 | 9:00 | 4 | 14.29 | | 2.68 | | | |
| MW-28 | 8:59 | 4 | 10.94 | | 2.11 | | | |
| MW-29 | 8:54 | 4 | 9.67 | | 2.48 | | | |
| MW-30 | 9:05 | 4 | 9.42 | | 2.56 | | | |
| MW-31 | 9:44 | 4 | 8.86 | 3.71 | 4.46 | 0.75 | 1.00 | |
| MW-32 | 9:59 | 4 | 10.66 | | 4.53 | | | |
| MW-33 | 10:43 | 4 | 7.33 | | 5.75 | | | |
| RW-34 | 10:39 | 6 | 10.81 | 7.45 | 7.55 | 0.10 | | |
| MW-35 | 10:45 | 4 | 7.79 | | 6.56 | | | |
| RW-36 | 10:50 | 6 | 10.48 | 8.66 | 8.75 | 0.09 | | |
| RW-37 | 10:57 | 6 | 10.40 | 7.89 | 7.92 | 0.03 | | |
| MW-38 | 11:02 | 4 | 8.17 | | 7.44 | | | |
| MW-39 | 10:35 | 4 | 8.45 | | 6.82 | | | |
| RW-40 | 10:48 | 6 | 11.66 | 8.66 | 8.69 | 0.03 | | |
| MW-41 | 10:59 | 4 | 9.49 | 7.11 | 7.19 | 0.08 | | |
| MW-42 | 9:24 | 4 | 12.60 | | 4.23 | | | |
| MW-43 | 9:22 | 4 | 12.42 | | 4.11 | | | |
| MW-44 | 9:28 | 4 | 12.47 | | 4.04 | | | |
| MW-45 | - | 4 | 11.96 | | - | | | flooded |
| TRW-1 | 9:33 | 6 | - | 4.26 | 4.28 | 0.02 | | |
| TRW-2 | 9:37 | 6 | 10.23 | | 4.03 | | | |
| TRW-3 | - | 6 | - | | - | | | flooded |
| TRW-4 | - | 6 | - | | - | | | flooded |
| TRW-5 | 9:40 | 6 | 10.19 | 3.39 | 3.47 | 0.08 | | |
| TRW-6 | 9:46 | 6 | 10.05 | 2.90 | 2.96 | 0.06 | | |

SOVEREIGN CONSULTING

# Job Safety Analysis
# Worksheet Acknowledgement

**SCI Project #:** _____ **Date:** 8/13/10

**Site Location:** 25 Paidge Ave, Brooklyn, NY

**List JSA(s) Reviewed:** _____

| Name (Print) | Company | Signature |
|---|---|---|
| Jane Hawkins | Longshore | Jane Hawkins |
| Juan A Franco | Long shore | Juan A Franco |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

**Sovereign Representative:** _____

## Sovereign Consulting Inc.
## Tailgate Safety Meeting Form
(To be submitted with field notes to Project Manager each day)

| | |
|---|---|
| **Project Name:** | **Date:** 8/13/10 |
| **Location:** 25 Paidge Ave, Brooklyn, NY | **Weather:** overcast |
| **Project Manager [Print]:** | **Temp:** 75°F |

**Contractors/Subcontractors:**

**Scope of Work:** well gauging

| **Task Hazards:** (check all that apply) *requires Permit to Work | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☐ | Excavations* | ☐ | Haz. Substances | ☐ | Sanitation | ☐ |
| Confined Spaces* | ☐ | Explosion | ☐ | Heavy Equipment | ☐ | Sharp Objects | ☐ |
| Cutting/Welding* | ☐ | Falling Objects | ☐ | Ladders* | ☐ | Tools | ☐ |
| Electrical | ☐ | Fire | ☐ | Noise | ☐ | Traffic | ☐ |
| Environmental Hazard | ☐ | Insects/Biological | ☐ | Slip/Trip Hazards | ☐ | Weather | ☐ |
| Elevated Work* | ☐ | Flying Debris | ☐ | Overhead | ☐ | Other (describe below) | ☐ |

**Engineering Controls / Work Practices:**

| **Levels of Protection / Personal Protective Equipment:** | | |
|---|---|---|
| Level A ☐ | Eye & Face Protection ☐ | Safety Glasses ☒ Face Shield ☐ |
| Level B ☐ | Foot Protection ☐ | Steel Toes ☒ Hip Boots/Waders ☐ |
| Level C ☐ | Hand Protection ☐ | Nitrile Gloves ☒ Leather Gloves ☐ Full Arm Chemical ☐ |
| Level D ☐ | Head Protection ☐ | Hard Hat ☒ |
| | Hearing Protection ☐ | Ear Muffs/Plugs ☐ |
| | Other ☐ | Barricades ☐ High Visibility Safety Vests ☒ Cones/Flags ☐ |
| | | Amber Light/Vehicle Hazards ☐ Crash Truck ☐ Tyvek/Coveralls ☐ |

| **Air Monitoring/Sampling** | | **Emergency Response** | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☐ | Emergency Alarms | ☐ | First Aid Kit | ☐ | Cell Phone | ☐ |
| FID/PID | ☐ | Emergency Contacts | ☐ | Spill Kit | ☐ | Fire Extinguisher | ☐ |
| Detector Tubes | ☐ | Evacuation Routes | ☐ | Hospital Route | ☐ | Pedestrian Safety | ☐ |
| Dust Monitor | ☐ | Explosion/Fire | ☐ | Work Area | ☐ | Vapor/Dust Suppression | ☐ |
| Personal Air | ☐ | Medical Emergency | ☐ | Smoking/Break Area | ☐ | | |

**Are site workers Fit To Work?** Yes ☒ No ☐

**Comments:**

**Name & Title of Person Conducting Tailgate Safety Meeting:**

**Signature:** **Date:**



Shell/Motiva 0007198

**SHELL**
**Life-Saving Rules**

Work with a valid Work Permit when required

Verify isolation before work begins and use the specified life protecting equipment

Obtain authorisation before overriding or disabling safety critical equipment

Conduct gas tests when required

Obtain authorisation before entering a confined space

Protect yourself against a fall when working at height

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth within this project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

### SIGN IN

MEETING ATTENDEES

| Name [Print] | Company | Signature |
|---|---|---|
| Jane Hawkins | Longshore | Jane Hawkins |
| Jean A Fiore | Long shore | [signature] |
| | | |
| | | |
| | | |

| | | | |
|---|---|---|---|
| Have all personnel been informed of work to be completed? | YES | NO | NA |
| Has fuel delivery service been informed? | YES | NO | NA |
| Is fuel delivery due today? | YES | NO | NA |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | NA |
| Are work areas controlled to protect workers, site staff, and the public? | YES | NO | NA |
| Do all workers have their API Safety Key card? | YES | NO | NA |
| Have all reviewed and understand the Shell 12 Life-Saving Rules | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| | [signature] | 8/13/10 0830 | | |

### SIGN OUT

| | | | |
|---|---|---|---|
| Has the work area been left tidy and safe? | YES | NO | NA |
| Are site personnel aware of status of work? | YES | NO | NA |
| Are changes to equipment documented and communicated? | YES | NO | NA |
| All incidents, near misses, unsafe situations reported? | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| | | | | [signature] |

**SHELL**
**Life-Saving Rules**

Do not walk under a suspended load

No alcohol or drugs whi working or driving

Wear your seat belt

Do not smoke outsid designated smoking a

While driving, do not u your phone and do no exceed speed limits

Follow prescribed Journ Management Plan

SOVEREIGN CONSULTING - WELL GAUGING/HAND-BAILING DATA SUMMARY SHEET DATE (DAY OF WEEK): Wed. (09/01/10)

PAGE 1 OF 1 CLIENT: MOTIVA ENTERPRISES LLC - 25 PAIDGE AVENUE, BROOKLYN NY

SCI JOB # EQ017

| WELL ID | TIME OF READING | WELL DIA. (IN) | TOTAL DEPTH (FT) | DEPTH TO PRODUCT (FT) | DEPTH TO WATER (FT) | PRODUCT THICKNESS (FT) | PRODUCT RECOVERED (GAL) | NOTES |
|---|---|---|---|---|---|---|---|---|
| MW-1 | 8:50 | 4 | 11.24 | | 3.32 | | | |
| MW-2 | 9:38 | 4 | 10.85 | 3.75 | 3.82 | 0.07 | | |
| MW-3 | 8:52 | 4 | 11.36 | | 3.01 | | | |
| MW-4 | 8:56 | 4 | 11.17 | 2.49 | 2.52 | 0.03 | | |
| MW-5 | 8:57 | 4 | 9.35 | | 1.98 | | | |
| MW-6 | 9:02 | 4 | 10.84 | | 5.28 | | | |
| MW-7R | 10:27 | 4 | 12.49 | | 5.78 | | | |
| MW-8 | 10:30 | 4 | 8.03 | | 6.44 | | | |
| MW-9 | 10:32 | 4 | 7.70 | | 6.41 | | | |
| MW-13 | 9:14 | 4 | 14.08 | | 7.28 | | | |
| MW-14 | 9:15 | 4 | 14.13 | | 6.22 | | | |
| MW-15 | 9:50 | 4 | 12.56 | | 3.18 | | | |
| MW-16 | 9:51 | 4 | 15.19 | | 3.08 | | | |
| MW-17 | 9:54 | 4 | 12.24 | | 2.61 | | | |
| MW-18 | 9:56 | 4 | 11.52 | | 3.05 | | | |
| MW-19 | - | - | - | | - | | | destroyed |
| MW-20 | 9:49 | 4 | 11.52 | | 3.26 | | | |
| MW-21R | 9:09 | 4 | 12.08 | | 3.93 | | | |
| MW-22R | 9:11 | 4 | 8.46 | | 3.98 | | | |
| MW-23 | 9:19 | 4 | 12.56 | | 3.84 | | | |
| MW-24 | 9:20 | 4 | 12.67 | | 3.82 | | | |
| MW-25 | - | 4 | 14.54 | | 2.94 | | | |
| MW-26 | 9:35 | 4 | 10.62 | 3.67 | 3.75 | 0.08 | | |
| MW-27 | 9:00 | 4 | 14.29 | | 2.42 | | | |
| MW-28 | 8:59 | 4 | 10.94 | | 1.79 | | | |
| MW-29 | 8:54 | 4 | 9.67 | | 2.09 | | | |
| MW-30 | 9:05 | 4 | 9.42 | | 2.23 | | | |
| MW-31 | 9:44 | 4 | 8.86 | 3.62 | 3.90 | 0.28 | 0.50 | |
| MW-32 | 9:59 | 4 | 10.66 | | 3.99 | | | |
| MW-33 | 10:43 | 4 | 7.33 | | 5.61 | | | |
| RW-34 | 10:39 | 6 | 10.81 | 7.09 | 7.12 | 0.03 | | |
| MW-35 | 10:45 | 4 | 7.79 | | 6.47 | | | |
| RW-36 | 10:50 | 6 | 10.48 | 9.56 | 9.78 | 0.22 | 0.25 | |
| RW-37 | 10:57 | 6 | 10.40 | 7.64 | 7.65 | 0.01 | | |
| MW-38 | 11:02 | 4 | 8.17 | | 7.01 | | | |
| MW-39 | 10:35 | 4 | 8.45 | | 7.11 | | | |
| RW-40 | 10:48 | 6 | 11.66 | | 9.30 | | | |
| MW-41 | 10:59 | 4 | 9.49 | 8.42 | 8.45 | 0.03 | | |
| MW-42 | 9:24 | 4 | 12.60 | | 3.69 | | | |
| MW-43 | 9:22 | 4 | 12.42 | | 3.56 | | | |
| MW-44 | 9:28 | 4 | 12.47 | | 3.50 | | | |
| MW-45 | - | 4 | 11.96 | 3.19 | 3.23 | 0.04 | | |
| TRW-1 | 9:33 | 6 | 10.28 | 3.94 | 3.95 | 0.01 | | |
| TRW-2 | 9:37 | 6 | 10.23 | | 3.80 | | | |
| TRW-3 | - | 6 | - | | - | | | flooded |
| TRW-4 | - | 6 | - | | - | | | flooded |
| TRW-5 | 9:40 | 6 | 10.19 | 3.25 | 3.27 | 0.02 | | |
| TRW-6 | 9:46 | 6 | 10.05 | | - | | | |

**Sovereign Consulting Inc.**
***Tailgate Safety Meeting Form***
(To be submitted with field notes to Project Manager each day)

| | | | |
|---|---|---|---|
| **Project Name:** | Motiva Terminal | **Date:** | 9-01-10 |
| **Location:** | 25 Paidge Av Brooklyn NY | **Weather:** | Sunny |
| **Project Manager [Print]:** | Matt Schneck | **Temp:** | 90s |
| **Contractors/Subcontractors:** | Edgar Lucero | | |
| **Scope of Work:** | Well gauging and recovery product | | |

| **Task Hazards:** (check all that apply) *requires Permit to Work | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☐ | Excavations* | ☐ | Haz. Substances | ☑ | Sanitation | ☐ |
| Confined Spaces* | ☐ | Explosion | ☐ | Heavy Equipment | ☐ | Sharp Objects | ☐ |
| Cutting/Welding* | ☐ | Falling Objects | ☐ | Ladders* | ☐ | Tools | ☑ |
| Electrical | ☐ | Fire | ☐ | Noise | ☐ | Traffic | ☑ |
| Environmental Hazard | ☑ | Insects/Biological | ☐ | Slip/Trip Hazards | ☑ | Weather | ☐ |
| Elevated Work* | ☐ | Flying Debris | ☐ | Overhead | ☐ | Other (describe below) | ☐ |

**Engineering Controls / Work Practices:**

| **Levels of Protection / Personal Protective Equipment:** | | | |
|---|---|---|---|
| Level A ☐ | Eye & Face Protection ☑ | Safety Glasses ☑ | Face Shield ☐ |
| Level B ☐ | Foot Protection ☑ | Steel Toes ☑ | Hip Boots/Waders ☐ |
| Level C ☐ | Hand Protection ☑ | Nitrile Gloves ☑ | Leather Gloves ☐ Full Arm Chemical ☐ |
| Level D ☑ | Head Protection ☑ | Hard Hat ☑ | |
| | Hearing Protection ☐ | Ear Muffs/Plugs ☐ | |
| | Other ☑ | Barricades ☐ | High Visibility Safety Vests ☑ Cones/Flags ☐ |
| | | Amber Light/Vehicle Hazards ☐ | Crash Truck ☐ Tyvek/Coveralls ☐ |

| **Air Monitoring/Sampling** | | **Emergency Response** | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☐ | Emergency Alarms | ☐ | First Aid Kit | ☐ | Cell Phone (none) | ☐ |
| FID/PID | ☐ | Emergency Contacts | ☐ | Spill Kit | ☐ | Fire Extinguisher | ☑ |
| Detector Tubes | ☐ | Evacuation Routes | ☑ | Hospital Route | ☑ | Pedestrian Safety | ☐ |
| Dust Monitor | ☐ | Explosion/Fire | ☐ | Work Area | ☐ | Vapor/Dust Suppression | ☐ |
| Personal Air | ☐ | Medical Emergency | ☐ | Smoking/Break Area | ☐ | | |

**Are site workers Fit To Work?** Yes ☑ No ☐

**Comments:** N/A

**Name & Title of Person Conducting Tailgate Safety Meeting:**

**Signature:** Edgar Lucero **Date:** 9-01-10



Shell/Motiva 0007201

**SHELL**
**Life-Saving Rules**

Work with a valid Work Permit when required

Verify isolation before work begins and use the specified life protecting equipment

Obtain authorisation before overriding or disabling safety critical equipment

Conduct gas tests when required

Obtain authorisation before entering a confined space

Protect yourself against a fall when working at height

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth within this project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

### SIGN IN

MEETING ATTENDEES

| Name [Print] | Company | Signature |
|---|---|---|
| Edgar Lucero | Long shore Env | Edgar Lucero |
| G. Rozaks | LONG SHORE | [illegible] |
| N Sbs | MOTIVA. | N. [illegible] |
| | | |
| | | |

| | | | |
|---|---|---|---|
| Have all personnel been informed of work to be completed? | YES | NO | NA |
| Has fuel delivery service been informed? | YES | NO | NA |
| Is fuel delivery due today? | YES | NO | NA |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | NA |
| Are work areas controlled to protect workers, site staff, and the public? | YES | NO | NA |
| Do all workers have their API Safety Key card? | YES | NO | NA |
| Have all reviewed and understand the Shell 12 Life-Saving Rules | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Edgar Lucero Long Shore | | | | |

### SIGN OUT

| | | | |
|---|---|---|---|
| Has the work area been left tidy and safe? | YES | NO | NA |
| Are site personnel aware of status of work? | YES | NO | NA |
| Are changes to equipment documented and communicated? | YES | NO | NA |
| All incidents, near misses, unsafe situations reported? | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Edgar Lucero Long Shore | | | | |

**SHELL**
**Life-Saving Rules**

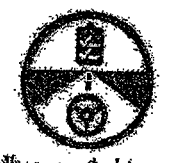
Do not walk under a suspended load

No alcohol or drugs whi working or driving

Wear your seat belt

Do not smoke outsid designated smoking ar

While driving, do not u your phone and do no exceed speed limits



Follow prescribed Journ Management Plan

SOVEREIGN CONSULTING

# Job Safety Analysis
# Worksheet Acknowledgement

SCI Project #: EQ-017 Date: 9-1-10

Site Location: Motiva Terminal / 25 Paidge Av Brooklyn NY

List JSA(s) Reviewed: General site Activites

Well Gauging

| Name (Print) | Company | Signature |
|---|---|---|
| EDGAR LUCERO | LONG SHORE | Edgar Lucero. |
| GEORGE ROZAKIS | LONG SHORE | |
| N. SOIS. | MOTIVA. | N. Sois. |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Sovereign Representative: _____

**Sovereign Consulting Inc.**
**Tailgate Safety Meeting Form**
(To be submitted with field notes to Project Manager each day)

| | |
|---|---|
| **Project Name:** Motiva Terminal EQ017 | **Date:** 10/8/10 |
| **Location:** 25 Paidge Ave | **Weather:** clear sky |
| **Project Manager [Print]:** Greg | **Temp:** 62° F |

**Contractors/Subcontractors:**

Nick Zarone & Justin King

**Scope of Work:** well gauging, hand bailing & GWS

| **Task Hazards:** (check all that apply) *requires Permit to Work | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☑ | Excavations* | ☐ | Haz. Substances | ☑ | Sanitation | ☐ |
| Confined Spaces* | ☐ | Explosion | ☐ | Heavy Equipment | ☐ | Sharp Objects | ☑ |
| Cutting/Welding* | ☐ | Falling Objects | ☐ | Ladders* | ☐ | Tools | ☑ |
| Electrical | ☐ | Fire | ☐ | Noise | ☑ | Traffic | ☑ |
| Environmental Hazard | ☑ | Insects/Biological | ☐ | Slip/Trip Hazards | ☑ | Weather | ☑ |
| Elevated Work* | ☐ | Ticks - Biohazard | ☐ | Overhead | ☐ | Flying Debris | ☐ |
| Other (describe below) | ☑ | | | | | | |

**Engineering Controls / Work Practices:** PPE

| **Levels of Protection / Personal Protective Equipment:** | | | |
|---|---|---|---|
| Level A ☐ | Eye & Face Protection ☑ | Safety Glasses ☑ | Face Shield ☐ |
| Level B ☐ | Foot Protection ☑ | Steel Toes ☑ | Hip Boots/Waders ☐ |
| Level C ☐ | Hand Protection ☑ | Nitrile Gloves ☑ | Leather Gloves ☑ Full Arm Chemical ☐ |
| Level D ☑ | Head Protection ☑ | Hard Hat ☑ | |
| | Hearing Protection ☑ | Ear Muffs/Plugs ☑ | |
| | Other ☐ | Barricades ☑ | High Visibility Safety Vests ☑ Cones/Flags ☑ |
| | | Amber Light/Vehicle Hazards ☐ | Crash Truck ☑ Tyvek/Coveralls ☐ |

| **Air Monitoring/Sampling** | | **Emergency Response** | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☐ | Emergency Alarms | ☑ | First Aid Kit | ☑ | Cell Phone none | ☐ |
| FID/PID | ☐ | Emergency Contacts | ☑ | Spill Kit | ☐ | Fire Extinguisher | ☑ |
| Detector Tubes | ☐ | Evacuation Routes | ☑ | Hospital Route | ☑ | Pedestrian Safety | ☐ |
| Dust Monitor | ☐ | Explosion/Fire | ☐ | Work Area | ☑ | Vapor/Dust Suppression | ☐ |
| Personal Air | ☐ | Medical Emergency | ☑ | Smoking/Break Area | ☑ | | |

**Are site workers Fit To Work?** Yes ☑ No ☐

**Do all site workers understand injury/intervention reporting requirements?** Yes ☑ No ☐

**Comments:** Will show Justin King the ropes his first time.

**Name & Title of Person Conducting Tailgate Safety Meeting:**

Nick Zarone

**Signature:** _____ **Date:** 10/8/10



Shell/Motiva 0007204

**SHELL**
**Life-Saving Rules**

Work with a valid Work Permit when required

Verify isolation before work begins and use the specified life protecting equipment

Obtain authorisation before overriding or disabling safety critical equipment

Conduct gas tests when required

Obtain authorisation before entering a confined space

Protect yourself against a fall when working at height

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth within this project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

**SIGN IN**

MEETING ATTENDEES

| Name [Print] | Company | Signature |
|---|---|---|
| Nick Zarcone | Sovereign | |
| Justin King | Sovereign | |
| | | |
| | | |
| | | |

| | | | |
|---|---|---|---|
| Have all personnel been informed of work to be completed? | (YES) | NO | NA |
| Has fuel delivery service been informed? | YES | NO | (NA) |
| Is fuel delivery due today? | YES | NO | (NA) |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | (NA) |
| Are work areas controlled to protect workers, site staff, and the public? | (YES) | NO | NA |
| Do all workers have their API Safety Key card? | (YES) | NO | NA |
| Have all reviewed and understand the Shell 12 Life-Saving Rules | (YES) | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Nick Zarcone | | 10/8/10 0730 | Yeong Lee | |

**SIGN OUT**

| | | | |
|---|---|---|---|
| Has the work area been left tidy and safe? | (YES) | NO | NA |
| Are site personnel aware of status of work? | (YES) | NO | NA |
| Are changes to equipment documented and communicated? | YES | NO | (NA) |
| All incidents, near misses, unsafe situations reported? | YES | NO | (NA) |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Nick Zarcone | | 10/8/10 1230 | Julio Martinez | |

**SHELL**
**Life-Saving Rules**

Do not walk under a suspended load

No alcohol or drugs while working or driving

Wear your seat belt

Do not smoke outside designated smoking area

While driving, do not use your phone and do not exceed speed limits

Follow prescribed Journe Management Plan



Shell/Motiva 0007205

# TIME & MATERIAL FIELDSHEET

**Date:** Friday, October 08, 2010
**Page:** 1 of 1

**Project #:** EQ017
**Project Address:** 25 Paidge Avenue, Brooklyn, New York
**Client:** Shell Oil Products, U.S.

## Employee Time

| Employee Name | Appr. # | Task ID | Prep Time | Travel Time | On-Site Time | Total Time |
|---|---|---|---|---|---|---|
| Nickolas Zarcone | 711 | 16 | 1.5 | 2.5 | 5 | 9 |
| Justin King | 711 | 16 | 1.5 | 2.5 | 5 | 9 |
| | | | | | | |
| | | | | | | |
| | | | | | | |


**SOVEREIGN CONSULTING, INC.**
290 Executive Drive, Suite 300
Cranberry Twp., PA 16066
www.sovcon.com


## SOVEREIGN OWNED OR LEASED EQUIPMENT AND MATERIALS LIST

| Item # | Item | Qty | Units |
|---|---|---|---|
| OE104 | Chevy Van | | hrs |
| OE124 | Ford F-150 | 7.5 | hrs |
| OE115 | Interface Probe | | day |
| OE143 | Multi-Gas PID | | day |
| SR620 | Mobile Phone | | day |
| SR800 | 4" Bailer | 1 | each |
| SR800 | 2" Bailer | 5 | each |
| SR800 | 1" Bailer | | each |
| SR812 | QED Filters | | each |
| SR816 | LDPE Tubing | | ft |
| SR817 | Silicon Flex Hose | | ft |
| SR820 | Gloves (box) (100) | 1 | each |

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR835 | Sorbent Sock | | each |
| SR836 | Sorbent Pads | 6 | each |
| SR837 | Sorbent Boom | | each |
| SR935 | 55 Gallon Drum | | each |
| SR980 | Gripper Plug - 1" | | each |
| SR981 | Gripper Plug - 2" | | each |
| SR982 | Gripper Plug - 4" | | each |
| SR983 | Brass Padlock | | each |
| SR205 | Hand Auger | | day |
| SR300 | Air Sampling Pump | | day |

## FEI Rental Equipment (Need PO)

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR105 | Interface Probe | 1 | day |
| SR110 | DO Meter | | day |
| SR130 | Sub Pump 2" | | day |
| SR300 | Air Sampling Pump | | day |
| SR310 | PID | | day |
| SR335 | 4-Gas Meter | | day |
| SR420 | Level Logger | | day |
| SR635 | Survey Equipment | | day |
| SR645 | GW Multi-Meter | | day |
| SR655 | Peristaltic Pump | | day |

## RENTAL EQUIPMENT AND ADDITIONAL MATERIALS
List items rented or purchased to complete work

## Subcontractor Labor
Name & Description of Work

## WORK DESCRIPTION

NZ and JK on site @ 0730 off @ 1230
Performed monthly well gaugung
Bailed product from wells that exhibited recoverable product
3.25 gallons of product were recovered by hand bailing

**Project Manager / Supervisor Approval:** _____ **Date:** _____

SOVEREIGN CONSULTING - WELL GAUGING/HAND-BAILING DATA SUMMARY SHEET
PAGE 1 OF 1

CLIENT: MOTIVA ENTERPRISES LLC
25 PAIDGE AVENUE, BROOKLYN NY
SCI JOB # EQ017

Date: 10/8/10

| WELL ID | TIME OF READING | WELL DIA. (IN) | TOTAL DEPTH (FT) | DEPTH TO PRODUCT (FT) | DEPTH TO WATER (FT) | PRODUCT THICKNESS (FT) | PRODUCT RECOVERED (GAL) | NOTES |
|---|---|---|---|---|---|---|---|---|
| MW-1 | | 4 | 11.17 | | 3.26 | | | |
| MW-2 | | 4 | 10.86 | 3.50 | 3.54 | 0.04 | | |
| MW-3 | | 4 | 11.29 | | 2.78 | | | |
| MW-4 | | 4 | 11.26 | 2.35 | 2.44 | 0.09 | | |
| MW-5 | | 4 | 9.41 | | 1.79 | | | |
| MW-6 | | 4 | 10.78 | | 3.30 | | | |
| MW-7R | 11:30 | 4 | 12.38 | | 2.35 | | | |
| MW-8 | 11:45 | 4 | 8.05 | | 3.03 | | | |
| MW-9 | 12:00 | 4 | 7.78 | | 2.94 | | | |
| MW-13 | | 4 | 14.13 | | 7.21 | | | |
| MW-14 | | 4 | 14.14 | | 6.05 | | | |
| MW-15 | | 4 | 12.61 | | 3.13 | | | |
| MW-16 | | 4 | 15.17 | | 3.02 | | | |
| MW-17 | | 4 | 10.31 | | 2.38 | | | |
| MW-18 | | 4 | 11.11 | | 2.87 | | | |
| MW-19 | | 4 | | | | | | |
| MW-20 | | 4 | 11.61 | | 3.12 | | | |
| MW-21R | 10:45 | 4 | 12.15 | | 3.54 | | | |
| MW-22R | 11:00 | 4 | 8.51 | | 3.11 | | | |
| MW-23 | | 4 | 12.60 | | 3.69 | | | |
| MW-24 | | 4 | 12.56 | | 3.65 | | | |
| MW-25 | | 4 | 14.43 | | 2.76 | | | |
| MW-26 | | 4 | 10.68 | 3.48 | 3.49 | 0.01 | | |
| MW-27 | | 4 | 14.36 | | 2.21 | | | |
| MW-28 | | 4 | 10.91 | | 1.67 | | | |
| MW-29 | | 4 | 9.69 | | 2.01 | | | |
| MW-30 | | 4 | 9.47 | | 1.90 | | | |
| MW-31 | | 4 | 8.88 | 3.31 | 3.49 | 0.18 | 0.25 | |
| MW-32 | | 4 | 10.69 | | 3.51 | | | |
| MW-33 | | 4 | 7.41 | | 5.63 | | | |
| RW-34 | | 6 | 10.85 | 7.12 | 7.16 | 0.04 | | |
| MW-35 | | 4 | 7.79 | | 6.47 | | | |
| RW-36 | | 6 | 10.64 | 8.27 | 8.32 | 0.05 | | |
| RW-37 | | 6 | 10.65 | | 7.49 | | | |
| MW-38 | | 4 | 8.06 | | 6.80 | | | |
| MW-39 | | 4 | 8.53 | | 6.51 | | | |
| RW-40 | | 6 | 11.61 | 7.57 | 9.44 | 1.87 | 3.00 | |
| MW-41 | | 4 | 9.58 | 6.69 | 6.72 | 0.03 | | |
| MW-42 | | 4 | 12.49 | | 3.45 | | | |
| MW-43 | | 4 | 12.65 | | 3.38 | | | |
| MW-44 | | 4 | 12.46 | | 3.32 | | | |
| MW-45 | | 4 | | | | | | |
| TRW-1 | | 6 | | | | | | |
| TRW-2 | | 6 | 10.20 | | 3.55 | | | |
| TRW-3 | | 6 | | | | | | |
| TRW-4 | | 6 | | | | | | |
| TRW-5 | | 6 | 9.65 | 2.92 | 2.98 | 0.06 | | |
| TRW-6 | | 6 | | | | | | |

25 Paidge Ave Brooklyn Date 10/8/10

Project / Client Brooklyn Terminal Motiva

Well Gauging & Hand Bailing & GWS (Page 1)

Sovereign on site @ 0730 off @ 12:30
NZ & JK with Ranger Pickup truck 62° A
went over H+S and scope of work with Terminal Worker
will show Justin King the ropes his first time
3.25 Gal. Recovered Product

| ID | DTW | DTP | Total Depth | Product Thickness | Product Recovered |
|---|---|---|---|---|---|
| 1 | 3.26 | | 11.17 | | |
| 3 | 2.78 | | 11.29 | | |
| 29 | 2.01 | | 9.69 | | |
| 4 | 2.44 | 2.35 | 11.26 | .09 | |
| 30 | 1.90 | | 9.47 | | |
| (M) 28 | 1.67 | | 10.91 | | |
| (M) ~~27~~ 27 | 2.21 | | 14.36 | | |
| (M) ~~25~~ 25 | 1.79 | | 9.41 | | |
| 6 | 3.30 | | 10.78 | | |
| 7R | 2.35 | | 12.38 | Time | 11:30 |
| 8 | 3.03 | | 8.05 | | 11:45 |
| 9 | 2.94 | | 7.78 | | 12:00 |
| 21R | 3.54 | | 12.15 | | 10:45 |
| 22R | 3.11 | | 8.51 | | 11:00 |
| 13 | 7.21 | | 14.13 | | |
| 14 | 6.05 | | 14.14 | | |



Location 25 Paidge Ave Brooklyn Date 10/8/10

Project / Client Brooklyn Terminal Motiva

Well Gauging & Hand Bailing & GWS (Page 2)

| ID | DTW | DTP | Total Depth | Product Thickness | Product Recovered |
|---|---|---|---|---|---|
| 23 | 3.69 | | 12.60 | | |
| 24 | 3.65 | | 12.56 | | |
| 43 | 3.38 | | 12.65 | | |
| 42 | 3.45 | | 12.49 | | |
| 44 | 3.32 | | 12.46 | | |
| 25 | 2.76 | | 14.43 | | |
| TW1 | ~~3.49~~ 3.48 | ~~3.48~~ | (M) | under water | |
| 26 | 3.49 | 3.48 | 10.68 | .01 | |
| TW2 | 3.55 | | 10.20 | | |
| 2 | 3.54 | 3.50 | 10.86 | .04 | |
| TW3 | | | | under water | |
| TW4 | | | | Under water | |
| TW5 | 2.98 | 2.92 | 9.65 | .06 | |
| 31 | 3.49 | 3.31 | 8.88 | .18 | .25 |
| TW6 | | | | under water | |
| 20 | 3.12 | | 11.41 | | |
| 15 | 3.13 | | 12.61 | | |
| 16 | 3.02 | | 15.17 | | |
| 17 | 2.38 | | 10.31 | | |
| 18 | 2.87 | | 11.11 | | |
| 32 | 3.51 | | 10.69 | | |
| 34 | 7.16 | 7.12 | 10.85 | .04 | |
| 33 | 5.63 | | 7.41 | | |

Shell/Motiva 0007208

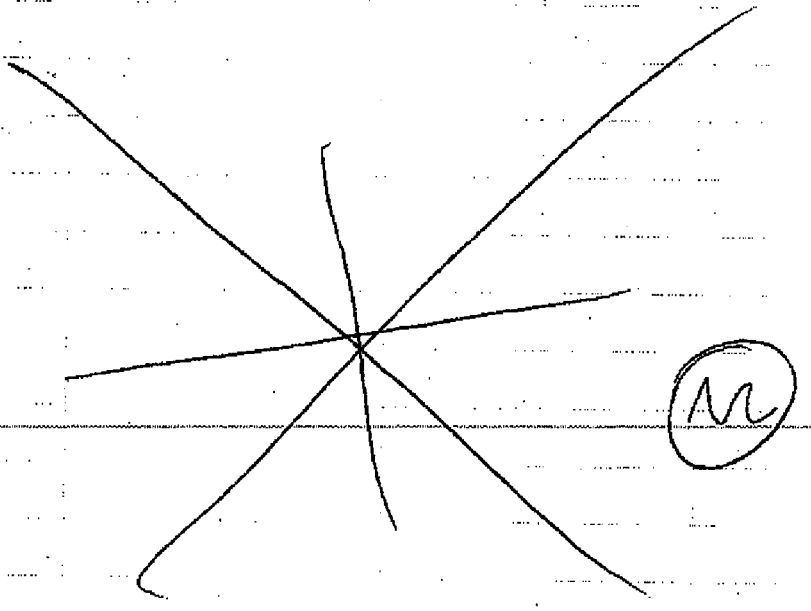
Location 25 Paidge Ave Brooklyn Date 10/8/10

Project/Client Brooklyn Terminal Motion

Well Gauging & Hand Bailing + GWS (Page 3)

| ID | DTW | DTP | Total Depth | Product Thickness | Product Recovered |
|---|---|---|---|---|---|
| 39 | 6.51 | | 8.53 | | |
| 40 | 9.44 | 7.57 | 11.61 | 1.87 | 3.00 |
| 35 | 6.47 | | 7.79 | | |
| 36 | 8.32 | 8.27 | 10.64 | 0.05 | |
| 41 | 6.72 | 6.69 | 9.58 | 0.03 | |
| 37 | 7.49 | | 10.65 | | |
| 38 | 6.80 | | 8.06 | | |

3.25 Gal Recovered



# Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
- [x] XENCO (Houston,TX)
- [ ] CALSCIENCE ( )
- [ ] TEST AMERICA ( )
- [ ] SPL ( )
- [ ] OTHER ( )

Please Check Appropriate Box:
- [ ] ENV. SERVICES
- [ ] MOTIVA RETAIL
- [ ] SHELL RETAIL
- [ ] MOTIVA SD&CM
- [x] CONSULTANT
- [ ] LUBES
- [ ] SHELL PIPELINE
- [ ] OTHER

Print Bill To Contact Name: Gregory Bosiljcic

PO #:

INCIDENT # (ENV SERVICES): 9 7 6 0 5 4 9 2 [ ] CHECK IF NO INCIDENT # APPLIES

SAP #: 1 7 1 1 9 9

DATE: 10/8/2010

PAGE: 1 of 1

CONSULTANT COMPANY: Sovereign Consulting Inc.

ADDRESS: 290 Executive Drive, Suite 300

CITY: Cranberry Twp., PA 16066

TELEPHONE: (724)553-5084 FAX: (724)553-5089 E-MAIL: gbosiljcic@sovcon.com

SITE ADDRESS (Street, City and State): 25 Paidge Ave., Brooklyn, New York

CONSULTANT PROJECT CONTACT (Report to): Gregory Bosiljcic

CONSULTANT PROJECT NO.: EQ017

SAMPLER NAME(S) (Print): Justin King and Nick Zarcone

LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS):
- [x] STANDARD (14 DAY)
- [ ] 5 DAYS
- [ ] 3 DAYS
- [ ] 2 DAYS
- [ ] 24 HOURS
- [ ] RESULTS NEEDED ON WEEKEND

DELIVERABLES:
- [x] LEVEL 1
- [ ] LEVEL 2
- [ ] LEVEL 3
- [ ] LEVEL 4
- [ ] OTHER (SPECIFY)

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :

email copy to: jmccollums@sovcon.com

- [x] SHELL CONTRACT RATE APPLIES
- [ ] STATE REIMBURSEMENT RATE APPLIES
- [ ] PROVIDE LEDD DISK

REQUESTED ANALYSIS

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | EPA 8260 (Full List) | MTBE (8260) | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-7R | 10/8/10 | 11:30 | GW | X | | | | | 3 | X | X | |
| | MW-8 | 10/8/10 | 11:45 | GW | X | | | | | 3 | X | X | |
| | MW-9 | 10/8/10 | 12:00 | GW | X | | | | | 3 | X | X | |
| | MW-21R | 10/8/10 | 10:45 | GW | X | | | | | 3 | X | X | |
| | MW-22R | 10/8/10 | 11:00 | GW | X | | | | | 3 | X | X | |
| | Field Blank | 10/8/10 | 11:20 | GW | X | | | | | 3 | X | X | |
| | Trip Blank | 10/8/10 | 0:00 | TB | X | | | | | 2 | X | X | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

| | | | |
|---|---|---|---|
| Relinquished by: (Signature) | Received by: (Signature) | Date: 10/8/10 | Time: 2:30 PM |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |

05/2/06 Revision

Shell/Motiva 0007210

# FedEx. US Airbill

FedEx Express

FedEx Tracking Number 8708 8418 1499

0200 — Sender's Copy

**1 From** *Please print and press hard.*

Date 10/8/10 — Sender's FedEx Account Number — SENDER'S FEDEX ACCOUNT NUMBER ONLY.

Sender's Name Justin King — Phone (631)753-8380

Company Sovereign Consulting

Address 1855 New Highway — Suite C — Dept./Floor/Suite/Room

City Farmingdale — State NY — ZIP 11735

**2 Your Internal Billing Reference** — OPTIONAL
First 24 characters will appear on invoice.

**3 To**

Recipient's Name Sample Receiving — Phone 281)240-4200

Company Xerco Labs — ☐ HOLD Weekday — Print FedEx location address below. NOT available for FedEx First Overnight. — ☐ HOLD Saturday — Print FedEx location address below. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Address 4143 Green Briar Dr. — Dept./Floor/Suite/Room
We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address
Print FedEx location address here if a HOLD option is selected.

City Stafford — State TX — ZIP 77477

**4a Express Package Service** — * To most locations. — *Packages up to 150 lbs.*

- ☒ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- ☐ FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.
- ☐ FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

**4b Express Freight Service** — ** To most locations. — *Packages over 150 lbs.*

- ☐ FedEx 1Day Freight — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected. — CALL 1.800.332.0807 — FedEx 1Day Freight Booking No.
- ☐ FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

**5 Packaging** — * Declared value limit $500.

- ☐ FedEx Envelope*
- ☐ FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- ☐ FedEx Box
- ☐ FedEx Tube
- ☒ Other

**6 Special Handling and Delivery Signature Options**

- ☐ SATURDAY Delivery — NOT available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 2Day Freight.
- ☐ No Signature Required — Package may be left without obtaining a signature for delivery.
- ☐ Direct Signature — Someone at recipient's address may sign for delivery. Fee applies.
- ☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.

**Does this shipment contain dangerous goods?** One box must be checked.

- ☒ No
- ☐ Yes — As per attached Shipper's Declaration.
- ☐ Yes — Shipper's Declaration not required.
- ☐ Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box. ☐ Cargo Aircraft Only

**7 Payment** *Bill to:*

- ☐ Sender — Acct. No. in Section 1 will be billed.
- ☒ Recipient
- ☐ Third Party
- ☐ Credit Card
- ☐ Cash/Check

Enter FedEx Acct. No. or Credit Card No. below.

FedEx Acct. No. / Credit Card No. 135095991 — Exp. Date

Total Packages — Total Weight ____ lbs. — Total Declared Value† $ ____ .00

†Our liability is limited to $100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability.

554

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Shell/Motiva 0007211

# Sovereign Consulting Inc.
## Tailgate Safety Meeting Form

(To be submitted with field notes to Project Manager each day)

| | |
|---|---|
| **Project Name:** Brooklyn Terminal Motiva | **Date:** 11/23/10 |
| **Location:** 25 Paidge Ave | **Weather:** Clear Sky |
| **Project Manager [Print]:** Greg B | **Temp:** 55°F |

**Contractors/Subcontractors:**

**Scope of Work:** Well gauging & hand bailing

**Task Hazards:** (check all that apply) *requires Permit to Work

| | | | |
|---|---|---|---|
| Cold Heat Stress ☐ | Excavations* ☐ | Haz. Substances ☑ | Sanitation ☐ |
| Confined Spaces* ☐ | Explosion ☐ | Heavy Equipment ☐ | Sharp Objects ☐ |
| Cutting/Welding* ☐ | Falling Objects ☐ | Ladders* ☐ | Tools ☑ |
| Electrical ☐ | Fire ☐ | Noise ☐ | Traffic ☑ |
| Environmental Hazard ☑ | Insects/Biological ☐ | Slip/Trip Hazards ☑ | Weather ☐ |
| Elevated Work* ☐ | Ticks - Biohazard ☐ | Overhead ☐ | Flying Debris ☐ |
| Other (describe below) ☐ | | | |

**Engineering Controls / Work Practices:** PPE

**Levels of Protection / Personal Protective Equipment:**

| | | |
|---|---|---|
| Level A ☐ | Eye & Face Protection ☑ | Safety Glasses ☑ Face Shield ☐ |
| Level B ☐ | Foot Protection ☑ | Steel Toes ☑ Hip Boots/Waders ☐ |
| Level C ☐ | Hand Protection ☑ | Nitrile Gloves ☑ Leather Gloves ☑ Full Arm Chemical ☐ |
| Level D ☑ | Head Protection ☑ | Hard Hat ☑ |
| | Hearing Protection ☑ | Ear Muffs/Plugs ☑ |
| | Other ☐ | Barricades ☐ High Visibility Safety Vests ☑ Cones/Flags ☑ |
| | | Amber Light/Vehicle Hazards ☐ Crash Truck ☑ Tyvek/Coveralls ☐ |

| **Air Monitoring/Sampling** | **Emergency Response** | | |
|---|---|---|---|
| LEL/O2/CO/H2S Meter ☐ | Emergency Alarms ☑ | First Aid Kit ☑ | Cell Phone None ☐ |
| FID/PID ☐ | Emergency Contacts ☑ | Spill Kit ☐ | Fire Extinguisher ☑ |
| Detector Tubes ☐ | Evacuation Routes ☑ | Hospital Route ☑ | Pedestrian Safety ☐ |
| Dust Monitor ☐ | Explosion/Fire ☐ | Work Area ☑ | Vapor/Dust Suppression ☐ |
| Personal Air ☐ | Medical Emergency ☑ | Smoking/Break Area ☑ | |

**Are site workers Fit To Work?** Yes ☑ No ☐

**Do all site workers understand injury/intervention reporting requirements?** Yes ☑ No ☐

**Comments:**

**Name & Title of Person Conducting Tailgate Safety Meeting:**

Nick Zarcone

**Signature:** [signature] **Date:** 11/23/10

**SHELL**
**Life-Saving Rules**

Work with a valid Work Permit when required

Verify isolation before work begins and use the specified life protecting equipment

Obtain authorisation before overriding or disabling safety critical equipment

Conduct gas tests when required

Obtain authorisation before entering a confined space

Protect yourself against a fall when working at height

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth within this project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

### SIGN IN

MEETING ATTENDEES

| Name [Print] | Company | Signature |
|---|---|---|
| Nick Zurcas | Sovereign | |
| Justin King | Sovereign | |
| | | |
| | | |
| | | |

| | | | |
|---|---|---|---|
| Have all personnel been informed of work to be completed? | (YES) | NO | NA |
| Has fuel delivery service been informed? | YES | NO | (NA) |
| Is fuel delivery due today? | YES | NO | (NA) |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | (NA) |
| Are work areas controlled to protect workers, site staff, and the public? | (YES) | NO | NA |
| Do all workers have their API Safety Key card? | (YES) | NO | NA |
| Have all reviewed and understand the Shell 12 Life-Saving Rules | (YES) | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Nick Zurcas | | 11/23/10 0736 | R. MORBATH | |

### SIGN OUT

| | | | |
|---|---|---|---|
| Has the work area been left tidy and safe? | (YES) | NO | NA |
| Are site personnel aware of status of work? | (YES) | NO | NA |
| Are changes to equipment documented and communicated? | YES | NO | (NA) |
| All incidents, near misses, unsafe situations reported? | YES | NO | (NA) |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Nick Zurcas | | 11/23/10 1230 | Nick Zurcas | |

**SHELL**
**Life-Saving Rules**

Do not walk under a suspended load

No alcohol or drugs whi working or driving

Wear your seat belt

Do not smoke outsid designated smoking ar

While driving, do not us your phone and do no exceed speed limits

Follow prescribed Journ Management Plan



Shell/Motiva 0007213

Behavior Based Safety Checklist - FIELD WORK
WILL YOUR NEXT CHOICE BE THE SAFE CHOICE?

Observer: Hung
Date: 11/25/10
Office: Farmingdale
Tasks Observed: GW Gauging
Job Site: EQ017 Shell Terminal
Total Safe Behaviors Observed: _____
Total At Risk Behaviors Observed: _____
% Safe Behaviors: _____

| Critical Behavior List | Safe | At Risk | Critical Behavior List | Safe | At Risk |
|---|---|---|---|---|---|
| Clear of pinch points | III | | Traffic awareness | I | |
| Use of traffic control devices | II | | Review of JSAs | III | |
| Use of tools | IIII | | Lifting / moving of equipment | — | — |
| Precautions for weather | I | | Emergency equipment | II | |
| PPE - safety vest and safety glasses | II | | Electrical safety | — | — |
| PPE- hard hat | I | | Heavy equipment hazards | — | — |
| PPE - hearing protection | I | | Biological hazards addressed | I | |
| PPE - task appropriate gloves | II | | Physical hazards addressed | I | |
| PPE - other | — | — | Work Permits | — | — |
| Use of air-monitoring equipment | — | — | | | |
| Clear of moving / rotating equipment | — | — | | | |

OBSERVED SAFE BEHAVIORS/GOOD PRACTICES

Clear of all pinch points

OBSERVED AT RISK BEHAVIORS

| What was observed to be at-risk? | Why was it at risk? |
|---|---|
| No observed risk behaviors | |
| | |
| | |

Comments:

**Definitions for Critical Behaviors:**

**Clear of pinch points:** body parts are kept out of pinch points -such as under gratings, manhole covers, etc.
**Use of traffic control devices:** Work zone delineators / traffic control devices used per the HASP/Scorecard
**Use of tools:** proper tool for the job utilized, tool is used appropriately (no hammering with a screwdriver, etc.), tool is in good condition
**Precautions for weather:** applies sunscreen, drinks plenty of fluids in hot weather; dresses appropriately for cold weather
**PPE - safety vest, safety glasses:** worn on site at all times
**PPE - hard hat:** worn when there are overhead hazards, construction activities, drilling, excavation, or as required by HASP
**PPE- hearing protection:** worn during times where noise is >85 dBa; drilling, vac truck, bobcat, geoprobe, etc.
**PPE - task appropriate gloves:** leather or protective gloves for manhole handling, equipment handling; nitrile gloves for gw sampling, and minimal chemical exposures
**PPE- other:** Other PPE as required by site HASP
**Use of air monitoring equipment:** per the site HASP
**Clear of moving/rotating equipment:** long hair should be tied back, long sleeves buttoned or rolled up to elbows, stay out of point of operation
**Traffic awareness:** faces traffic, remains alert to oncoming vehicles, blocks off parking spots where encroachment may be a problem
**Review of JSAs:** Prior to task, JSA should be reviewed
**Lifting/moving equipment:** proper body positioning during lifting, lift with legs, load close to body, etc.
**Emergency equipment:** should have fire extinguisher, first aid kit, BBP kit available at site
**Electrical safety:** LOTO utilized, GFCI utilized
**Heavy equipment hazards:** aware of backup signals, only approaches heavy equipment after eye contact/hand signal from operator, and operator stops equipment, stays out of heavy equipment blind spots
**Biological hazards addressed:** preventative measures for ticks, mosquitos, chiggers, bees, snakes when needed
**Physical hazards addressed:** fall protection, slip, trip, fall, overhead hazards, compressed gases, pressure relief, etc.
**Work Permits:** obtained for working at heights, confined space entry, hot work, excavation, LOTO, etc.

SHERIDAN CONSULTING INC.

## Behavior Based Safety Checklist - DRIVING
WILL YOUR NEXT CHOICE BE THE SAFE CHOICE?

Observer: Jking
Date: 11/23/10
Office: Farmingdale

Job Site: EQ017 Shell Terminal

Total Safe Behaviors Observed: _____
Total At Risk Behaviors Observed: _____
% Safe Behaviors: _____

| Critical Behavior List | Safe | At Risk | Critical Behavior List | Safe | At Risk |
|---|---|---|---|---|---|
| Seat belts | / | | Following distance | //// | |
| Seat adjustment | / | | Traffic lights/signs | //// | |
| Mirror adjustment | / | | Travel surface / speed | /// | |
| Hands on wheel | / | | Distractions | / | |
| Personal health / task alignment | / | | Signaling / Changing lanes | //// | |
| Walk around | / | | Parking | / | |
| Headrest adjusted | / | | Refueling | — | — |
| Headlights | / | | Securing vehicle | / | |
| Eyes on path | / | | | | |
| | | | | | |

### OBSERVED SAFE BEHAVIORS/GOOD PRACTICES

Made all proper adjustments

### OBSERVED AT RISK BEHAVIORS

| What was observed to be at-risk? | Why was it at risk? |
|---|---|
| No observed risk behaviors | |
| | |
| | |

Comments:

### Definitions for Critical Behaviors:

**Seat belts:** All seat belts should be fastened for driver and occupants.
**Seat and mirror adjustment:** Seat properly adjusted for driver; mirrors are aligned for optimum coverage of side and rear views.
**Hands on wheel:** Driver has both hands on steering wheel
**Personal health / task alignment:** Driver is rested, physically capable of driving, and not emotionally distracted
**Walk around:** performs walk around vehicle to check for unforeseen obstructions prior to entering
**Headrest adjusted:** Headrest is properly adjusted for current driver to prevent potential whip-lash from rear-end impact
**Headlights:** Turns on headlights during rainy, foggy, snowy weather, etc.
**Eyes on path:** Eyes are on the road ahead, not focused on reading a map or other
**Following distance:** Maintains a safe following distance of 3 seconds for cars & vans with dry conditions, 4 seconds for trucks
**Obeying traffic lights/signs:** This includes coming to a complete stop and/or yeilding at appropriate road signs and signals
**Travel surface / speed:** Travel within speed limits, and adjusts speed for poor road conditions
**Distractions:** Driver is not distracted by radios, maps, telephones or conversations within the car while moving.
**Signaling / changing lanes:** Driver checks mirrors and signals for turns and lane changes
**Parking:** Driver enters parking space slowly, allows room on each side of vehicle
**Refueling:** shuts off engine during refueling
**Securing vehicle:** all loads are secured properly both inside vehicle and outside vehicle

# TIME & MATERIAL FIELDSHEET

**Date:** Tuesday, November 23, 2010
**Page:** 1 of 1

**Project #:** EQ017
**Project Address:** 25 Paidge Avenue, Brooklyn, New York
**Client:** Shell Oil Products, U.S.

## Employee Time

| Employee Name | Appr. # | Task ID | Prep Time | Travel Time | On-Site Time | Total Time |
|---|---|---|---|---|---|---|
| Nickolas Zarcone | 711 | 16 | 1 | 2.5 | 5 | 8.5 |
| Justin King | 711 | 16 | 0.5 | 2.5 | 5 | 8 |
| | | | | | | |
| | | | | | | |
| | | | | | | |


**SOVEREIGN CONSULTING, INC.**
290 Executive Drive, Suite 300
Cranberry Twp., PA 16066
www.sovcon.com


## SOVEREIGN OWNED OR LEASED EQUIPMENT AND MATERIALS LIST

| Item # | Item | Qty | Units |
|---|---|---|---|
| OE104 | Chevy Van | | hrs |
| OE124 | Ford F-150 | 1 | hrs |
| OE115 | Interface Probe | | day |
| OE143 | Multi-Gas PID | | day |
| SR620 | Mobile Phone | | day |
| SR800 | 4" Bailer | | each |
| SR800 | 2" Bailer | | each |
| SR800 | 1" Bailer | | each |
| SR812 | QED Filters | | each |
| SR816 | LDPE Tubing | | ft |
| SR817 | Silicon Flex Hose | | ft |
| SR820 | Gloves (box) (100) | | each |

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR835 | Sorbent Sock | | each |
| SR836 | Sorbent Pads | 6 | each |
| SR837 | Sorbent Boom | | each |
| SR935 | 55 Gallon Drum | | each |
| SR980 | Gripper Plug - 1" | | each |
| SR981 | Gripper Plug - 2" | | each |
| SR982 | Gripper Plug - 4" | 1 | each |
| SR983 | Brass Padlock | | each |
| SR205 | Hand Auger | | day |
| SR300 | Air Sampling Pump | | day |
| | | | |
| | | | |

## TEI Rental Equipment (Need PO)

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR105 | Interface Probe | 1 | day |
| SR110 | DO Meter | | day |
| SR130 | Sub Pump 2" | | day |
| SR300 | Air Sampling Pump | | day |
| SR310 | PID | | day |
| SR335 | 4-Gas Meter | | day |
| SR420 | Level Logger | | day |
| SR635 | Survey Equipment | | day |
| SR645 | GW Multi-Meter | | day |
| SR655 | Peristaltic Pump | | day |
| | | | |
| | | | |

## RENTAL EQUIPMENT AND ADDITIONAL MATERIALS

List items rented or purchased to complete work

## Subcontractor Labor

Name & Description of Work

## WORK DESCRIPTION

NZ & JK on site @ 0730 OFF @ 1230
Performed monthly well gauging
Bailed product from wells that exhibited recoverable product
1.25 gallons of product were recovered by hand bailing
installed 1 new 4" J-plug for MW18

**Project Manager / Supervisor Approval:** _____ **Date:** _____

SOVEREIGN CONSULTING - WELL GAUGING/HAND-BAILING DATA SUMMARY SHEET

PAGE 1 OF 1

Date: 11/23/10

CLIENT: MOTIVA ENTERPRISES LLC
25 PAIDGE AVENUE, BROOKLYN NY
SCI JOB # EQ017

| WELL ID | TIME OF READING | WELL DIA. (IN) | TOTAL DEPTH (FT) | DEPTH TO PRODUCT (FT) | DEPTH TO WATER (FT) | PRODUCT THICKNESS (FT) | PRODUCT RECOVERED (GAL) | NOTES |
|---|---|---|---|---|---|---|---|---|
| MW-1 | 7:45 | 4 | 11.17 | | 3.53 | | | |
| MW-3 | 7:48 | 4 | 11.26 | | 3.16 | | | |
| MW-29 | 7:50 | 4 | 9.70 | | 2.28 | | | |
| MW-4 | 7:52 | 4 | 11.19 | | 2.65 | | | |
| MW-30 | 7:54 | 4 | 9.53 | | 2.43 | | | |
| MW-5 | 13:26 | 4 | 9.39 | | 2.12 | | | |
| MW-28 | 8:00 | 4 | 10.89 | | 1.95 | | | |
| MW-27 | 8:03 | 4 | 14.35 | | 2.56 | | | |
| MW-6 | 8:05 | 4 | 10.79 | | 3.33 | | | |
| MW-7R | 8:10 | 4 | 12.28 | | 3.94 | | | |
| MW-8 | 8:12 | 4 | 8.06 | | 4.75 | | | |
| MW-9 | 8:14 | 4 | 7.81 | | 4.72 | | | |
| MW-21R | 8:17 | 4 | 12.06 | | 4.02 | | | |
| MW-22R | 8:19 | 4 | 8.50 | | 3.88 | | | |
| MW-13 | 8:21 | 4 | 14.10 | | 7.38 | | | |
| MW-14 | 8:23 | 4 | 14.13 | | 6.63 | | | |
| MW-23 | 8:25 | 4 | 12.57 | | 4.27 | | | |
| MW-24 | 8:27 | 4 | 12.69 | | 4.19 | | | |
| MW-43 | 8:30 | 4 | 12.55 | | 3.94 | | | |
| MW-42 | 8:32 | 4 | 12.48 | | 4.03 | | | |
| MW-44 | 8:34 | 4 | 12.41 | | 3.89 | | | |
| MW-25 | 8:55 | 4 | 14.38 | | 3.30 | | | |
| TW-1 | | 6 | | | | | | |
| MW-26 | 8:57 | 4 | 10.69 | 4.27 | 4.31 | 0.04 | | |
| TW-2 | 9:00 | 6 | 10.23 | | 4.26 | | | |
| MW-2 | 9:02 | 4 | 8.76 | 3.92 | 3.97 | 0.05 | | |
| TW-3 | | 6 | | | | | | |
| TW-4 | | 6 | | | | | | |
| TW-5 | 9:07 | 6 | 9.49 | 3.51 | 3.58 | 0.07 | | |
| MW-31 | 9:09 | 4 | 8.88 | 3.67 | 4.46 | 0.79 | 1.00 | |
| TW-6 | | 6 | | | | | | |
| MW-20 | 9:12 | 4 | 11.58 | | 3.41 | | | |
| MW-15 | 9:14 | 4 | 12.61 | | 3.53 | | | |
| MW-16 | 9:16 | 4 | 15.24 | | 3.44 | | | |
| MW-17 | 9:18 | 4 | 10.25 | | 3.03 | | | |
| MW-18 | 9:21 | 4 | 10.68 | | 3.51 | | | |
| MW-32 | 9:24 | 4 | 10.58 | | 4.62 | | | |
| RW-34 | 9:40 | 6 | 10.97 | 7.32 | 7.34 | 0.02 | | |
| MW-33 | 9:42 | 4 | 7.38 | | 5.72 | | | |
| MW-39 | 9:46 | 4 | 8.47 | | 6.06 | | | |
| RW-40 | 9:50 | 6 | 11.60 | 7.71 | 7.83 | 0.12 | 0.25 | |
| MW-35 | 9:52 | 4 | 7.78 | | 6.51 | | | |
| RW-36 | 9:54 | 6 | 10.71 | 8.09 | 8.13 | 0.04 | | |
| MW-41 | 9:58 | 4 | 9.51 | 6.20 | 6.21 | 0.01 | | |
| RW-37 | 10:00 | 6 | 10.51 | | 7.77 | | | |
| MW-38 | 10:03 | 4 | 8.20 | | 7.26 | | | |
| | | | | | | | | |
| | | | | | | | | |

Location 25 Paidge Ave Brooklyn Date 11/23/10

Project / Client Brooklyn Terminal Motiva

Well gauging & Hand bailing (Page 1)

Sovereign on site @ 0730 off @

M & JK 07 Ford Ranger ~52° F Clear Sky

went over H&S and scope of work with terminal worker

| ID | Time | DTW | DTP | Total Depth | Product Thickness | Product Recovered |
|---|---|---|---|---|---|---|
| 1 | 7:45 | 3.53 | | 11.17 | | |
| 3 | 7:48 | 3.16 | | 11.26 | | |
| 29 | 7:50 | 2.28 | | 9.70 | | |
| 4 | 7:52 | 2.65 | | 11.19 | | |
| 30 | 7:54 | 2.43 | | 9.53 | | |
| 5 | 7:56 | 2.12 | | 9.39 | | |
| 28 | 8:00 | 1.95 | | 10.89 | | |
| 27 | 8:03 | 2.56 | | 14.35 | | |
| 6 | 8:05 | 3.33 | | 10.79 | | |
| 7R | 8:10 | 3.94 | | 12.28 | | |
| 8 | 8:12 | 4.75 | | 8.06 | | |
| 9 | 8:14 | 4.72 | | 7.81 | | |
| 21R | 8:17 | 4.02 | | 12.06 | | |
| 22R | 8:19 | 3.88 | | 8.50 | | |
| 13 | 8:21 | 7.38 | | 14.10 | | |
| 14 | 8:23 | 6.63 | | 14.13 | | |
| 23 | 8:25 | 4.27 | | 12.57 | | |
| 24 | 8:27 | 4.19 | | 12.69 | | |
| 43 | 8:30 | 3.94 | | 12.55 | | |
| 42 | 8:32 | 4.03 | | 12.48 | | |



Location 25 Paidge Ave Brooklyn Date 11/23/10

Project / Client Brooklyn Terminal Motiva

Well gauging & Hand bailing (Page 2)

| ID | Time | DTW | DTP | Total Depth | Product Thickness | Product Recovered |
|---|---|---|---|---|---|---|
| 44 | 8:34 | 3.89 | | 12.41 | | |
| 25 | 8:55 | 3.30 | | 14.38 | | |
| @ 23 | | | | | | |
| TW1 | | | under water | | | |
| 26 | 8:57 | 4.31 | 4.27 | 10.69 | .04 | |
| TW2 | 9:00 | 4.26 | | 10.23 | | |
| 2 | 9:02 | 3.97 | 3.92 | 8.76 | .05 | |
| TW3 | | | under water | | | |
| TW4 | | | under water | | | |
| TW5 | 9:07 | 3.58 | 3.51 | 9.49 | .07 | |
| 31 | 9:09 | 4.46 | 3.67 | 8.88 | .79 | 1.00 |
| TW6 | | | underwater | | | |
| 20 | 9:12 | 3.41 | | 11.58 | | |
| 15 | 9:14 | 3.53 | | 12.61 | | |
| 16 | 9:16 | 3.44 | | 15.24 | | |
| 17 | 9:18 | 3.03 | | 10.25 | | |
| 18 | 9:21 | 3.51 | | 10.68 | | |
| 32 | 9:24 | 4.62 | | 10.58 | | |
| 34 | 9:40 | 7.34 | 7.32 | 10.97 | .02 | |
| 33 | 9:42 | 5.72 | | 7.38 | | |
| 39 | 9:46 | 6.06 | | 8.47 | | |
| 40 | 9:50 | 7.83 | 7.71 | 11.60 | .12 | .25 |
| 35 | 9:52 | 6.51 | | 7.78 | | |

18

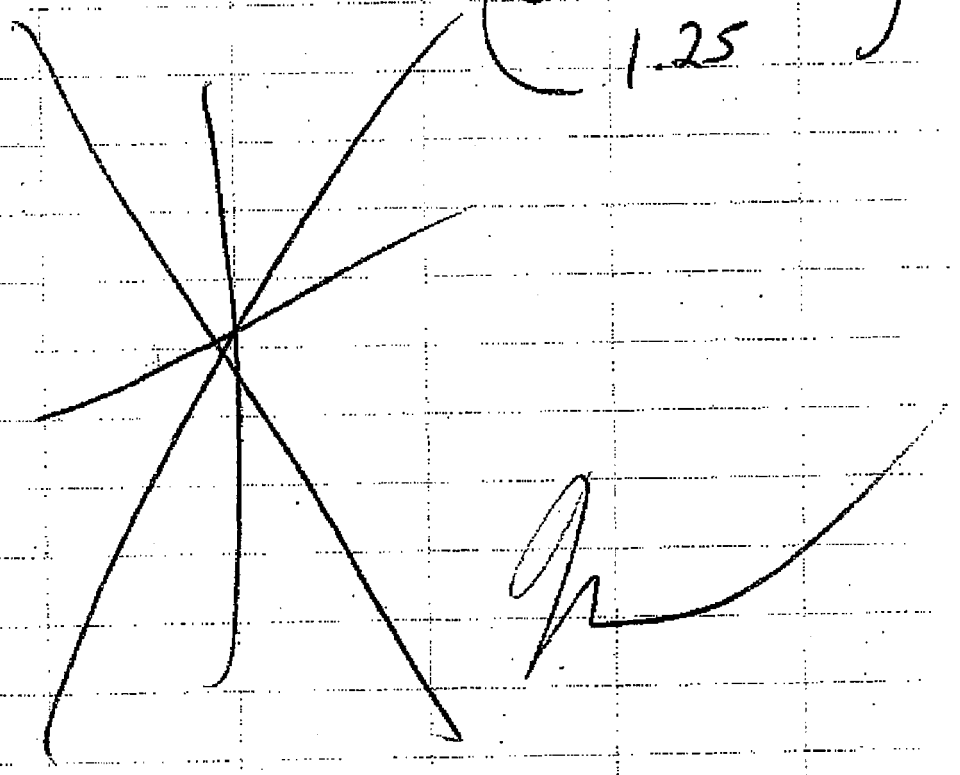
Location 25 Paidge Ave Brooklyn Date 11/23/10

Project / Client Brooklyn Terminal Motiva

Well gauging & Hand bailing (Page 3)

| ID | Time | DTW | DTP | Total Depth | Product thickness | Product Recovered |
|---|---|---|---|---|---|---|
| 36 | 9.54 | 8.13 | 8.09 | 10.71 | .04 | |
| 41 | 9.58 | 6.21 | 6.20 | 9.51 | .01 | |
| 37 | 10:00 | 7.77 | | 10.51 | | |
| 38 | 10:03 | 7.26 | | 8.20 | | |

(Gal. Recovered 1.25)



Shell/Motiva 0007219

15

# DOCUMENT INFO

DocID: 00000435

Filename: 58603-2011-04-15-OTH-01 (Quarterly Site Summary - Shell).pdf

# SHELL OIL PRODUCTS US
# QUARTERLY ENVIRONMENTAL SITE SUMMARY FOR MOTIVA ENTERPRISES LLC HSE STANDARD 325
# BROOKLYN TERMINAL
# 1st QUARTER 2011

**EXPENSE BUDGET INFORMATION**

Current Year Budget: $34,000
Expenses Incurred: $1,059
5-Year Forecast: 2011 - $34,000 2012- $15,000
Monthly well gauging / product recovery via hand bailing.
Annual groundwater monitoring of all wells.

| Question | Response (Y, N) | Explanation |
|---|---|---|
| **Does our plume migrate off-site?** | **Y** | **Low levels of MTBE and Benzene are detected above the standard at site perimeter wells. Updated groundwater elevation contours indicate groundwater is migrating off-site.** |
| **Are there down gradient receptors?** | **Y** | **Surface water (Newtown Creek) immediately adjacent to terminal.** |
| **Does a Third Party plume encroach on our property?** | **N** | |
| **Is our Plume commingled with one or more other plumes?** | **N** | |
| **Plume delineated to regulatory standards on-site?** | **Y** | **Results above standards for Benzene and MTBE near property line. However, regulators have not required any additional delineation.** |
| **Plume delineated to regulatory standards off-site?** | **NA** | **No off-site wells** |

**SITE DRIVERS:** Liquid Phase Hydrocarbons (LPH or product) was detected in interior site monitoring wells during this period.

## CURRENT ACTIVITIES

1. Monthly well gauging / product recovery via hand bailing.
2. Annual groundwater monitoring of wells.
3. Quarterly groundwater sampling on northern perimeter monitoring wells.

## PROJECTED WORK

1. Perform monthly well gauging and product recovery.
2. Evaluate LNAPL plume behavior through the LNAPL Source Zone Depletion model

**OTHER RECOMMENDATIONS/COMMENTS**

Repair monitoring wells that require repairs to maintain them as valid data points.

**PATH TO CLOSURE**

Continue product recovery via hand bailing. Remove LPH to maximum extent practical. Following mitigation of LPH, conduct a risk assessment and evaluate recoverability of LPH.



Shell/Motiva 0007221

SITE LOCATION INFORMATION
Incident No.: 97094981
Address: 25 Paidge Ave. Brooklyn, NY

**RECENT ONSITE GROUNDWATER CONCENTRATIONS (Include last four sampling events. List each perimeter well and a representative sample of source wells)**

| Well Number | Perimeter or Source | Date | Benzene (ppb) | BTEX (ppb) | MTBE (ppb) |
|---|---|---|---|---|---|
| 1 | Perimeter | 06/26/07 | <1.0 | <6.0 | <1.0 |
| | | 05/12/08 | <1.0 | <4.0 | <1.0 |
| | | 04/29/09 | <1.0 | <4.0 | <1.0 |
| | | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | | | | |
| 3 | Perimeter | 06/26/07 | <1.0 | <6.0 | <1.0 |
| | | 05/12/08 | <1.0 | <4.0 | <1.0 |
| | | 04/29/09 | <1.0 | <4.0 | <1.0 |
| | | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | | | | |
| 6 | Perimeter | 06/26/07 | <1.0 | <6.0 | <1.0 |
| | | 05/12/08 | <1.0 | <4.0 | <1.0 |
| | | 04/29/09 | <1.0 | <4.0 | <1.0 |
| | | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | | | | |
| 7 | Perimeter | | Well Abandoned during bulkhead construction | | |
| | | | | | |
| 7R | Perimeter | 04/15/10 | **16.9** | 16.9 | **31.5** |
| | | 07/27/10 | <5.0 | <5.0 | **25.6** |
| | | 10/08/10 | <5.0 | <5.0 | **36.9** |
| | | 1/25/11 | **2.4** | 2.4 | **39.2** |
| | | | | | |
| 8 | Perimeter | 04/15/10 | **44.9** | 44.9 | **37.6** |
| | | 07/27/10 | **24.3** | 24.3 | **39.5** |
| | | 10/08/10 | <5.0 | <5.0 | **21.8** |
| | | 1/25/11 | <1.0 | <1.0 | **22.5** |
| | | | | | |
| 9 | Perimeter | 04/15/10 | **12.5** | 12.5 | **15.2** |
| | | 07/27/10 | <5.0 | <5.0 | <5.0 |
| | | 10/08/10 | <5.0 | <5.0 | 7.3 |
| | | 1/25/11 | <1.0 | <1.0 | 1.6 |
| | | | | | |
| 13 | Perimeter | 06/26/07 | <1.0 | <6.0 | <1.0 |
| | | 05/12/08 | <1.0 | <4.0 | <1.0 |
| | | 04/29/09 | <1.0 | <4.0 | <1.0 |
| | | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | | | | |
| 14 | Perimeter | 06/26/07 | <1.0 | <6.0 | <1.0 |
| | | 05/12/08 | <1.0 | <4.0 | <1.0 |
| | | 04/29/09 | <1.0 | <4.0 | <1.0 |
| | | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | | | | |
| 21 | Perimeter | 05/12/08 | Well Abandoned during bulkhead construction | | |
| | | | | | |
| 21R | Perimeter | 04/15/10 | **139** | 247 | <5.0 |
| | | 07/27/10 | **160** | 304 | **14.2** |
| | | 10/08/10 | **239** | 455 | **28.4** |
| | | 1/25/11 | **292** | 551 | **24.6** |
| | | | | | |
| 22 | Perimeter | 05/12/08 | Well Abandoned during bulkhead construction | | |
| | | | | | |



Shell/Motiva 0007222

**SITE LOCATION INFORMATION**
Incident No.: 97094981
Address: 25 Paidge Ave. Brooklyn, NY

| Well Number | Perimeter or Source | Date | Benzene (ppb) | BTEX (ppb) | MTBE (ppb) |
|---|---|---|---|---|---|
| **22R** | **Perimeter** | 04/15/10 | **386** | 2,705 | **42.8** |
| | | 07/27/10 | **337** | 2,525 | **31.4** |
| | | 10/08/10 | **193** | 935 | **25.2** |
| | | 1/25/11 | **483** | 2,045 | **57.2** |
| | | | | | |
| **23** | **Perimeter** | 06/26/07 | <1.0 | 4.37 | 5.64 |
| | | 05/12/08 | <1.0 | <4.0 | 2.70 |
| | | 04/29/09 | <1.0 | <4.0 | 2.80 |
| | | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | | | | |
| **24** | **Perimeter** | 06/26/07 | <1.0 | <6.0 | 5.13 |
| | | 05/12/08 | **144** | 265 | **621** |
| | | 04/29/09 | **11.3** | 17.3 | **37.1** |
| | | 04/15/10 | <5.0 | <5.0 | 6.63 |
| | | | | | |
| **27** | **Perimeter** | 06/26/07 | <1.0 | <6.0 | 8.86 |
| | | 05/12/08 | <1.0 | <4.0 | <1.0 |
| | | 04/29/09 | <1.0 | <4.0 | <1.0 |
| | | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | | | | |
| **28** | **Perimeter** | 06/26/07 | <1.0 | <6.0 | 5.75 |
| | | 05/12/08 | <1.0 | 2.40 | 6.40 |
| | | 04/29/09 | <1.0 | <4.0 | 3.90 |
| | | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | | | | |
| **42** | **Perimeter** | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | | | | |
| **43** | **Perimeter** | 04/15/10 | <5.0 | <5.0 | **17.5** |
| | | | | | |
| **44** | **Perimeter** | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | | | | |
| **19** | **Source** | 06/26/07 | **114** | 139 | **12** |
| | | 05/12/08 | **11.4** | 13 | 4.20 |
| | | 04/29/09 | **7.5** | 11.9 | 7.70 |
| | | 04/15/10 | **11.2** | 62.4 | 5.59 |
| | | | | | |
| **18** | **Source** | 06/26/07 | **83.1** | 129 | **12.2** |
| | | 05/12/08 | **49.8** | 83.2 | 3.7 |
| | | 04/29/09 | **76.9** | 123 | 6.6 |
| | | 04/15/10 | **36.6** | 71.8 | <5.0 |
| | | | | | |
| **15** | **Source** | 06/26/07 | **234** | 319 | **54.7** |
| | | 05/12/08 | **264** | 381 | **40.9** |
| | | 04/29/09 | **165** | 320 | **45.9** |
| | | 04/15/10 | **839** | 9,266 | **38.8** |
| **Regulatory Standards** | | | **0.7** | **NA** | **10** |



Shell/Motiva 0007223

SITE LOCATION INFORMATION
Incident No.: 97094981
Address: 25 Paidge Ave. Brooklyn, NY

**RECENT OFFSITE GROUNDWATER CONCENTRATIONS (Include last four sampling events. List representative sample of wells)**

| Well Number | Date | Benzene (ppb) | BTEX (ppb) | MTBE (ppb) |
|---|---|---|---|---|
| Not Applicable | | | | |

**FREE PRODUCT (List the last four gauging events)**

| Well | Offsite or Onsite | Thickness | Date |
|---|---|---|---|
| MW-2 | Onsite | 0.07 | 09/01/10 |
| | | 0.04 | 10/08/10 |
| | | 0.05 | 11/23/10 |
| | | 0.08 | 03/26/11 |
| | | | |
| MW-4 | Onsite | 0.01 | 01/03/11 |
| | | 0.05 | 01/25/11 |
| | | 0.03 | 02/04/11 |
| | | 0.03 | 03/26/11 |
| | | | |
| MW-26 | Onsite | 0.04 | 01/03/11 |
| | | 0.02 | 01/25/11 |
| | | 0.03 | 02/04/11 |
| | | NM | 03/26/11 |
| | | | |
| MW-31 | Onsite | 0.28 | 09/01/10 |
| | | 0.18 | 10/08/10 |
| | | 0.79 | 11/23/10 |
| | | 0.33 | 03/26/11 |
| | | | |
| RW-34 | Onsite | 0.02 | 01/03/11 |
| | | 0.03 | 01/25/11 |
| | | 0.02 | 02/04/11 |
| | | 0.02 | 03/26/11 |
| | | | |
| RW-36 | Onsite | 0.11 | 01/03/11 |
| | | 0.32 | 01/25/11 |
| | | 0.00 | 02/04/11 |
| | | 0.09 | 03/26/11 |
| | | | |
| RW-37 | Onsite | 0.00 | 01/03/11 |
| | | 0.00 | 01/25/11 |
| | | 0.00 | 02/04/11 |
| | | 0.02 | 03/26/11 |
| | | | |
| RW-40 | Onsite | 0.46 | 01/03/11 |
| | | 0.68 | 01/25/11 |
| | | 0.59 | 02/04/11 |
| | | 0.97 | 03/26/11 |
| | | | |
| MW-41 | Onsite | 0.02 | 01/03/11 |
| | | 0.00 | 01/25/11 |



Shell/Motiva 0007224

**SITE LOCATION INFORMATION**
Incident No.: 97094981
Address: 25 Paidge Ave. Brooklyn, NY

| Well | Offsite or Onsite | Thickness | Date |
|---|---|---|---|
| **MW-41** | **Onsite** | 0.00 | 02/04/11 |
| | | 0.04 | 03/26/11 |
| | | | |
| **TW-01** | **Onsite** | 0.01 | 09/01/10 |
| | | NM | 01/03/11 |
| | | NM | 01/25/11 |
| | | NM | 02/04/11 |
| | | | |
| **TW-05** | **Onsite** | 0.02 | 09/01/10 |
| | | 0.06 | 10/08/10 |
| | | 0.07 | 11/23/10 |
| | | 0.03 | 03/26/11 |
| | | | |

Notes: NM: Not measured
NS: Not sampled
ND: Not detected

**CHEMICALS OF CONCERN**: Benzene and MTBE

**SITE HISTORY**
Chronological List of the Major Events
(date-event)

1. 1999 began operation of LNAPL recovery system.
2. Annual groundwater monitoring performed yearly between June 2003 and June 2009.
3. Wells MW-21 and MW-22 were abandoned in October 2008 as part of the bulkhead construction project. During the construction, MW-7 has been buried and is not accessible.
4. MW-7, MW-21, and MW-22 replaced by MW-7R, MW-21R and MW-22R in February 2010.
5. Monitoring wells MW-42, MW-43, and MW-44 were installed in February 2010.
6. 550-gallon AST was removed in February 2010.
7. Annual groundwater sampling last conducted in April 2010 and is scheduled for April 2011.
8. Perimeter well quarterly groundwater sampling conducted July 2010, October 2010 and January 2011.

**REGULATORY COMPLIANCE**

1. Major Onshore Storage Facility License -Annual groundwater sampling.
2. UST closure and land farming soil remediation 1990.
3. Investigative soil boring program November 1995.
4. SVE/Pump/SPG feasibility testing June 1996.
5. Product recovery system installation October 1999.
6. Product recovery system operation from 1999 through 2007.
7. NYDEC letter dated January 3, 2008 approved deactivation of the LPH recovery system and the implementation of monthly hand-bailing as the method of product recovery.



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# HSE Standard 325
# Guidance for Groundwater Monitoring Plans
# For Release Detection At Distribution Terminals

**Objective**

Control measures are needed for early detection of potential new releases and preventing offsite migration of contamination consistent with Shell OP US (SOP US) and Motiva Enterprises LLC HSE Standard 325 Revised 12/02 (Standard 325). Control measures may include:

- Groundwater monitoring wells along downgradient property boundary with routine sampling
- Groundwater monitoring wells along upgradient and sidegradient property boundaries (where potential exists for offsite sources) with routine sampling
- Routine visual inspections of aboveground pipelines and connections
- Routine monitoring of interstitial area with double bottom aboveground tanks

This document provides information regarding a specific plan to comply with Standard 325 including roles and responsibilities for terminal personnel and SOP US Environmental Engineers (EEs). The SOP US EE and the appropriate terminal personnel should identify and note which of the following mechanisms will be utilized to comply with Standard 325. A copy of the plan will be maintained at the terminal in a binder referred to as the "Perimeter Monitoring binder".

## I Groundwater Gauging and Analytical Sampling

a) Identify Designated Monitoring Wells

- Designated monitoring wells – the first step is to select monitoring wells that will be included in the sampling plan and list them. The selection will be based on proximity to downgradient property boundary or offsite sources of contamination.
- Note any new monitoring wells that have to be installed.
- Establish Perimeter Monitoring binder with well completion reports and well construction diagrams, if available.

b) Groundwater Gauging and Analytical Sampling Frequency

- Document groundwater gauging frequency of designated monitoring wells. Gauging activities should be conducted on a quarterly basis, unless an alternate schedule is selected based on site-specific conditions. If an alternate schedule is selected, the rationale should be documented in the terminal files and noted in the sampling plan. The basis for an alternate schedule might include regulatory requirements, geologic conditions, facility design, or operational practices. Groundwater gauging should be coordinated by the EE if there is an open environmental incident. Groundwater gauging should be



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conducted by terminal personnel if there is not an open environmental incident. Note who will perform the gauging.

- Document groundwater analytical sampling frequency of designated monitoring wells. Sampling activities should be conducted on an annual basis unless an alternate schedule is selected based on site specific conditions. If an alternate schedule is selected, then the rationale should be documented in the terminal files and noted in the sampling plan. The basis for an alternate schedule might include regulatory requirements, geologic conditions, facility design, or operational practices. Groundwater analytical sampling should be coordinated by the EE if there is an open environmental incident. If there isn't an open environmental incident, groundwater analytical sampling should be coordinated by the EE or by terminal personnel. Note who will perform the groundwater analytical sampling.

c) Groundwater Gauging Methods

- Proposed method is clear plastic disposable bailer. The disposable bailer will be used to extract a sample of water from each well. Visually observe whether product is present in the bailer and record observation. Enter results on the attached excel spreadsheet entitled Groundwater Gauging Data. Water sample should be released back down the well and the bailer re-used if free product is not detected. Bailer should be rinsed off in a bucket with Alconox (or similar) soap and water after gauging each well.

d) Groundwater Analytical Sampling Methods

- Document sampling protocol to be used, i.e., purge or no-purge, specific or non-specific sample collection protocol. No-purge sampling will be used to collect groundwater samples for lab analysis unless regulatory requirements dictate sampling procedures. Additionally, it will not be necessary to follow any particular sample collection protocol if terminal personnel are collecting samples solely for the purpose of compliance with Standard 325. In this case, the bailer will be lowered into the well, the bailer will be allowed to fill with water, the bailer will be removed from well and water from the bailer will be used to fill VOA jars. Filled VOA jars should be completely filled with water. Ensure that VOA jars do not have air bubbles by gently turning jar upside down and looking for bubbles.

  Chemicals to be analyzed include BTEX and MTBE. Ethanol should be included if ethanol is stored at the terminal. If an alternate set of parameters is selected, then the rationale should be documented in the terminal files and noted in the sampling plan. The basis for an alternate schedule might include regulatory requirements, geologic conditions, facility design, or operational practices.

  - If groundwater analytical sampling is being coordinated by the EE and there is an active incident number, results should be entered into the Groundwater Analytical and Gauging Data spreadsheet included within the terminal site summary documents. The site summary documents are sent to the terminal personnel on a regular basis. Terminal personnel should



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save these files electronically as well as print out a hard copy and insert into the Perimeter Monitoring binder.

- If terminal personnel are conducting groundwater gauging, results should be entered into the Groundwater Gauging Data spreadsheet and filed electronically as well as hard copy into the Perimeter Monitoring binder. See attached excel spreadsheets.
- If terminal personnel are conducting groundwater analytical sampling, results should be sent to the EE. The EE will then be responsible for entering the data in the Groundwater Analytical and Gauging Data spreadsheet and reviewing for comparison to background and action levels.
- Occasionally a well is sampled and it is observed to be dry. If this condition is encountered, please follow these steps:

  1) Measure the total depth of the well and compare this depth to the construction depth. If the measured depth is shallower than the constructed depth, there may be an obstacle in the well that is preventing measurement of the water table. The obstacle may be a tool, pump, silt or mechanical failure of the well. Call the EE.
  2) If the measured depth and well construction depth is the same, then the water table has probably fallen below the bottom of the well screen. Call the EE.

## II Monitoring of Double Bottom Tanks

a) Monitoring Frequency

- Document inspection frequency of the double bottom tank area and/or interstitial monitoring devices.
- Monitoring frequency should be conducted in accordance with the inspection requirements listed in the operational plan for the terminal. If an alternate schedule is selected the rationale should be documented in the terminal files and noted in the sampling plan for the terminal. The basis for an alternate schedule might include regulatory requirements, geologic conditions, facility design, or operational practices.

b) Monitoring Method

- The inspection should be done by terminal personnel and should check for the presence of product or staining. If the double bottom tanks are equipped with interstitial monitoring devices, these should be checked for the presence of liquid (water or product).

## III Monitoring of Product Piping

a) Monitoring Frequency

- Document inspection frequency of the product piping.



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- Frequency should be conducted in accordance with the inspection requirements listed in the operational plan for the terminal. If an alternate schedule is selected, the rationale should be documented in the terminal files and noted in the sampling plan for the terminal. The basis for an alternate schedule might include regulatory requirements, geologic conditions, facility design, or operational practices. No additional inspection or testing is required for buried lines if downgradient groundwater monitoring wells are strategically located to detect potential releases from the system.

b) Monitoring Method

- Terminal personnel should conduct the inspection and check for the presence of product or staining.

## IV Database

A database should be established for each facility. The database should be in Excel format. A spreadsheet template is attached.

a) Well gauging and sampling will be documented in the spreadsheet to record data measured in the field from each designated well. If there is an active environmental incident, the EE will provide the terminal manager with analytical and gauging data through submittal of the terminal site summary document. The site summary document contains an excel spreadsheet dedicated to perimeter monitoring analytical and gauging data entitled Groundwater Analytical and Gauging Data. If there is not an active incident, and terminal personnel are available to help conduct gauging events, the data should be documented in the Perimeter Monitoring Gauging data spreadsheet included as an attachment.

b) Monitoring activities for double bottoms will be documented in the terminal operating records as described in their procedures. If records are maintained in an alternate location, then the sampling plan should indicate location for the records.

c) Monitoring activities for product pipelines will be documented in the terminal operating records as described in their procedures. If records are maintained in an alternate location, then the sampling plan should indicate location for the records.

## V Action (Trigger) Levels

Action levels need to be established in order for the terminal personnel to know when to make notification that a potential release may have occurred. Background levels have to be established for each well and documented in the database. Adequate historical data may already exist so background levels can be established. If this data does not exist, then four quarters of gauging and a groundwater analytical



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sampling event should be conducted in order to establish background levels. The EE will assist in establishing background concentrations and the action level for each well.

a) For groundwater analytical sampling events, the following gauging and analytical results will require action:

1. Presence of free product in wells that have not had product before.
2. Increase (such as 50% increase to allow for slight changes due to groundwater fluctuations) in product thickness in wells that product has been present historically. A significant change in color, viscosity, etc should also be considered an actionable item.
3. Increase in groundwater dissolved concentrations above either the action levels established in the sampling plan and soil and groundwater risk assessment or more than 50% increase of the background average for that well.

b) For Groundwater gauging events, the following results will require action:

1. Presence of free product in wells that have not had product before.
2. Change in appearance (color, viscosity, etc.) of free product in wells that have had product historically. If there is any question as to whether a change has occurred, notify per section d) below.

c) For Monitoring of Double Bottom Tanks and Monitoring of Piping, the following will require action:

1. Presence of liquid (water or product) in the interstitial pipe.
2. Presence of product or staining in or around piping, tanks, or loading rack area.

d) Notification

1. If any of the conditions in (V(a), (b) and (c)) above, are encountered, the terminal manager, EE, and Motiva Compliance Coordinator should be notified immediately for further evaluation.

## VI Equipment Requirements

The EE and terminal manager should evaluate the need for any equipment to be secured. Some potential items that may be required are as follows:

Interface Probe for Well Depth monitoring
Organic Vapor Analyzer (OVA) for headspace monitoring
36-inch clear plastic bailer
Decontamination fluid and bucket
Tape measure with weighted end



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## VII Expense Handling

- If there is an active environmental incident and the requirements to comply with the monitoring program are already being met or the additional work is minimal, then the expense will be charged to the environmental incident.
- If there is not an active environmental incident or the requirements to comply with the monitoring program is significantly[1] greater than what was required for management of the environmental incident, then the increased expense will be charged to terminal expense.

Terminal Manager and EE should sign and date this document and maintain at the terminal facility for periodic review.

[1] By way of example, if the terminal monitoring program requires the installation of additional wells for compliance they will be charged to expense.



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## SOP US/Motiva CM&D – Brooklyn Terminal
## Groundwater Monitoring Plan

This plan provides for early detection of potential new releases and preventing offsite migration of constituents consistent with Shell OP US (SOP US) and Motiva Enterprises LLC HSE Standard 325 Revised 12/02 (Standard 325).

Control measures may include:

**Groundwater Monitoring**

| Method | List Wells# | Frequency | Parameters | Action Level | Methods | Recordkeeping |
|---|---|---|---|---|---|---|
| Visual Monitoring | MW-3, 27, 7, 8, 9, 21, 22, 13, 24 | Quarterly | Product or Sheen on water | - Product or Sheen in Well<br>- Increase in thickness overtime | Electronic interface probe | Spreadsheet |
| Analytical Monitoring | MW-3, 27, 7, 8, 9, 21, 22, 13, 24 | Annual | - BTEX<br>- MTBE<br>- Ethanol<br>- TPH | - BTEX at MCL<br>*<br>- MTBE at MCL | No purge | Spreadsheet |

\# Attach plat plan/map with location of monitoring wells selected for release detection monitoring.
* Note: Action levels are consistent with values listed in the Site Risk Assessment.

Observations and analytical Results go to the terminal manager who gets the data entered into the terminal spreadsheet (Excel format). The terminal will maintain the master spreadsheet with a copy being kept by the SOP US EE who supports the terminal.

**Monitoring of Double Bottom Tanks**

| List Tanks | Responsibility | Frequency | Method | Action Level | Recordkeeping |
|---|---|---|---|---|---|
| None | | | | | |

**Monitoring of Product Piping**

| Piping | Responsibility | Frequency | Method | Action level | Recordkeeping |
|---|---|---|---|---|---|
| Above ground | Terminal personnel | Each Shift | Visual | - Product or staining in or around piping, tanks, or loading rack area. | Operating Records |
| Below ground | None | | | | |

If any of the conditions above action levels, the terminal manager, SOP US EE, and the Motiva Compliance Coordinator should be notified immediately for further evaluation.

Terminal Manager — Date: 5/2/05

SOP US Environmental Engineer — Date: 5/2/05

# HSE Standard 325
## Perimeter Monitoring Plan
### Perimeter Well Groundwater Monitoring Summary
### Motiva Enterprises, LLC- Brooklyn, NY Terminal
### Updated Through 1st Quarter 2011

| Perimeter MW ID | Date | Depth of Well (ft) | Depth to Product (ft) | Depth to Water | Product Thickness | New Product* | Product Increase >50% | Benzene (ppb) | | | MTBE (ppb) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Background or Action Level | Actual | Action Level Triggered | Background or Action Level | Actual | Action Level Triggered |
| 1 | 5/12/08 | 13.75 | | 3.10 | | | | 0.70 | <1.0 | no | 10.00 | <1.0 | no |
| 1 | 4/15/10 | 13.75 | | 2.90 | | | | 0.70 | <5.0 | no | 10.00 | <5.0 | no |
| 1 | 6/21/10 | 13.75 | | 3.10 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 1 | 7/2/10 | 13.75 | | 2.49 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 1 | 8/13/10 | 13.75 | | 3.70 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 1 | 9/1/10 | 13.75 | | 3.32 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 1 | 10/8/10 | 13.75 | | 3.26 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 1 | 11/23/10 | 13.75 | | 3.53 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 1 | 1/3/11 | 13.75 | | 3.38 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 1 | 1/25/11 | 13.75 | | 3.34 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 1 | 2/4/11 | 13.75 | | NG | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 1 | 3/26/11 | 13.75 | | 2.82 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| | | | | | | | | | | | | | |
| 3 | 5/12/08 | 13.75 | | 2.70 | | | | 0.70 | <1.0 | no | 10.00 | <1.0 | no |
| 3 | 5/6/09 | 13.75 | | 2.59 | | | | 0.70 | <1.0 | no | 10.00 | <1.0 | no |
| 3 | 4/15/10 | 13.75 | | 2.53 | | | | 0.70 | <5.0 | no | 10.00 | <5.0 | no |
| 3 | 7/2/10 | 13.75 | | 3.08 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 3 | 8/13/10 | 13.75 | | 3.36 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 3 | 9/1/10 | 13.75 | | 3.01 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 3 | 10/8/10 | 13.75 | | 2.78 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 3 | 11/23/10 | 13.75 | | 3.16 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 3 | 1/3/11 | 13.75 | | NG | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 3 | 1/25/11 | 13.75 | | NG | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 3 | 2/4/11 | 13.75 | | NG | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 3 | 3/26/11 | 13.75 | | 2.22 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| | | | | | | | | | | | | | |
| 6 | 5/12/08 | 12.75 | | 2.80 | | | | 0.70 | <1.0 | no | 10.00 | <1.0 | no |
| 6 | 5/6/09 | 12.75 | | 3.06 | | | | 0.70 | <1.0 | no | 10.00 | <1.0 | no |
| 6 | 4/15/10 | 12.75 | | 5.08 | | | | 0.70 | <5.0 | no | 10.00 | <5.0 | no |
| 6 | 7/2/10 | 12.75 | | 6.93 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 6 | 8/13/10 | 12.75 | | 3.87 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 6 | 9/1/10 | 12.75 | | 5.28 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 6 | 10/8/10 | 12.75 | | 3.30 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 6 | 11/23/10 | 12.75 | | 3.33 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 6 | 1/3/11 | 12.75 | | 3.25 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 6 | 1/25/11 | 12.75 | | 6.21 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 6 | 2/4/11 | 12.75 | | NG | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 6 | 3/26/11 | 12.75 | | 4.25 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| | | | | | | | | | | | | | |
| 7R | 4/15/10 | 12.34 | | 5.80 | | | | 0.70 | 16.9 | yes | 10.00 | 31.5 | yes |
| 7R | 6/21/10 | 12.34 | | 5.92 | | | | 16.90 | NS | NS | 31.50 | NS | NS |
| 7R | 7/2/10 | 12.34 | | 6.15 | | | | 16.90 | NS | NS | 31.50 | NS | NS |
| 7R | 7/27/10 | 12.34 | | 5.97 | | | | 16.90 | <5.0 | no | 31.50 | 25.6 | no |
| 7R | 8/13/10 | 12.34 | | 4.04 | | | | 8.45 | NS | NS | 28.55 | NS | NS |
| 7R | 9/1/10 | 12.34 | | 5.78 | | | | 8.45 | NS | NS | 28.55 | NS | NS |
| 7R | 10/8/10 | 12.34 | | 2.35 | | | | 8.45 | <5.0 | no | 28.55 | 36.9 | no |
| 7R | 11/23/10 | 12.34 | | 3.94 | | | | 5.63 | NS | NS | 31.33 | NS | NS |
| 7R | 1/3/11 | 12.34 | | 4.02 | | | | 5.63 | NS | NS | 31.33 | NS | NS |
| 7R | 1/25/11 | 12.34 | | 6.62 | | | | 5.63 | 2.4 | no | 31.33 | 39.2 | no |
| 7R | 2/4/11 | 12.34 | | NG | | | | 4.83 | NS | NS | 33.30 | NS | NS |
| 7R | 3/26/11 | 12.34 | | 5.38 | | | | 4.83 | NS | NS | 33.30 | NS | NS |
| | | | | | | | | | | | | | |
| 8 | 5/12/08 | 8.11 | | 4.63 | | | | 0.70 | <1.0 | no | 10.00 | 6.20 | no |
| 8 | 5/15/09 | 8.11 | | 5.62 | | | | 0.80 | 2.40 | yes | 10.00 | 6.60 | no |
| 8 | 4/15/10 | 8.11 | | 6.48 | | | | 11.83 | 44.9 | yes | 13.85 | 37.6 | yes |
| 8 | 7/27/10 | 8.11 | | 6.64 | | | | 14.32 | 24.3 | yes | 18.98 | 39.5 | yes |
| 8 | 8/13/10 | 8.11 | | 4.82 | | | | 17.90 | NS | NS | 22.48 | NS | NS |
| 8 | 9/1/10 | 8.11 | | 6.44 | | | | 17.90 | NS | NS | 22.48 | NS | NS |
| 8 | 10/8/10 | 8.11 | | 3.03 | | | | 17.90 | <5.0 | no | 22.48 | 21.8 | no |
| 8 | 11/23/10 | 8.11 | | 4.75 | | | | 14.32 | NS | NS | 22.34 | NS | NS |
| 8 | 1/3/11 | 8.11 | | 4.89 | | | | 14.32 | NS | NS | 22.34 | NS | NS |
| 8 | 1/25/11 | 8.11 | | 6.73 | | | | 14.32 | <1.0 | no | 22.34 | 22.50 | no |
| 8 | 2/4/11 | 8.11 | | NG | | | | 11.93 | NS | NS | 22.37 | NS | NS |
| 8 | 3/26/11 | 8.11 | | 5.81 | | | | 11.93 | NS | NS | 22.37 | NS | NS |
| | | | | | | | | | | | | | |
| 9 | 5/12/08 | 7.83 | | 4.40 | | | | 0.70 | <1.0 | no | 10.00 | <1.0 | no |
| 9 | 5/15/09 | 7.83 | | 5.63 | | | | 0.70 | <1.0 | no | 10.00 | 4.70 | no |
| 9 | 4/15/10 | 7.83 | | 6.46 | | | | 3.13 | 12.5 | yes | 10.00 | 15.2 | yes |
| 9 | 7/27/10 | 7.83 | | 6.59 | | | | 3.13 | <5.0 | no | 10.00 | <5.0 | no |
| 9 | 8/13/10 | 7.83 | | 4.79 | | | | 3.13 | NS | NS | 10.00 | NS | NS |
| 9 | 9/1/10 | 7.83 | | 6.41 | | | | 3.13 | NS | NS | 10.00 | NS | NS |
| 9 | 10/8/10 | 7.83 | | 2.94 | | | | 3.13 | <5.0 | no | 10.00 | 7.30 | no |
| 9 | 11/23/10 | 7.83 | | 4.72 | | | | 2.50 | NS | NS | 10.00 | NS | NS |
| 9 | 1/3/11 | 7.83 | | 4.83 | | | | 2.50 | NS | NS | 10.00 | NS | NS |
| 9 | 1/25/11 | 7.83 | | 6.68 | | | | 2.50 | <1.0 | no | 10.00 | 1.60 | no |
| 9 | 2/4/11 | 7.83 | | NG | | | | 2.08 | NS | NS | 10.00 | NS | NS |
| 9 | 3/26/11 | 7.83 | | 5.78 | | | | 2.08 | NS | NS | 10.00 | NS | NS |



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# HSE Standard 325
## Perimeter Monitoring Plan
### Perimeter Well Groundwater Monitoring Summary
### Motiva Enterprises, LLC- Brooklyn, NY Terminal
### Updated Through 1st Quarter 2011

| Perimeter MW ID | Date | Depth of Well (ft) | Depth to Product (ft) | Depth to Water | Product Thickness | New Product* | Product Increase >50% | Benzene (ppb) | | | MTBE (ppb) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Background or Action Level | Actual | Action Level Triggered | Background or Action Level | Actual | Action Level Triggered |
| 13 | 5/12/08 | 14.12 | | 6.75 | | | | 0.70 | <1.0 | no | 10.00 | <1.0 | no |
| 13 | 5/6/09 | 14.12 | | 6.59 | | | | 0.70 | <1.0 | no | 10.00 | <1.0 | no |
| 13 | 4/15/10 | 14.12 | | 7.37 | | | | 0.70 | <5.0 | no | 10.00 | <5.0 | no |
| 13 | 7/2/10 | 14.12 | | 7.61 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 13 | 8/13/10 | 14.12 | | 7.17 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 13 | 9/1/10 | 14.12 | | 7.28 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 13 | 10/8/10 | 14.12 | | 7.21 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 13 | 11/23/10 | 14.12 | | 7.38 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 13 | 1/3/11 | 14.12 | | 7.09 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 13 | 1/25/11 | 14.12 | | 7.23 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 13 | 2/4/11 | 14.12 | | 7.14 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 13 | 3/26/11 | 14.12 | | 7.04 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| | | | | | | | | | | | | | |
| 14 | 5/12/08 | 14.13 | | 6.00 | | | | 0.70 | <1.0 | no | 10.00 | <1.0 | no |
| 14 | 5/6/09 | 14.13 | | 6.62 | | | | 0.70 | <1.0 | no | 10.00 | <1.0 | no |
| 14 | 4/15/10 | 14.13 | | 6.55 | | | | 0.70 | <5.0 | no | 10.00 | <5.0 | no |
| 14 | 7/2/10 | 14.13 | | 6.82 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 14 | 8/13/10 | 14.13 | | 6.86 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 14 | 9/1/10 | 14.13 | | 6.22 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 14 | 10/8/10 | 14.13 | | 6.05 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 14 | 11/23/10 | 14.13 | | 6.63 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 14 | 1/3/11 | 14.13 | | 6.06 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 14 | 1/25/11 | 14.13 | | 6.24 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 14 | 2/4/11 | 14.13 | | 6.03 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 14 | 3/26/11 | 14.13 | | 5.86 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| | | | | | | | | | | | | | |
| 21R | 4/15/10 | 12.13 | | 3.95 | | | | 0.70 | 139 | yes | 10.00 | <5.0 | no |
| 21R | 6/21/10 | 12.13 | | 3.86 | | | | 139.00 | NS | NS | 10.00 | NS | NS |
| 21R | 7/2/10 | 12.13 | | 3.99 | | | | 139.00 | NS | NS | 10.00 | NS | NS |
| 21R | 7/27/10 | 12.13 | | 3.95 | | | | 139.00 | 160 | no | 10.00 | 14.2 | no |
| 21R | 8/13/10 | 12.13 | | 3.70 | | | | 149.50 | NS | NS | 10.00 | NS | NS |
| 21R | 9/1/10 | 12.13 | | 3.93 | | | | 149.50 | NS | NS | 10.00 | NS | NS |
| 21R | 10/8/10 | 12.13 | | 3.54 | | | | 149.50 | 239 | yes | 10.00 | 28.4 | yes |
| 21R | 11/23/10 | 12.13 | | 4.02 | | | | 179.33 | NS | NS | 14.20 | NS | NS |
| 21R | 1/3/11 | 12.13 | | 3.57 | | | | 179.33 | NS | NS | 14.20 | NS | NS |
| 21R | 1/25/11 | 12.13 | | 3.97 | | | | 179.33 | 292 | yes | 14.20 | 24.6 | yes |
| 21R | 2/4/11 | 12.13 | | 3.73 | | | | 208.00 | NS | NS | 16.80 | NS | NS |
| 21R | 3/26/11 | 12.13 | | 3.66 | | | | 208.00 | NS | NS | 16.80 | NS | NS |
| | | | | | | | | | | | | | |
| 22R | 4/15/10 | 8.55 | | 4.06 | | | | 0.70 | 386 | yes | 10.00 | 42.8 | yes |
| 22R | 6/21/10 | 8.55 | | 3.84 | | | | 386.00 | NS | NS | 42.80 | NS | NS |
| 22R | 7/2/10 | 8.55 | | 4.17 | | | | 386.00 | NS | NS | 42.80 | NS | NS |
| 22R | 7/27/10 | 8.55 | | 3.94 | | | | 386.00 | 337 | no | 42.80 | 31.4 | no |
| 22R | 8/13/10 | 8.55 | | 3.50 | | | | 361.50 | NS | NS | 37.10 | NS | NS |
| 22R | 9/1/10 | 8.55 | | 3.98 | | | | 361.50 | NS | NS | 37.10 | NS | NS |
| 22R | 10/8/10 | 8.55 | | 3.11 | | | | 361.50 | 193 | no | 37.10 | 25.2 | no |
| 22R | 11/23/10 | 8.55 | | 3.88 | | | | 305.33 | NS | NS | 33.13 | NS | NS |
| 22R | 1/3/11 | 8.55 | | 3.44 | | | | 305.33 | NS | NS | 33.13 | NS | NS |
| 22R | 1/25/11 | 8.55 | | 4.00 | | | | 305.33 | 483 | yes | 33.13 | 57.2 | yes |
| 22R | 2/4/11 | 8.55 | | 3.69 | | | | 350.00 | NS | NS | 39.20 | NS | NS |
| 22R | 3/26/11 | 8.55 | | 3.72 | | | | 350.00 | NS | NS | 39.20 | NS | NS |
| | | | | | | | | | | | | | |
| 23 | 5/12/08 | 14.75 | | 3.73 | | | | 0.70 | <1.0 | no | 10.00 | 2.70 | no |
| 23 | 4/15/10 | 14.75 | | 3.98 | | | | 0.70 | <5.0 | no | 10.00 | <5.0 | no |
| 23 | 6/21/10 | 14.75 | | 4.13 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 23 | 7/2/10 | 14.75 | | 4.33 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 23 | 8/13/10 | 14.75 | | 4.50 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 23 | 9/1/10 | 14.75 | | 3.84 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 23 | 10/8/10 | 14.75 | | 3.69 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 23 | 11/23/10 | 14.75 | | 4.27 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 23 | 1/3/11 | 14.75 | | 3.91 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 23 | 1/25/11 | 14.75 | | 3.82 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 23 | 2/4/11 | 14.75 | | 3.59 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 23 | 3/26/11 | 14.75 | | 3.46 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| | | | | | | | | | | | | | |
| 24 | 5/12/08 | 14.75 | | 3.80 | | | | 21.50 | 144 | yes | 82.50 | 621 | yes |
| 24 | 5/6/09 | 14.75 | | 4.43 | | | | 86.00 | 11.3 | yes | 263.00 | 37.1 | yes |
| 24 | 4/15/10 | 14.75 | | 3.82 | | | | 51.77 | <5.0 | no | 221.58 | 6.63 | no |
| 24 | 7/2/10 | 14.75 | | 4.18 | | | | 51.77 | NS | NS | 221.58 | NS | NS |
| 24 | 8/13/10 | 14.75 | | 4.38 | | | | 51.77 | NS | NS | 221.58 | NS | NS |
| 24 | 9/1/10 | 14.75 | | 3.82 | | | | 51.77 | NS | NS | 221.58 | NS | NS |
| 24 | 10/8/10 | 14.75 | | 3.65 | | | | 51.77 | NS | NS | 221.58 | NS | NS |
| 24 | 11/23/10 | 14.75 | | 4.19 | | | | 51.77 | NS | NS | 221.58 | NS | NS |
| 24 | 1/3/11 | 14.75 | | 3.86 | | | | 51.77 | NS | NS | 221.58 | NS | NS |
| 24 | 1/25/11 | 14.75 | | 3.75 | | | | 51.77 | NS | NS | 221.58 | NS | NS |
| 24 | 2/4/11 | 14.75 | | 3.54 | | | | 51.77 | NS | NS | 221.58 | NS | NS |
| 24 | 3/26/11 | 14.75 | | 3.36 | | | | 51.77 | NS | NS | 221.58 | NS | NS |
| | | | | | | | | | | | | | |



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# HSE Standard 325
## Perimeter Monitoring Plan
### Perimeter Well Groundwater Monitoring Summary
### Motiva Enterprises, LLC- Brooklyn, NY Terminal
### Updated Through 1st Quarter 2011

| Perimeter MW ID | Date | Depth of Well (ft) | Depth to Product (ft) | Depth to Water | Product Thickness | New Product* | Product Increase >50% | Benzene (ppb) | | | MTBE (ppb) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Background or Action Level | Actual | Action Level Triggered | Background or Action Level | Actual | Action Level Triggered |
| 28 | 5/12/08 | 10.93 | | 1.65 | | | | 0.70 | <1.0 | no | 10.00 | 6.40 | no |
| 28 | 4/29/09 | 10.93 | | 1.95 | | | | 0.70 | <1.0 | no | 10.00 | 3.90 | no |
| 28 | 4/15/10 | 10.93 | | 1.43 | | | | 0.70 | <5.0 | no | 10.00 | <5.0 | no |
| 28 | 7/2/10 | 10.93 | | 1.85 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 28 | 8/13/10 | 10.93 | | 2.11 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 28 | 9/1/10 | 10.93 | | 1.79 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 28 | 10/8/10 | 10.93 | | 1.67 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 28 | 11/23/10 | 10.93 | | 1.95 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 28 | 1/3/11 | 10.93 | | 1.93 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 28 | 1/25/11 | 10.93 | | 1.89 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 28 | 2/4/11 | 10.93 | | NG | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 28 | 3/26/11 | 10.93 | | 1.14 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| | | | | | | | | | | | | | |
| 42 | 4/15/10 | 12.53 | | 3.54 | | | | 0.70 | <5.0 | no | 10.00 | <5.0 | no |
| 42 | 5/3/10 | 12.53 | | 3.45 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 42 | 6/21/10 | 12.53 | | 3.91 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 42 | 7/2/10 | 12.53 | | 4.03 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 42 | 8/13/10 | 12.53 | | 4.23 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 42 | 9/1/10 | 12.53 | | 3.69 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 42 | 10/8/10 | 12.53 | | 3.45 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 42 | 11/23/10 | 12.53 | | 4.03 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 42 | 1/3/11 | 12.53 | | 3.71 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 42 | 1/25/11 | 12.53 | | 3.54 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 42 | 2/4/11 | 12.53 | | NG | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 42 | 3/26/11 | 12.53 | | 3.07 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| | | | | | | | | | | | | | |
| 43 | 4/15/10 | 12.61 | | 3.47 | | | | 0.70 | <5.0 | no | 17.50 | 17.50 | no |
| 43 | 5/3/10 | 12.61 | | 3.41 | | | | 0.70 | NS | NS | 17.50 | NS | NS |
| 43 | 6/21/10 | 12.61 | | 3.74 | | | | 0.70 | NS | NS | 17.50 | NS | NS |
| 43 | 7/2/10 | 12.61 | | 3.91 | | | | 0.70 | NS | NS | 17.50 | NS | NS |
| 43 | 8/13/10 | 12.61 | | 4.11 | | | | 0.70 | NS | NS | 17.50 | NS | NS |
| 43 | 9/1/10 | 12.61 | | 3.56 | | | | 0.70 | NS | NS | 17.50 | NS | NS |
| 43 | 10/8/10 | 12.61 | | 3.38 | | | | 0.70 | NS | NS | 17.50 | NS | NS |
| 43 | 11/23/10 | 12.61 | | 3.94 | | | | 0.70 | NS | NS | 17.50 | NS | NS |
| 43 | 1/3/11 | 12.61 | | 3.63 | | | | 0.70 | NS | NS | 17.50 | NS | NS |
| 43 | 1/25/11 | 12.61 | | 3.48 | | | | 0.70 | NS | NS | 17.50 | NS | NS |
| 43 | 2/4/11 | 12.61 | | 3.28 | | | | 0.70 | NS | NS | 17.50 | NS | NS |
| 43 | 3/26/11 | 12.61 | | 3.10 | | | | 0.70 | NS | NS | 17.50 | NS | NS |
| | | | | | | | | | | | | | |
| 44 | 4/15/10 | 12.44 | | 3.58 | | | | 0.70 | <5.0 | no | 10.00 | <5.0 | no |
| 44 | 5/3/10 | 12.44 | | 3.37 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 44 | 6/21/10 | 12.44 | | 3.68 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 44 | 7/2/10 | 12.44 | | 3.85 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 44 | 8/13/10 | 12.44 | | 4.04 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 44 | 9/1/10 | 12.44 | | 3.50 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 44 | 10/8/10 | 12.44 | | 3.32 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 44 | 11/23/10 | 12.44 | | 3.89 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 44 | 1/3/11 | 12.44 | | 3.60 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 44 | 1/25/11 | 12.44 | | 3.43 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 44 | 2/4/11 | 12.44 | | NG | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 44 | 3/26/11 | 12.44 | | 3.04 | | | | 0.70 | NS | NS | 10.00 | NS | NS |

NB1: All measurements in feet

NB2: Immediate notification is to be made to the terminal manager, EE, and Motiva Compliance Coordinator in the event new product is detected, a 50% increase in product is noted, or dissolved concentration levels are greater than 50% of established background levels.

*New product in a well where product has not been observed before OR new product indicated by a major change in color, viscosity, etc.

NM = Not Measured

NS = Not Sampled



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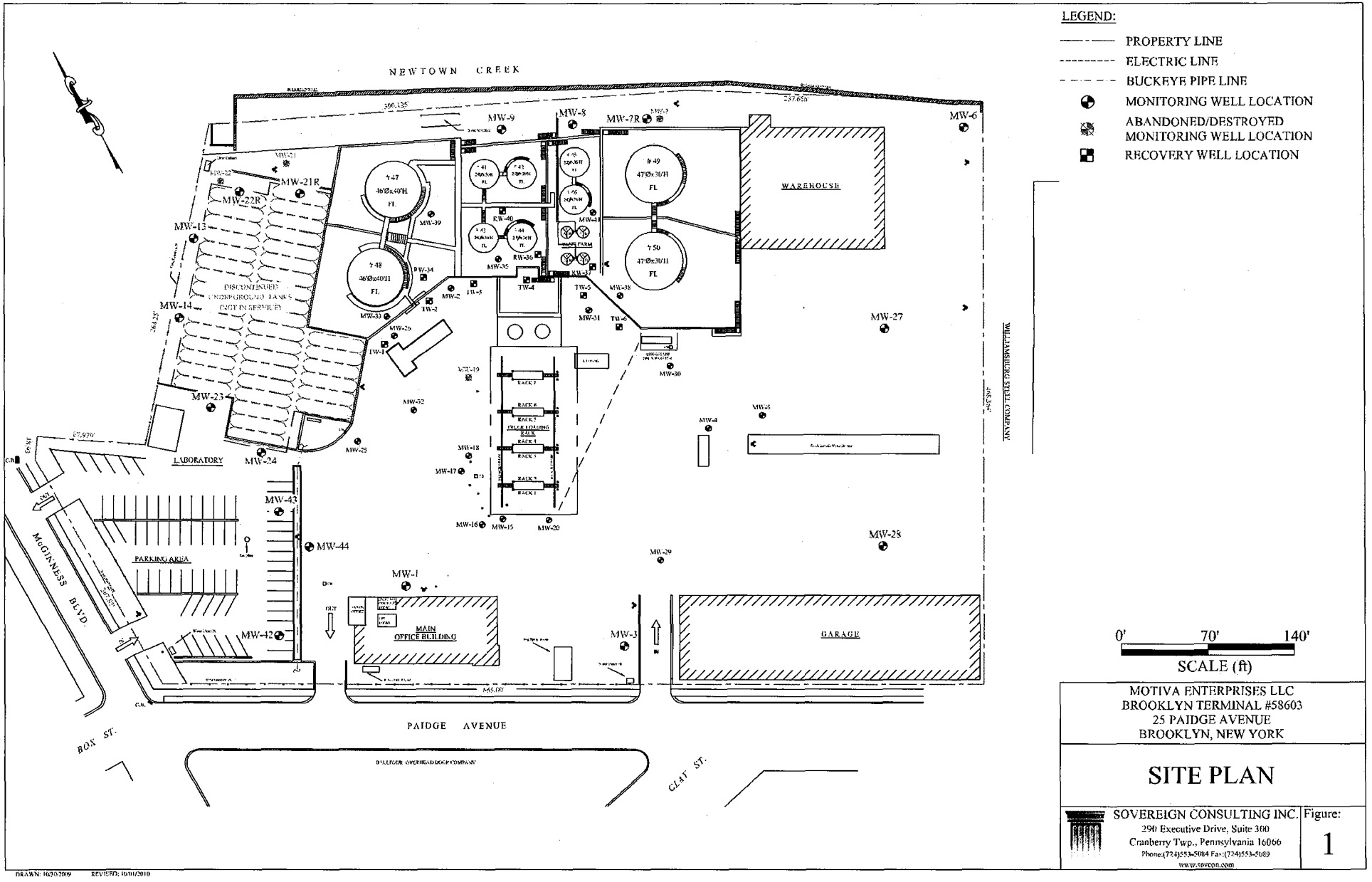


DRAWN: 10/30/2009 REVISED: 10/01/2010

MOTIVA ENTERPRISES LLC
BROOKLYN TERMINAL #58603
25 PAIDGE AVENUE
BROOKLYN, NEW YORK

# SITE PLAN

SOVEREIGN CONSULTING INC.
290 Executive Drive, Suite 300
Cranberry Twp., Pennsylvania 16066
Phone:(724)553-5084 Fax:(724)553-5089
www.sovcon.com

Figure: 1

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# DOCUMENT INFO

15

DocID: 00000436

Filename: 58603-2011-04-29-SA-01 (Non-Intrusive UST Investigation -SCI).pdf

April 29, 2011

Mr. Douglas Weimer
Senior Project Manager
Environmental Services Shell OPUS
4094 Majestic Lane PMB 224
Fairfax, VA 22033

Re: Non-Intrusive Underground Storage Tank Investigation
Motiva Enterprises, LLC - Brooklyn Terminal
25 Paidge Avenue
Brooklyn, New York

Dear Mr. Weimer:

Sovereign Consulting, Inc. (Sovereign) is pleased to present this letter report evaluating the closed underground storage tank farm (UST farm) at the Motiva Enterprises, LLC – Brooklyn Terminal located at 25 Paidge Avenue, Brooklyn, New York 11222 location as seen in ***Figure 1*** (site). The field investigation occurred April 6 and 7, 2011 at the site.

***Facility Description***
The site is an active bulk fuel distribution facility containing above ground storage tank farm, truck loading rack, bulk underground delivery via pipeline, dock facilities, office building, garage, warehouse, parking areas and closed UST farm as illustrated in ***Figure 2***. The area of investigation is located in the northwestern corner of the facility.

***UST Farm***
As seen in the illustration of the UST farm in ***Figure*** 2 (based on drawing *4844-C1* dated October 5, 2009 by Motiva Enterprises, LLC) there are forty closed USTs with an estimated capacity of 30,000-gallons, reportedly closed in place with either sand or concrete. There is no available documentation of either closure or removal of the USTs in question.

***Geophysical Investigation***
Sovereign contracted with URS Corporation (URS) who completed a Geophysical Investigation utilizing Ground Penetrating Radar (GPR), Electromagnetic Surveying (EMS) and utility line tracing on April 6 and 7, 2011. The Geophysical Investigation Report prepared by URS is located in ***Appendix A***.

***Aerial Photograph Review***
Sovereign obtained Historical Aerial Photographs from Environmental Data Resources, Inc. to evaluate photographically documented site changes over time. The report contains aerial photographs from 1954, 1966, 1975, 1984, 1994 and 2006 of the site. The report is included as ***Appendix B***; a summary of each photograph follows:

- 1954- Present in the photograph is the warehouse, garage and loading rack. The AST tank farm, surrounded by a concrete dike, contains Tanks 41through 46 and the four small additive tanks south of Tank 46. The UST farm contains no structures, has a mottled appearance and appears to be unimproved land. There are three buildings present that



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have since been demolished, a warehouse in the southwest corner, a building immediately to the east of the warehouse along Paidge Avenue and a building to the east of the loading rack and south of the warehouse. Primary entrance and egress to the property appears to be from McGinnis Boulevard along the western property border. Offsite the Pulaski Bridge is under construction to the west, exiting buildings are present across Paidge Avenue and in the adjoining property to the east. Newtown Creek is a navigable waterway with a ship maneuvering in the channel north of the site.

- 1966- The warehouse in the southwest corner and building along Paidge Avenue has been demolished replaced by a parking lot and the current main office building, respectively. The building east of the loading rack has also been demolished and restored as a paved parking area. The current fire suppression building has been constructed. There are changes in the loading rack with respect to length, width and roofing material. The Tank Farm contains the prior ten ASTs with the addition of Tanks 47 and 48, surrounded by a concrete dike. Primary site entrance and egress is now in the current configuration. The UST farm contains no structures and appears to be uniform in appearance indicating some manner of improvement or grading. Offsite the Pulaski Bridge is complete and there are no significant changes in the adjacent properties. Of note is the backfill of the side channel, construction of the settling and aeration tanks at the new wastewater treatment facility south east of the site.
- 1975- The improvement in optics permits more definition within the photograph. There again have been are changes in the loading rack with respect to length, width and roofing material. The loading rack also has a visible border in the paving indicating either drainage or storm water diversion infrastructure. Primary site entrance and exit have improvements, likely the installation of moveable gates to restrict unauthorized entrance. The Tank Farm contains the prior twelve ASTs with the addition of Tanks 49 and 50, surrounded by a concrete dike. Enlargement of the photograph reveals twelve areas of regular shading in UST Farm area which may be indicative of near surface USTs. Shading is evident along the western side of the UST Farm; shading is not as well defined along the eastern side. The UST Farm also has vehicles or equipment parked or staged centrally within the area. Offsite, the property between the site and Pulaski Bridge appears uniform in appearance indicating improvements to facilitate parking or staging of equipment.
- 1984- The photograph is light in appearance diffusing the image. The loading rack appears unchanged, no ASTs have been added and no other changes were identified. The UST Farm remains an unimproved area of the site. No significant changes are noted offsite.
- 1994- This photograph is out of focus, reducing the image definition, no interpretation of changes in site activities or infrastructure can be made.
- 2006- The current portable AST in the parking area to the east of the loading rack is visible. The addition of overhead piping infrastructure to the loading rack is visible. Improvements have also been made to the south of ASTs 48, likely the current diked storm water detention basin. Newtown Creek remains a navigable waterway with the presence of a barge at the site's dock. The UST Farm is uniform in appearance, without the shading noted in the 1975 photograph.

*Sanborn Map Review*

Sovereign obtained a Certified Sanborn® Map Report from Environmental Data Resources, Inc. to evaluate Sanborn fire insurance maps which document property usage over time. The report contains Sanborn Maps of the site from 1887, 1905, 1916, 1922, 1928, 1942, 1951, 1965, 1978-1983, 1986-1989, 1991-1993, 1995-1996 and 2001-2007. The report is included as ***Appendix*** C; a summary of each map follows:

- 1887- A 'sawdust storage' building and another building are present along Paidge Avenue. The site is identified as a 'lumber yard'. Three streets, Ranton St., Pequot St.



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and Shawnett St. are identified as running between Paidge St. and Newtown Creek, Water St. runs between Oakland St. and Shawnett Street.

- 1905- Eastern end of building along Paidge Ave. appears to have been enlarged. Numerous lumber piles are outlined and the property is identified as E.C. Smith Box Factory and Lumber Yard. A lumber shed is located over the UST farm.
- 1916- The sawdust storage building appears to have been enlarged and the lumber shed now identified as Planing Mill / Lumber Shed.
- 1922- The sawdust storage building appears to have further additions, outlined details and building identification removed. Planing Mill / Lumber Shed building now identified as Packing.
- 1928- Map continues to have reduced detail, name change to Forest Box & Lumber Company, no buildings are identified along Paidge Avenue.
- 1942- Additional details return to the map. Site now identified as Shell Union Oil Corp. and Union Oil Corp. with garage and building identified along Paidge Avenue. Water lines and monitors are locates across the site. A loading rack is now present, in a different orientation, near the current location and a garage and paint shop are identified in the south west corner. The UST Farm now has three rows, from west to east, containing 15, 19 and 6 USTs. The rows of 15 and 19 are identified as gasoline tanks; the row of six is identified as oil tanks. This arrangement has been used to present as the UST number and orientation. Scale measurement indicates the tanks are 50 feet by 7.5 feet with a computed volume approximately 16,500-gallons. This is not considered an accurate representation of the USTs and that artistic license was used. The diameter is such that the tanks would be partially submerged and the drawn length conveniently fills the identified area.
- 1951- Entire site now identified as Shell Oil Co. Inc., two structures have been constructed onsite, the warehouse along Newtown Creek and a garage to the south of the warehouse. The UST Farm loses the individual tank outlines. USTs are now identified as a block of 33 gasoline tanks and a block of six oil tanks.
- 1965- The outline detail of the Ranton St., Pequot St., Shawnett St. and Water St. are removed. The garage south of the warehouse and several buildings along Paidge St. has been demolished; the current main office building has been constructed. The loading rack, in the current orientation and ASTs 41 through 48 with the four additive tanks are identified.
- 1978- The only changes to the site map are the addition of AST 49 and 50.
- 1979- No change.
- 1980- No change.
- 1981- No change.
- 1982- No change.
- 1983- No change.
- 1986- No change.
- 1987- No change.
- 1988- No change.
- 1989- No change.
- 1991- No change.
- 1992- No change.
- 1993- No change.
- 1995- A small building (Foam House) has been constructed in the parking area between the main office building and garage along Paidge Avenue.
- 1996- No change.
- 2001- No change.
- 2002- No change.
- 2003- No change.

- 2004- No site changes, the map appears to have been redrawn with updated fonts and symbols.
- 2005- No change.
- 2006- No change.
- 2007- No change.

***Conclusions***

*Tanks are not as large as illustrated-* The URS Geophysical Report estimates the depth to the USTs is four feet, groundwater occurs three to seven feet below grade in the UST Farm. USTs as illustrated would be 50 feet long and 11 feet in diameter resulting in more than half of the UST being submerged in water, which is not a practical installation. The GPR Survey estimates the UST diameter to between three to four feet which would be a practical diameter for burial and within the technological capabilities at the time of installation.

*USTs on the eastern side of the UST Farm may have been removed for site improvements-* The Aerial photograph from 1975 appears to have regular shading in the western half of the UST Farm which may indicate shallow burial of the USTs in this area. The same shading could not be identified along the eastern half of the UST Farm. The conclusion is that during the construction of ASTs 47 and 48 the eastern USTs were removed to permit excavation and access to the future AST Farm. The lack of response in Electromagnetic Survey appears to reinforce this conclusion. ASTs 47 and 48 were installed in 1965 or earlier, the USTs could have been removed without incurring environmental regulations for closure.

*USTs in the offset area may have been removed to permit site improvements-* The area that has been identified as containing six oil tanks was not accessible for either GPR or electromagnetic survey due to existing pipe infrastructure and up to 24-inches of standing water. USTs were likely installed in the same manner as the main body of USTs. When the AST Farm floor was installed, it was extended over this area and diked to create a containment area that is currently used for storm water retention. This area also likely had the USTs removed to permit excavation, base placement and compaction for concrete floor construction.

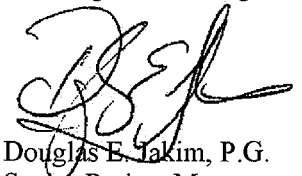
*There are no unknown utilities in the UST Farm-* Utilities are located along the western and northern perimeter of the UST Farm; there is no evidence of any bisecting utility lines.

***Recommendations***

*Confirmation of Investigation-* The UST Farm area lacking any utility infrastructure would be a candidate for either vacuum excavation or test pits to confirm the location, condition and depth to the remaining USTs. Condition of the USTs is likely to be poor or nonexistent considering partial burial of steel in brackish water influenced by tidal fluctuations seventy years ago.

Should you have any questions or comments regarding the information contained with this report, please feel free to contact Douglas Jakim at (724) 553-5084.

Respectfully submitted,
Sovereign Consulting, Inc.

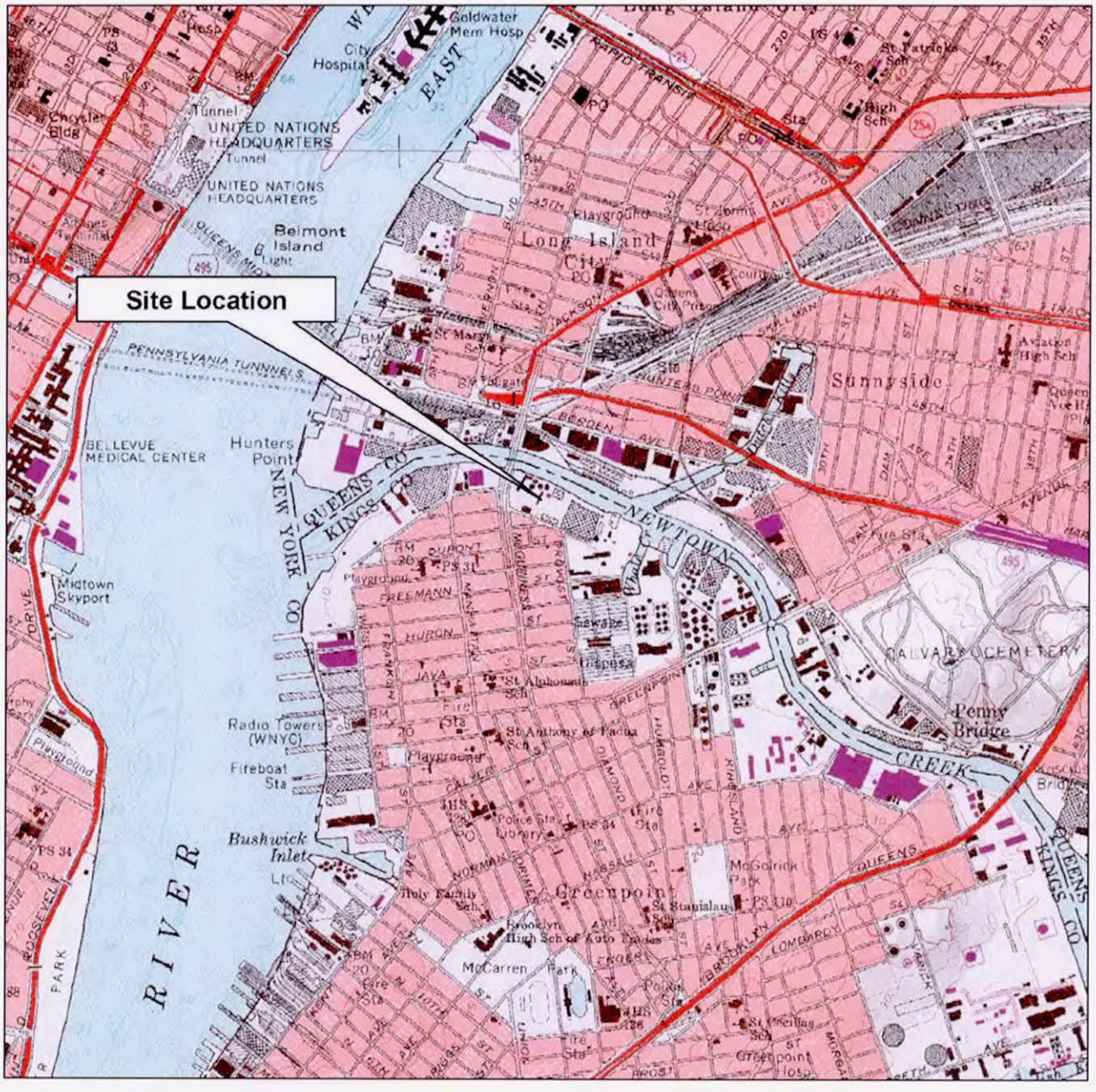


Douglas E. Jakim, P.G.
Senior Project Manager



Shell/Motiva 0007241

# FIGURES




# FIGURE 1

## SITE LOCATION MAP

(BROOKLYN USGS 7.5 MIN. TOPOGRAPHICAL QUADRANGLE)

Site Coordinates
Latitude N 40° 44' 15.4"
Longitude W 73° 57' 3.4"
Elevation = 13' (WGS84)

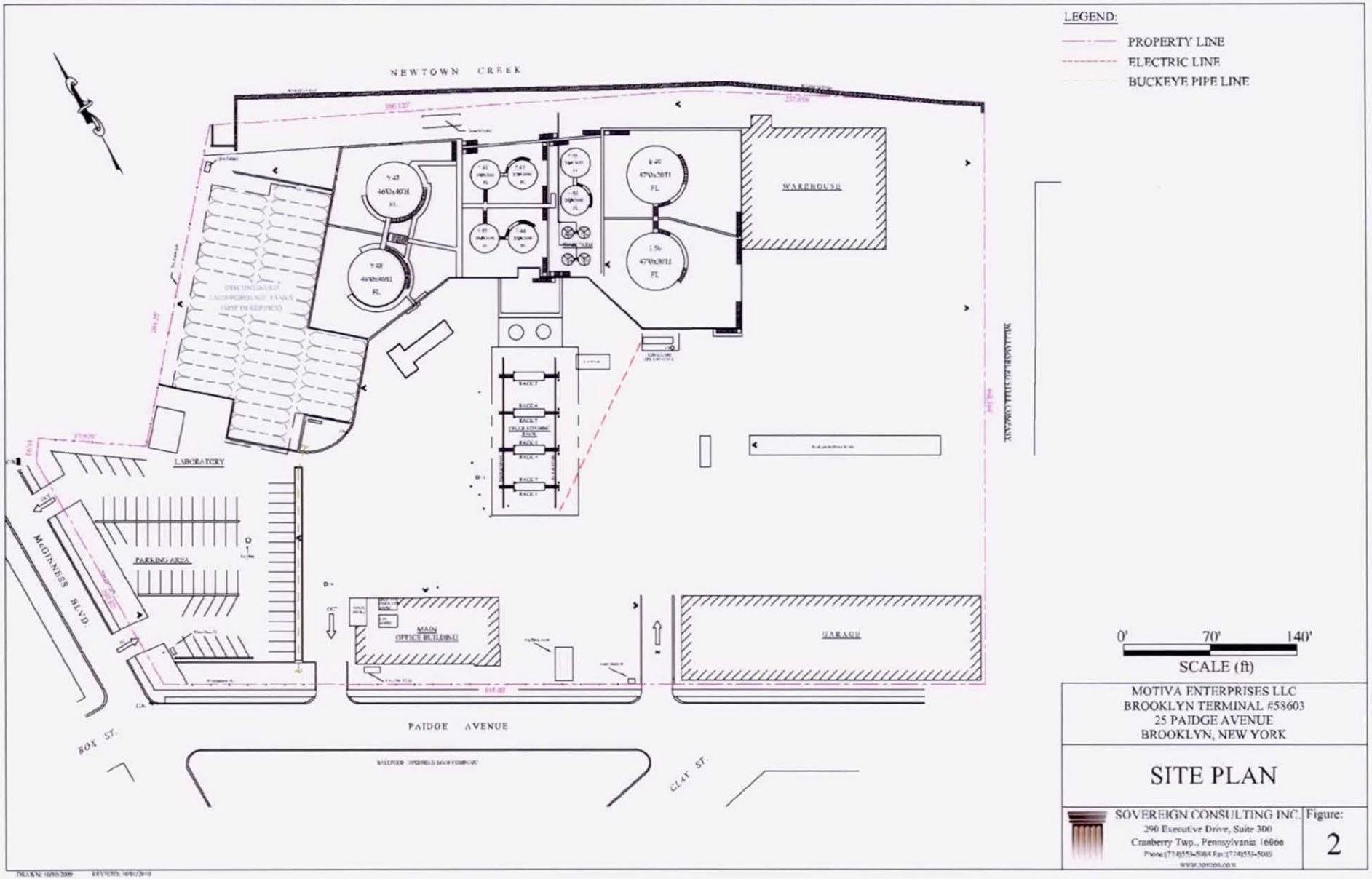
UTM GRID AND 1979 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

**Motiva Enterprises LLC**
**Brooklyn Terminal #58603**
25 Paidge Avenue
Brooklyn, New York

SCALE 1:24000

1 0 1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 .5 0 1 KILOMETER

CONTOUR INTERVAL 20 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929




Shell/Motiva 0007244

# ATTACHMENT A

Geophysical Investigation Report

# GEOPHYSICAL INVESTIGATION REPORT

MOTIVA ENTERPRISES LLC
BROOKLYN TERMINAL #58603
25 PAIDGE AVENUE
BROOKLYN, NY 211222

*Prepared for*

Motiva Enterprises LLC
4094 Majestic Lane, PMB 224
Fairfax, VA 22033

April 2011

URS Corporation
200 Orchard Ridge Drive, Suite 101
Gaithersburg, Maryland 20878

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Shell/Motiva 0007247

## 1.1 INTRODUCTION

On behalf of Motiva Enterprises, LLC (Motiva), URS Corporation (URS) is pleased to present this report on the geophysical investigation conducted at the Motiva Enterprises, LLC Brooklyn Terminal facility in Brooklyn, New York.

## 1.2 INVESTIGATION OBJECTIVE

The objective of the investigation included 1) delineate the perimeter of existing USTs in the subsurface; 2) survey several USTs to evaluate if interconnection lines remain; 3) evaluate UST dimensions; 4) provide numerical estimate of USTs; 5) identify any underground utilities in or around the USTs, and 6) provide a total or estimated depth to bottom of USTs.

## 1.3 SITE DESCRIPTION

The Motiva Enterprises, LLC Brooklyn Terminal Facility is located at 25 Paidge Avenue, in Brooklyn, New York. The designated investigation area (IA) is located in the northwest corner of the site and encompasses approximately 0.5 acres as shown on Figure 1. The majority of the investigation area is covered with coarse gravel and contains a small amount of industrial debris. The IA is bound by a fence to the west and north, and pipe racks to the east. The southern boundary of the IA is defined by a concrete curb.



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## 2.1 GEOPHYSICAL INVESTIGATION METHODS

The geophysical investigation was conducted using a combination of geophysical methods including electromagnetic (EM), ground penetrating radar (GPR) and pipe and cable locators. Descriptions of these methods are provided below.

### 2.1.1 Electromagnetic Surveying with the EM-61 MKII (EM-61)

The EM survey was completed using the EM-61 MKII (EM-61), manufactured by Geonics, Ltd. The EM-61 is a time domain EM instrument specifically designed to detect buried metal objects. The EM-61 generates rapid EM pulses through a transmitter coil. These pulses induce secondary EM fields in the near subsurface. The secondary EM fields induced from moderately conductive subsurface materials (i.e. soil and rock) are of relatively short duration. However, the secondary EM fields induced from metallic objects, such as reinforced concrete or steel drums, are of relatively long duration. The EM-61 measures this prolonged response from metallic objects after the EM response from conductive earth materials dissipates. This design provides high resolution of metallic targets. The depth of investigation of the instrument is relatively unaffected by site-specific subsurface conditions.

The EM-61 measures the EM response in milliVolts (mV). The variations in EM response readings from some background level are more diagnostic than the absolute values. EM response values can be plotted and contoured to evaluate the variations across the site. Variations in the EM response resulting from buried metallic objects such as a buried drum are generally manifested by relatively large amplitude (greater than about 50 mV) anomalies.

The response amplitude for a given buried metallic object is primarily a function of burial depth and size of the object. The EM-61 uses a two receiver coil system consisting of a top coil and a bottom coil. This design facilitates the recognition of near-surface objects from deeper targets when the system is operated in differential mode. This EM-61 record includes the response from the top coil, the bottom coil and the differential response between the two coils. Near surface objects, such as small pieces of scrap metal, can mask the response from larger objects, such as utility lines or drums at deeper depths. The two-coil design of the EM-61, and differential processing, allows for this masking effect to be reduced. Although the EM-61 is designed to mitigate interference from surface features, large metallic objects at the surface, such as cars, buildings, and fences can effectively saturate the EM response and mask potential buried metal objects below.

### 2.1.2 Ground Penetrating Radar (GPR)

The GPR method involves transmitting electromagnetic pulses into the subsurface and recording the subsequent reflected signal. These electromagnetic pulses are primarily influenced by the dielectric properties of subsurface materials. Reflection of the transmitted energy back to the GPR antenna occurs at the interfaces of dielectric contrasts while some of the transmitted energy is lost to attenuation and signal degradation. Contrasts in dielectric properties typically correspond to variations in soil type, rock type, ground water content, and the presence of buried cultural features (e.g. building foundations, debris, utilities, voids, etc.). These variations in subsurface conditions



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subsequently influence the amount of energy that is reflected back to the antenna and the amount of energy lost to attenuation and signal degradation. In addition, these variations in subsurface conditions result in changes in electromagnetic wave propagation velocity, which in turn influences the achievable depth of investigation using the GPR method. The GPR survey was conducted using a Sensors & Software Noggin Smart Cart PLUS system with a 250 MHz scanning antenna.

### 2.1.3 Pipe and Cable Locators and Tracers

Pipe and cable locators and tracers allow for inductive or conductive tracing of accessible utility lines. Tracing utilities with these instruments may require access to the utility, either via a manhole, an exposed portion of the utility, a standpipe, or a valve stem. Cast iron or steel utility lines can be traced by transmitting a signal into the line using a multi-frequency high-power transmitter and using a receiver at the surface to follow the signal. The signal can be transmitted to the utility either by placing the transmitter on the ground surface above the suspected utility location or by applying a signal directly to the utility if it is exposed at the ground surface. Non-metallic lines can be traced using transducer sondes that are pushed through the pipes using rigid push rods or plumber snakes, although use of these sondes requires access to the inside of the utility.

Pipe and cable locating/tracing was performed using the Radiodetection Cable Avoidance Tool (C.A.T.) and the Radiodetection RD4000 receiver with a high-powered transmitter. Both instruments allow detection of radio signals that can be broadcast by metal utilities or inactive conduits. This feature allows for reliable tracing of utilities that have no access points. In addition, both instruments allow for detection of 60 Hz electric lines.

## 2.2 FIELD INVESTIGATION

The field investigation was conducted on April 6 and 7, 2011, by Gaithersburg, Maryland based members of the URS Geophysics Team. URS conducted a broad scan survey of accessible portions of the approximate 0.5 acre investigation area using the pipe and cable locaters. The lateral extents of suspected subsurface utilities identified from the broad scan survey were marked on the ground surface using semi-permanent marking paint. In portions of the survey area where surface conditions permitted, a general sweep search was conducted with the GPR to locate potential unknown utilities or USTs.

EM-61 data was collected across the accessible portions of the survey area. Where conditions permitted, EM-61 data were collected along parallel profiles spaced approximately 3 feet apart with an along-profile data point spacing of less than 1 foot. Simultaneous positional data were collected using a Trimble differential global positioning system (DGPS). Real-time differential corrections were provided by a satellite-based augmentation system (SBAS). The resulting DGPS data provide a horizontal accuracy of approximately 3 feet.

A Trimble ProXH GPS (GPS) system was used to provide horizontal positional data in support of the utility mapping survey. The position of utility center line locations and relevant site features were recorded with the GPS.



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## 2.3 LOCATION CONTROL

Location control throughout the geophysical survey was maintained using a Trimble ProXH GPS system. For the EM-61 survey, GPS positions were recorded at 1 second intervals and streamed to an Allegro field computer for real-time merging with the EM-61 data.

The Trimble ProXH system was used for positioning control to facilitate marking out potential USTs as well as suspected utilities identified based on the results of the EM-61 survey. In addition, the GPS was used to record the center-line location of identified potential USTs as well as the locations of relevant site features including hydrants, manholes, and power poles.

## 2.4 DATA PROCESSING

The EM data were downloaded and then converted to a format compatible with the contouring software using the program TrackMaker61MKII by Geomar Software Inc. Data plotting and contouring was accomplished using Surfer by Golden Software and Oasis Montaj by Geosoft. A color enhanced contour map was generated for the EM-61 channel 3 response. The GPR survey was conducted using real-time analysis of the displayed GPR images. Pipe and cable locators do not have recording capability. The Trimble ProXH GPS data were exported using the Trimble GPS Pathfinder Office software package for input into AutoCad and Surfer.



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## 3.1 INVESTIGATION RESULTS AND INTERPRETATION

The results of the geophysical investigation are presented on Figure 2. Utilities identified with the pipe and cable locators and GPR are annotated on the map and are shown superimposed on the contoured EM results. The utility center line locations are shown relative to other site features depicted on the base drawing (base drawing features shown in light gray or black). Identified suspected utility lines are presented as light blue dashed lines on Figure 2. Question marks shown on Figure 2 indicate that the termination point of the utility could not be determined in the field due to limitations imposed by site features, technical limitations of the geophysical instruments, or extension of the utility beyond the survey limits.

The results presented on Figure 2 represent the contoured EM-61 channel 3 response. Interpreted background EM values are represented by the contours in the blue to green contour range. Suspected utilities and sources of interference are denoted accordingly on the map and are indicated by elevated EM responses in the yellow to red contour range.

The EM-61 results indicate a total of 23 anomalies that are consistent with suspected USTs. These anomalies are shown as black dashed lines on Figure 2. The results of the GPR survey indicated responses consistent with USTs for the twelve EM-61 anomalies located on the northwestern side of the indicated tank field. Analysis of the GPR responses associated with the 11 remaining EM-61 anomalies located on the southeastern side of the indicated tank field did not provide conclusive confirmatory information regarding the presence of USTs at those locations.

Encountered site subsurface conditions limited the effectiveness of the geophysical investigation methods relative to providing more detailed information on the size, depth and potential interconnectivity of the suspected USTs. The penetration depth of the GPR signal was significantly limited by suspected wet and disturbed subsurface soils associated with previous excavation and backfilling activities at the site. It should be noted that the GPR responses associated with relatively large features such as the interpreted USTs indicated by the well-defined EM-61 anomalies on the northwestern side of the indicated tank field, were relatively poorly defined and difficult to conclusively characterize as consistent with USTs. Therefore, it appears possible that additional USTs may be present in the subsurface that were not indicated by the GPR results including the 11 suspected USTs along the southeastern side of the indicated tank field that were identified from the EM-61 results.

The GPR results indicate that the top of the suspected USTs are generally approximately 4 feet below the ground surface. The GPR results indicate further that the widths of the USTs are in the range of 3 to 4 feet, whereas the EM-61 results suggest that the widths are generally 7 to 8 feet. The geophysical results did not provide conclusive information regarding bottom depths of the USTs or the potential presences of remaining interconnection lines between USTs. However, the approximate 4 feet depth of the USTs indicated from the GPR results, combined with the 7 to 8 feet width from the EM-61 results, suggests that the depth to the tank bottoms may exceed 10 feet below ground surface.



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A composite drawing of suspected utilities and USTs identified during this investigation is presented as Figure 3. The EM contours have been removed from Figure 3 to provide an unobstructed view of the investigation results.

## 3.2 LIMITATIONS

This investigation was conducted in accordance with reasonable and accepted engineering geophysics practices, and the interpretations and conclusions are rendered in a manner consistent with other consultants in the profession. All geophysical techniques have some level of uncertainty and limitations. No other representations of the reported information is expressed or implied, and no warranty or guarantee is included or intended.



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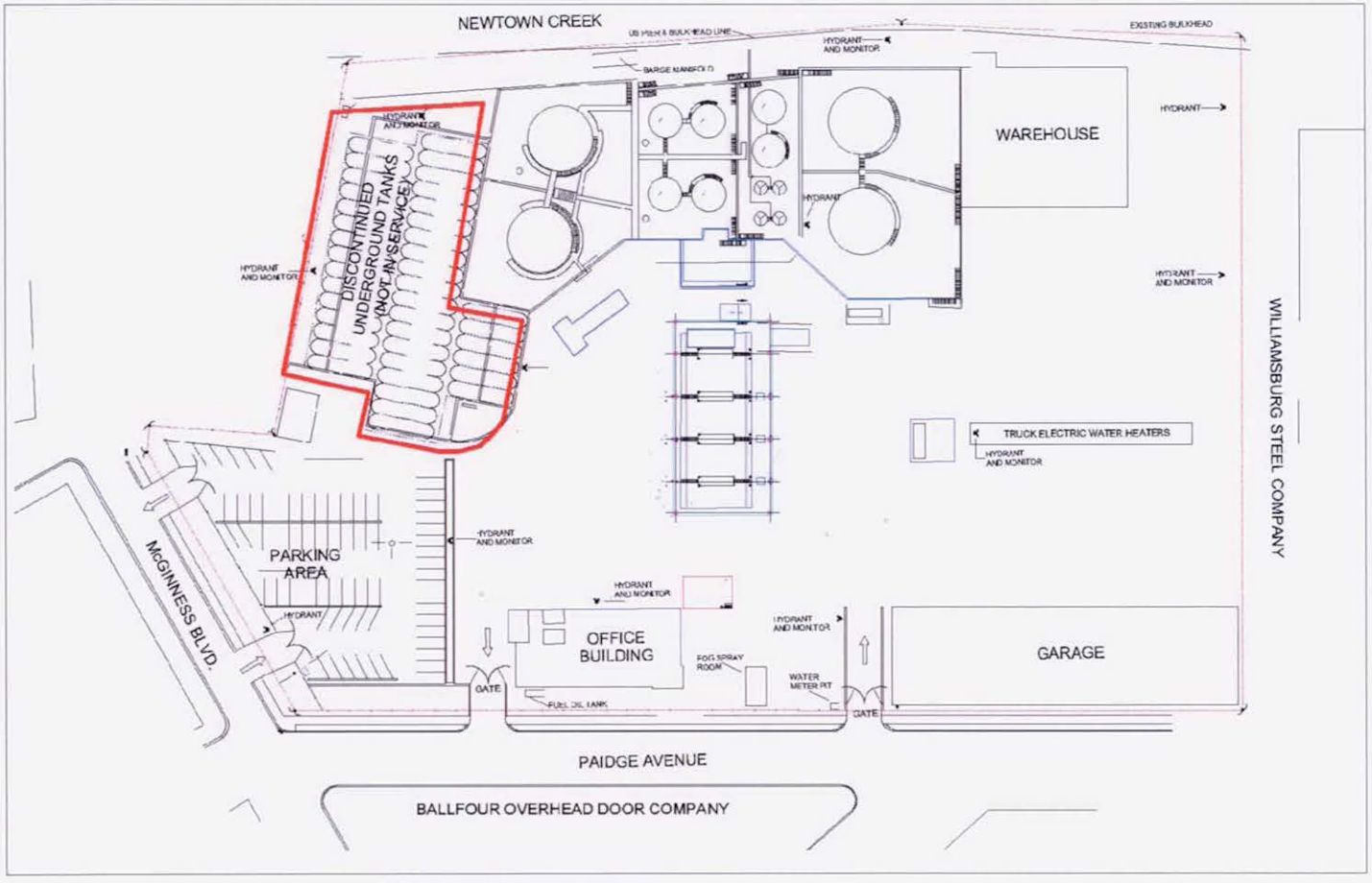


Legend:

Proposed Geophysical Investigation Area

**Scale**
**1 inch = 80 feet**

0 20 40 60 80 100 120 140

Notes

1. Base drawing "4844C1.dxf" provided by Sovereign Consultants Inc.

URS Geophysical Services
200 Orchard Ridge Dr., Ste. 101
Gaithersburg, MD 20878
(301) 258-9780

Geophysical Investigation Area

Motiva Brooklyn Terminal

Brooklyn, New York

| DESIGNED BY | | DRAWN BY | | CHECKED BY | | JOB NUMBER | Figure |
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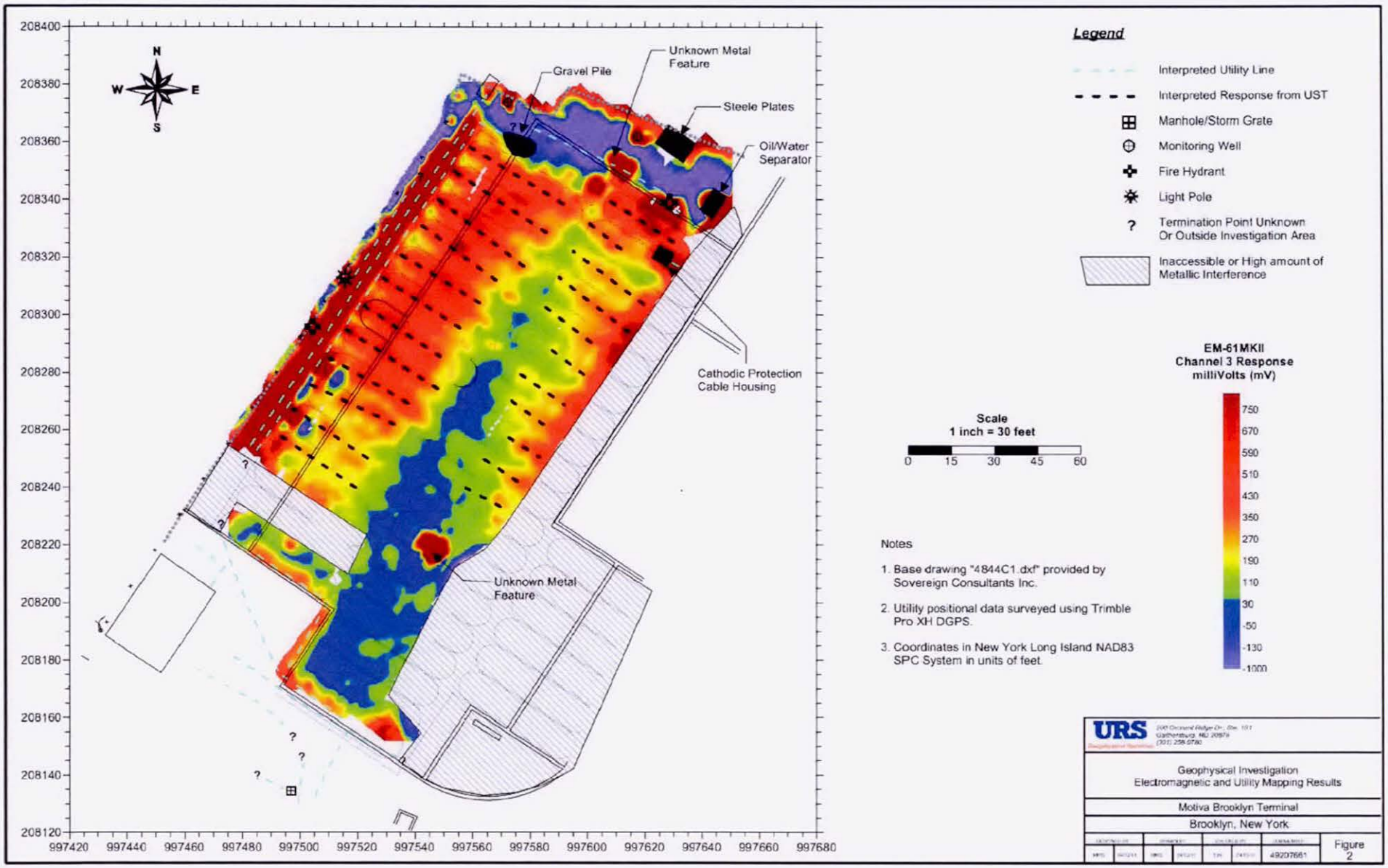


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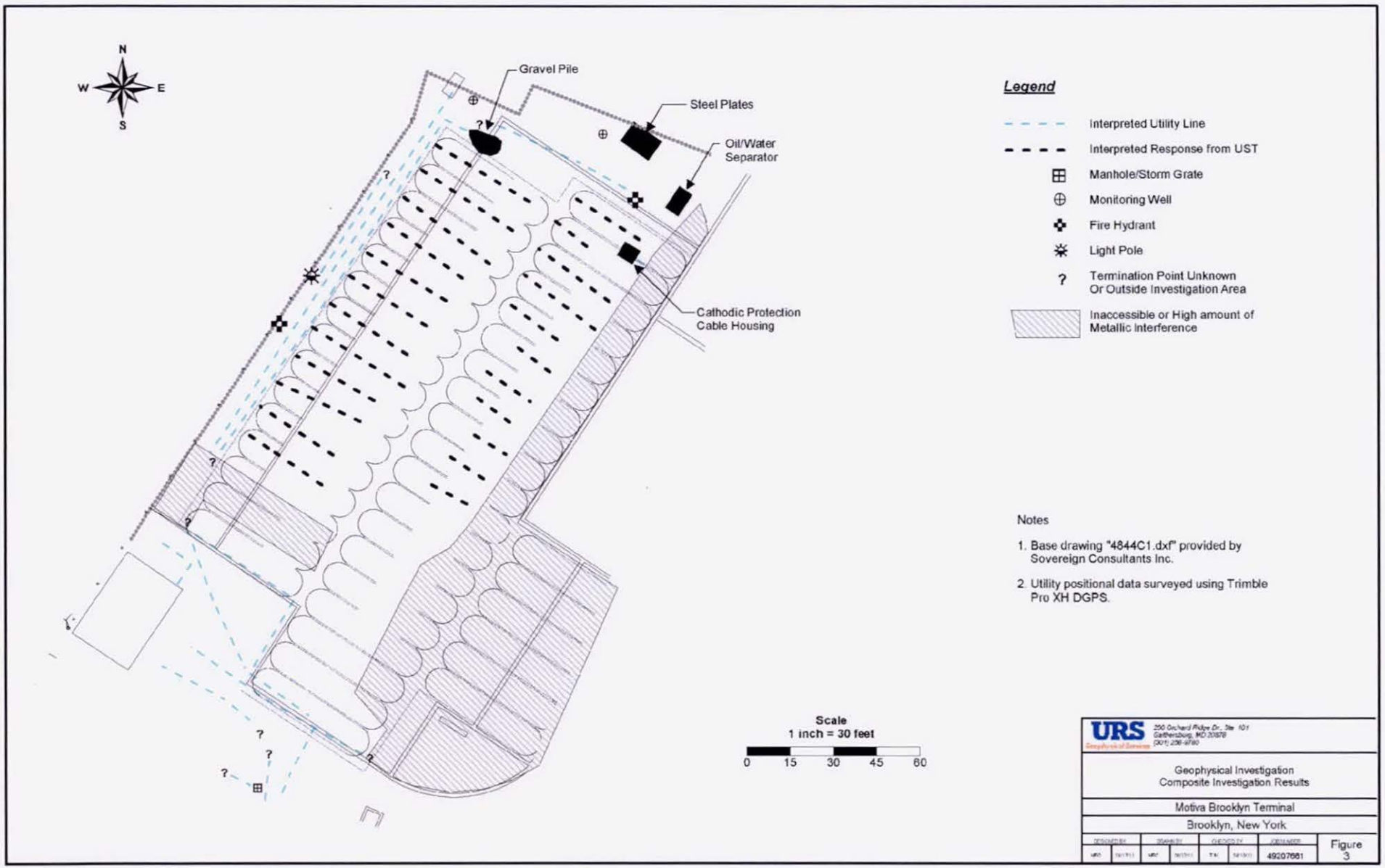


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# ATTACHMENT B

Aerial Photograph Report

**Motiva Terminal**
25 Paidge Ave
Brooklyn, NY 11222

Inquiry Number: 3026550.2
March 30, 2011

# The EDR Aerial Photo Decade Package

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

# EDR Aerial Photo Decade Package

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**Date EDR Searched Historical Sources:**
Aerial Photography March 30, 2011

**Target Property:**
25 Paidge Ave
Brooklyn, NY 11222

| *Year* | *Scale* | *Details* | *Source* |
|---|---|---|---|
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| 1966 | Aerial Photograph. Scale: 1"=500' | Panel #: 40073-F8, Brooklyn, NY;/Flight Date: February 23, 1966 | EDR |
| 1975 | Aerial Photograph. Scale: 1"=750' | Panel #: 40073-F8, Brooklyn, NY;/Flight Date: April 01, 1975 | EDR |
| 1984 | Aerial Photograph. Scale: 1"=750' | Panel #: 40073-F8, Brooklyn, NY;/Flight Date: April 27, 1984 | EDR |
| 1994 | Aerial Photograph. Scale: 1"=750' | Panel #: 40073-F8, Brooklyn, NY;/Flight Date: April 04, 1994 | EDR |
| 2006 | Aerial Photograph. Scale: 1"=604' | Panel #: 40073-F8, Brooklyn, NY;/Flight Date: January 01, 2006 | EDR |



Shell/Motiva 0007260

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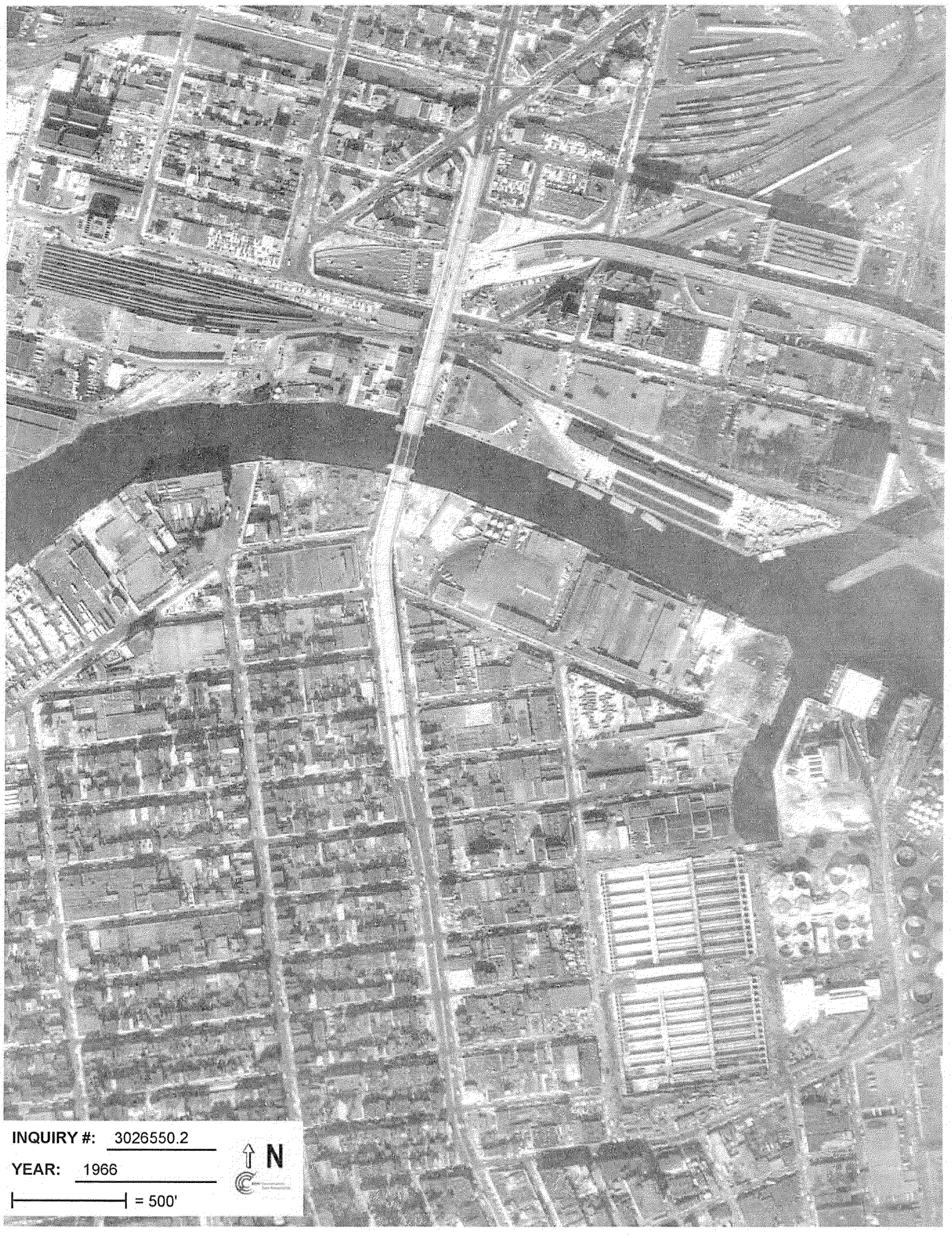
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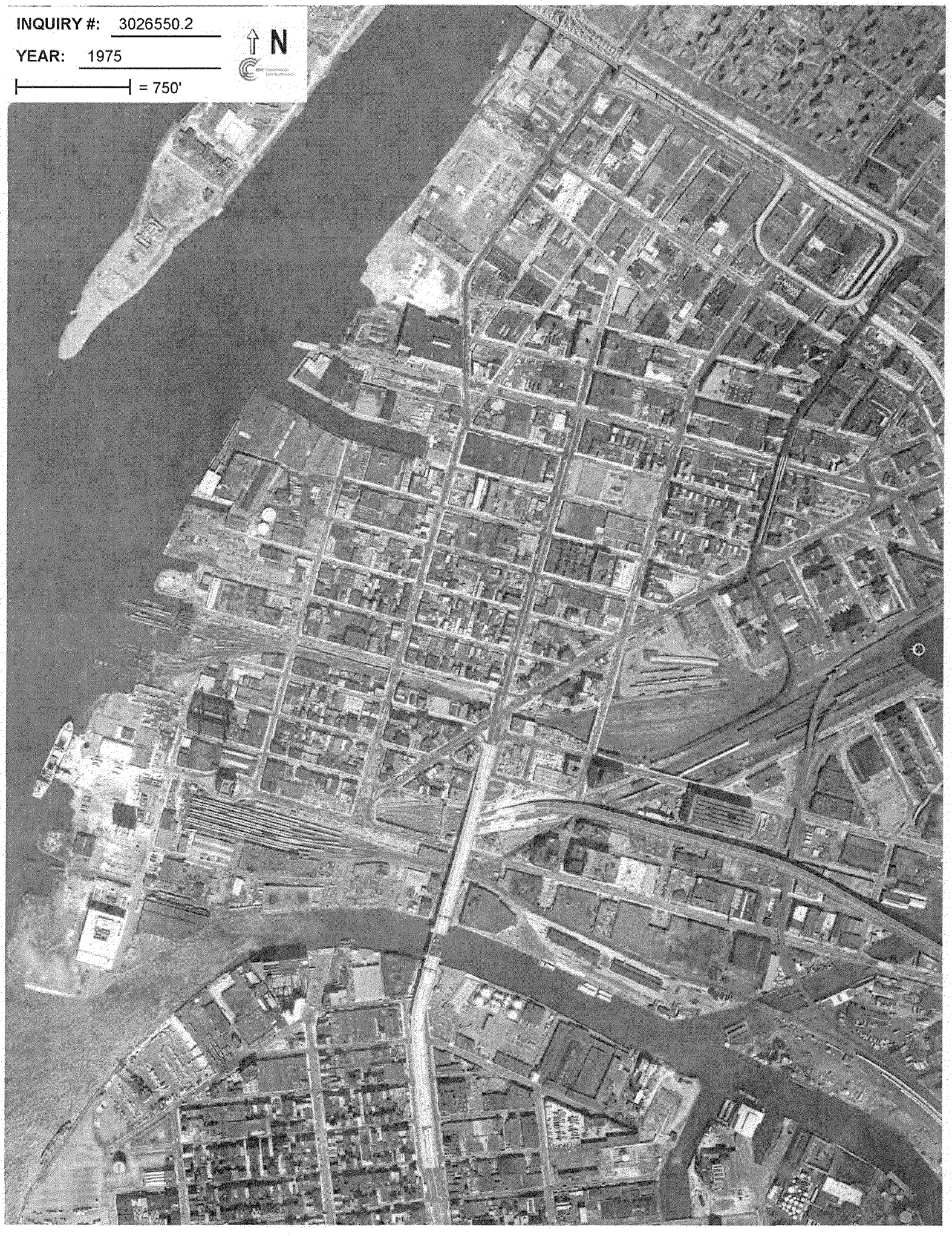
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YEAR: 2006
= 604'
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# ATTACHMENT C

Sanborn Map Report

**Motiva Terminal**
25 Paidge Ave
Brooklyn, NY 11222

Inquiry Number: 3026550.1
March 30, 2011

# Certified Sanborn® Map Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

# Certified Sanborn® Map Report

3/30/11

**Site Name:**
Motiva Terminal
25 Paidge Ave
Brooklyn, NY 11222

EDR Inquiry # 3026550.1

**Client Name:**
Sovereign Consulting Inc.
100 Dobbs Lane
Cherry Hill, NJ 08034-0000

Contact: Doug Jakim

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## Certified Sanborn Results:

**Site Name:** Motiva Terminal
**Address:** 25 Paidge Ave
**City, State, Zip:** Brooklyn, NY 11222
**Cross Street:**
**P.O. #** 5E017.140.03.93
**Project:** Brooklyn Terminal
**Certification #** DEE6-4A86-86B8

**Maps Provided:**

| | | | | |
|---|---|---|---|---|
| 2007 | 2001 | 1989 | 1981 | 1942 |
| 2006 | 1996 | 1988 | 1980 | 1928 |
| 2005 | 1995 | 1987 | 1979 | 1922 |
| 2004 | 1993 | 1986 | 1978 | 1916 |
| 2003 | 1992 | 1983 | 1965 | 1905 |
| 2002 | 1991 | 1982 | 1951 | 1887 |

Sanborn® Library search results
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Shell/Motiva 0007269

## Sanborn Sheet Thumbnails

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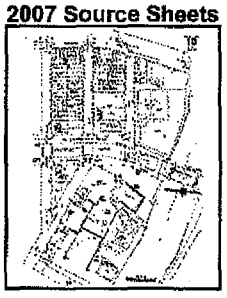
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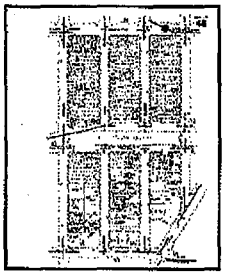
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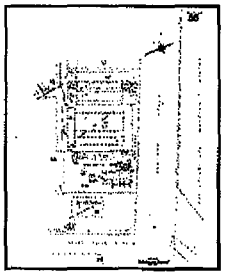
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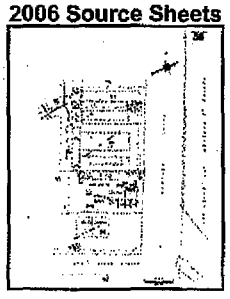
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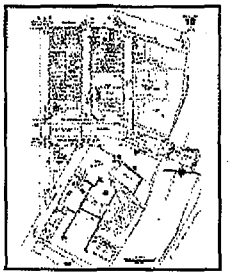
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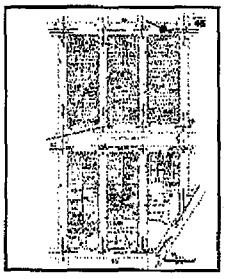
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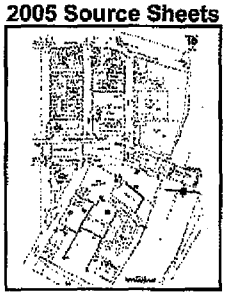
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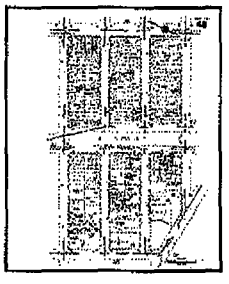
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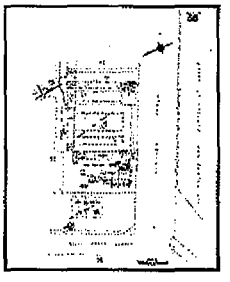
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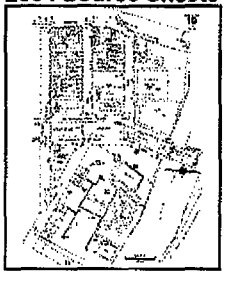
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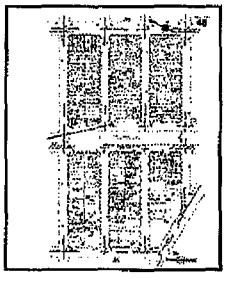
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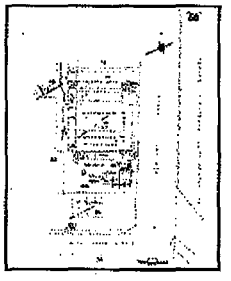
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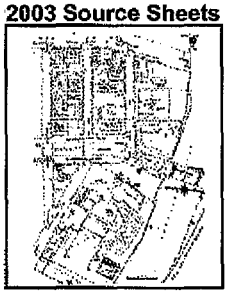

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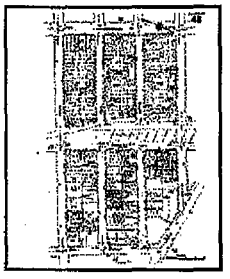

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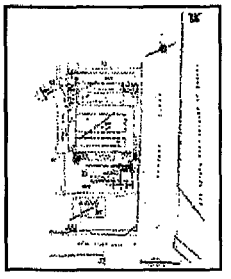

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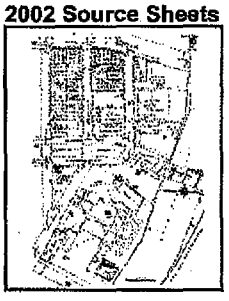

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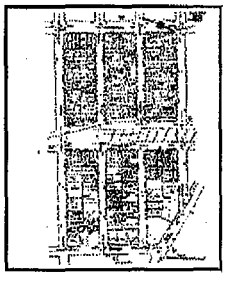

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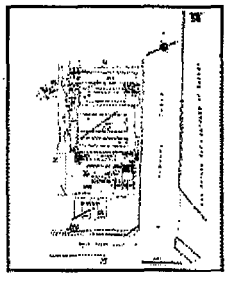

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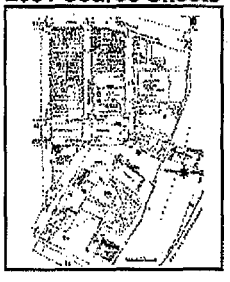

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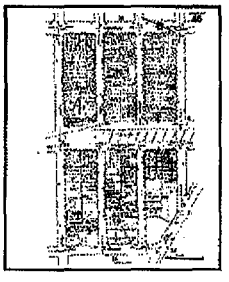

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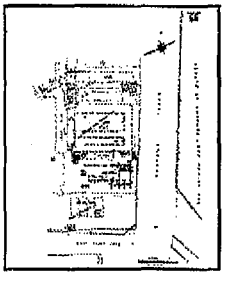

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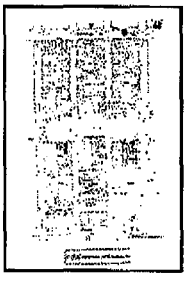

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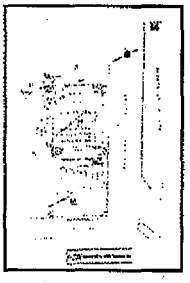

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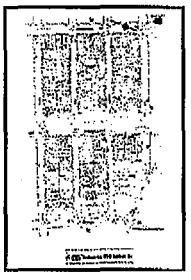

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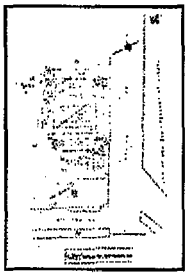

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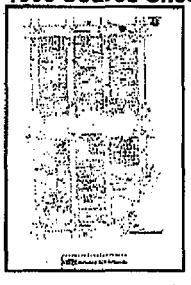

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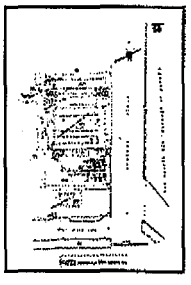

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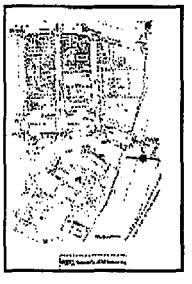

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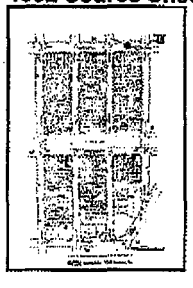

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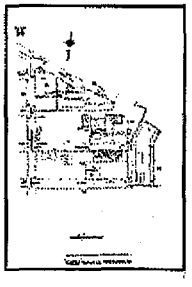

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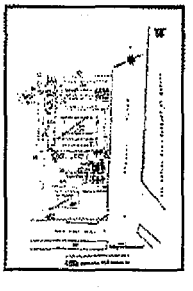

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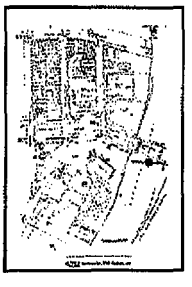

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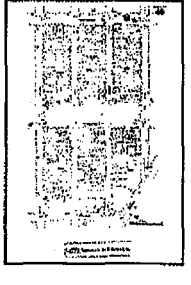

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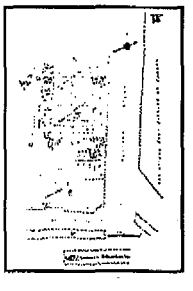

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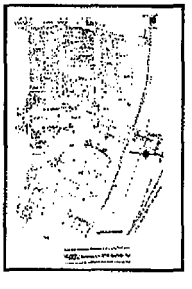

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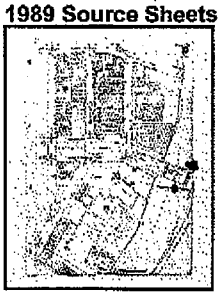

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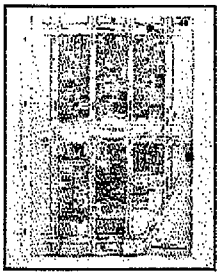

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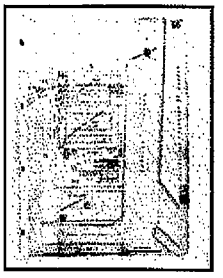

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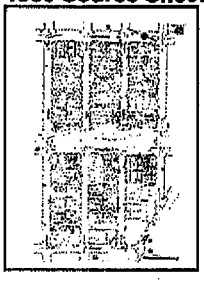

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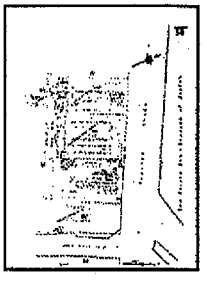

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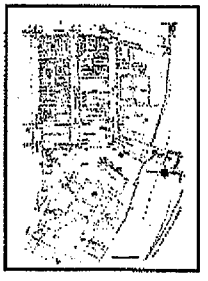

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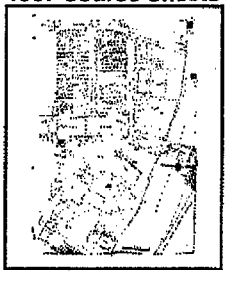

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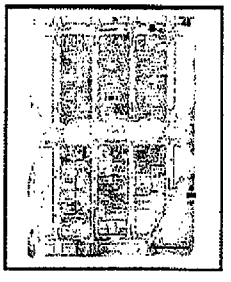

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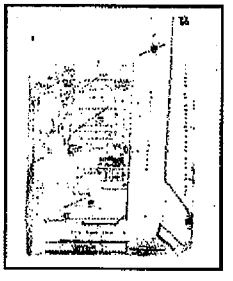

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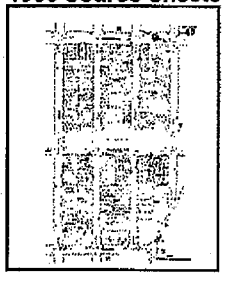

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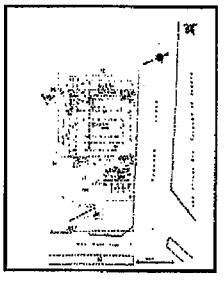

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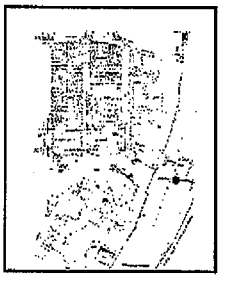

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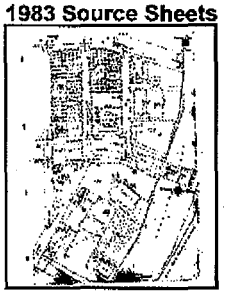

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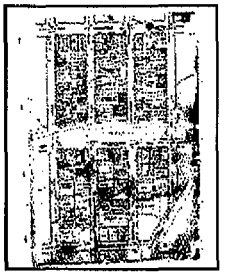

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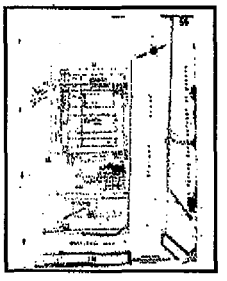

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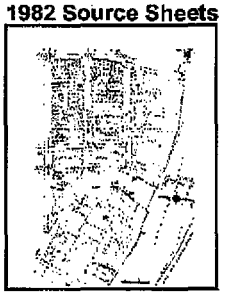

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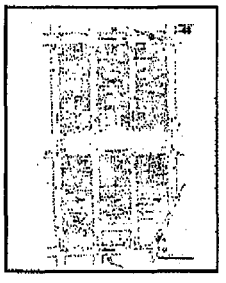

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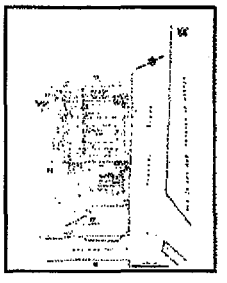

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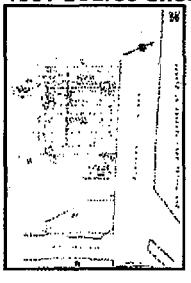

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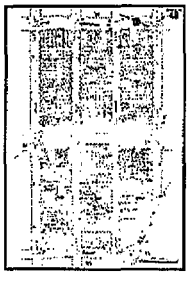

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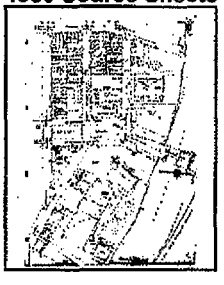

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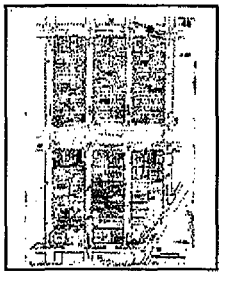

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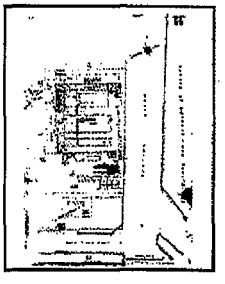

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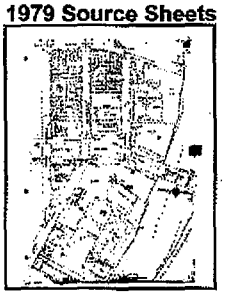

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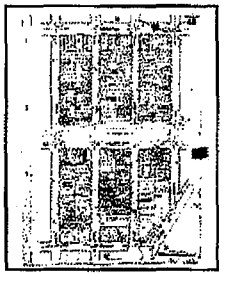

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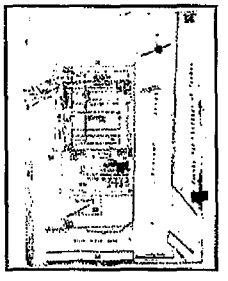

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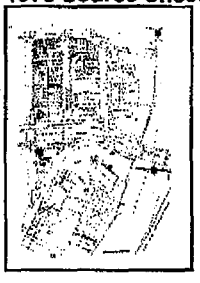

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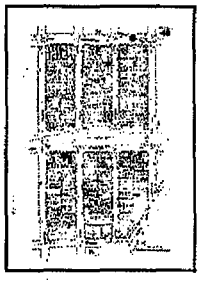

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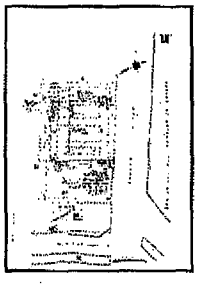

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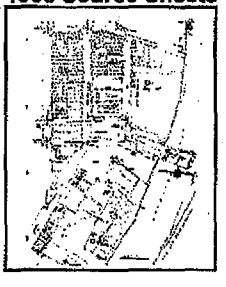

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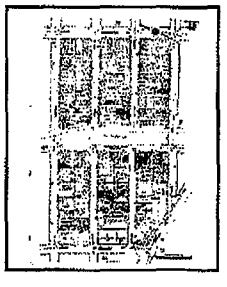

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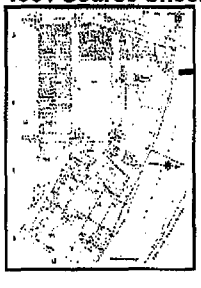

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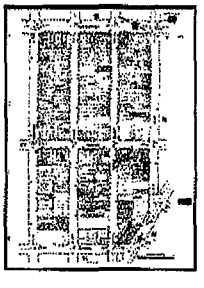

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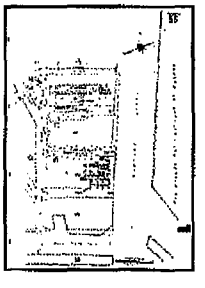

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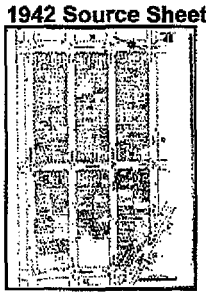

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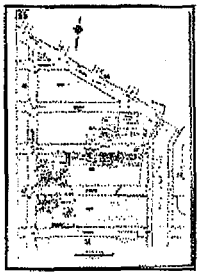

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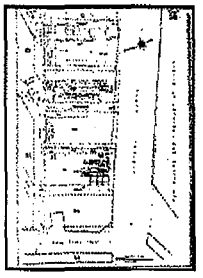
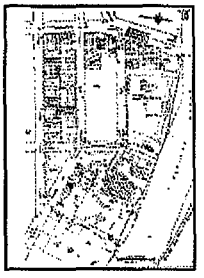


Volume 4, Sheet 56



Volume 4, Sheet 10

## 1928 Source Sheets

Volume Pier Maps, Sheet 39

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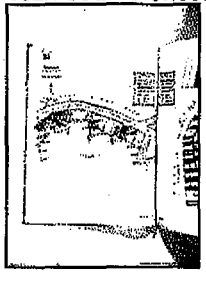

Volume Pier Maps, Sheet 31

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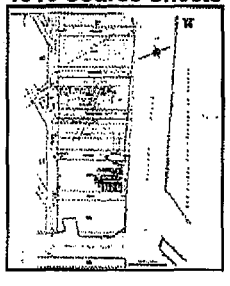
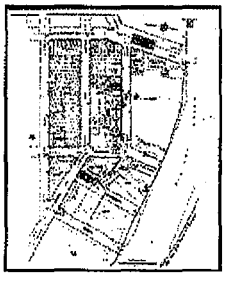
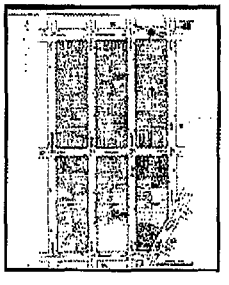


Volume 4, Sheet 56



Volume 4, Sheet 10



Volume 4, Sheet 48



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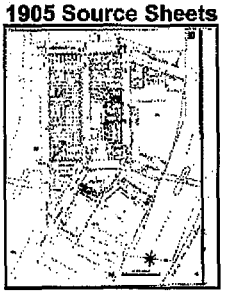

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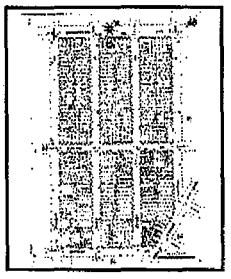

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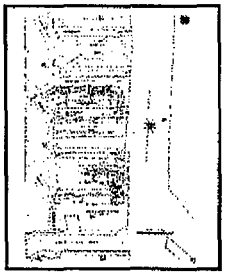

Volume 4, Sheet 56

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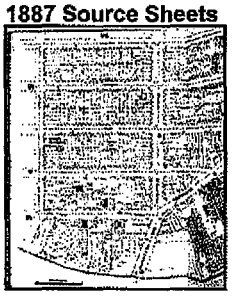

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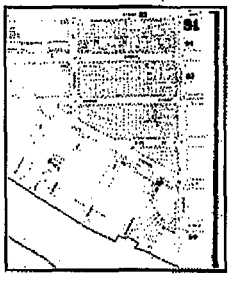

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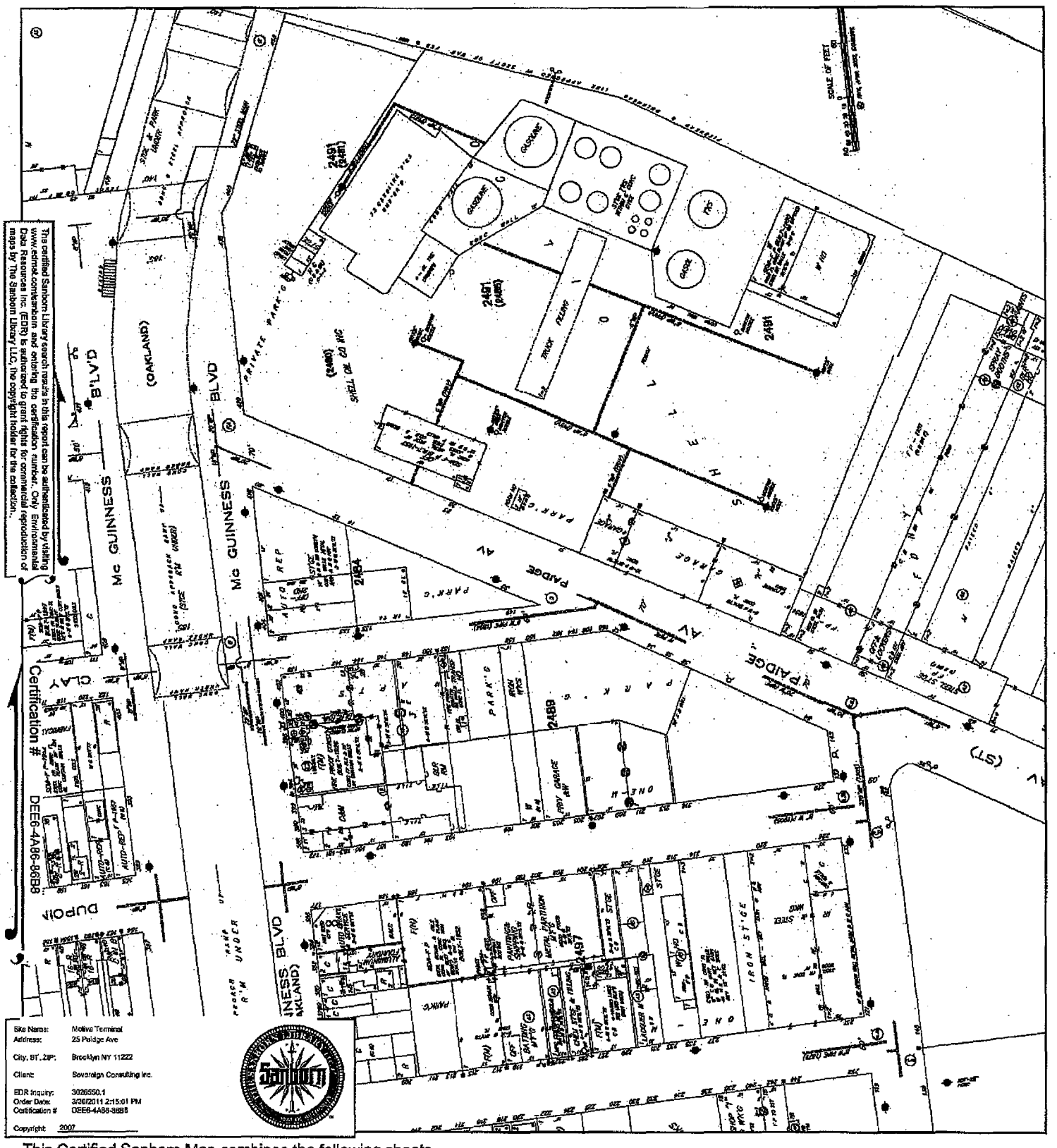


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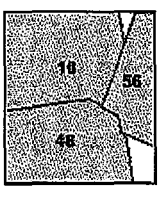


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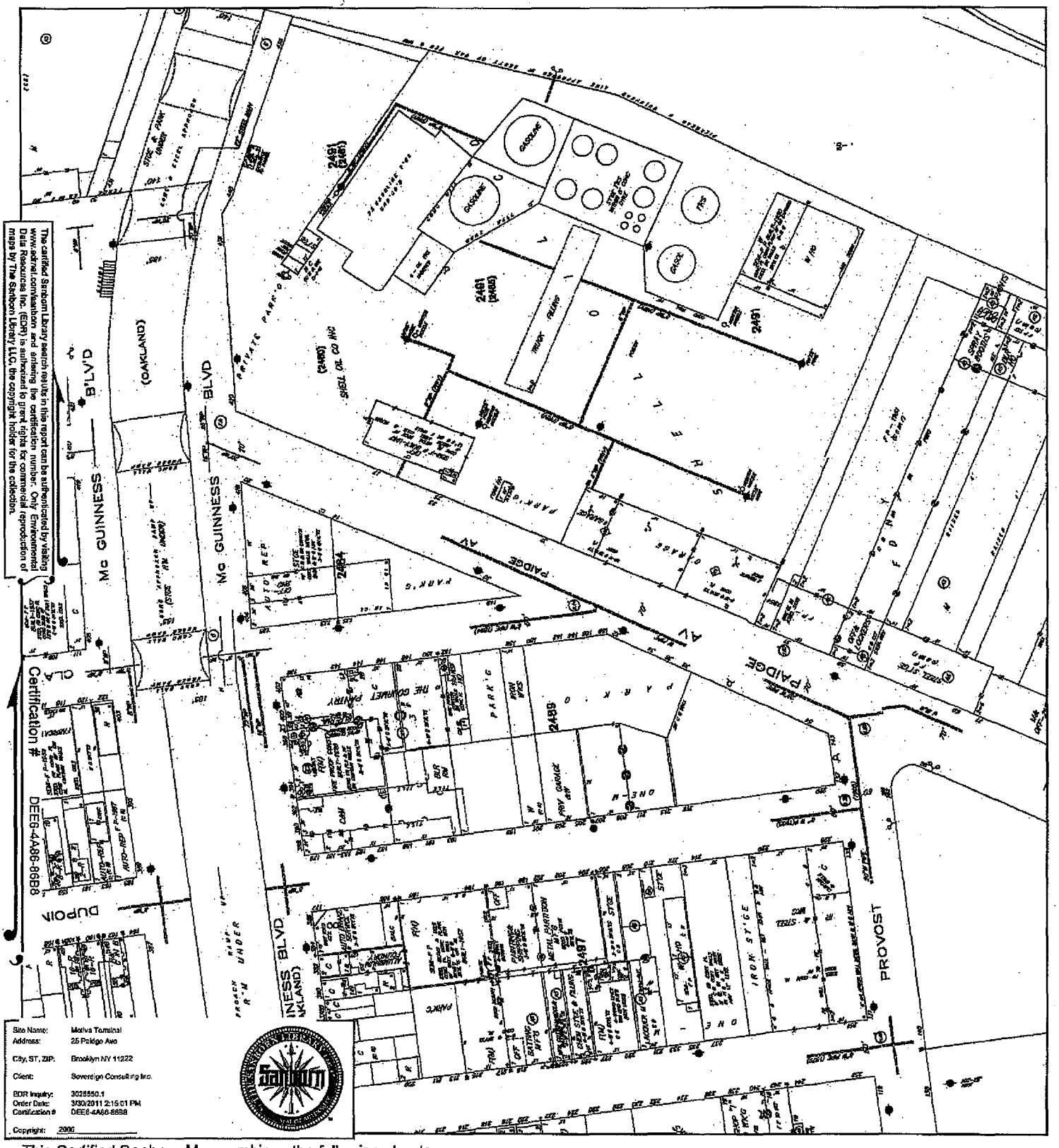
# 2006 Certified Sanborn Map

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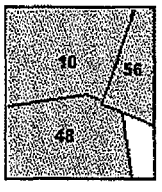


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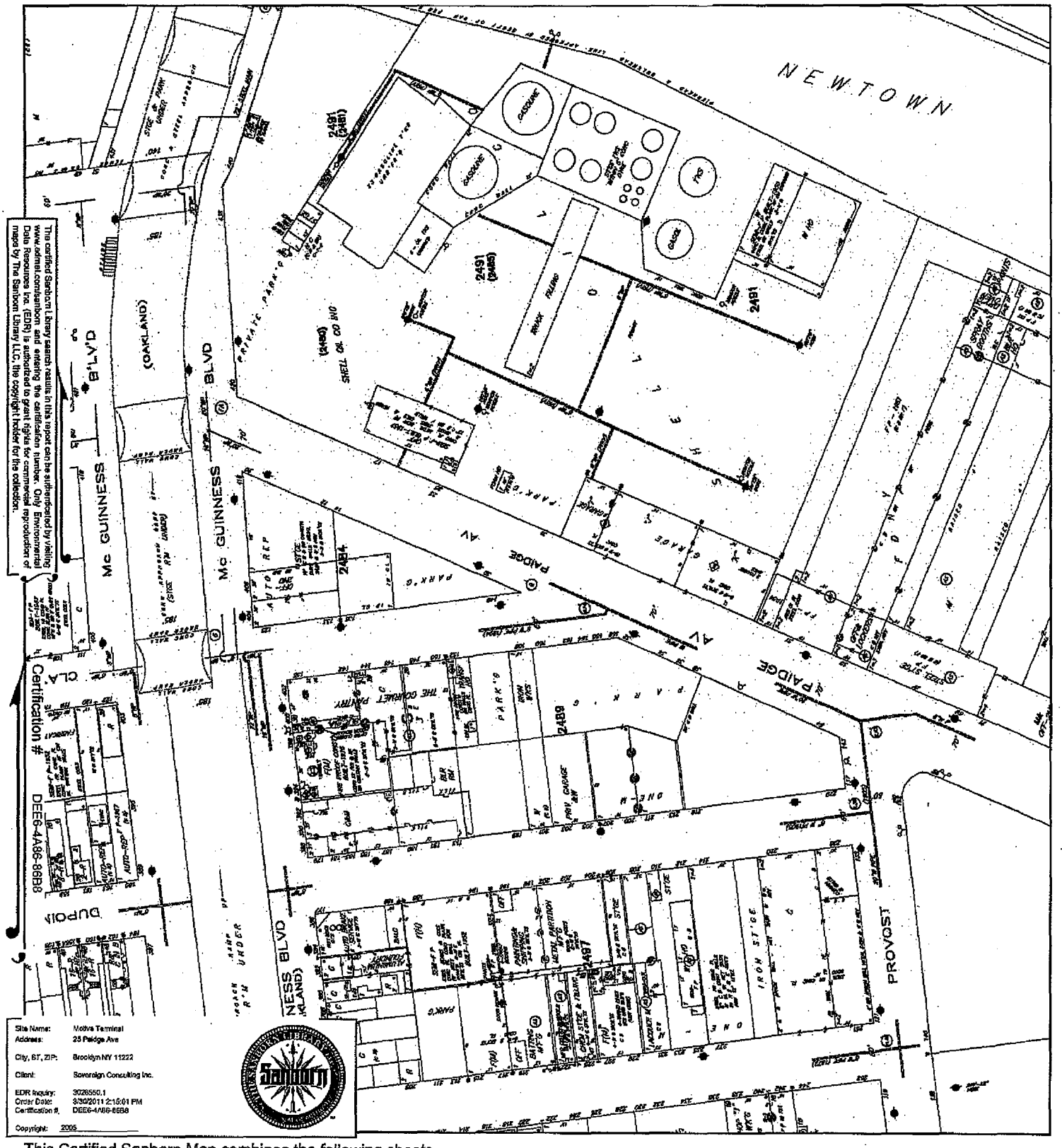


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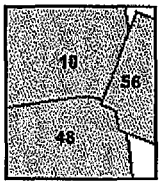


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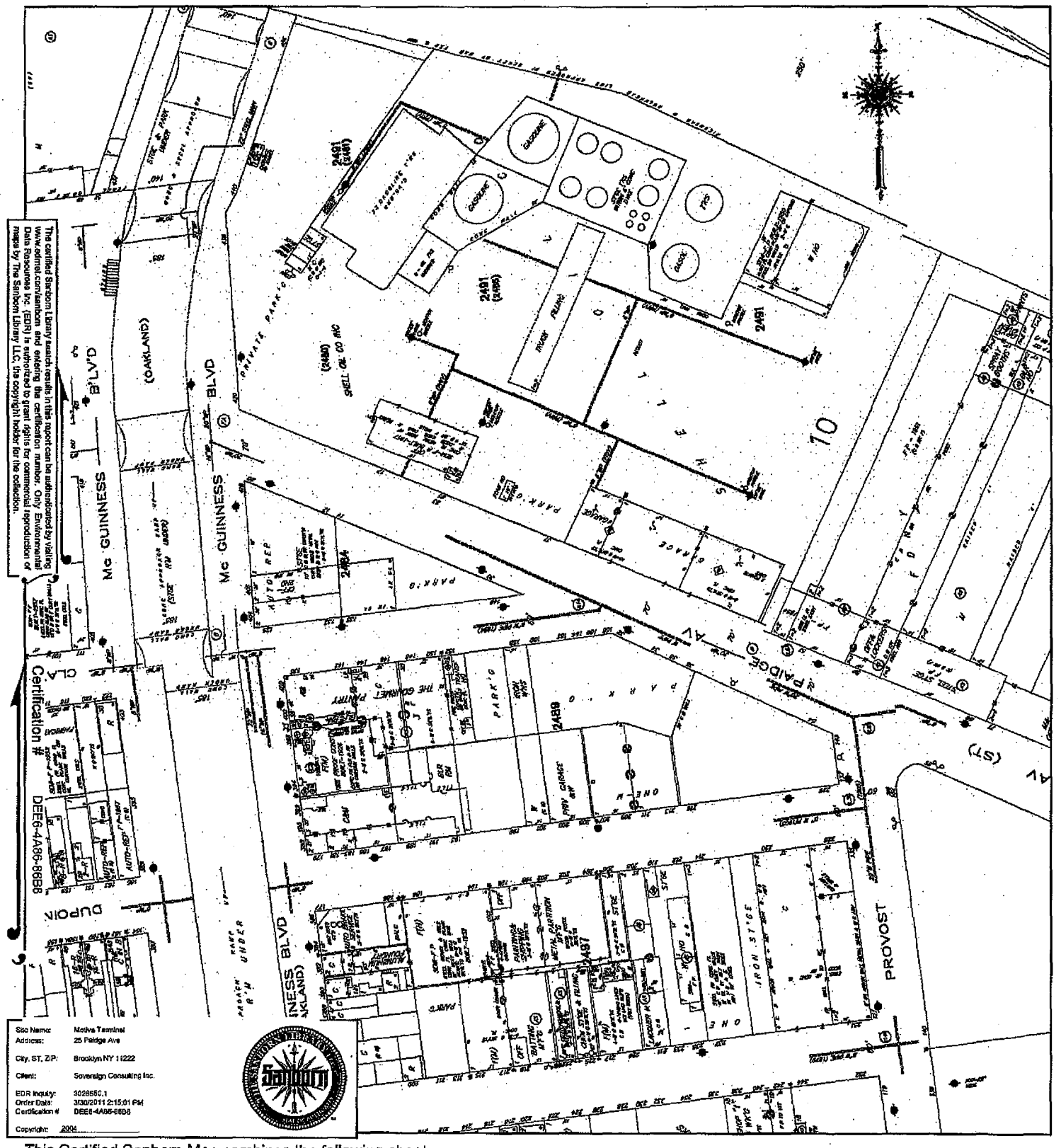


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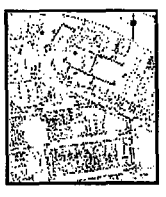

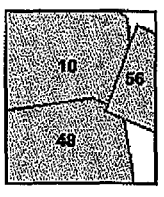


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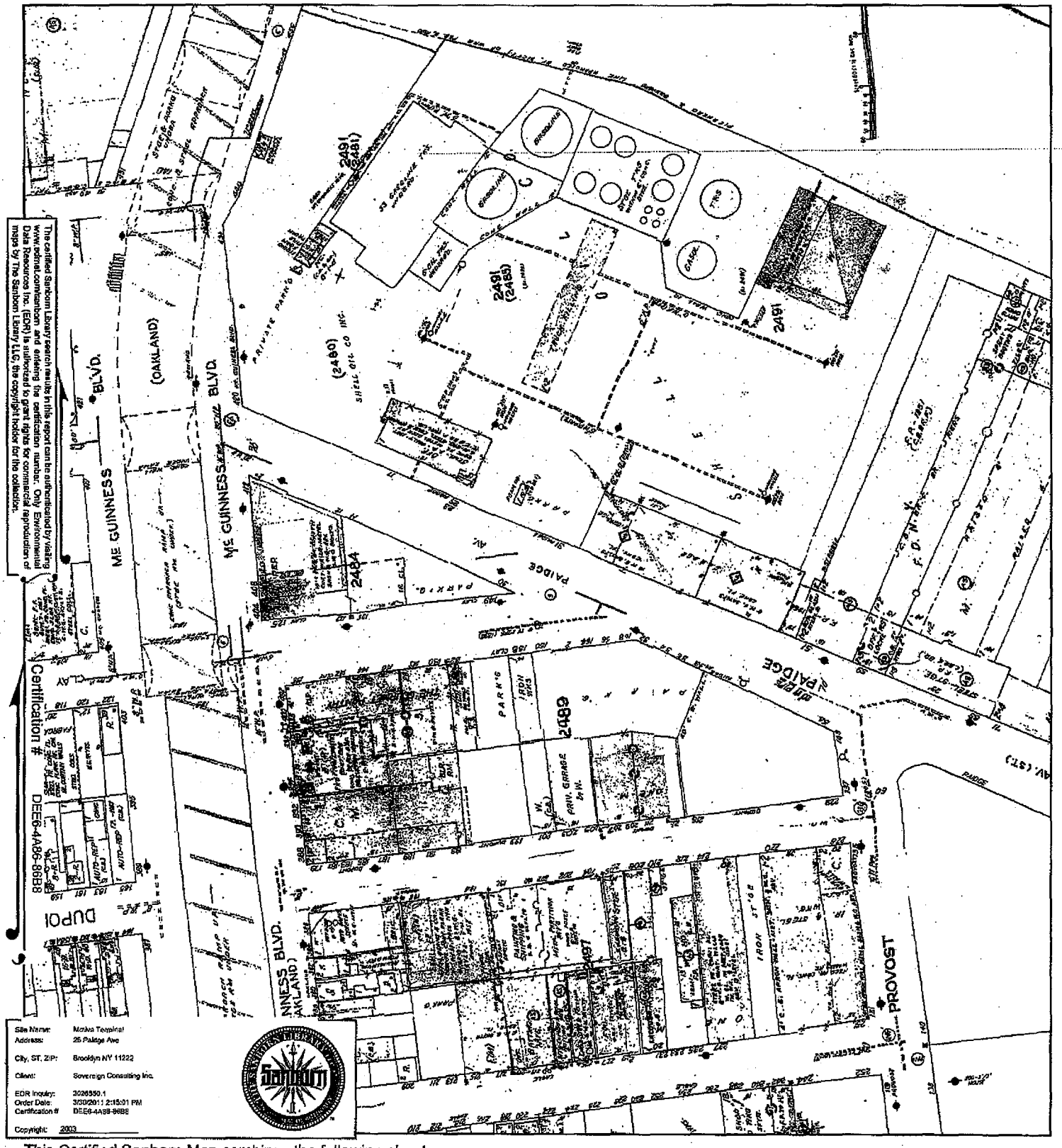


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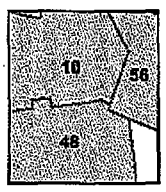


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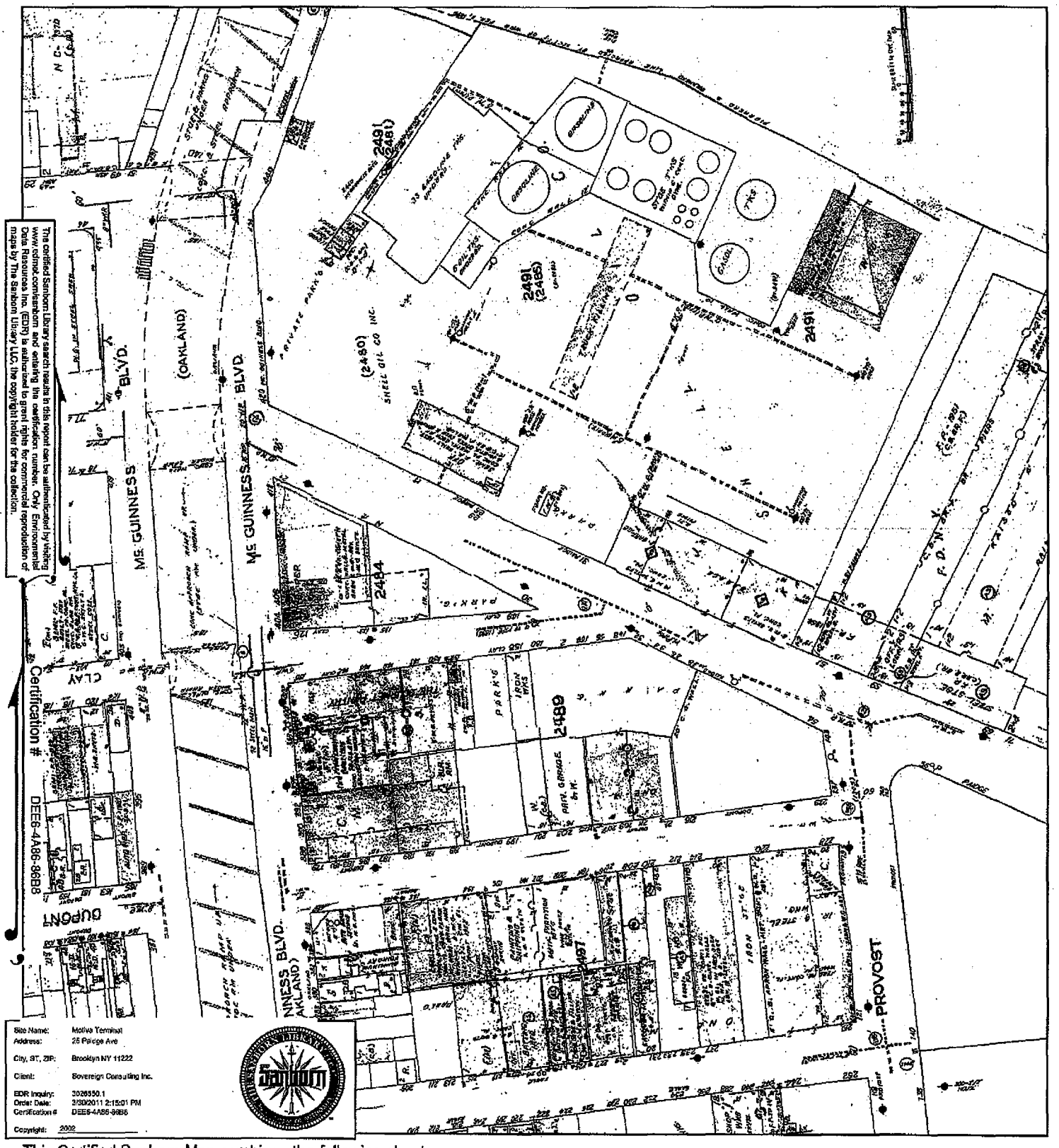


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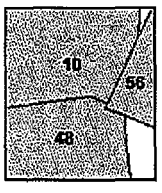


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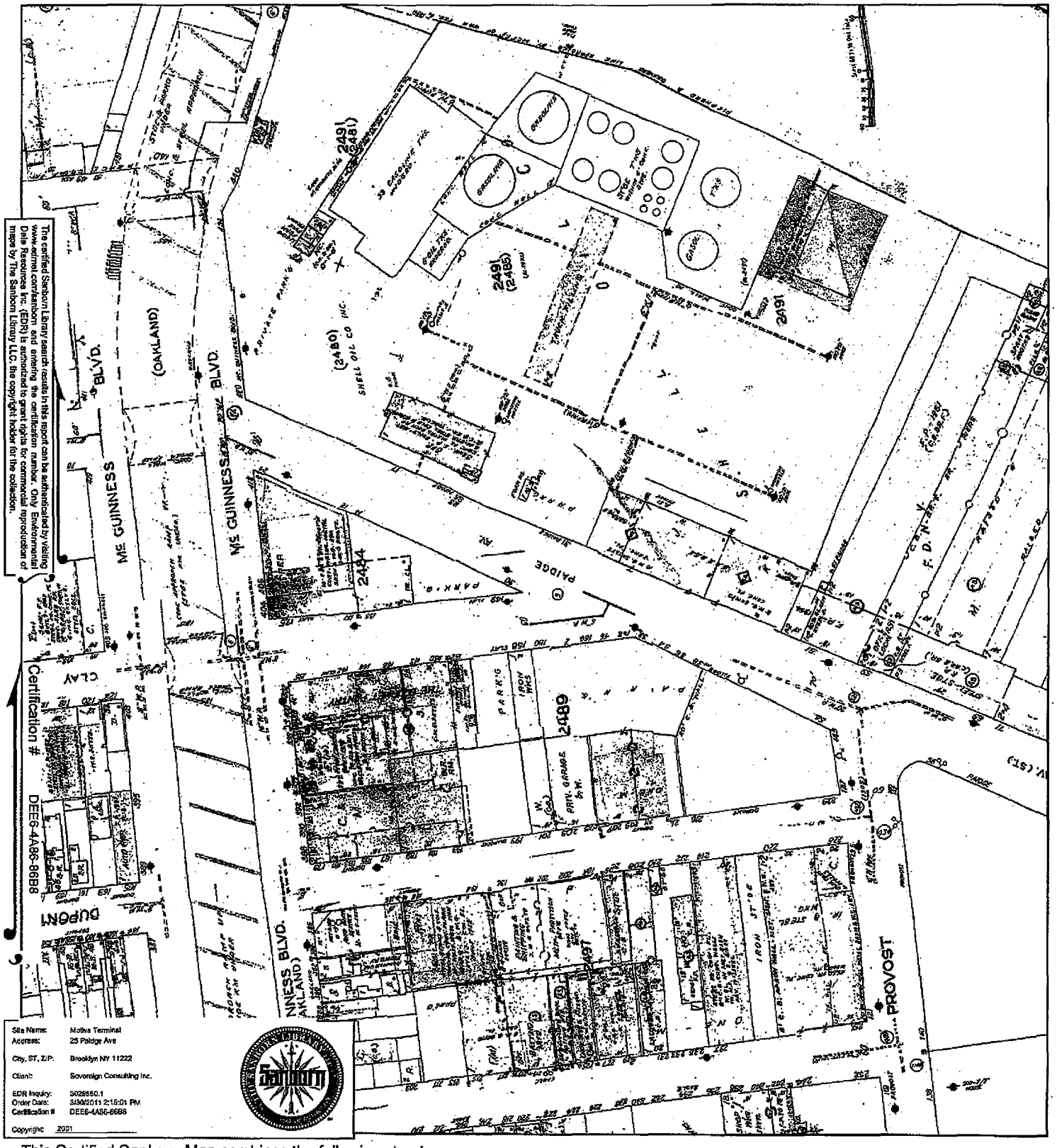


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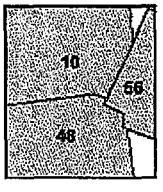


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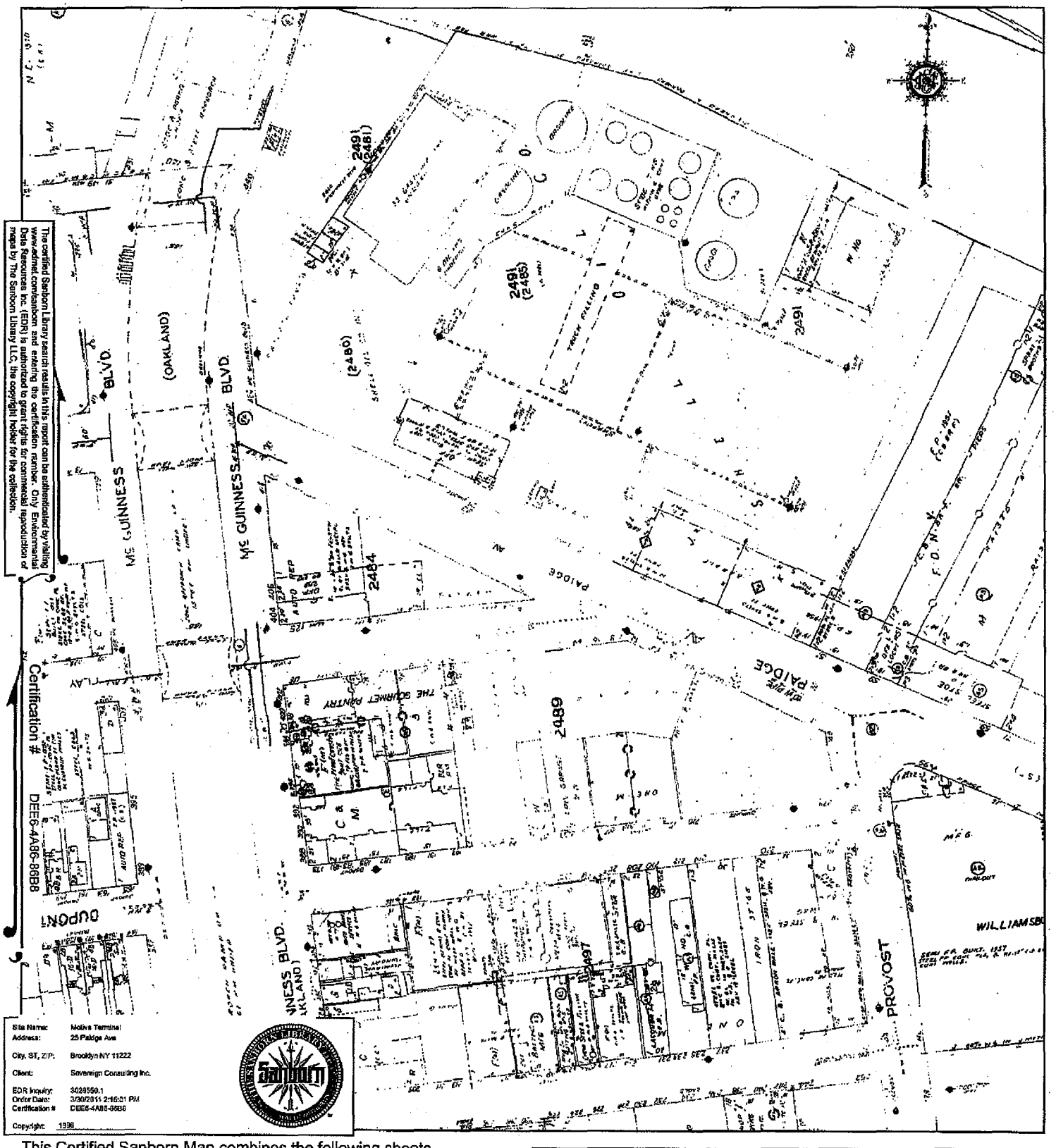


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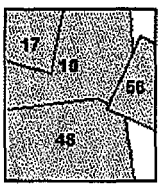


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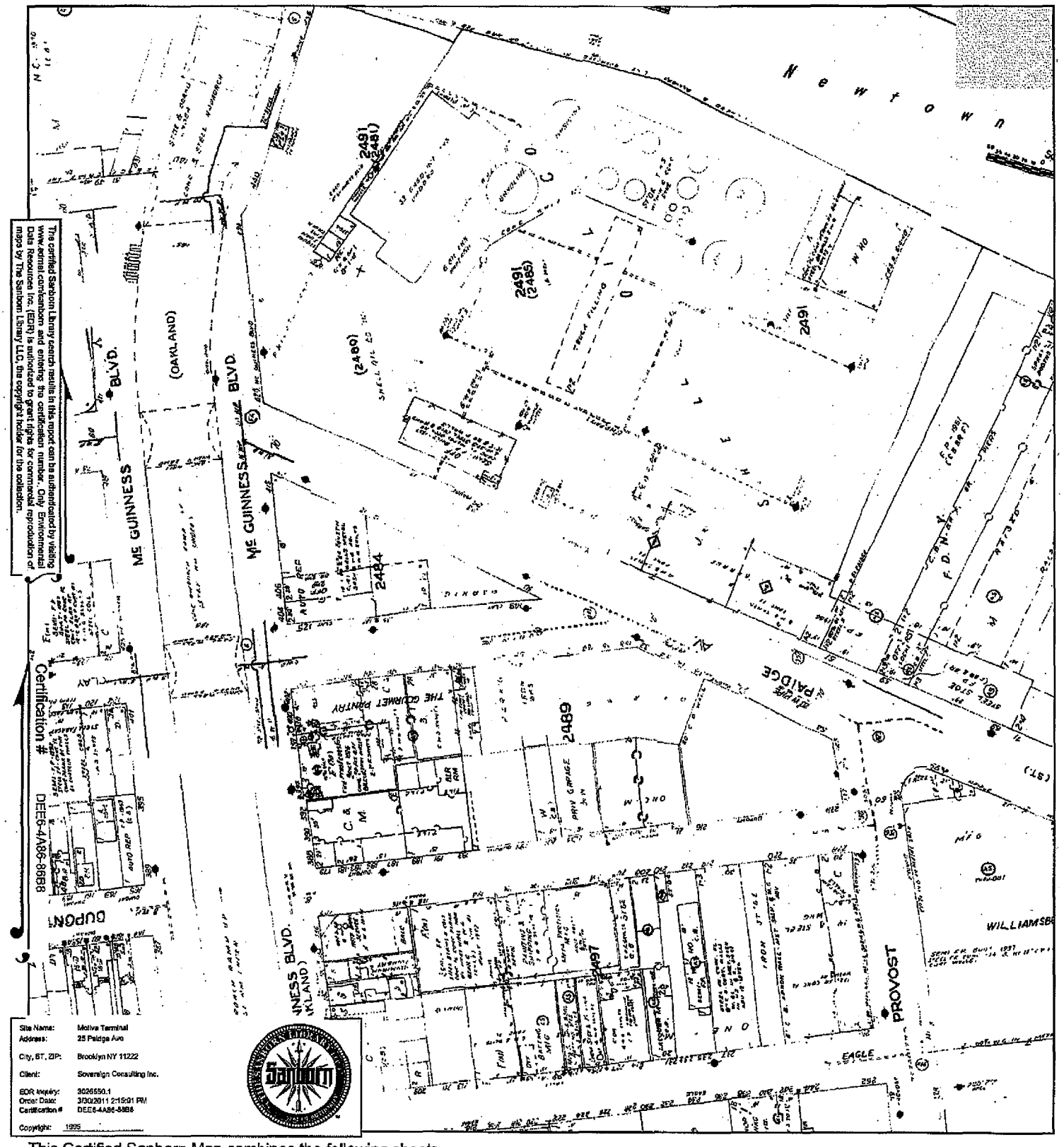
# 1995 Certified Sanborn Map

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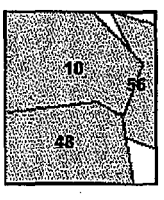


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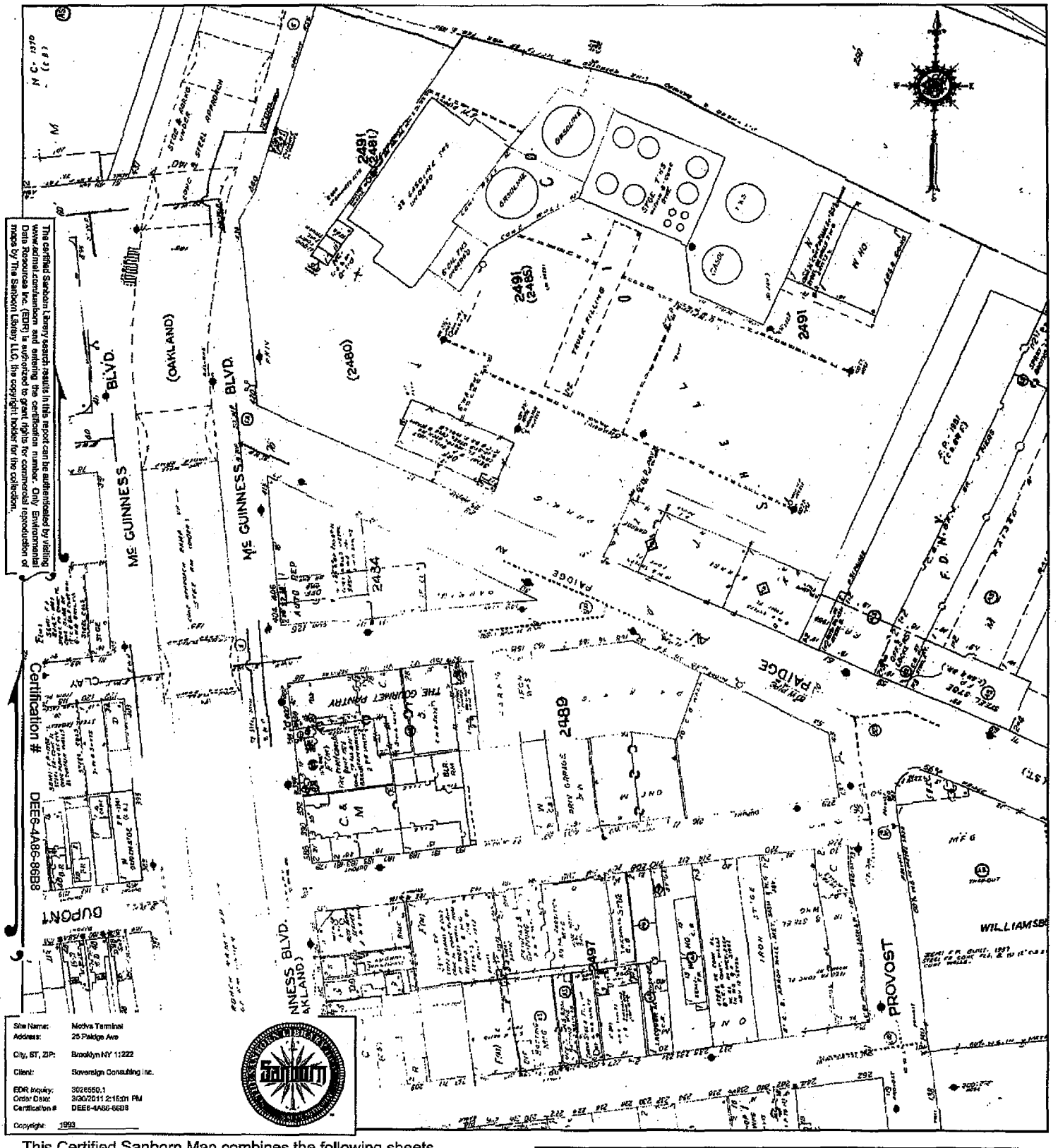


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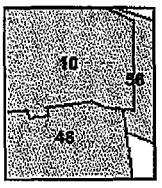


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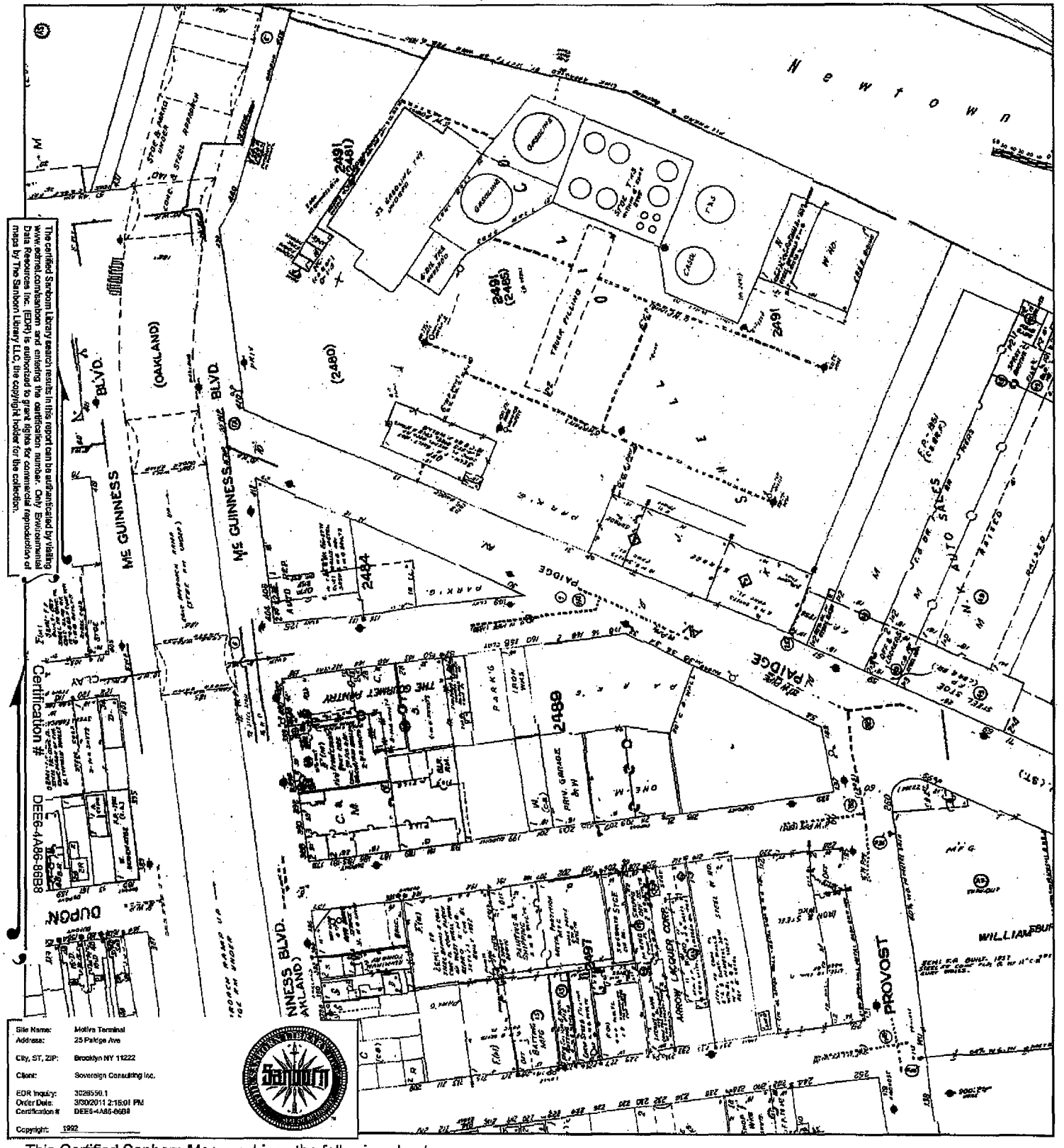


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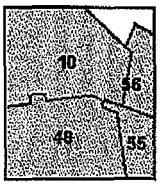


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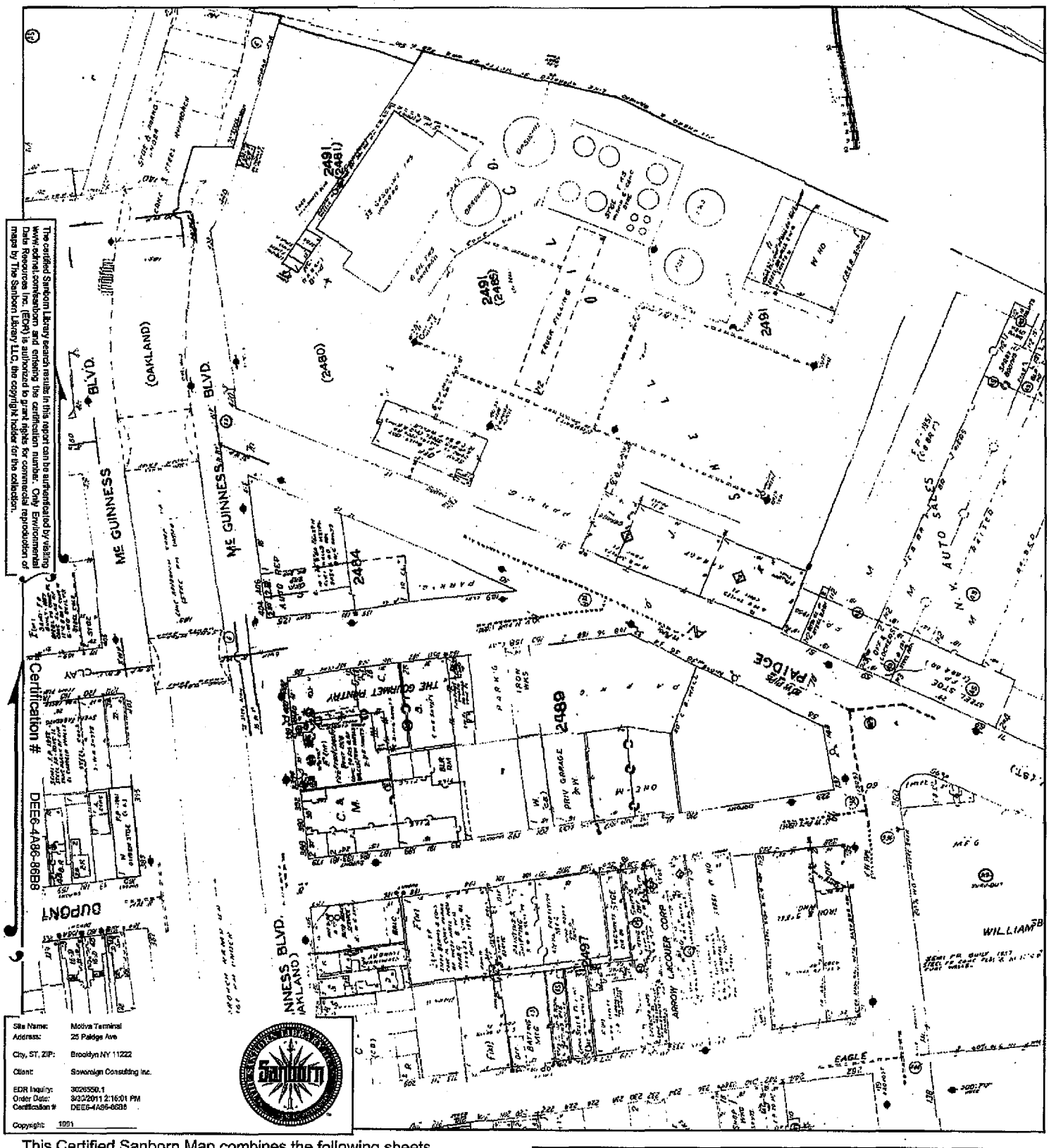


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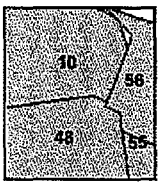


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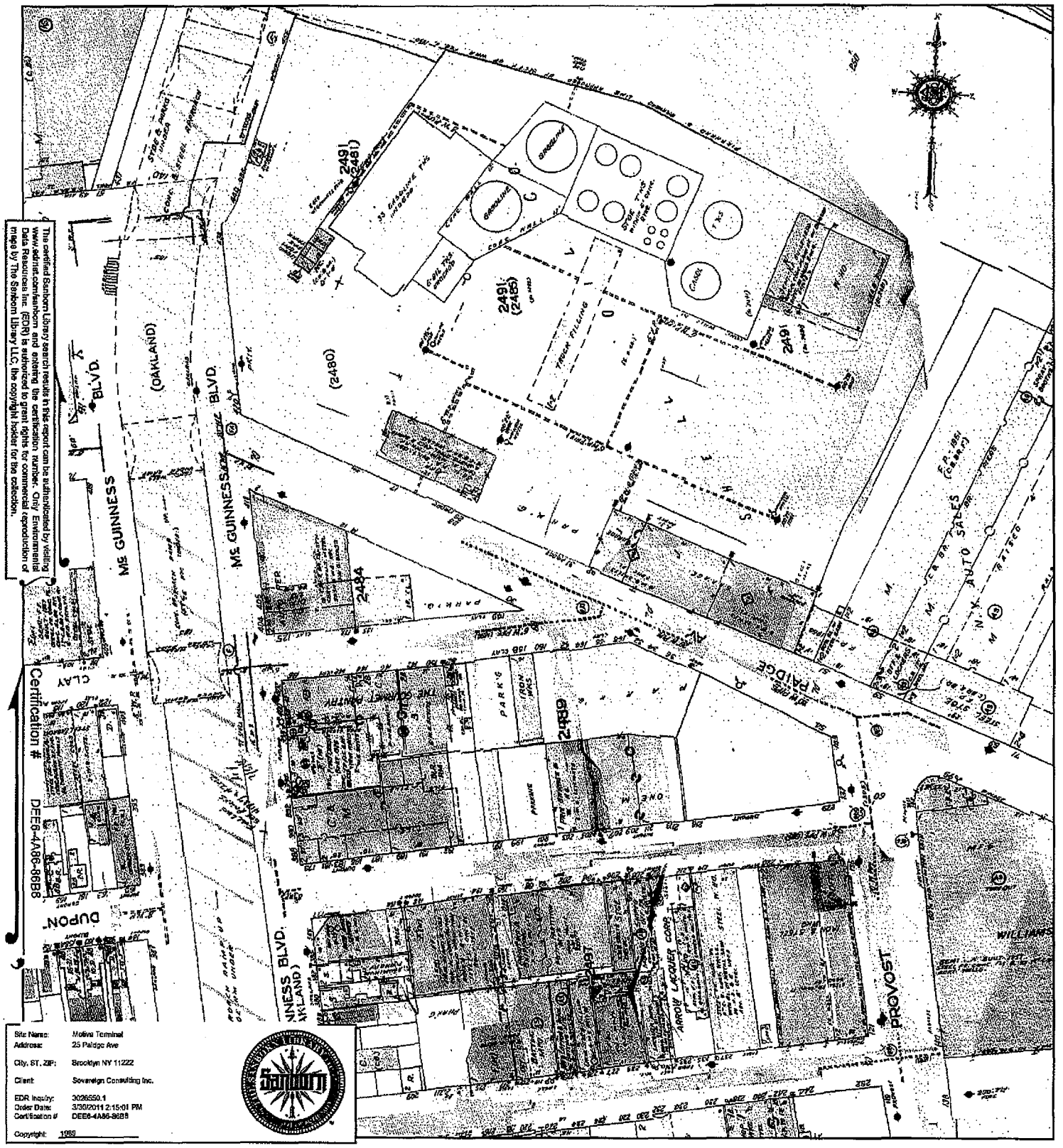


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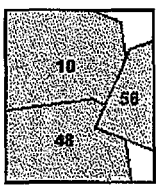


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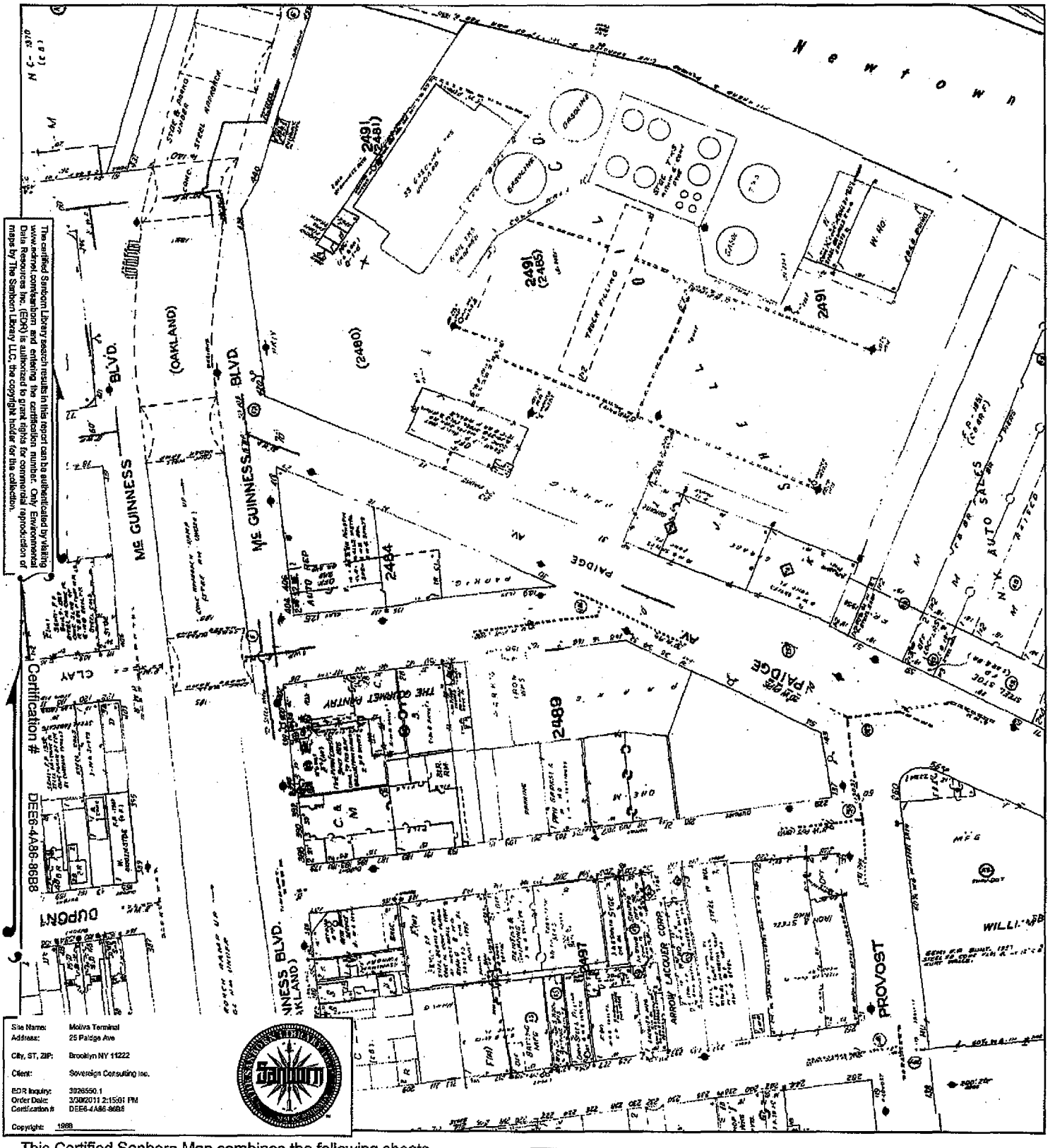


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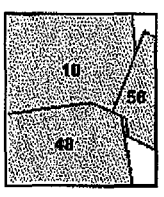


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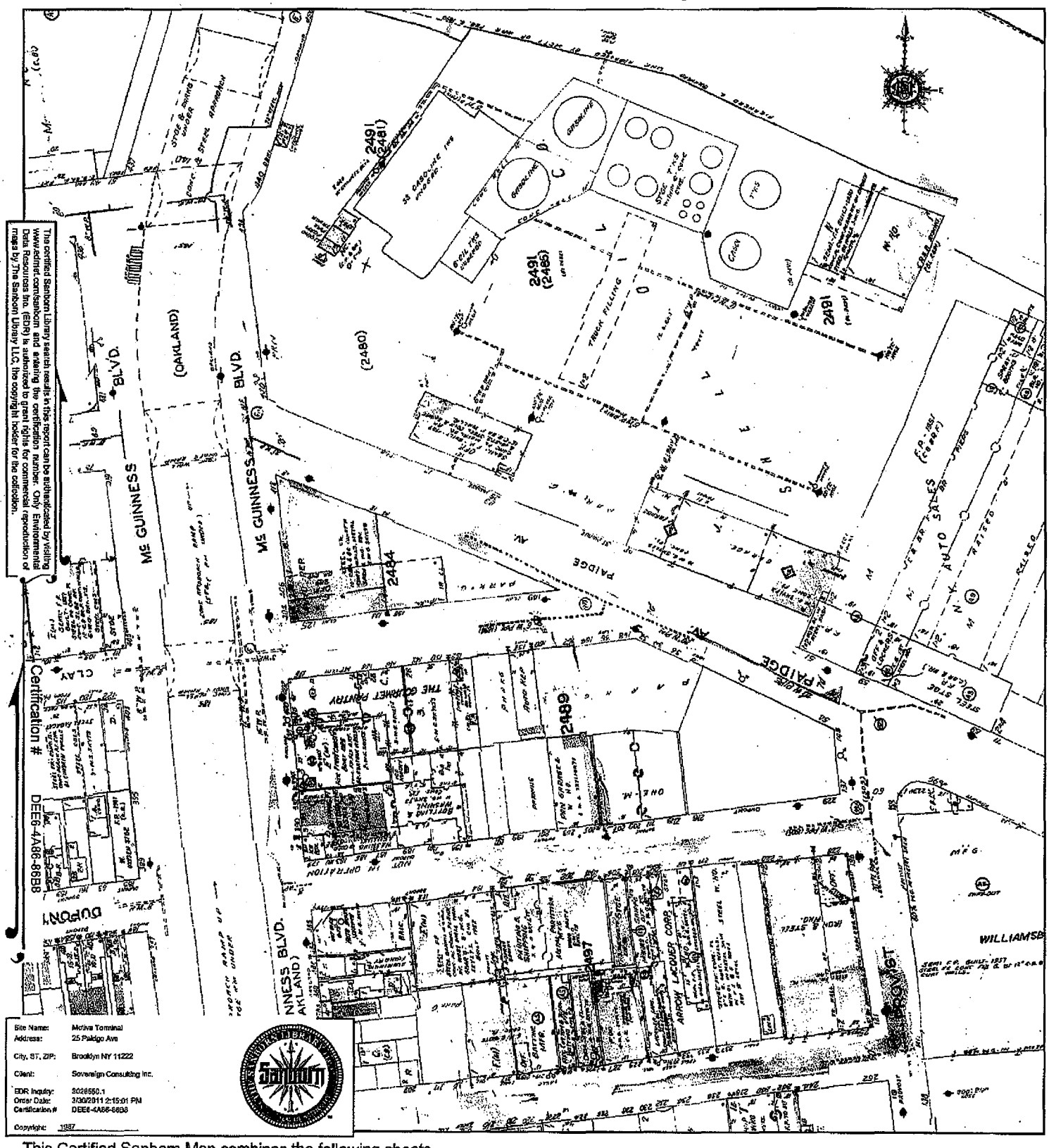
# 1987 Certified Sanborn Map

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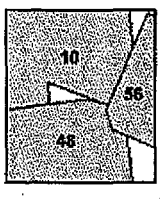


Volume 4, Sheet 10
Volume 4, Sheet 48
Volume 4, Sheet 56

0 Feet 150 300 600

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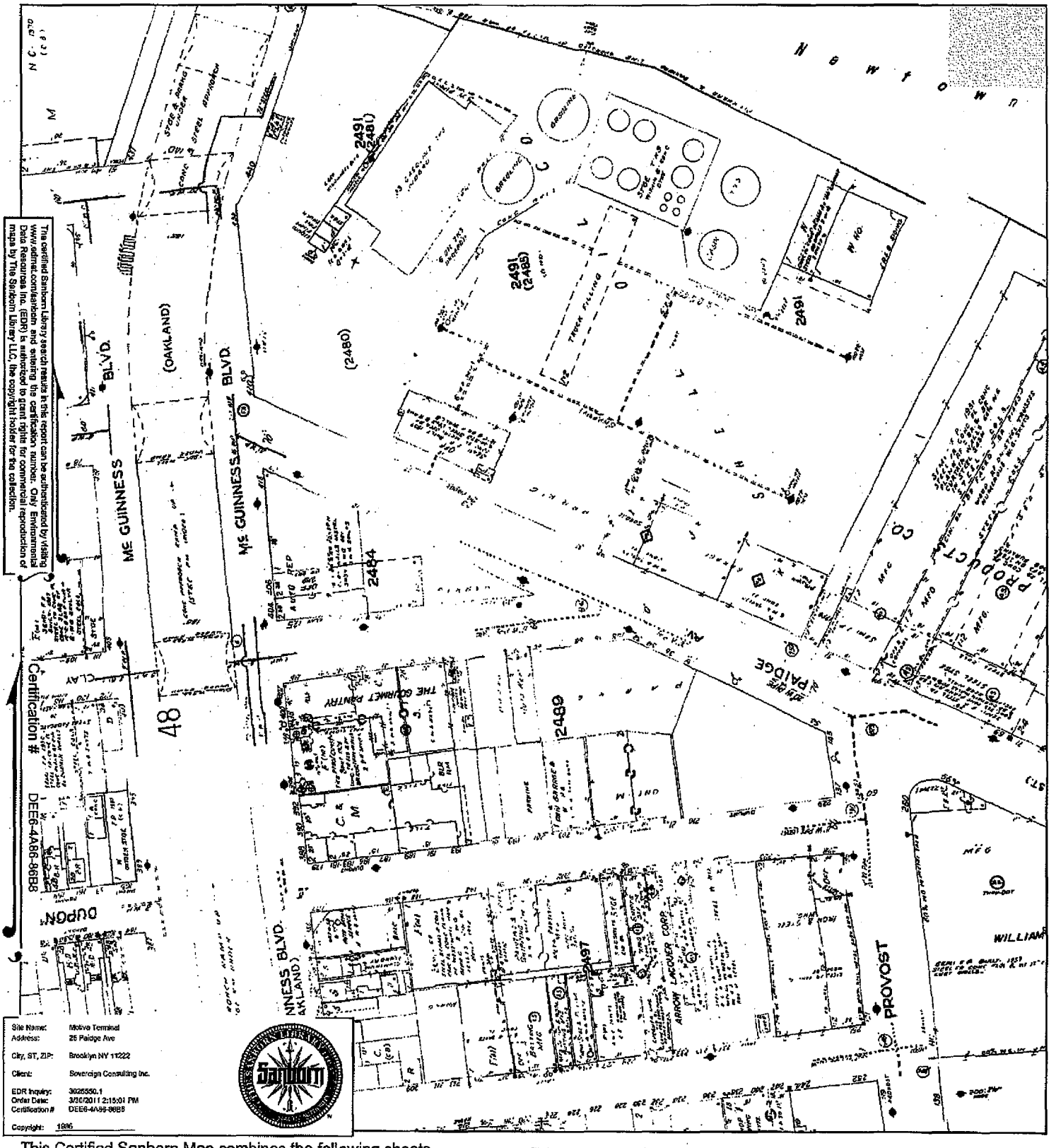
# 1986 Certified Sanborn Map

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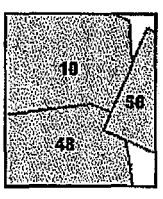


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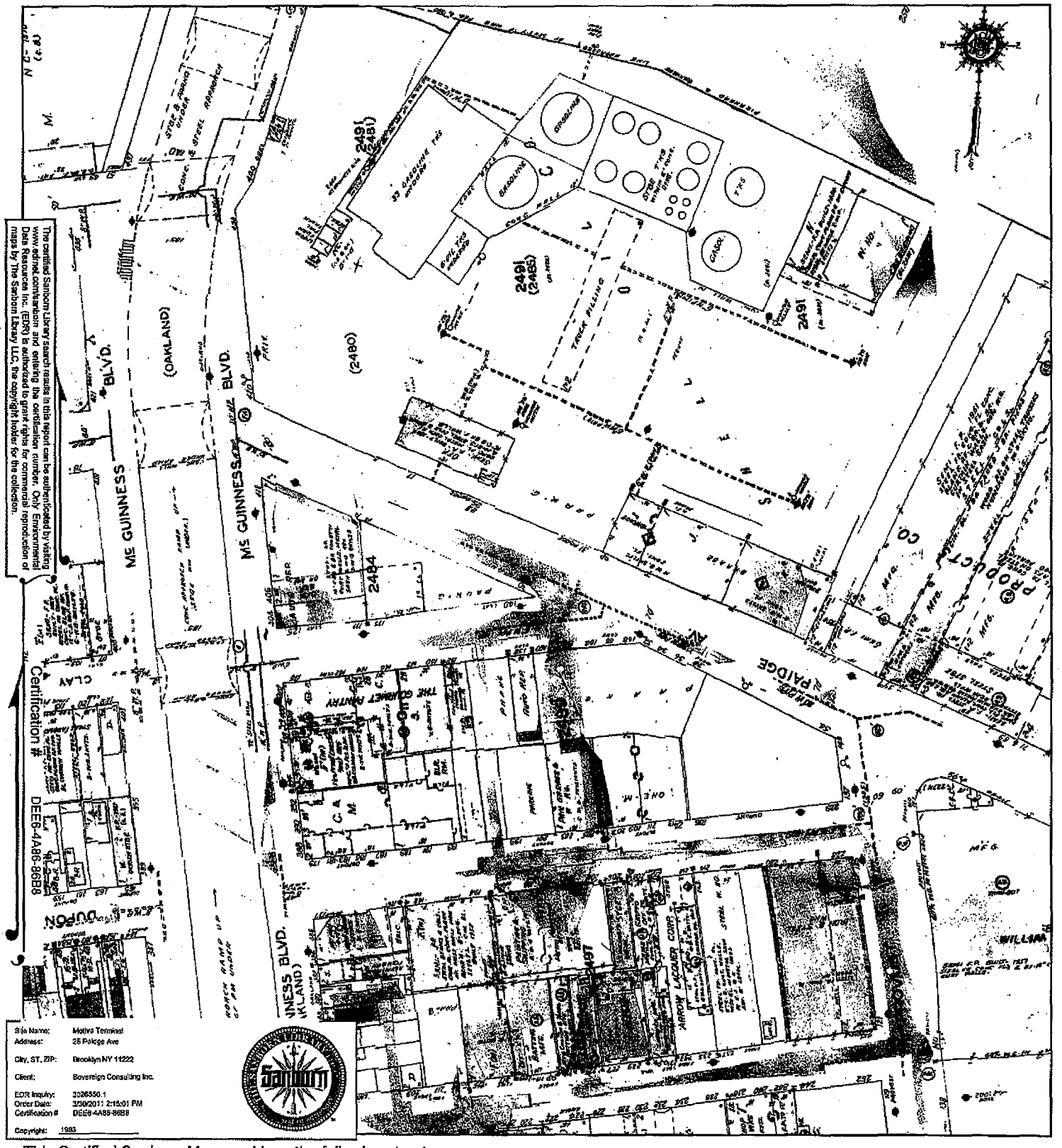
# 1983 Certified Sanborn Map

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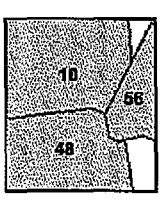


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Volume 4, Sheet 56

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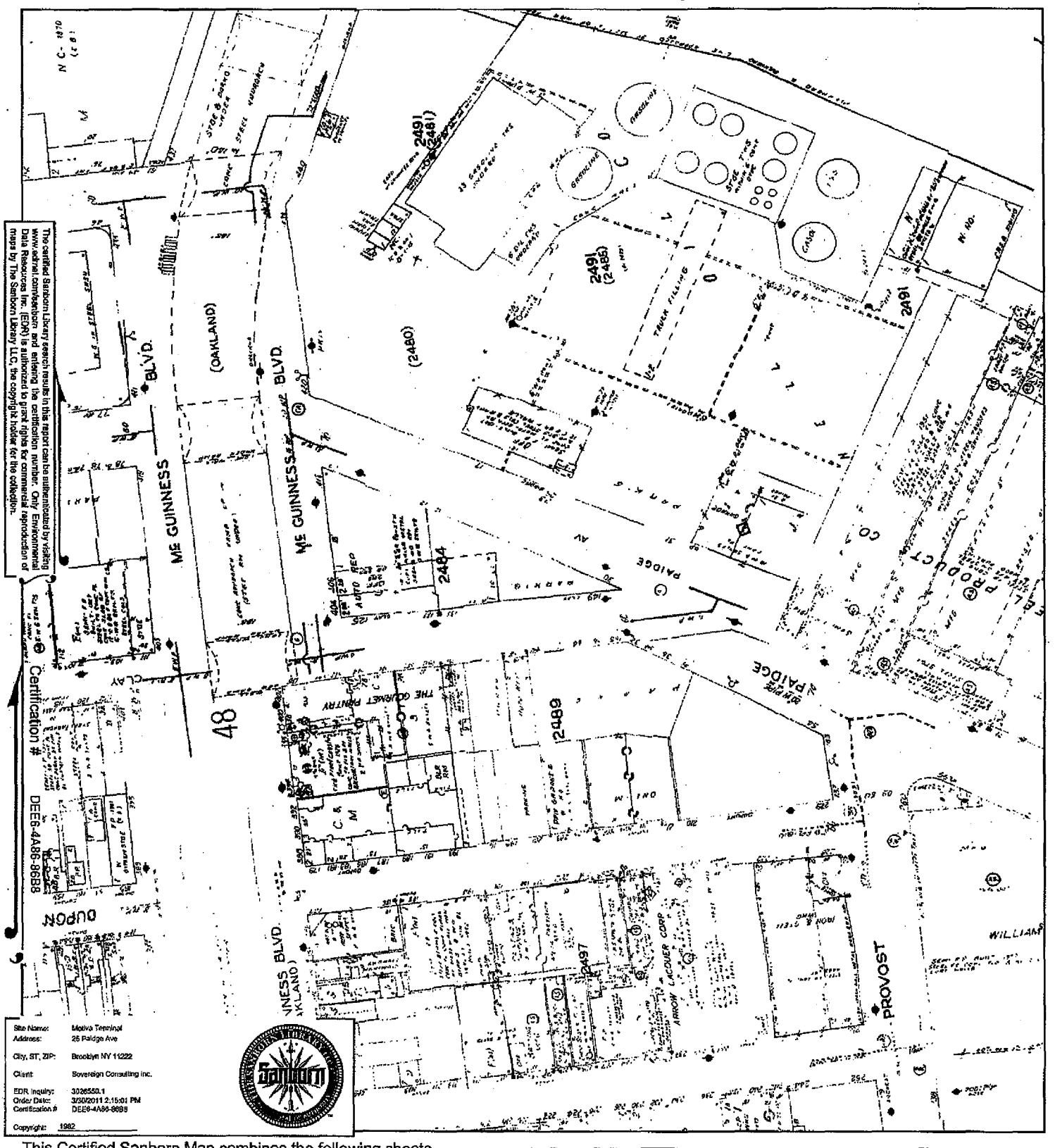
# 1982 Certified Sanborn Map

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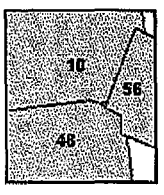


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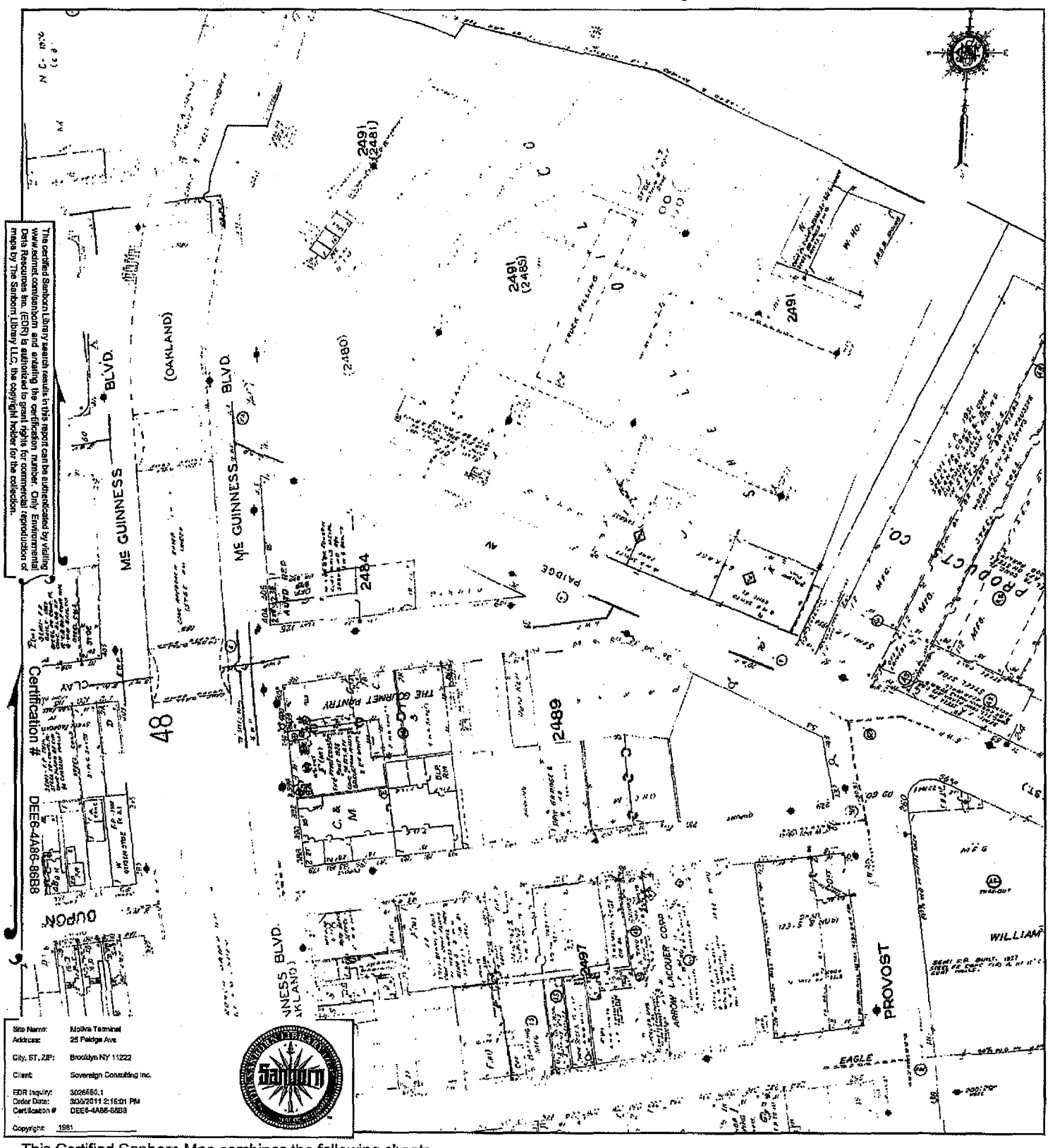


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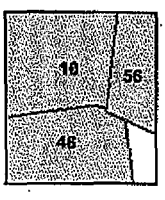


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Volume 4, Sheet 48

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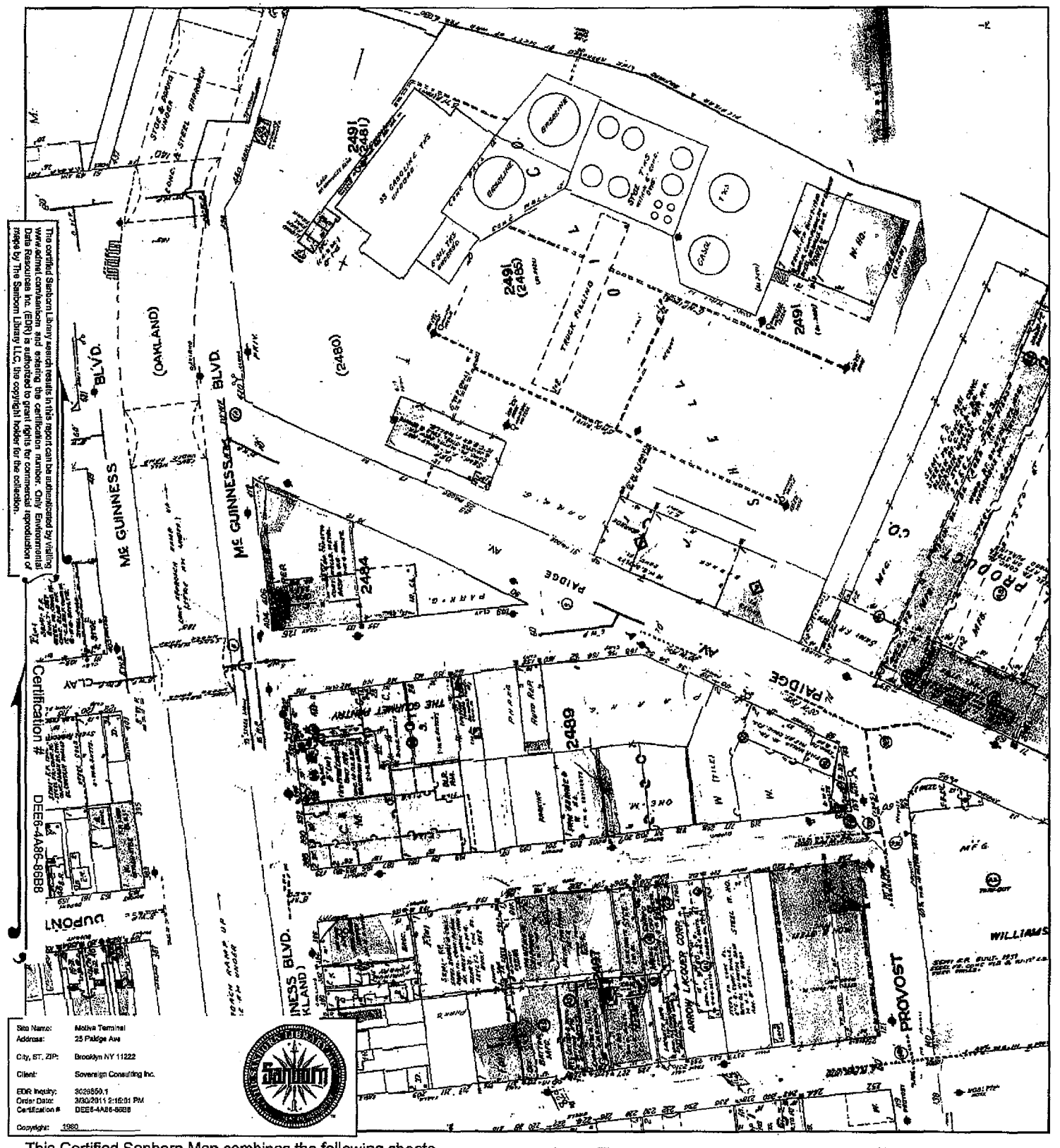


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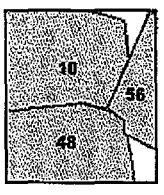


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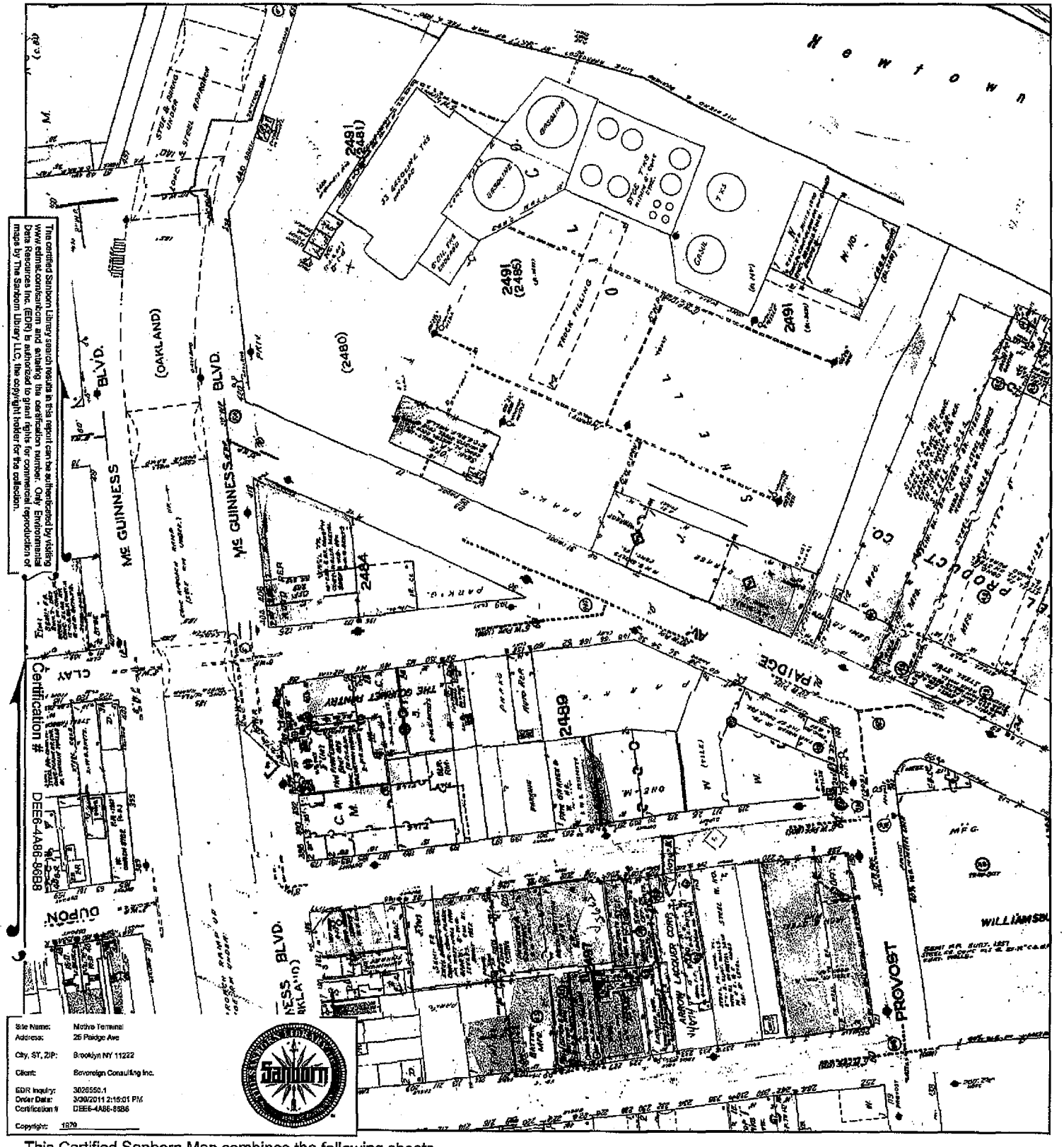
# 1979 Certified Sanborn Map

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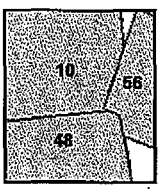


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0 Feet 150 300 600

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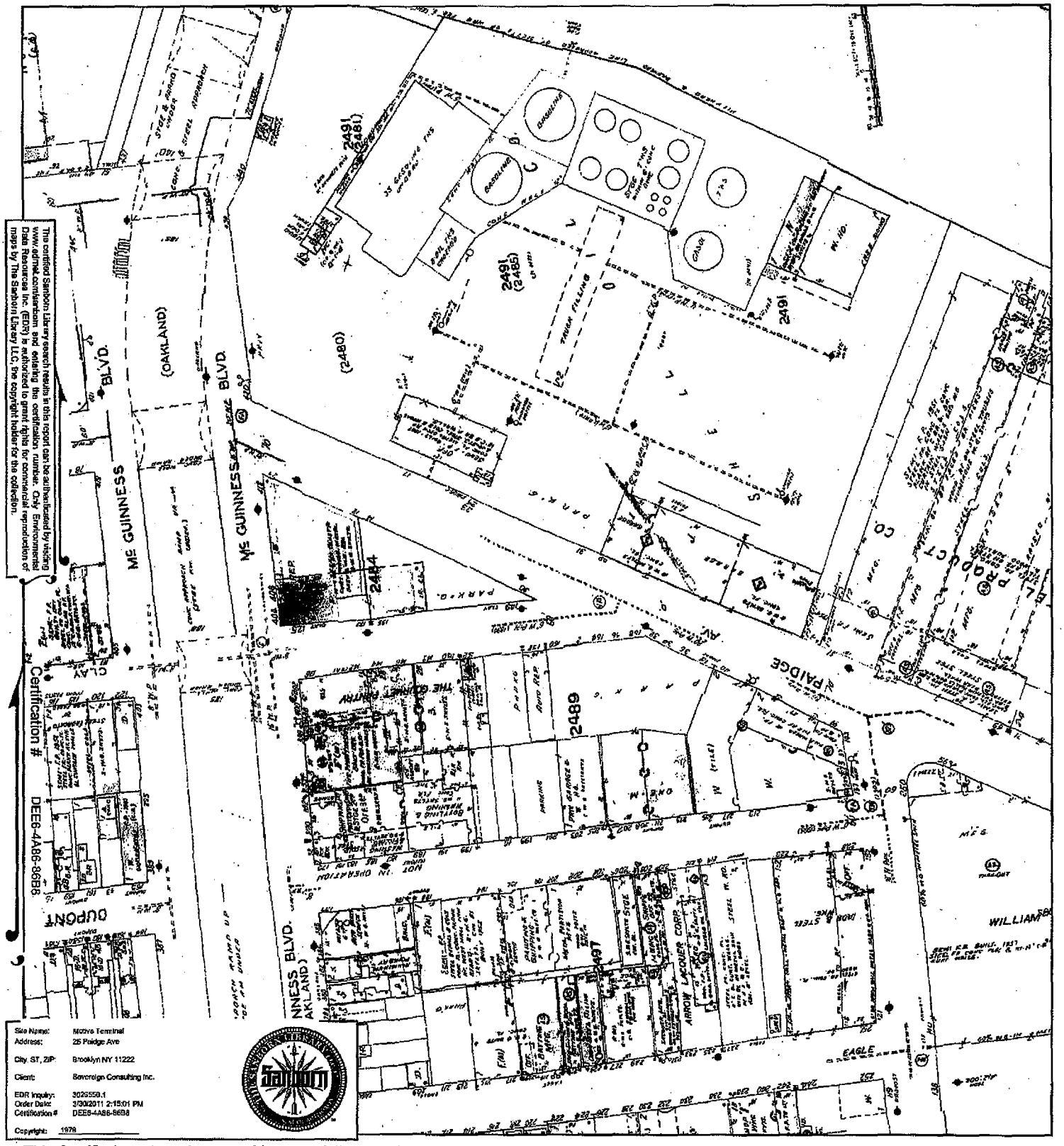


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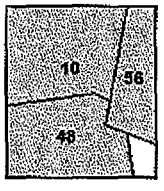


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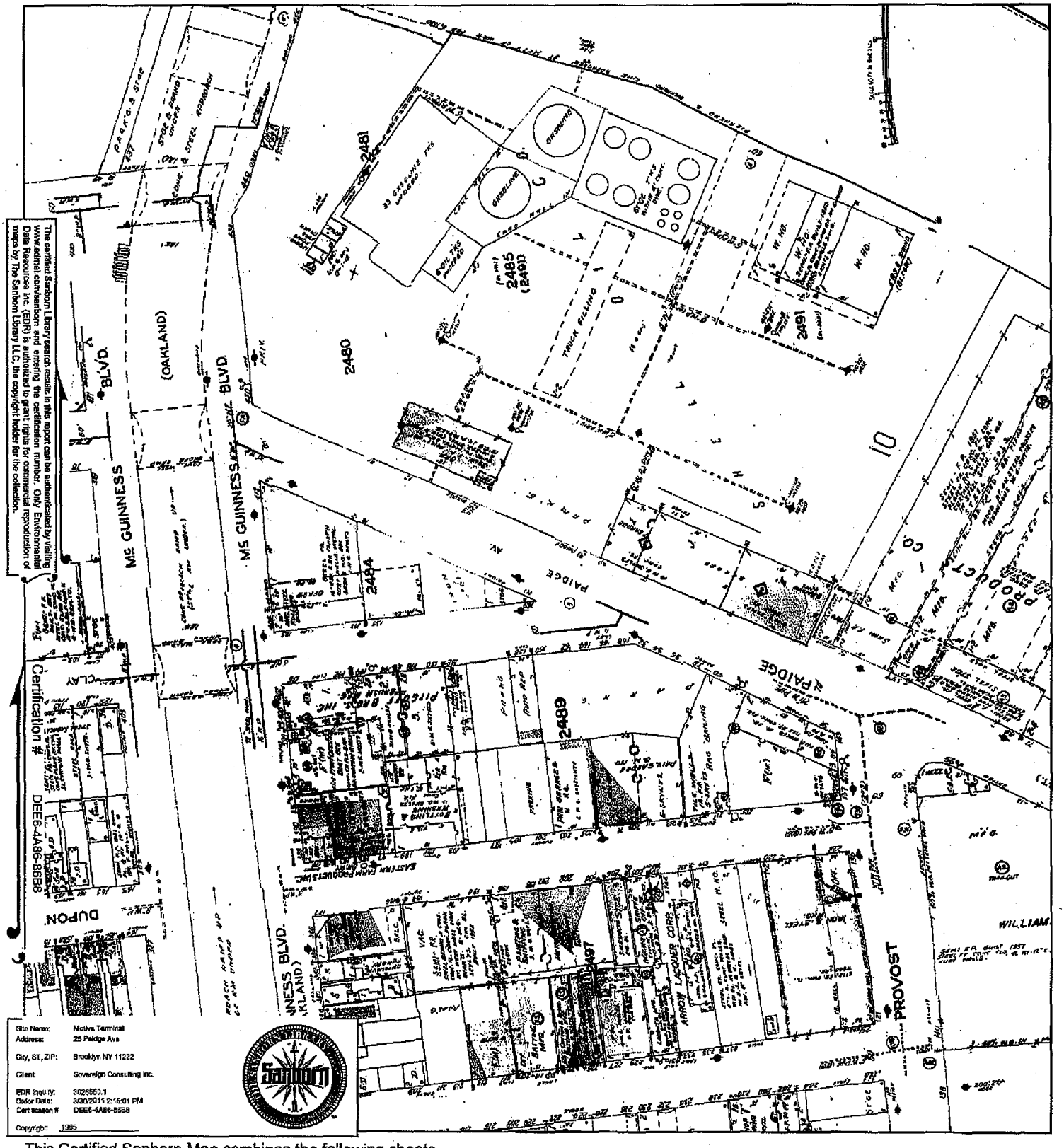


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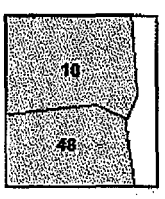


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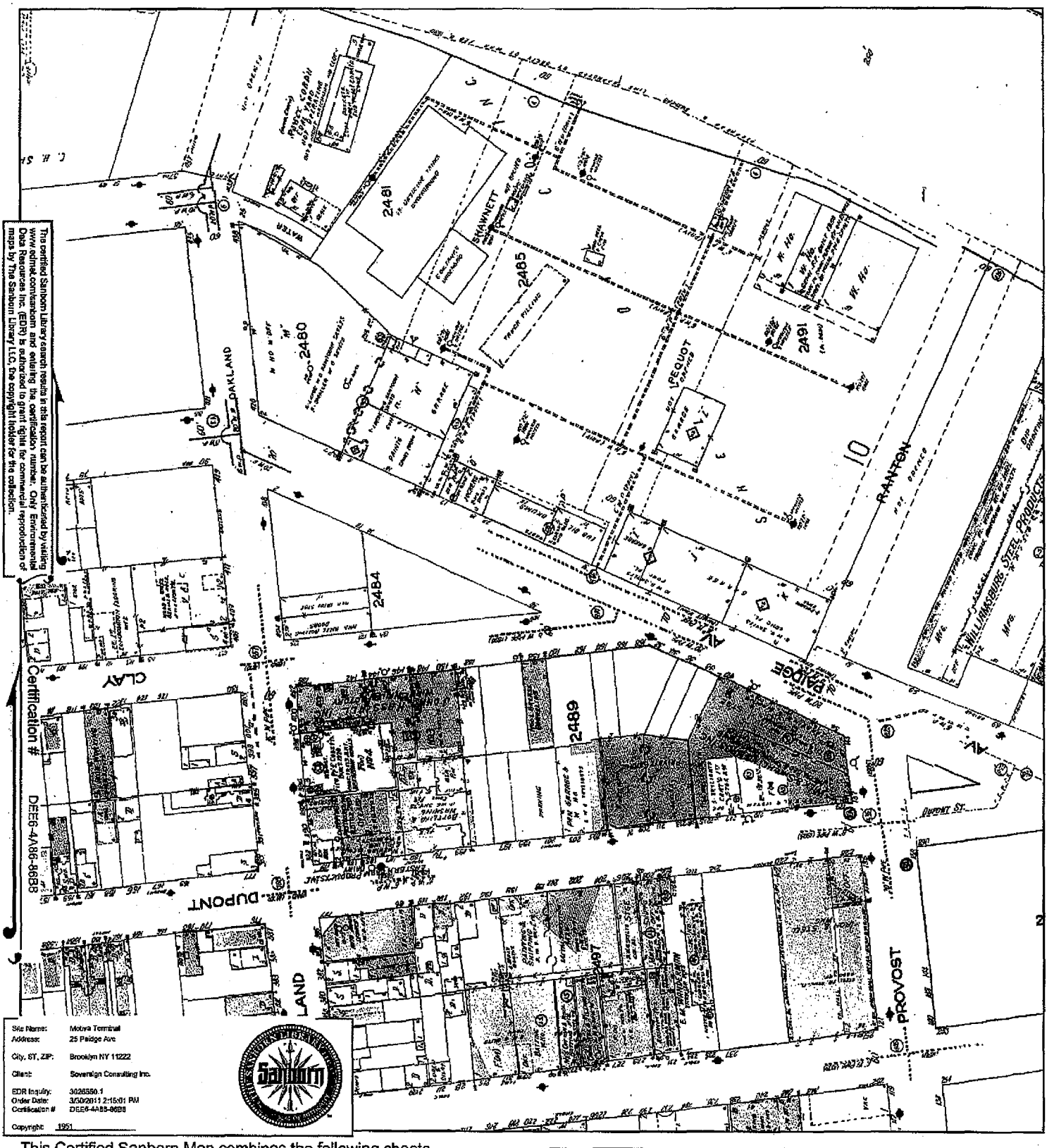


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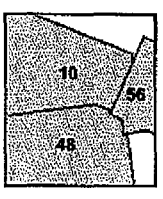


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Volume 4, Sheet 56

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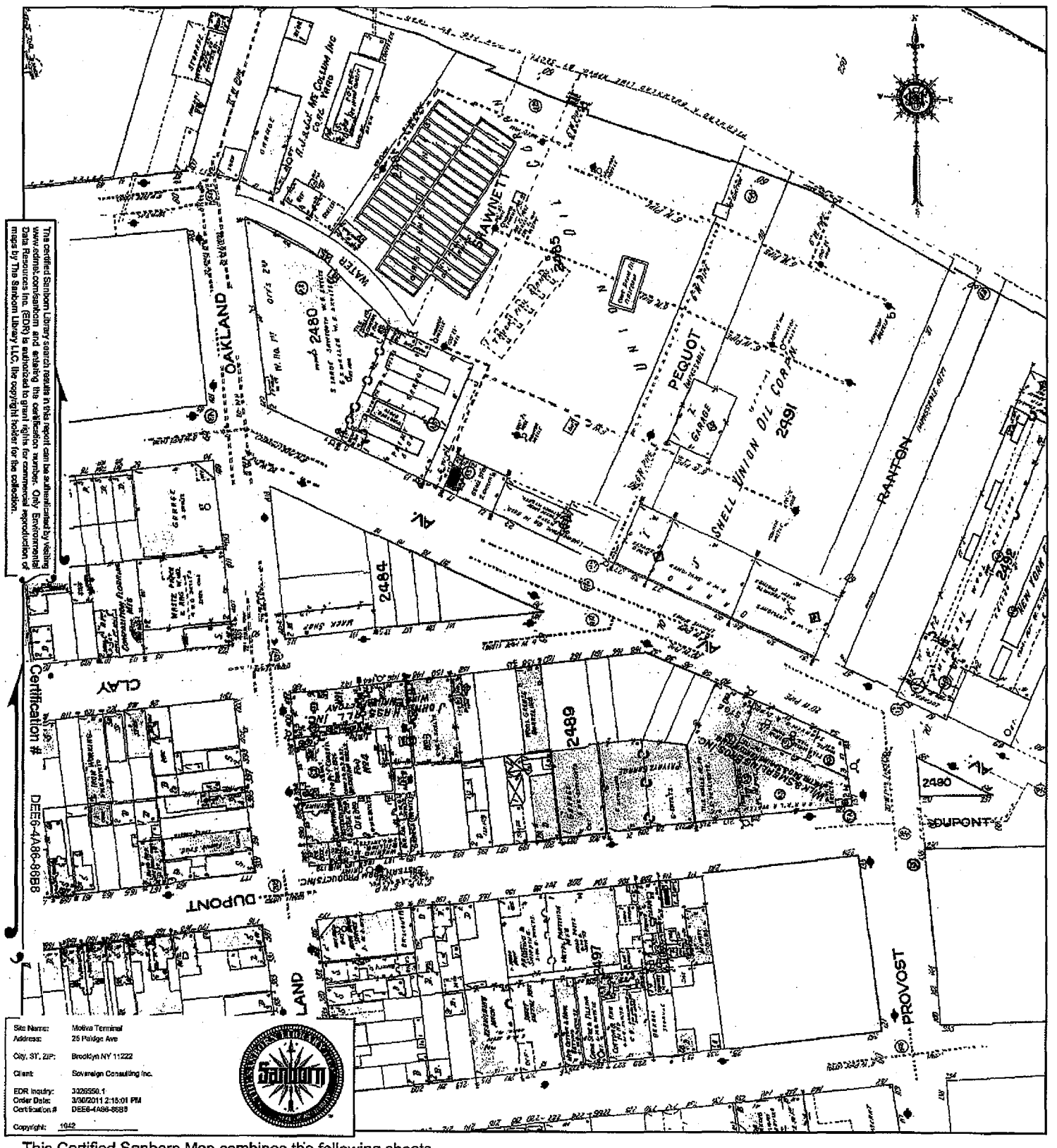


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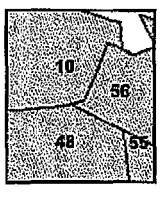


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Volume 4, Sheet 56
Volume 4, Sheet 10

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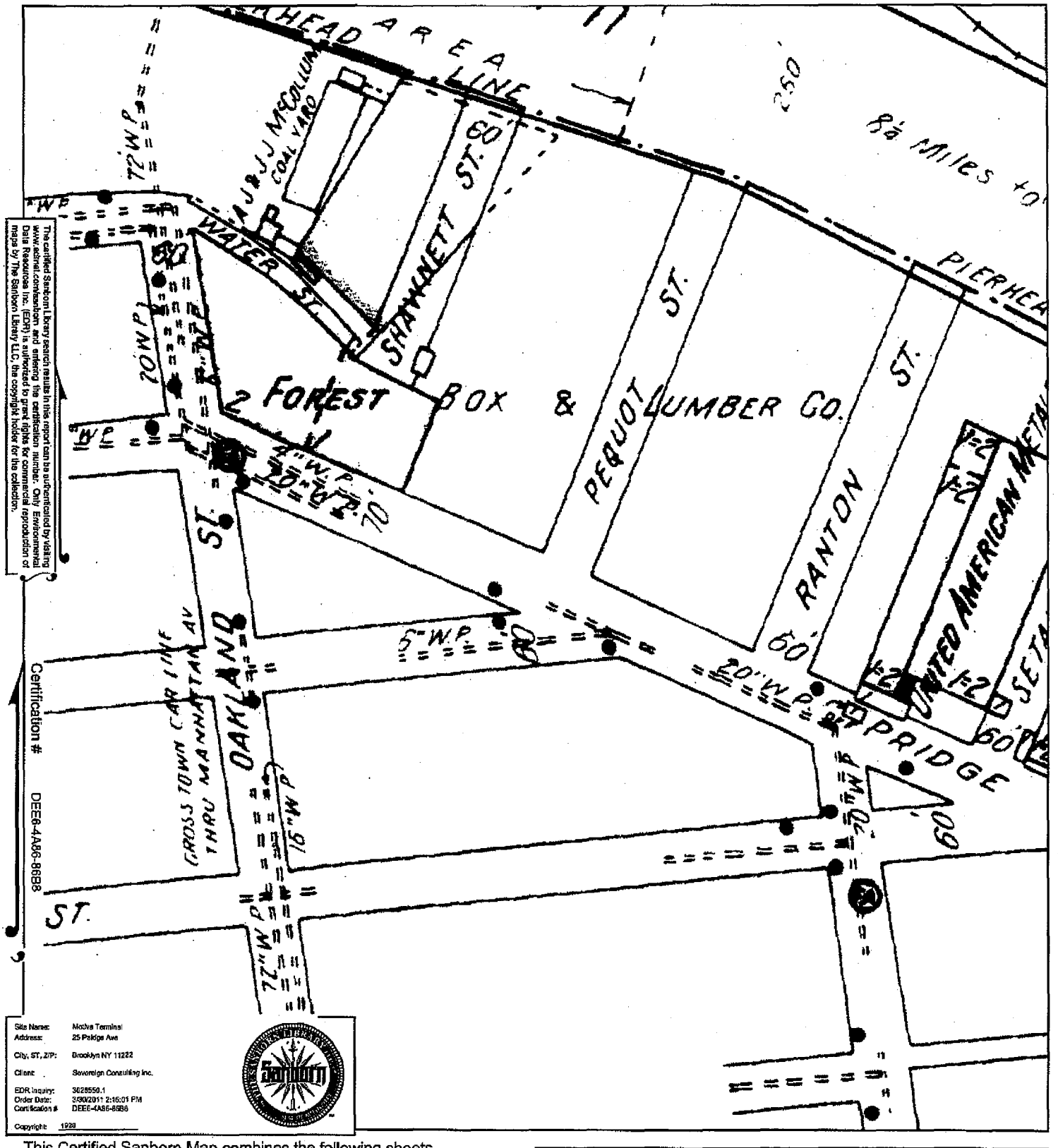
# 1928 Certified Sanborn Map

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Volume Pier Maps, Sheet 39

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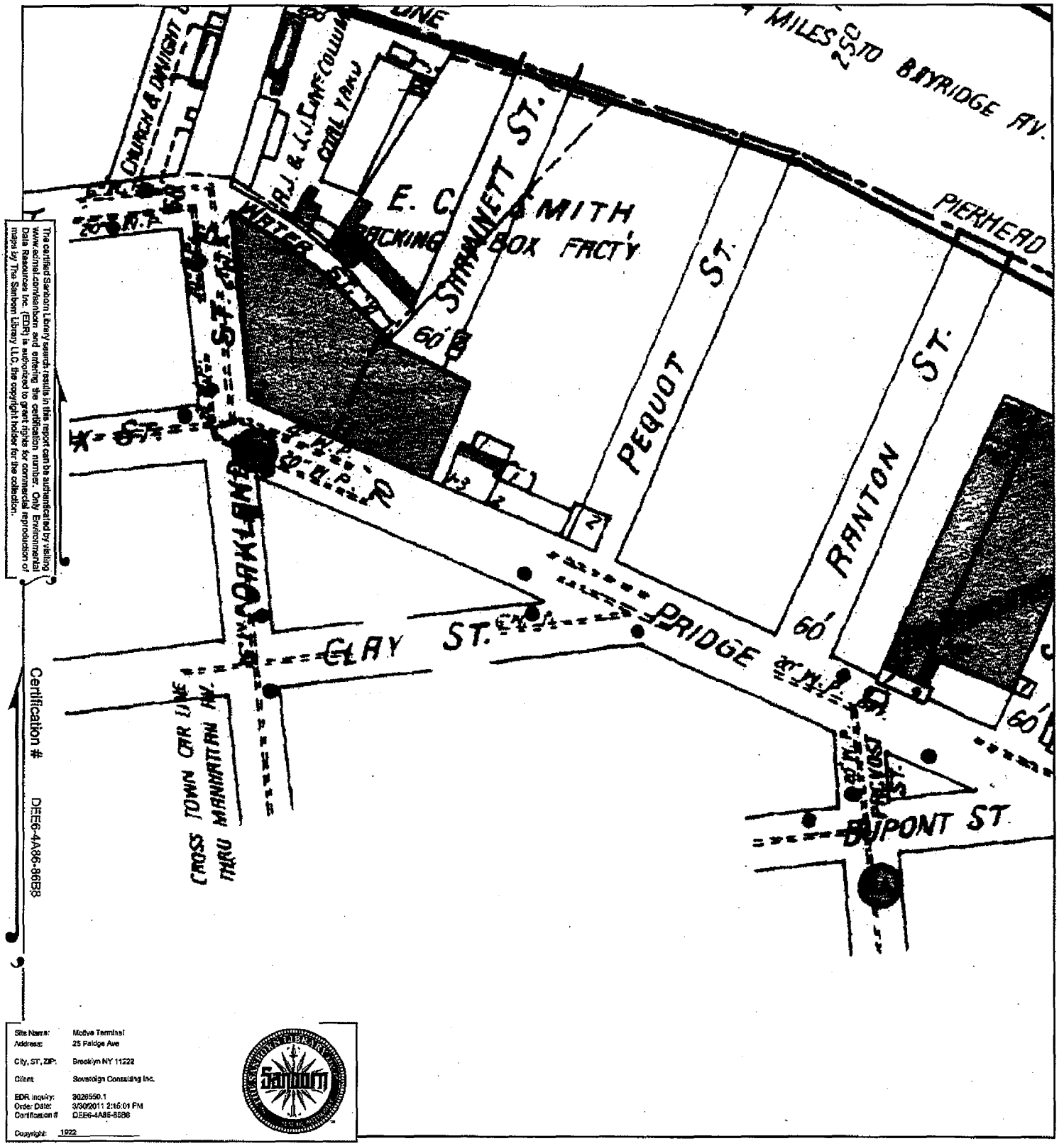
3026550 - 1 page 36

# 1922 Certified Sanborn Map

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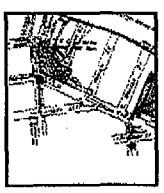

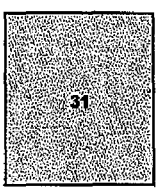


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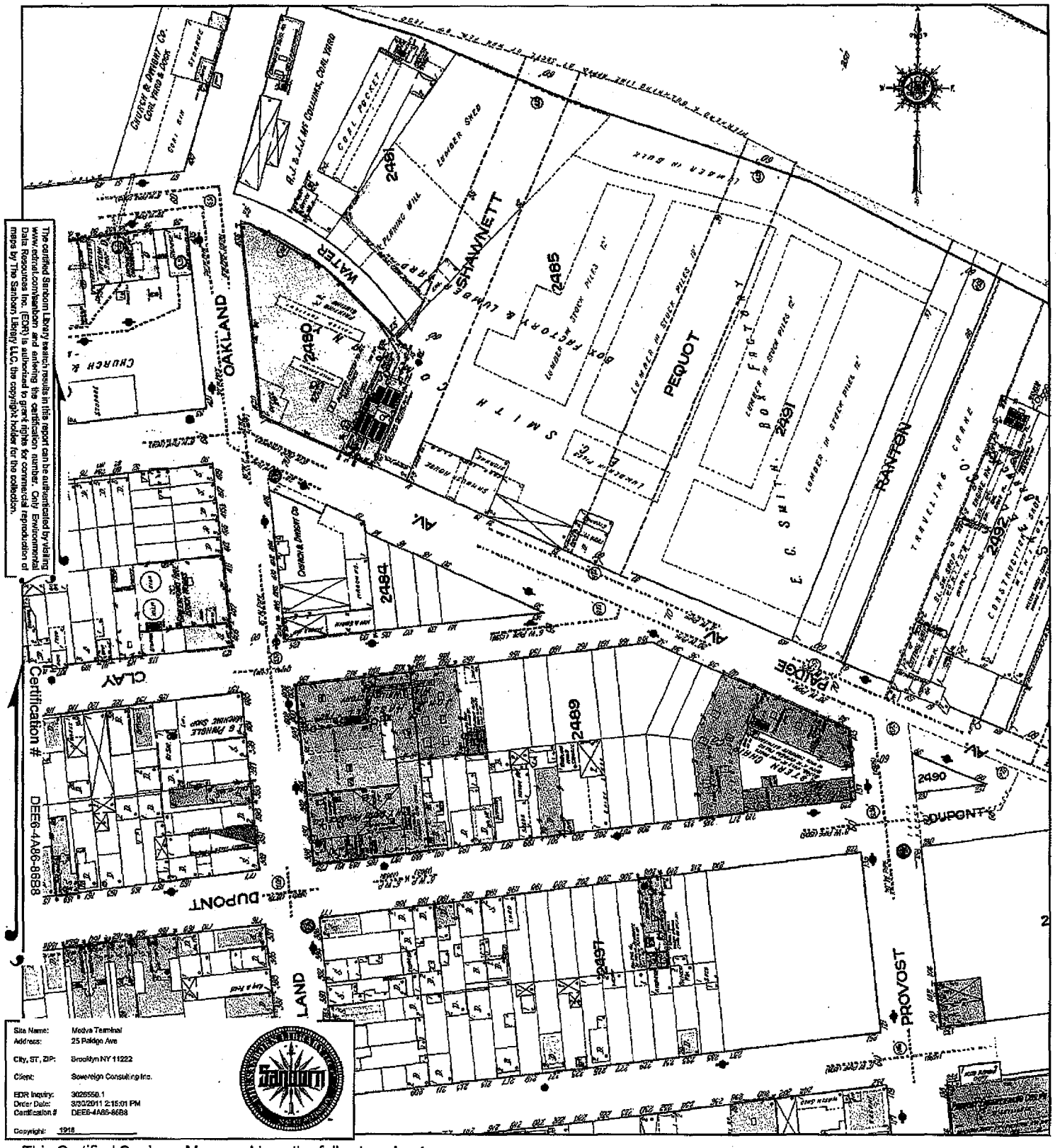
# 1916 Certified Sanborn Map

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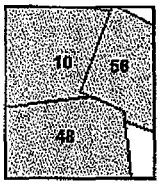


Volume 4, Sheet 56
Volume 4, Sheet 10
Volume 4, Sheet 48

0 Feet 150 300 600

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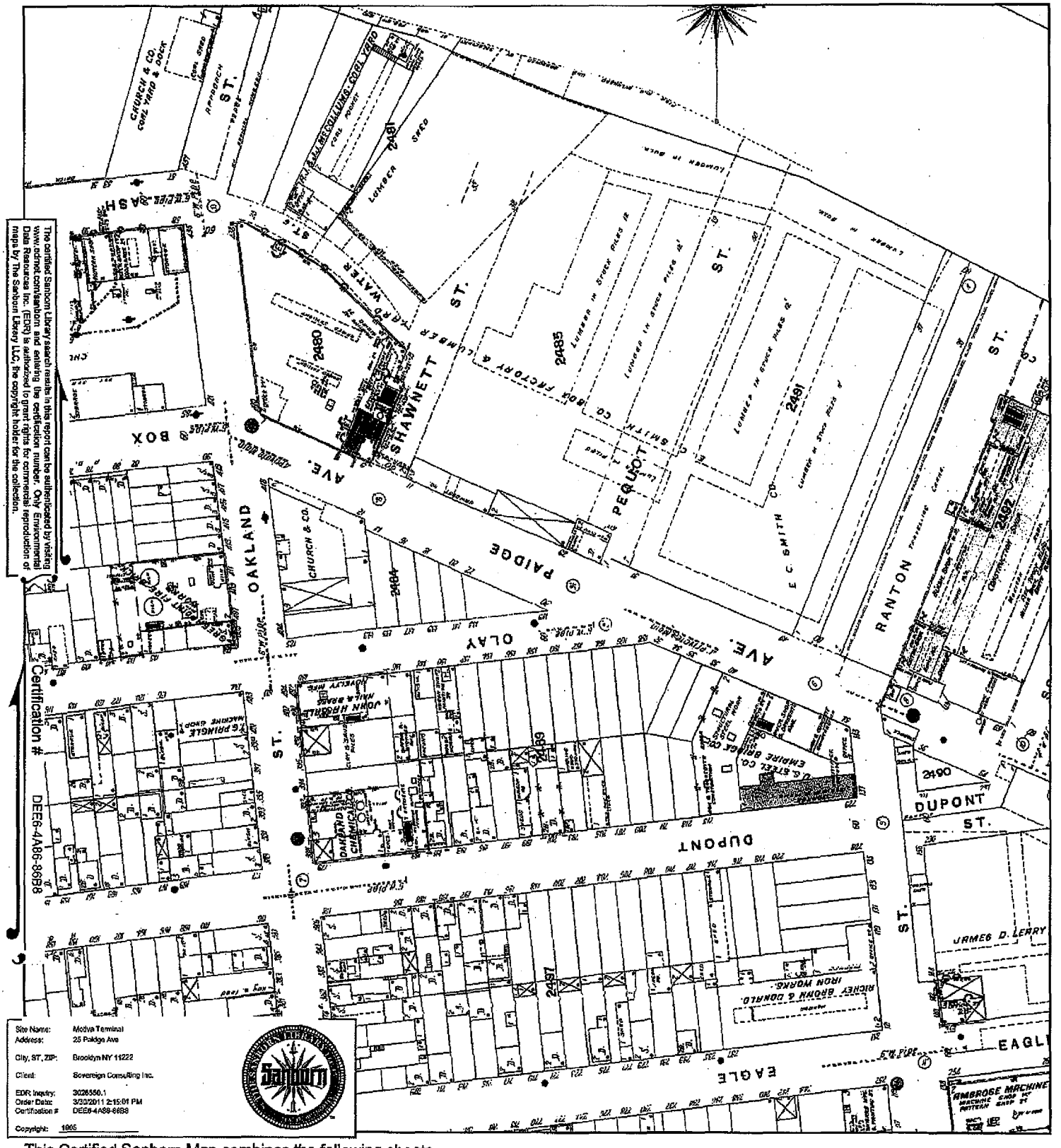


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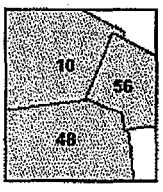


Volume 4, Sheet 10
Volume 4, Sheet 48
Volume 4, Sheet 56

0 Feet 150 300 600

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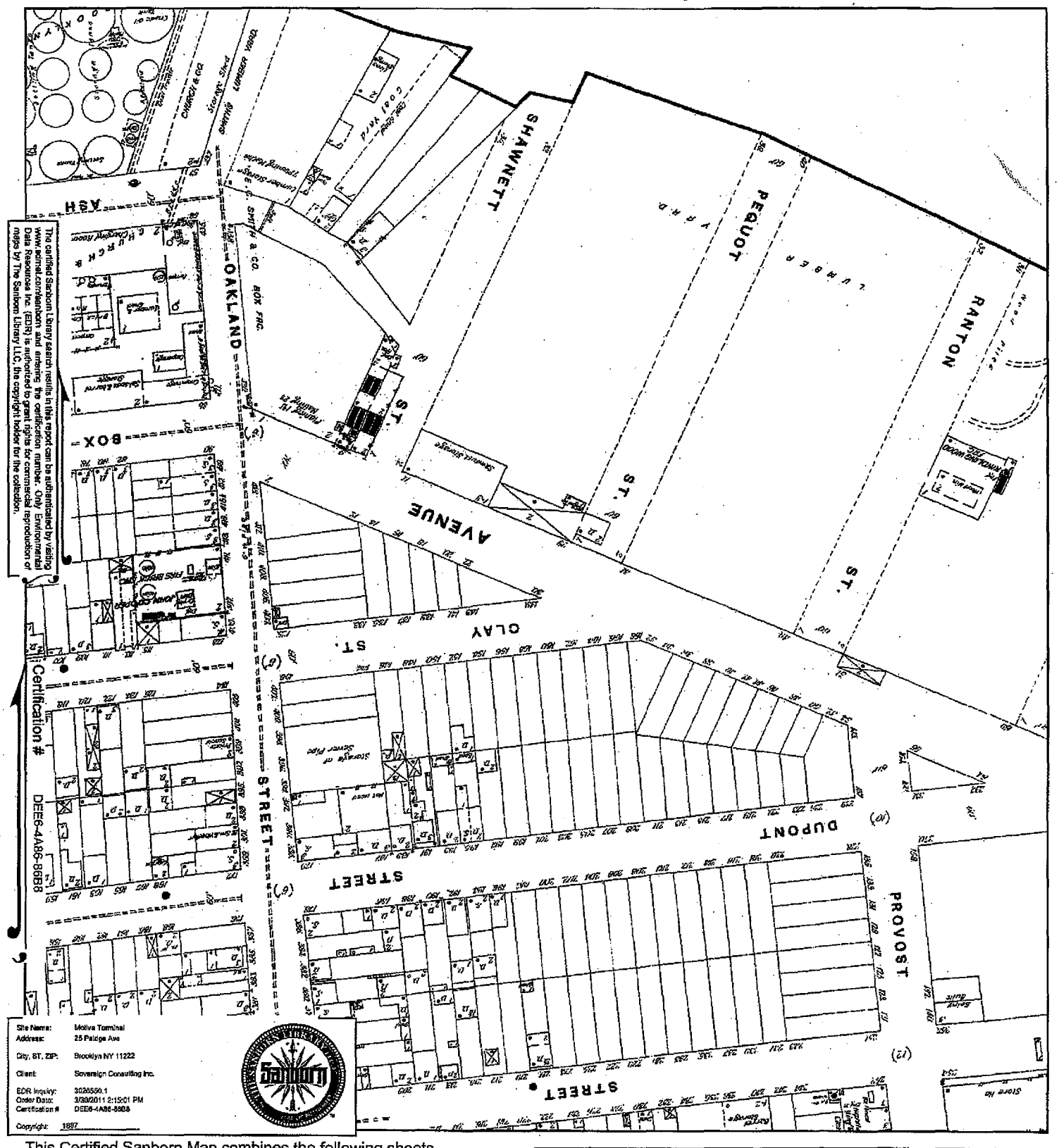
# 1887 Certified Sanborn Map

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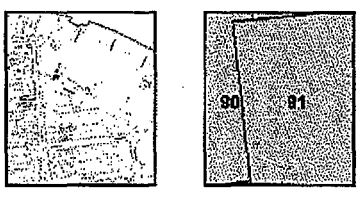


Volume 4, Sheet 90
Volume 4, Sheet 91

0 Feet 150 300 600

N

# DOCUMENT INFO

15

DocID: 00000438

Filename: 58603-2011-06-20-FIG-01 (Historical GW Analytical Data - SCI).pdf

# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sample Location | Date | Benzene | Toluene | Ethylbenzene | Xylenes, Total | Total BTEX | MTBE |
| < GW Standard > | | < 0.7 > | < 5 > | < 5 > | < 5 > | --- | < 10 > |
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| MW-01 | 11/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-01 | 2/13/1990 | ND | ND | ND | ND | ND | NA |
| MW-01 | 5/4/1990 | ND | ND | ND | ND | ND | NA |
| MW-01 | 5/8/1991 | ND | ND | ND | ND | ND | NA |
| MW-01 | 5/13/1992 | ND | ND | ND | ND | ND | NA |
| MW-01 | 5/12/1993 | ND | ND | ND | ND | ND | NA |
| MW-01 | 5/10/1994 | ND | ND | ND | ND | ND | NA |
| MW-01 | 5/22/1995 | ND | ND | ND | ND | ND | NA |
| MW-01 | 5/23/1996 | ND | ND | ND | ND | ND | NA |
| MW-01 | 6/18/1997 | ND | ND | ND | ND | ND | NA |
| MW-01 | 5/29/1998 | ND | ND | ND | ND | ND | NA |
| MW-01 | 5/11/1999 | ND | ND | ND | ND | ND | NA |
| MW-01 | 10/27/1999 | ND | ND | ND | ND | ND | 2 |
| MW-01 | 6/7/2000 | ND | ND | ND | ND | ND | ND |
| MW-01 | 5/29/2001 | ND | ND | ND | ND | ND | ND |
| MW-01 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | < 8.0 | < 1.0 |
| MW-01 | 6/30/2003 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-01 | 6/15/2004 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-01 | 6/7/2005 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-01 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <1.00 | <6.00 | <1.00 |
| MW-01 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-01 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-01 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-01 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-01 | 4/29/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-02 | 6/8/2005 | ***172*** | ***5.5*** | 3.2 | ***16.4*** | 197.1 | 6.3 |
| MW-02 | 5/12/2008 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-02 | 4/29/2009 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-02 | 4/15/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-02 | 4/28/2011 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-03 | 8/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-03 | 11/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-03 | 2/13/1990 | ND | ND | ND | ND | ND | NA |
| MW-03 | 5/4/1990 | ND | ND | ND | ND | ND | NA |
| MW-03 | 5/8/1991 | ND | ND | ND | ND | ND | NA |
| MW-03 | 5/13/1992 | ND | ND | ND | ND | ND | NA |
| MW-03 | 5/12/1993 | ND | ND | ND | ND | ND | NA |
| MW-03 | 5/10/1994 | ND | ND | ND | ND | ND | NA |
| MW-03 | 5/22/1995 | ND | ND | ND | ND | ND | NA |
| MW-03 | 5/23/1996 | ND | ND | ND | ND | ND | NA |
| MW-03 | 6/18/1997 | ND | ND | ND | ND | ND | NA |
| MW-03 | 5/29/1998 | ND | ND | ND | ND | ND | NA |
| MW-03 | 5/11/1999 | ND | ND | ND | ND | ND | NA |
| MW-03 | 10/27/1999 | ND | ND | ND | ND | ND | 1.2 |
| MW-03 | 6/7/2000 | ND | ND | ND | ND | ND | ND |
| MW-03 | 5/29/2001 | ND | ND | ND | ND | ND | 2.1 |
| MW-03 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | < 8.0 | < 1.0 |
| MW-03 | 6/30/2003 | ***0.97***[J] | 0.70[J] | <1.0 | <1.0 | 1.67 | <1.0 |
| MW-03 | 6/15/2004 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | <1.0 |
| MW-03 | 6/7/2005 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | <1.0 |
| MW-03 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-03 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-03 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-03 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-03 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-03 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |



Shell/Motiva 0007309

# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| **Sample Location** | **Date** | **Benzene** | **Toluene** | **Ethylbenzene** | **Xylenes, Total** | **Total BTEX** | **MTBE** |
| **< GW Standard >** | | **< 0.7 >** | **< 5 >** | **< 5 >** | **< 5 >** | **---** | **< 10 >** |
| MW-04 | 5/12/1993 | ***1.8*** | ND | 2 | ***12*** | 15.8 | NA |
| MW-04 | 5/10/1994 | ND | ND | ND | ND | ND | NA |
| MW-04 | 6/18/1997 | ND | ND | 0.49 | ND | 0.49 | NA |
| MW-04 | 6/30/2003 | <2.5 | <2.5 | <2.5 | <2.5 | <10 | ***38.8*** |
| MW-04 | 6/15/2004 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | ***24.8*** |
| MW-04 | 6/7/2005 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | ***11.6*** |
| MW-04 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-04 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 3.1 |
| MW-04 | 4/15/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-04 | 4/28/2011 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-05 | 8/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-05 | 11/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-05 | 2/13/1990 | ***4.6*** | ND | ND | 2 | 6.6 | NA |
| MW-05 | 5/4/1990 | ***2.9*** | ND | ND | ND | 2.9 | NA |
| MW-05 | 5/8/1991 | ND | ND | ND | ND | ND | NA |
| MW-05 | 5/13/1992 | ND | ND | ND | ND | ND | NA |
| MW-05 | 5/12/1993 | ND | ND | ND | ND | ND | NA |
| MW-05 | 5/10/1994 | ND | ND | ND | ND | ND | NA |
| MW-05 | 5/22/1995 | ND | ND | ND | ND | ND | NA |
| MW-05 | 5/23/1996 | ND | ND | ND | ND | ND | NA |
| MW-05 | 6/18/1997 | ND | ND | 0.29 | ND | 0.29 | NA |
| MW-05 | 5/29/1998 | ND | ND | ND | ND | ND | NA |
| MW-05 | 5/11/1999 | ND | ND | ND | ND | ND | NA |
| MW-05 | 10/27/1999 | ND | ND | ND | ND | ND | ***228*** |
| MW-05 | 6/7/2000 | ND | ND | ND | ND | ND | ***19.7*** |
| MW-05 | 5/29/2001 | ND | ND | ND | ND | ND | ***18.5*** |
| MW-05 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | < 8.0 | ***17*** |
| MW-05 | 6/30/2003 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | ***17.1*** |
| MW-05 | 6/15/2004 | ***88.9*** | ***10*** | ***7.8*** | ***32.4*** | 139 | ***38.9*** |
| MW-05 | 6/7/2005 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-05 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-05 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-05 | 5/12/2008 | Not Accessible (Underwater/Flooded) | | | | | |
| MW-05 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-05 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-05 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |



Shell/Motiva 0007310

# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| **Sample Location** | **Date** | **Benzene** | **Toluene** | **Ethylbenzene** | **Xylenes, Total** | **Total BTEX** | **MTBE** |
| **< GW Standard >** | | **< 0.7 >** | **< 5 >** | **< 5 >** | **< 5 >** | **---** | **< 10 >** |
| MW-06 | 8/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-06 | 11/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-06 | 2/13/1990 | ND | ND | ND | ND | ND | NA |
| MW-06 | 5/4/1990 | ND | ND | ND | ND | ND | NA |
| MW-06 | 5/8/1991 | ND | ND | ND | ND | ND | NA |
| MW-06 | 5/13/1992 | ND | ND | ND | ND | ND | NA |
| MW-06 | 5/12/1993 | ND | ND | ND | ND | ND | NA |
| MW-06 | 5/10/1994 | ND | ND | ND | ND | ND | NA |
| MW-06 | 5/23/1996 | ND | ND | ND | ND | ND | NA |
| MW-06 | 5/29/1998 | ND | ND | ND | ND | ND | NA |
| MW-06 | 5/11/1999 | ND | ND | ND | ND | ND | NA |
| MW-06 | 10/27/1999 | ND | ND | ND | ND | ND | ***28.7*** |
| MW-06 | 6/7/2000 | ND | ND | ND | ND | ND | ***10.5*** |
| MW-06 | 5/29/2001 | ND | ND | ND | ND | ND | ND |
| MW-06 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | < 8.0 | < 1.0 |
| MW-06 | 6/30/2003 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | ***13.4*** |
| MW-06 | 6/15/2004 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | <1.0 |
| MW-06 | 6/7/2005 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | <1.0 |
| MW-06 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-06 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-06 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-06 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-06 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-06 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-07 | 8/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-07 | 11/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-07 | 2/13/1990 | ND | ND | ND | ND | ND | NA |
| MW-07 | 5/4/1990 | ND | ND | ND | ND | ND | NA |
| MW-07 | 5/8/1991 | ND | ND | ND | ND | ND | NA |
| MW-07 | 5/13/1992 | ND | ND | ND | ND | ND | NA |
| MW-07 | 5/12/1993 | ND | ND | ND | ND | ND | NA |
| MW-07 | 5/10/1994 | ND | ND | ND | ND | ND | NA |
| MW-07 | 5/22/1995 | ND | ND | ND | ND | ND | NA |
| MW-07 | 5/23/1996 | ND | ND | ND | ND | ND | NA |
| MW-07 | 6/18/1997 | ND | ND | ND | ND | ND | NA |
| MW-07 | 5/29/1998 | ND | ND | ND | ND | ND | NA |
| MW-07 | 5/11/1999 | ND | ND | ND | ND | ND | NA |
| MW-07 | 10/27/1999 | ND | ND | ND | ND | ND | 1.3 |
| MW-07 | 6/7/2000 | ND | ND | ND | ND | ND | ND |
| MW-07 | 5/29/2001 | ND | ND | ND | ND | ND | 4.0 |
| MW-07 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | < 8.0 | 1.4 |
| MW-07 | 6/30/2003 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | ***13.4*** |
| MW-07 | 6/15/2004 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | 1.8 |
| MW-07 | 6/7/2005 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | <1.0 |
| MW-07 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-07 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-07 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |



Shell/Motiva 0007311

# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| **Sample Location** | **Date** | **Benzene** | **Toluene** | **Ethylbenzene** | **Xylenes, Total** | **Total BTEX** | **MTBE** |
| **< GW Standard >** | | **< 0.7 >** | **< 5 >** | **< 5 >** | **< 5 >** | **---** | **< 10 >** |
| MW-07R | 4/15/2010 | ***16.9*** | <5.00 | <5.00 | <5.00 | 16.9 | ***31.5*** |
| MW-07R | 7/27/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | ***25.6*** |
| MW-07R | 10/8/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | ***36.9*** |
| MW-07R | 1/25/2011 | ***2.4*** | <1.00 | <1.00 | <1.00 | 2.4 | ***39.2*** |
| MW-07R | 4/28/2011 | ***31.3*** | <1.0 | <1.0 | <1.0 | 31.3 | ***38.0*** |
| MW-08 | 8/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-08 | 11/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-08 | 2/13/1990 | ND | ND | ND | ND | ND | NA |
| MW-08 | 5/4/1990 | ND | ND | ND | ND | ND | NA |
| MW-08 | 5/8/1991 | ND | ND | ND | ND | ND | NA |
| MW-08 | 5/13/1992 | ND | ND | ND | ND | ND | NA |
| MW-08 | 5/12/1993 | ***9.5*** | ND | ND | ND | 9.5 | NA |
| MW-08 | 5/10/1994 | ***1.7*** | ND | ND | ND | 1.7 | NA |
| MW-08 | 5/22/1995 | ND | ND | ND | ND | ND | NA |
| MW-08 | 5/23/1996 | ND | ND | ND | ND | ND | NA |
| MW-08 | 6/18/1997 | ND | ND | ND | ND | ND | NA |
| MW-08 | 5/29/1998 | ND | ND | ND | ND | ND | NA |
| MW-08 | 5/11/1999 | ND | ND | ND | ND | ND | NA |
| MW-08 | 10/27/1999 | ND | ND | ND | ND | ND | 3.20 |
| MW-08 | 6/7/2000 | ND | ND | ND | ND | ND | ***21.0*** |
| MW-08 | 5/29/2001 | 0.43 | ND | ND | ND | 0.43 | ***39.0*** |
| MW-08 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | < 8.0 | 1.9 |
| MW-08 | 6/30/2003 | ***18.3*** | <1.0 | <1.0 | <1.0 | 18.3 | ***58.2*** |
| MW-08 | 6/15/2004 | ***1.5*** | <1.0 | <1.0 | <1.0 | 1.5 | 8.50 |
| MW-08 | 6/7/2005 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 5.80 |
| MW-08 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | 5.00 |
| MW-08 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 6.20 |
| MW-08 | 5/15/2009 | ***2.4*** | <1.0 | <1.0 | <1.0 | 2.4 | 6.6 |
| MW-08 | 4/15/2010 | ***44.9*** | <5.00 | <5.00 | <5.00 | 44.9 | ***37.6*** |
| MW-08 | 7/27/2010 | ***24.3*** | <5.00 | <5.00 | <5.00 | 24.3 | ***39.5*** |
| MW-08 | 10/8/2010 | ***<5.00*** | <5.00 | <5.00 | <5.00 | <5.00 | ***21.8*** |
| MW-08 | 1/25/2011 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | ***22.5*** |
| MW-08 | 4/28/2011 | ***87.6*** | <1.0 | <1.0 | <1.0 | 87.6 | ***31.6*** |
| MW-09 | 5/12/1993 | ND | ND | ND | ND | ND | NA |
| MW-09 | 5/10/1994 | ND | ND | ND | ND | ND | NA |
| MW-09 | 5/22/1995 | ND | ND | ND | ND | ND | NA |
| MW-09 | 5/23/1996 | ND | ND | ND | ND | ND | NA |
| MW-09 | 6/18/1997 | ND | ND | ND | ND | ND | NA |
| MW-09 | 5/29/1998 | ND | ND | ND | ND | ND | NA |
| MW-09 | 5/11/1999 | ND | ND | ND | ND | ND | NA |
| MW-09 | 10/27/1999 | ND | ND | ND | ND | ND | 6.5 |
| MW-09 | 6/7/2000 | ND | ND | ND | ND | ND | ND |
| MW-09 | 5/29/2001 | ND | ND | ND | ND | ND | 3.3 |
| MW-09 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | < 8.0 | < 1.0 |
| MW-09 | 6/30/2003 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | 9.2 |
| MW-09 | 6/15/2004 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | 0.79[J] |
| MW-09 | 6/7/2005 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | 5.0 |
| MW-09 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-09 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-09 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-09 | 5/15/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 4.7 |
| MW-09 | 4/15/2010 | ***12.5*** | <5.00 | <5.00 | <5.00 | 12.5 | ***15.2*** |
| MW-09 | 7/27/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-09 | 10/8/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | 7.26 |
| MW-09 | 1/25/2011 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | 1.6 |
| MW-09 | 4/28/2011 | ***11.5*** | <1.0 | <1.0 | <1.0 | 11.5 | 7.6 |



Shell/Motiva 0007312

# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| **Sample Location** | **Date** | **Benzene** | **Toluene** | **Ethylbenzene** | **Xylenes, Total** | **Total BTEX** | **MTBE** |
| **< GW Standard >** | | **< 0.7 >** | **< 5 >** | **< 5 >** | **< 5 >** | **---** | **< 10 >** |
| MW-13 | 8/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-13 | 11/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-13 | 2/13/1990 | ND | ND | ND | ND | ND | NA |
| MW-13 | 5/4/1990 | ND | ND | ND | ND | ND | NA |
| MW-13 | 5/8/1991 | ND | ND | ND | ND | ND | NA |
| MW-13 | 5/13/1992 | ND | ND | ND | ND | ND | NA |
| MW-13 | 5/12/1993 | ***8.6*** | ND | ND | ND | 8.6 | NA |
| MW-13 | 5/10/1994 | ND | ND | ND | ND | ND | NA |
| MW-13 | 5/22/1995 | ND | ND | ND | ND | ND | NA |
| MW-13 | 6/18/1997 | ***1.4*** | ND | ND | 1.4 | 2.8 | NA |
| MW-13 | 5/29/1998 | ***1.2*** | ND | ND | ND | 1.2 | NA |
| MW-13 | 5/11/1999 | ND | ND | ND | ND | ND | NA |
| MW-13 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | < 8.0 | 7.4 |
| MW-13 | 6/30/2003 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | <1.0 |
| MW-13 | 6/15/2004 | 0.37[J] | <1.0 | <1.0 | <1.0 | 0.37[J] | 1.1 |
| MW-13 | 6/8/2005 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-13 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-13 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-13 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-13 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-13 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-13 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-14 | 8/14/1989 | ***2.5*** | 1.7 | 4.4 | 4.9 | 13.5 | NA |
| MW-14 | 11/14/1989 | ***6.7*** | ND | 1 | ND | 7.7 | NA |
| MW-14 | 2/13/1990 | ***60*** | ***5.4*** | ND | ***18*** | 83.4 | NA |
| MW-14 | 5/4/1990 | ***68*** | ***2.3*** | ***8.1*** | ***7.1*** | 85.5 | NA |
| MW-14 | 5/8/1991 | ***43*** | 2.6 | ***6.5*** | ***7.2*** | 59.3 | NA |
| MW-14 | 5/13/1992 | ***97*** | 4.8 | ***8.5*** | ***12*** | 122.3 | NA |
| MW-14 | 5/12/1993 | ***45*** | 2.1 | 4.9 | ***7.8*** | 59.8 | NA |
| MW-14 | 5/10/1994 | ***57*** | 2.1 | 2.7 | ***8.3*** | 70.1 | NA |
| MW-14 | 5/22/1995 | ***33*** | 1.8 | 1.1 | ***5.9*** | 41.8 | NA |
| MW-14 | 5/23/1996 | ***25.7*** | 1.6 | 1.3 | ***6.6*** | 35.2 | NA |
| MW-14 | 6/18/1997 | ***13.1*** | 1.1 | 0.98 | ***5.3*** | 20.48 | NA |
| MW-14 | 5/29/1998 | ***24.6*** | 2 | 2.2 | ***9.6*** | 38.4 | NA |
| MW-14 | 5/11/1999 | ***19*** | ND | 0.83 | 2.2 | 22.03 | NA |
| MW-14 | 10/27/1999 | ***24.4*** | 1.3 | ND | 4.8 | 30.5 | ND |
| MW-14 | 6/7/2000 | ***1.5*** | ND | ND | ND | 1.5 | ND |
| MW-14 | 5/29/2001 | ***16.1*** | 0.67 | ND | 3.2 | 19.97 | ND |
| MW-14 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | < 8.0 | < 1.0 |
| MW-14 | 6/30/2003 | ***1.9*** | < 1.0 | < 1.0 | < 1.0 | 1.9 | <1.0 |
| MW-14 | 6/15/2004 | ***5.8*** | <1.0 | <1.0 | 1.3 | 7 | <1.0 |
| MW-14 | 6/8/2005 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-14 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-14 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-14 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-14 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-14 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-14 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |



Shell/Motiva 0007313

# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| **Sample Location** | **Date** | **Benzene** | **Toluene** | **Ethylbenzene** | **Xylenes, Total** | **Total BTEX** | **MTBE** |
| **< GW Standard >** | | **< 0.7 >** | **< 5 >** | **< 5 >** | **< 5 >** | **---** | **< 10 >** |
| MW-15 | 5/10/1994 | ***1,200*** | ***48*** | ***130*** | ***130*** | 1,508 | NA |
| MW-15 | 6/18/1997 | ***1,600*** | ***624*** | ***686*** | ***3,300*** | 6,210 | NA |
| MW-15 | 5/11/1999 | ***162.0*** | ND | ***122*** | ***408.0*** | 692 | NA |
| MW-15 | 10/27/1999 | ***1,360*** | ***176*** | ***740*** | ***2,350*** | 4,626 | ***8,080*** |
| MW-15 | 6/7/2000 | ***1,050*** | ***143*** | ***584*** | ***1,330*** | 3,107 | ***2,120*** |
| MW-15 | 5/29/2001 | ***507*** | ***81.3*** | ***386*** | ***500*** | 1,474 | ***1,430*** |
| MW-15 | 6/30/2003 | ***281*** | ***21*** | ***158*** | ***250*** | 710 | ***52.7*** |
| MW-15 | 6/7/2005 | ***280*** | ***18.7*** | ***30.6*** | ***53.3*** | 383 | ***45.2*** |
| MW-15 | 6/28/2006 | ***361*** | ***28.0*** | ***22.7*** | ***44.9*** | 457 | ***47.3*** |
| MW-15 | 6/26/2007 | ***234*** | ***15.6*** | ***21.2*** | ***48.6*** | 319 | ***54.7*** |
| MW-15 | 5/12/2008 | ***264*** | ***19.4*** | ***26.2*** | ***71.2*** | 381 | ***40.9*** |
| MW-15 | 4/29/2009 | ***165*** | ***20.4*** | ***13.7*** | ***121*** | 320 | ***45.9*** |
| MW-15 | 4/15/2010 | ***839*** | ***4,350*** | ***556*** | ***3,521*** | 9,266 | ***38.8*** |
| MW-15 | 4/29/2011 | ***183*** | ***8.3*** | ***33.4*** | ***536*** | 760.7 | ***13.4*** |
| MW-16 | 8/14/1989 | ***300*** | ***310*** | ***43*** | ***240*** | 893 | NA |
| MW-16 | 11/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-16 | 5/12/1993 | ***73*** | ND | ***10*** | ***17*** | 100 | NA |
| MW-16 | 5/10/1994 | ***46*** | ND | 1.6 | 4.1 | 51.7 | NA |
| MW-16 | 6/18/1997 | ***2,470*** | ***17,800*** | ***3,760*** | ***19,900*** | 43,930 | NA |
| MW-16 | 5/11/1999 | ***1,040*** | ***350*** | ***469*** | ***3,900*** | 5,759 | NA |
| MW-16 | 6/30/2003 | ***331*** | ***47.7*** | ***76.4*** | ***118*** | 573 | ***335*** |
| MW-16 | 6/15/2004 | ***218*** | ***12.1*** | ***107*** | ***118*** | 455 | ***197*** |
| MW-16 | 6/7/2005 | ***225*** | ***7.6*** | ***29.2*** | ***26.0*** | 288 | ***32.6*** |
| MW-16 | 6/28/2006 | ***52.6*** | 2.88 | ***6.59*** | ***8.90*** | 71.0 | 5.88 |
| MW-16 | 6/26/2007 | ***99.8*** | ***6.20*** | 4.93 | ***17.1*** | 128 | ***34.2*** |
| MW-16 | 5/12/2008 | ***83.8*** | 4.10 | 2.00 | ***20.7*** | 111 | ***13.4*** |
| MW-16 | 4/29/2009 | ***56.2*** | ***5.3*** | 2.2 | ***15.2*** | 78.9 | ***26.7*** |
| MW-16 | 4/15/2010 | ***37.6*** | <5.00 | <5.00 | ***5.22*** | 42.82 | ***14.6*** |
| MW-16 | 4/29/2011 | ***7.2*** | <1.0 | <1.0 | 1.4 | 8.6 | ***11.4*** |



Shell/Motiva 0007314

# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sample Location | Date | Benzene | Toluene | Ethylbenzene | Xylenes, Total | Total BTEX | MTBE |
| < GW Standard > | | < 0.7 > | < 5 > | < 5 > | < 5 > | --- | < 10 > |
| MW-17 | 8/14/1989 | ***900*** | ***2,600*** | ***600*** | ***3,300*** | 7,400 | NA |
| MW-17 | 11/14/1989 | ***400*** | ***1,200*** | ***590*** | ***2,700*** | 4,890 | NA |
| MW-17 | 2/13/1990 | ***410*** | ***960*** | ND | ***3,100*** | 4,470 | NA |
| MW-17 | 5/12/1993 | ***290*** | ***24*** | ***70*** | ***130*** | 514 | NA |
| MW-17 | 5/10/1994 | ***82*** | ***10*** | ***30*** | ***48*** | 170 | NA |
| MW-17 | 5/29/1998 | ***347*** | ***435*** | ***797*** | ***5,220*** | 6,799 | NA |
| MW-17 | 5/11/1999 | ***133*** | ***42*** | ***162*** | ***370*** | 707 | NA |
| MW-17 | 10/27/1999 | ***213*** | ***161*** | ***615*** | ***2,150*** | 3,139 | ***96.4*** |
| MW-17 | 6/7/2000 | ***136*** | ***30.7*** | ***77.8*** | ***229*** | 474 | ***254*** |
| MW-17 | 5/29/2001 | ***70.9*** | ***16.5*** | ***78.7*** | ***170*** | 336 | ND |
| MW-17 | 5/30/2002 | ***53*** | ***7.1*** | ***12.9*** | ***14*** | 87 | ***13.4*** |
| MW-17 | 6/30/2003 | ***13.9*** | ***5.3*** | 3.9 | ***17.2*** | 40 | ***12.5*** |
| MW-17 | 6/15/2004 | ***13*** | 3.1 | 1.4 | ***8.7*** | 26 | 6.8 |
| MW-17 | 6/7/2005 | ***54.3*** | 4.0 | 1.9 | ***24.7*** | 85 | ***16.1*** |
| MW-17 | 6/28/2006 | ***3.37*** | <1.00 | <1.00 | <3.00 | 3.37 | 3.59 |
| MW-17 | 6/26/2007 | ***67.7*** | 4.44 | 1.54 | ***25.2*** | 98.9 | ***11.8*** |
| MW-17 | 5/12/2008 | ***44.2*** | 3.70 | <1.0 | ***27.9*** | 75.8 | 8.00 |
| MW-17 | 4/29/2009 | ***30.1*** | 2.8 | <1.0 | ***17.2*** | 50.1 | 4.6 |
| MW-17 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | 5.1 |
| MW-17 | 4/29/2011 | ***1.1*** | <1.0 | <1.0 | <1.0 | 1.1 | 5.0 |
| MW-18 | 8/14/1989 | ***1,100*** | ***2,500*** | ***580*** | ***2,900*** | 7,080 | NA |
| MW-18 | 11/14/1989 | ***680*** | ***770*** | ***590*** | ***2,900*** | 4,940 | NA |
| MW-18 | 2/13/1990 | ***630*** | ***570*** | ND | ***3,100*** | 4,300 | NA |
| MW-18 | 5/4/1990 | ***420*** | ***540*** | ***420*** | ***2,800*** | 4,180 | NA |
| MW-18 | 5/13/1992 | ***480*** | ***78*** | ***380*** | ***580*** | 1,518 | NA |
| MW-18 | 5/12/1993 | ***590*** | ***400*** | ***61*** | ***420*** | 1,471 | NA |
| MW-18 | 5/10/1994 | ***210*** | ***20*** | ***70*** | ***130*** | 430 | NA |
| MW-18 | 5/22/1995 | ***5,900*** | ***19,000*** | ***1,600*** | ***12,000*** | 38,500 | NA |
| MW-18 | 5/23/1996 | ***1,520*** | ***12,600*** | ***2,750*** | ***15,200*** | 32,070 | NA |
| MW-18 | 6/18/1997 | ***794*** | ***1,140*** | ***2,280*** | ***11,200*** | 15,414 | NA |
| MW-18 | 5/29/1998 | ***1,010*** | ***294*** | ***2,300*** | ***8,140*** | 11,744 | NA |
| MW-18 | 5/11/1999 | ***501*** | ***127*** | ***1,690*** | ***3,030*** | 5,348 | NA |
| MW-18 | 10/27/1999 | ***432*** | ***95.6*** | ***1,190*** | ***779*** | 2,497 | ***178*** |
| MW-18 | 6/7/2000 | ***378*** | ***85.2*** | ***1,240*** | ***1,080*** | 2,783 | ***704*** |
| MW-18 | 5/29/2001 | ***184*** | ***47*** | ***601*** | ***279*** | 1,111 | ***79*** |
| MW-18 | 5/30/2002 | ***104*** | ***19*** | ***424*** | ***48.5*** | 595.9 | ***22.8*** |
| MW-18 | 6/30/2003 | ***42.2*** | ***11*** | ***154*** | ***37.5*** | 245 | ***12.8*** |
| MW-18 | 6/15/2004 | ***71.7*** | ***10.4*** | ***39*** | ***19.9*** | 141 | ***14.9*** |
| MW-18 | 6/7/2005 | ***97*** | ***7.9*** | ***13.2*** | ***35.0*** | 153 | ***18.4*** |
| MW-18 | 6/28/2006 | ***31.8*** | 4.84 | ***29.3*** | ***15.4*** | 81.3 | 8.77 |
| MW-18 | 6/26/2007 | ***83.1*** | ***8.33*** | ***12.1*** | ***25.6*** | 129 | ***12.2*** |
| MW-18 | 5/12/2008 | ***49.8*** | 4.00 | ***7.50*** | ***21.9*** | 83.2 | 3.70 |
| MW-18 | 4/29/2009 | ***76.9*** | 4.8 | ***7.7*** | ***33.4*** | 123 | 6.6 |
| MW-18 | 4/15/2010 | ***36.6*** | ***5.08*** | ***13.3*** | ***16.9*** | 71.88 | <5.00 |
| MW-18 | 4/29/2011 | ***2.6*** | <1.0 | <1.0 | 3.7 | 6.3 | 1.3 |



Shell/Motiva 0007315

# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| **Sample Location** | **Date** | **Benzene** | **Toluene** | **Ethylbenzene** | **Xylenes, Total** | **Total BTEX** | **MTBE** |
| **< GW Standard >** | | **< 0.7 >** | **< 5 >** | **< 5 >** | **< 5 >** | **---** | **< 10 >** |
| MW-19 | 5/30/2002 | ***165*** | 4.8 | 3.6 | ***10.3*** | 184 | ***56.9*** |
| MW-19 | 6/30/2003 | ***76.7*** | ***9.9*** | ***6.5*** | ***45.5*** | 139 | ***19.8*** |
| MW-19 | 6/15/2004 | ***179*** | ***15.8*** | ***6.1*** | ***37*** | 238 | ***20.4*** |
| MW-19 | 6/7/2005 | ***194*** | ***12.4*** | ***8.8*** | ***41.3*** | 257 | ***16.8*** |
| MW-19 | 6/28/2006 | ***49.5*** | 2.74 | <1.00 | 9.16 | 61.4 | ***11.9*** |
| MW-19 | 6/26/2007 | ***114*** | 4.91 | 2.27 | ***17.7*** | 139 | ***12.0*** |
| MW-19 | 5/12/2008 | ***11.4*** | <1.0 | <1.0 | 1.60 | 13.0 | 4.20 |
| MW-19 | 4/29/2009 | ***7.5*** | 1.5 | <1.0 | 2.9 | 11.9 | 7.7 |
| MW-19 | 4/15/2010 | ***11.2*** | ***6.34*** | <5.00 | ***44.9*** | 62.44 | 5.59 |
| MW-20 | 5/12/1993 | ***410*** | ND | ***180*** | ***62*** | 652 | NA |
| MW-20 | 6/30/2003 | ***525*** | ***103*** | ***34.9*** | ***178*** | 841 | ***3,440*** |
| MW-20 | 6/15/2004 | ***443*** | ***95.5*** | ***48.1*** | ***353*** | 940 | ***220*** |
| MW-20 | 6/7/2005 | ***861*** | ***25.1*** | ***38.9*** | ***90.1*** | 1,015 | ***230*** |
| MW-20 | 6/28/2006 | ***1,420*** | ***2,260*** | ***342*** | ***3,730*** | 7,752 | ***341*** |
| MW-20 | 6/26/2007 | ***1,320*** | ***263*** | ***98.7*** | ***1,420*** | 3,102 | ***188*** |
| MW-20 | 5/12/2008 | ***636*** | ***19.7*** | ***45.4*** | ***119*** | 820 | ***105*** |
| MW-20 | 4/29/2009 | ***59.7*** | 2.5 | ***7.3*** | ***5.9*** | 75.4 | ***56.6*** |
| MW-20 | 4/15/2010 | ***497*** | ***43.2*** | ***20.4*** | ***84.9*** | 645.5 | ***145*** |
| MW-20 | 4/29/2011 | ***205*** | ***102*** | ***8.6*** | ***333*** | 648.6 | ***57.7*** |
| MW-21 | 5/8/1991 | ***140*** | ***6.5*** | ***12.0*** | ***41*** | 199.5 | NA |
| MW-21 | 5/13/1992 | ***20*** | ***5.6*** | ***15.0*** | ***54*** | 94.6 | NA |
| MW-21 | 5/12/1993 | ***66*** | ***17*** | ***40*** | ***160*** | 283 | NA |
| MW-21 | 5/10/1994 | ***41*** | ***12*** | ***46*** | ***170*** | 269 | NA |
| MW-21 | 5/22/1995 | ***14*** | ***9.1*** | ***31*** | ***130*** | 184.1 | NA |
| MW-21 | 6/18/1997 | ***18.4*** | ND | ***32.7*** | ***122*** | 173.1 | NA |
| MW-21 | 5/29/1998 | ***3.4*** | 0.68 | 4.5 | ***15.1*** | 23.68 | NA |
| MW-21 | 5/11/1999 | ***56.9*** | ***10.8*** | ***61.5*** | ***201*** | 330.2 | NA |
| MW-21 | 10/27/1999 | ***13.4*** | ND | ***11.1*** | ***41.6*** | 66.1 | ***275*** |
| MW-21 | 6/7/2000 | ***6.6*** | 1.6 | ***6.6*** | ***24.4*** | 39.2 | ***214*** |
| MW-21 | 5/29/2001 | ***5.2*** | 1.4 | ***8.6*** | ***25.2*** | 40.4 | ***110*** |
| MW-21 | 5/30/2002 | ***1.6*** | < 1.0 | 1.5 | ***5.1*** | 8.2 | ***28.9*** |
| MW-21 | 6/30/2003 | ***10.5*** | 0.66[J] | 3.2 | ***11.4*** | 25 | ***156*** |
| MW-21 | 6/15/2004 | ***1.4*** | 0.36[J] | 0.79[J] | 2.8 | 5.4 | ***48.4*** |
| MW-21 | 6/8/2005 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | ***65.3*** |
| MW-21 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | ***50.0*** |
| MW-21 | 6/26/2007 | ***7.07*** | <1.00 | ***5.57*** | ***14.6*** | 27.2 | ***10.7*** |
| MW-21 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | ***93.2*** |



Shell/Motiva 0007316

# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| **Sample Location** | **Date** | **Benzene** | **Toluene** | **Ethylbenzene** | **Xylenes, Total** | **Total BTEX** | **MTBE** |
| **< GW Standard >** | | **< 0.7 >** | **< 5 >** | **< 5 >** | **< 5 >** | **---** | **< 10 >** |
| MW-21R | 4/15/2010 | ***139*** | ***12.2*** | ***41.5*** | ***54.6*** | 247.3 | <5.00 |
| MW-21R | 7/27/2010 | ***160*** | ***20.0*** | ***52.3*** | ***71.5*** | 303.8 | ***14.2*** |
| MW-21R | 10/8/2010 | ***239*** | ***26.9*** | ***80.5*** | ***108.4*** | 455 | ***28.4*** |
| MW-21R | 1/25/2011 | ***292*** | ***34.0*** | ***112*** | ***113*** | 551 | ***24.6*** |
| MW-21R | 4/28/2011 | ***217*** | ***29.9*** | ***97.0*** | ***87.9*** | 431.8 | 7.7 |
| MW-22 | 5/12/1993 | ***2,300*** | ***24*** | ***620*** | ***210*** | 3,154 | NA |
| MW-22 | 5/10/1994 | ***2,500*** | ***49*** | ***720*** | ***390*** | 3,659 | NA |
| MW-22 | 6/18/1997 | ***819*** | ND | ***375*** | ***76.1*** | 1,270 | NA |
| MW-22 | 5/29/1998 | ***677*** | ***19.9*** | ***232*** | ***41.9*** | 971 | NA |
| MW-22 | 10/27/1999 | ***650*** | ***31.6*** | ***323*** | ***21.8*** | 1,026 | ***478*** |
| MW-22 | 6/30/2003 | ***646*** | ***91.2*** | ***1,240*** | ***86.4*** | 2,064 | ***19.3*** |
| MW-22 | 6/15/2004 | ***285*** | ***23.2*** | ***185*** | ***16.4*** | 510 | ***34.4*** |
| MW-22 | 6/8/2005 | ***346*** | ***24.8*** | ***434*** | ***12.1*** | 817 | ***29.5*** |
| MW-22 | 6/28/2006 | ***251*** | ***38.9*** | ***370*** | ***31.6*** | 692 | ***22.0*** |
| MW-22 | 6/26/2007 | ***444*** | ***38.0*** | ***344*** | ***23.7*** | 850 | ***13.8*** |
| MW-22 | 5/12/2008 | ***270*** | ***20.5*** | ***177*** | ***18.4*** | 486 | ***19.6*** |
| MW-22R | 4/15/2010 | ***386*** | ***68.4*** | ***2140*** | ***111.2*** | 2706 | ***42.8*** |
| MW-22R | 7/27/2010 | ***337*** | ***63.6*** | ***2070*** | ***54.5*** | 2525 | ***31.4*** |
| MW-22R | 10/8/2010 | ***193*** | ***30.1*** | ***678*** | ***33.6*** | 935 | ***25.2*** |
| MW-22R | 1/25/2011 | ***483*** | ***72.0*** | ***1410*** | ***79.6*** | 2045 | ***57.2*** |
| MW-22R | 4/28/2011 | ***792*** | ***57.6*** | ***1,330*** | ***67.4*** | 2,247 | ***32.2*** |
| MW-23 | 5/8/1991 | ***3.9*** | 3 | 1.4 | ***8.2*** | 16.5 | NA |
| MW-23 | 5/12/1993 | ***42*** | 4.1 | ND | 4.9 | 51 | NA |
| MW-23 | 5/10/1994 | ***26*** | 1.6 | ND | 3.3 | 30.9 | NA |
| MW-23 | 5/22/1995 | ***4.6*** | 1.5 | ND | 4.5 | 10.6 | NA |
| MW-23 | 5/23/1996 | ***9.2*** | 1.7 | ND | 3.4 | 14.3 | NA |
| MW-23 | 6/18/1997 | ***7.8*** | 1.4 | 0.55 | ***5.1*** | 14.85 | NA |
| MW-23 | 5/29/1998 | ***11.6*** | 1.8 | ND | ***6.1*** | 19.5 | NA |
| MW-23 | 5/11/1999 | ***6*** | 0.9 | ND | 3.7 | 10.6 | NA |
| MW-23 | 10/27/1999 | ***9.1*** | 2.1 | 0.53 | ***6.3*** | 18.03 | ***20.3*** |
| MW-23 | 6/7/2000 | ***8.5*** | 1.9 | ND | ***5.5*** | 15.9 | ***19.3*** |
| MW-23 | 5/29/2001 | ***4.7*** | 0.98 | ND | 3.3 | 8.98 | ***38.1*** |
| MW-23 | 5/30/2002 | ***1.7*** | 1.3 | < 1.0 | 2 | 5.0 | ***21.7*** |
| MW-23 | 6/30/2003 | ***1.4*** | 1.3 | <1.0 | 3.7 | 6.4 | ***12.9*** |
| MW-23 | 6/15/2004 | ***1.1*** | 1.6 | <1.0 | 3.5 | 6.2 | ***17.9*** |
| MW-23 | 6/8/2005 | <1.0 | <1.0 | <1.0 | 1.6 | 1.6 | ***11.9*** |
| MW-23 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | 7.05 |
| MW-23 | 6/26/2007 | <1.00 | 1.27 | <1.00 | 3.10 | 4.37 | 5.64 |
| MW-23 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 2.70 |
| MW-23 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 2.8 |
| MW-23 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-23 | 4/28/2011 | <1.0 | <1.0 | <1.0 | 2.3 | 2.3 | 1.1 |



Shell/Motiva 0007317

# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| **Sample Location** | **Date** | **Benzene** | **Toluene** | **Ethylbenzene** | **Xylenes, Total** | **Total BTEX** | **MTBE** |
| **< GW Standard >** | | **< 0.7 >** | **< 5 >** | **< 5 >** | **< 5 >** | **---** | **< 10 >** |
| MW-24 | 5/8/1991 | ***230*** | ***180*** | ***83*** | ***270*** | 763 | NA |
| MW-24 | 5/13/1992 | ***240*** | ***64*** | ***200*** | ***300*** | 804 | NA |
| MW-24 | 5/12/1993 | ***31*** | ND | ND | ND | 31 | NA |
| MW-24 | 5/10/1994 | ***460*** | ***16*** | ***130*** | ***230*** | 836 | NA |
| MW-24 | 5/22/1995 | ***100*** | ND | ***86*** | ***7*** | 193 | NA |
| MW-24 | 5/23/1996 | ***168*** | 3.5 | ***50.3*** | ***42.2*** | 264 | NA |
| MW-24 | 6/18/1997 | ***126*** | ***5.7*** | ***17.7*** | ***169*** | 318.4 | NA |
| MW-24 | 5/29/1998 | ***54.6*** | 3.6 | ***10.2*** | ***61.8*** | 130.2 | NA |
| MW-24 | 5/11/1999 | ***78.2*** | 2 | 3.8 | ***10.5*** | 94.5 | NA |
| MW-24 | 10/27/1999 | ***1.3*** | ND | ND | 1.3 | 2.6 | ***26.4*** |
| MW-24 | 6/7/2000 | ***24*** | 1.9 | 3.9 | ***7.3*** | 37.1 | ***234*** |
| MW-24 | 5/29/2001 | ***75.6*** | ***12*** | ***5.6*** | ***37.2*** | 130.4 | ***1,380*** |
| MW-24 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | 4.1 | 4.1 | ***295*** |
| MW-24 | 6/30/2003 | ***99.9*** | 4.2 | ***11.6*** | ***85.9*** | 202 | ***543*** |
| MW-24 | 6/15/2004 | ***7.6*** | 0.67J | <1.0 | 2.2 | 9.8 | ***16.2*** |
| MW-24 | 6/8/2005 | ***15.3*** | 1.2 | <1.0 | 2.0 | 18.5 | ***78.3*** |
| MW-24 | 6/28/2006 | ***27.6*** | <1.00 | <1.00 | <3.00 | 27.6 | ***164*** |
| MW-24 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | 5.13 |
| MW-24 | 5/12/2008 | ***144*** | ***22.1*** | ***28.8*** | ***70.3*** | 265 | ***621*** |
| MW-24 | 4/29/2009 | ***11.3*** | <1.0 | <1.0 | ***6.0*** | 17.3 | ***37.1*** |
| MW-24 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | 6.63 |
| MW-24 | 4/28/2011 | ***9.5*** | <1.0 | <1.0 | 2.7 | 12.2 | ***37.5*** |
| MW-25 | 5/8/1991 | ***210*** | 4.4 | 1.9 | ND | 216.3 | NA |
| MW-25 | 5/13/1992 | ***28*** | ND | ND | 1.5 | 29.5 | NA |
| MW-25 | 5/12/1993 | ***30*** | ND | ND | 3.2 | 33.2 | NA |
| MW-25 | 5/10/1994 | ***4.6*** | ND | ND | 1.5 | 6.1 | NA |
| MW-25 | 5/22/1995 | ND | ND | ND | ND | ND | NA |
| MW-25 | 5/23/1996 | ***0.78*** | ND | ND | ND | 0.78 | NA |
| MW-25 | 6/18/1997 | ND | ND | ND | ND | ND | NA |
| MW-25 | 5/29/1998 | ND | ND | ND | 2.9 | 2.9 | NA |
| MW-25 | 5/11/1999 | ND | ND | ND | ND | ND | NA |
| MW-25 | 10/27/1999 | ND | ND | ND | 1.7 | 1.7 | ***28.2*** |
| MW-25 | 6/7/2000 | ND | ND | ND | ND | ND | ***74.4*** |
| MW-25 | 5/29/2001 | ND | ND | ND | ND | ND | ***25.8*** |
| MW-25 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | < 8.0 | ***18*** |
| MW-25 | 6/30/2003 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | ***12.6*** |
| MW-25 | 6/15/2004 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | ***42.9*** |
| MW-25 | 6/7/2005 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | ***13.6*** |
| MW-25 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | 7.18 |
| MW-25 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | ***12.5*** |
| MW-25 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-25 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 3.8 |
| MW-25 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-25 | 4/29/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 1.5 |
| MW-26 | 6/15/2004 | ***53.5*** | ***8.3*** | ***29.2*** | ***37.2*** | 128 | ***18.2*** |
| MW-26 | 6/8/2005 | ***6.6*** | 1.3 | 1.3 | ***8.6*** | 17.8 | 3.3 |
| MW-26 | 5/12/2008 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-26 | 4/29/2009 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-26 | 4/15/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-26 | 4/28/2011 | NOT SAMPLED (PRODUCT) | | | | | |



Shell/Motiva 0007318

# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| **Sample Location** | **Date** | **Benzene** | **Toluene** | **Ethylbenzene** | **Xylenes, Total** | **Total BTEX** | **MTBE** |
| **< GW Standard >** | | **< 0.7 >** | **< 5 >** | **< 5 >** | **< 5 >** | **---** | **< 10 >** |
| MW-27 | 5/29/1998 | ***0.92*** | ND | ND | 1.8 | 2.72 | NA |
| MW-27 | 5/11/1999 | ND | ND | ND | 1 | 1 | NA |
| MW-27 | 10/27/1999 | ND | ND | ND | 1.9 | 1.9 | ***50.1*** |
| MW-27 | 6/7/2000 | ND | ND | ND | ND | ND | 1.7 |
| MW-27 | 5/29/2001 | ND | ND | ND | ND | ND | ***23.8*** |
| MW-27 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | < 8.0 | ***28.3*** |
| MW-27 | 6/30/2003 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | ***13.1*** |
| MW-27 | 6/15/2004 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | ***18.6*** |
| MW-27 | 6/7/2005 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-27 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-27 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | 8.86 |
| MW-27 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-27 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-27 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-27 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-28 | 5/29/1998 | ND | ND | ND | 1.9 | 1.9 | NA |
| MW-28 | 5/11/1999 | ND | ND | ND | 0.97 | 0.97 | NA |
| MW-28 | 10/27/1999 | ND | ND | ND | 1.4 | 1.4 | ***13.2*** |
| MW-28 | 6/7/2000 | ND | ND | ND | ND | ND | 9.5 |
| MW-28 | 5/29/2001 | ND | ND | ND | 1.5 | 1.5 | 8 |
| MW-28 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | 1.5 | 1.5 | ***12.6*** |
| MW-28 | 6/30/2003 | ***1.3*** | <1.0 | <1.0 | 2.4 | 3.7 | ***20.4*** |
| MW-28 | 6/15/2004 | ***1.3*** | 0.61[J] | <1.0 | 3.8 | 5.7 | ***23.4*** |
| MW-28 | 6/7/2005 | <1.0 | <1.0 | <1.0 | 1.7 | 1.7 | ***10.1*** |
| MW-28 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | 3.96 |
| MW-28 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | 5.75 |
| MW-28 | 5/12/2008 | <1.0 | <1.0 | <1.0 | 2.40 | 2.4 | 6.40 |
| MW-28 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 3.9 |
| MW-28 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-28 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 2.1 |
| MW-29 | 5/29/1998 | ***1,250*** | ***17.2*** | ***62.9*** | ***79.2*** | 1409 | NA |
| MW-29 | 5/11/1999 | ***651*** | ***10.5*** | ***33.3*** | ***50.1*** | 745 | NA |
| MW-29 | 10/27/1999 | ***1,060*** | ***18.1*** | ***40.6*** | ***53.6*** | 1172 | ND |
| MW-29 | 6/7/2000 | ***173*** | 2.8 | 4.4 | ***5.7*** | 186 | ND |
| MW-29 | 5/29/2001 | ***267*** | 4.4 | ***6.3*** | ***9.2*** | 287 | ***11.7*** |
| MW-29 | 6/30/2003 | ***390*** | ***14*** | ***45*** | ***33*** | 482 | 7.5 |
| MW-29 | 6/15/2004 | ***250*** | ***10*** | ***23.6*** | ***30.1*** | 314 | 3.6 |
| MW-29 | 6/7/2005 | ***35.6*** | 1.3 | 4.2 | 3.8 | 44.9 | <1.0 |
| MW-29 | 6/28/2006 | ***184*** | 4.36 | ***12.6*** | ***15.0*** | 216 | <1.00 |
| MW-29 | 6/26/2007 | ***303*** | ***5.46*** | ***10.0*** | ***26.8*** | 345 | <1.00 |
| MW-29 | 5/12/2008 | ***335*** | 4.60 | ***12.5*** | ***22.9*** | 375 | 1.00 |
| MW-29 | 4/29/2009 | ***105*** | 1.9 | 3.9 | ***7.6*** | 118 | <1.0 |
| MW-29 | 4/15/2010 | ***122*** | <5.00 | <5.00 | <5.00 | 122 | <5.00 |
| MW-29 | 4/28/2011 | ***83.0*** | 1.2 | 2.7 | 4.9 | 91.8 | <1.0 |
| MW-30 | 6/30/2003 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 3.5 |
| MW-30 | 6/15/2004 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-30 | 6/7/2005 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-30 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-30 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-30 | 5/12/2008 | NOT ACCESSIBLE (FLOODED) | | | | | |
| MW-30 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-30 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-30 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-31 | 5/12/2008 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-31 | 4/29/2009 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-31 | 4/15/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-31 | 4/28/2011 | NOT SAMPLED (PRODUCT) | | | | | |



Shell/Motiva 0007319

## Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| **Sample Location** | **Date** | **Benzene** | **Toluene** | **Ethylbenzene** | **Xylenes, Total** | **Total BTEX** | **MTBE** |
| **< GW Standard >** | | **< 0.7 >** | **< 5 >** | **< 5 >** | **< 5 >** | **---** | **< 10 >** |
| MW-32 | 10/27/1999 | ***21.7*** | ***5.4*** | 3.2 | ***19.2*** | 49.5 | ***37*** |
| MW-32 | 5/30/2002 | ***7.2*** | 2.8 | 1.1 | ***10.9*** | 22 | ***28.6*** |
| MW-32 | 6/30/2003 | ***5.2*** | 2.3 | 1.8 | ***10.8*** | 20 | ***13.5*** |
| MW-32 | 6/15/2004 | ***3.5*** | 1.4 | 0.78[J] | ***5.6*** | 11.3 | ***18.1*** |
| MW-32 | 6/7/2005 | <1.0 | <1.0 | <1.0 | 3.0 | 4.8 | 4.7 |
| MW-32 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | 3.81 |
| MW-32 | 6/26/2007 | ***1.18*** | 1.02 | <1.00 | 4.16 | 4.16 | 4.50 |
| MW-32 | 5/12/2008 | <1.0 | <1.0 | <1.0 | 1.00 | 1.0 | 2.80 |
| MW-32 | 4/29/2009 | <1.0 | <1.0 | <1.0 | 1.6 | 1.6 | 3.2 |
| MW-32 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-32 | 4/29/2011 | <1.0 | <1.0 | <1.0 | 2.8 | 2.8 | 2.6 |
| MW-33 | 6/15/2004 | ***284*** | ***5.7*** | 4.1 | ***16*** | 310 | ***298*** |
| MW-33 | 6/8/2005 | ***212*** | 4.6 | ***9.2*** | ***13.2*** | 239 | ***138*** |
| MW-33 | 6/28/2006 | ***148*** | 1.70 | 4.74 | ***9.17*** | 164 | ***142*** |
| MW-33 | 6/26/2007 | ***240*** | 2.67 | <1.00 | ***5.93*** | 249 | ***89.9*** |
| MW-33 | 5/12/2008 | ***72.4*** | 4.30 | 2.20 | ***10.5*** | 89.4 | ***27.1*** |
| MW-33 | 4/29/2009 | ***13.7*** | <1.0 | <1.0 | ***5.6*** | 19.3 | 7.8 |
| MW-33 | 4/15/2010 | ***223*** | <5.00 | <5.00 | <5.00 | 223 | ***61.9*** |
| MW-33 | 4/29/2011 | ***227*** | 3.4 | 2.9 | ***8.4*** | 241.7 | ***51.4*** |
| MW-34 | 6/8/2005 | ***115*** | 3.8 | 4.4 | ***16.4*** | 140 | ***22.6*** |
| MW-34 | 6/28/2006 | ***83.7*** | 3.14 | 2.31 | ***7.42*** | 96.6 | ***22.2*** |
| MW-34 | 6/26/2007 | ***73.2*** | 3.41 | 1.41 | ***10.80*** | 88.8 | ***19.4*** |
| MW-34 | 5/12/2008 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-34 | 4/29/2009 | ***77.5*** | <1.0 | <1.0 | 4.0 | 81.5 | ***61.6*** |
| MW-34 | 4/15/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-34 | 4/28/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-35 | 6/15/2004 | ***1,180*** | ***22.2*** | ***18.6*** | ***33.3*** | 1,254 | ***472*** |
| MW-35 | 6/8/2005 | ***1,220*** | ***22.8*** | ***30.4*** | ***44.9*** | 1,318 | ***284*** |
| MW-35 | 6/28/2006 | ***693*** | ***7.43*** | 3.49 | ***17.3*** | 721 | ***189*** |
| MW-35 | 6/26/2007 | ***742*** | ***6.87*** | 2.68 | ***17.8*** | 769 | ***142*** |
| MW-35 | 5/12/2008 | ***518*** | ***10.4*** | ***6.50*** | ***28.6*** | 564 | ***79.9*** |
| MW-35 | 4/29/2009 | ***173*** | 4.3 | 2.0 | ***14.1*** | 193 | ***42.4*** |
| MW-35 | 4/15/2010 | ***765*** | ***9.78*** | <5.00 | <5.00 | 774.78 | ***97.4*** |
| MW-35 | 4/29/2011 | ***857*** | ***12.1*** | 2.1 | ***8.9*** | 880.1 | ***117*** |
| MW-36 | 5/12/2008 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-36 | 4/29/2009 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-36 | 4/15/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-36 | 4/28/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-37 | 6/15/2004 | ***259*** | ***8.7*** | 1.4 | ***18*** | 287 | ***64.3*** |
| MW-37 | 6/8/2005 | ***209*** | 4.2 | <1.0 | ***7.4*** | 221 | ***55.5*** |
| MW-37 | 6/28/2006 | ***133*** | 2.39 | <1.00 | 3.81 | 139 | ***49.4*** |
| MW-37 | 5/12/2008 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-37 | 4/29/2009 | ***162*** | 1.9 | <1.0 | 3.0 | 167 | ***36.4*** |
| MW-37 | 4/15/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-37 | 4/28/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-38 | 5/29/2001 | ***9.9*** | ND | 0.76 | ND | 10.7 | ***18.9*** |
| MW-38 | 5/30/2002 | ***5.4*** | 0.72 | < 1.0 | 1.4 | 7.52 | 6.9 |
| MW-38 | 6/30/2003 | ***17.2*** | 4.2 | 0.84[J] | 2.1 | 23.5 | ***29.5*** |
| MW-38 | 6/15/2004 | ***9.6*** | 1.8 | 0.55[J] | 2.1 | 13.5 | ***12.7*** |
| MW-38 | 6/8/2005 | ***5.5*** | <1.0 | <1.0 | <1.0 | 5.5 | 1.8 |
| MW-38 | 6/28/2006 | ***5.71*** | <1.00 | <1.00 | <3.00 | 5.71 | ***22.9*** |
| MW-38 | 6/26/2007 | ***2.33*** | <1.00 | <1.00 | <3.00 | 2.33 | 2.24 |
| MW-38 | 5/12/2008 | ***10.1*** | <1.0 | 3.80 | 1.60 | 15.5 | 3.80 |
| MW-38 | 4/29/2009 | ***2.9*** | <1.0 | <1.0 | <1.0 | 2.9 | 3.4 |
| MW-38 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-38 | 4/29/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |



Shell/Motiva 0007320

# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| **Sample Location** | **Date** | **Benzene** | **Toluene** | **Ethylbenzene** | **Xylenes, Total** | **Total BTEX** | **MTBE** |
| **< GW Standard >** | | **< 0.7 >** | **< 5 >** | **< 5 >** | **< 5 >** | **---** | **< 10 >** |
| MW-39 | 6/15/2004 | ***296*** | ***21*** | ***19.2*** | ***42.4*** | 379 | ***125*** |
| MW-39 | 6/8/2005 | ***246*** | ***14.8*** | ***12.5*** | ***27.6*** | 301 | ***74.8*** |
| MW-39 | 6/28/2006 | ***119*** | ***7.29*** | 3.45 | ***14.1*** | 144 | ***60.9*** |
| MW-39 | 6/26/2007 | ***136*** | ***7.04*** | 3.21 | ***17.0*** | 163 | ***57.3*** |
| MW-39 | 5/12/2008 | ***225*** | ***13.8*** | 4.50 | ***19.3*** | 263 | ***69.9*** |
| MW-39 | 4/29/2009 | ***183*** | ***7.3*** | 4.9 | ***20.6*** | 216 | ***65.5*** |
| MW-39 | 4/15/2010 | ***65.9*** | <5.00 | <5.00 | <5.00 | 65.9 | ***36.7*** |
| MW-39 | 4/29/2011 | ***90.3*** | 2.9 | 2.2 | ***8.1*** | 103.5 | ***33.8*** |
| MW-40 | 5/12/2008 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-40 | 4/29/2009 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-40 | 4/15/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-40 | 4/28/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-41 | 6/8/2005 | ***347*** | ***10.7*** | 2.7 | ***22.1*** | 383 | ***68.2*** |
| MW-41 | 5/12/2008 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-41 | 4/29/2009 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-41 | 4/15/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-41 | 4/28/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-42 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-42 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-43 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | ***17.5*** |
| MW-43 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 3.0 |
| MW-44 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-44 | 4/29/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| TW-01 | 5/12/2008 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-01 | 4/29/2009 | NOT SAMPLED (PRODUCT) | | | | | |
| TW-01 | 4/15/2010 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-01 | 4/28/2010 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-02 | 6/28/2006 | ***41.9*** | 2.63 | 1.84 | 4.22 | 50.6 | 2.97 |
| TW-02 | 5/12/2008 | ***17.3*** | 1.0 | <1.0 | <1.0 | 18.3 | <1.0 |
| TW-02 | 4/29/2009 | ***3.4*** | <1.0 | <1.0 | <1.0 | 3.4 | <1.0 |
| TW-02 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| TW-02 | 4/29/2011 | ***19.2*** | 1.5 | <1.0 | 3.6 | 24.3 | 1.3 |
| TW-03 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| TW-03 | 5/12/2008 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-03 | 4/29/2009 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-03 | 4/15/2010 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-03 | 4/29/2011 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-04 | 5/12/2008 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-04 | 4/29/2009 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-04 | 4/15/2010 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-04 | 4/29/2011 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-05 | 5/12/2008 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-05 | 4/29/2009 | NOT SAMPLED (PRODUCT) | | | | | |
| TW-05 | 4/15/2010 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-05 | 4/29/2011 | NOT SAMPLED (PRODUCT) | | | | | |
| TW-06 | 5/12/2008 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-06 | 4/29/2009 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-06 | 4/15/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| TW-06 | 4/29/2011 | NOT ACCESSIBLE (FLOODED) | | | | | |

**Notes:**

GW Standard = Values in ***bold and italic*** exceed the Groundwater Standard.
µg/L = micrograms per liter, or parts per billion (ppb)
NA = Sample not analyzed for target parameter.
NS = No sample collected from well.
ND(X) = Parameter not-detected at the reporting limit (or method detection limit if shown)(X).
<X = Parameter detected below the method limit of quantitation (X).
J = The target analyte was positively identified below the MQL and above the SQL.



Shell/Motiva 0007321

# DOCUMENT INFO

15

DocID: 00000440

Filename: 58603-2011-06-30-MON-01 (Annual Monitoring Report - SCI).pdf

SOVEREIGN CONSULTING INC.

# TRANSMITTAL SHEET

**Sovereign Consulting Inc.**
*290 Executive Drive, Suite 300*
*Cranberry Township, PA 16066*
*724-553-5084*
*724-553-5089 (fax)*
*www.sovcon.com*

Date: June 27, 2011
Job #: NYSDEC Spill #87-09990
Re: Brooklyn Terminal
25 Paidge Avenue
Brooklyn, New York

TO: Mr. Leszek Zielinski
NYSDEC - Region 2
Division of Environmental Remediation
4740 21st Street
Stony Brook, New York 11790

**WE ARE SENDING YOU THE FOLLOWING INFORMATION:**

| COPIES | DATE | NO. | DESCRIPTION |
|---|---|---|---|
| 1 | 6/30/2011 | | Annual Sampling Report |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

**THESE ARE TRANSMITTED:**

- ☒ For your use
- ☐ For approval
- ☒ As requested
- ☐ Return signed copy
- ☐ Approved as submitted
- ☐ Approved as noted
- ☐ Returned for corrections

**ADDITIONAL COMMENTS:**

Dear Mr. Zielinski:

Sovereign Consulting Inc. has prepared and is submitting the enclosed Annual Sampling Report at the request and on behalf of Motiva Enterprises LLC.

Should you have any questions, please feel free to contact Doug Jakim at 724-553-5084 .

Copy to: Doug Weimer - SOPUS

Signed: _____

# Shipment Receipt

**Transaction Date:** 27 Jun 2011
**Tracking Number:** 1Z97A7X70394397136

## 1 Address Information

| Ship To: | Ship From: | Return Address: |
|---|---|---|
| NYSDEC REGION 2 | SOVEREIGN CONSULTING | SOVEREIGN CONSULTING |
| LESZEK ZIELINSKI | SOVEREIGN CONSULTING | SOVEREIGN CONSULTING |
| 1 HUNTERS POINT PLAZA | 290 EXECUTIVE DRIVE | 290 EXECUTIVE DRIVE |
| 4740 21ST STREET | SUITE 300 | SUITE 300 |
| DIV. OF ENVIRONMENTAL REMEDIATION | CRANBERRY TOWNSHIP PA 16066 | CRANBERRY TOWNSHIP PA 16066 |
| LONG ISLAND CITY NY 11101 | Telephone:7245535084 | Telephone:7245535084 |

## 2 Package Information

| | Weight | Dimensions / Packaging | Declared Value | Reference Numbers |
|---|---|---|---|---|
| 1. | 2.0 lbs | Other Packaging | | Reference#1 - 6E017-140-03-93<br>Reference#2 - ANNUAL SAMPLING REPORT |

## 3 UPS Shipping Service and Shipping Options

**Service:**
UPS Ground Service

**Guaranteed By:** [1]
End of Day Wednesday, 6/29/2011

| | |
|---|---|
| **Shipping Fees Subtotal:** | **6.26 USD** |
| **Transportation** | 5.72 USD |
| **Fuel Surcharge** | 0.54 USD |

## 4 Payment Information

**Bill Shipping Charges to:** Shipper's Account 97A7X7

**Total Charged:** **6.26 USD**

Note: Your invoice may vary from the displayed reference rates.

* For delivery and guarantee information, see the UPS Service Guide. To speak to a customer service representative, call 1-800-PICK-UPS for domestic services and 1-800-782-7892 for international services.

## Responsibility for Loss or Damage

Unless a greater value is recorded in the declared value field as appropriate for the UPS shipping system used, the shipper agrees that the released value of each package covered by this receipt is no greater than $100, which is a reasonable value under the circumstances surrounding the transportation. If additional protection is desired, a shipper may increase UPS's limit of liability by declaring a higher value and paying an additional charge. UPS does not accept for transportation and shipper's requesting service through the Internet are prohibited from shipping packages with a value of more than $50,000. The maximum liability per package assumed by UPS shall not exceed $50,000, regardless of value in excess of the maximum. Claims not made within nine months after delivery of the package (sixty days for international shipments), or in the case of failure to make delivery, nine months after a reasonable time for delivery has elapsed (sixty days for international shipments), shall be deemed waived. The entry of a C.O.D. amount is not a declaration of value for carriage purposes. All checks or other negotiable instruments tendered in payment of C.O.D. will be accepted by UPS at shipper's risk. UPS shall not be liable for any special, incidental, or consequential damages. All shipments are subject to the terms and conditions contained in the UPS Tariff and the UPS Terms and Conditions of Service, which can be found at www.ups.com.

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MOTIVA
ENTERPRISES LLC

# MOTIVA ENTERPRISES LLC TERMINAL
# 25 PAIDGE AVENUE
# BROOKLYN, NEW YORK
# NYSDEC SPILL NO. 87-09990

---

## 2011 ANNUAL SAMPLING REPORT

## (June 2010 – June 2011)

**June 30, 2011**

**PREPARED FOR:**

**SHELL OIL PRODUCTS US**

**Doug Weimer**
**Senior Project Manager**
**4094 Majestic Lane PMB 224**
**Fairfax, VA 22033**

**PREPARED BY:**

**SOVEREIGN CONSULTING INC**

290 Executive Dr., Suite 300
Cranberry Twp, Pennsylvania 16066
(724)553-5084

Aaron C. Yingling
Geologist

Douglas E. Jakim
Senior Project Manager

**MOTIVA ENTERPRISES LLC TERMINAL**
**25 PAIDGE AVENUE**
**BROOKLYN, NEW YORK**
**NYSDEC SPILL NO. 87-09990**
**INCIDENT NO. 97094981**

---

# 2011 ANNUAL SAMPLING REPORT
**(June 2010 – June 2011)**

## SITE STATUS

The site is an active Terminal and is under a NYSDEC Stipulation Agreement. During the reporting period, the site continues to be in the remediation phase using hand bailing to recover free product on a monthly basis. Groundwater monitoring will continue on an annual basis as will the recovery of free product.

## SITE ACTIVITIES

- All monitoring wells not exhibiting separate phase product were sampled on April 28-29, 2011 consistent with the request made in a NYSDEC letter dated February 13, 2008 and the existing Stipulation Agreement. Each sample was analyzed utilizing EPA Method 8260 for VOCs consisting of BTEX and MTBE. Laboratory analysis reports are included in ***Appendix A***.
- Gauging of all wells and hand bailing of product was performed on a monthly basis.

## GROUNDWATER MONITORING

| | |
|---|---|
| Number of Wells: | 32 |
| Gauging Frequency: | Monthly |
| Sampling Frequency: | Annually |
| Recent Sample Dates: | April 28-29, 2011 |
| BTEX Range: | Below detection limit – 2,247 ug/l (MW-22R) |
| MTBE Range: | Below detection limit – 117 ug/l (MW-35) |

## PRODUCT RECOVERY

| | |
|---|---|
| Total Product Recovered: | 1,228 gallons (as of June 2011) |
| Recent Gauging Date: | June 6, 2011 |
| Wells Exhibiting Product since June 2010: | MW-2, MW-4, MW-26, MW-31, MW-34, MW-36, MW-37, MW-40, MW-41, MW-45, TW-1, TW-5 and TW-6 |
| Greatest Product Thickness measured since June 2010: | 2.30 ft (MW-40) (June 6, 2011) |

## HYDROGEOLOGY

| | |
|---|---|
| Geology: | Geology consists of 12 ft. fine to coarse sand and gravel (fill material), underlain by naturally occurring organic clay and silt (peat) |
| Depth to Water: | 1.34 to 9.81 ft. |
| Flow Direction: | North – Northeast towards Newtown Creek under a gradient of 0.02 ft/ft |

## CONCLUSIONS AND RECOMMENDATIONS

- Review of historical BTEX and MTBE concentrations in the groundwater beneath the site indicates concentrations have generally decreased over time. Annual sampling of all wells will continue with the next sampling in April-May 2012.

- Based on the product thicknesses and the results of the product bail-down testing results completed in May 2005 (Documented in the 2005 Annual Report), product gauging and hand bailing recovery will continue.

## ATTACHMENTS

- Table 1 Current Groundwater Analytical Results Summary
- Table 2 Historical Groundwater Analytical Results Summary
- Table 3 Groundwater Elevation Summary (2006-2011)

- Figure 1 Groundwater Contour Map - April 27, 2011
- Figure 2 Total BTEX/MTBE Concentrations in Groundwater - April 28-29, 2011
- Figure 3 LNAPL Thickness Contour Map – April 27, 2011
- Figure 4 Cumulative Product Recovery Graph

- Appendix A April 15, 2010 Groundwater Analysis Laboratory Reports

# TABLES

# Table 1
## Current Groundwater Analytical Summary
### Motiva Enterprises LLC Terminal # 58603

25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sample Location | Date | Benzene | Toluene | Ethylbenzene | Xylenes, Total | Total BTEX | MTBE |
| < GW Standard > | | < 0.7 > | < 5 > | < 5 > | < 5 > | --- | < 10 > |
| MW-01 | 4/29/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-02 | 4/28/2011 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-03 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-04 | 4/28/2011 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-05 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-06 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-07R | 4/28/2011 | ***31.3*** | <1.0 | <1.0 | <1.0 | 31.3 | ***38.0*** |
| MW-08 | 4/28/2011 | ***87.6*** | <1.0 | <1.0 | <1.0 | 87.6 | ***31.6*** |
| MW-09 | 4/28/2011 | ***11.5*** | <1.0 | <1.0 | <1.0 | 11.5 | 7.6 |
| MW-13 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-14 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-15 | 4/29/2011 | ***183*** | ***8.3*** | ***33.4*** | ***536*** | 760.7 | ***13.4*** |
| MW-16 | 4/29/2011 | ***7.2*** | <1.0 | <1.0 | 1.4 | 8.6 | ***11.4*** |
| MW-17 | 4/29/2011 | ***1.1*** | <1.0 | <1.0 | <1.0 | 1.1 | 5.0 |
| MW-18 | 4/29/2011 | ***2.6*** | <1.0 | <1.0 | 3.7 | 6.3 | 1.3 |
| MW-20 | 4/29/2011 | ***205*** | ***102*** | ***8.6*** | ***333*** | 648.6 | ***57.7*** |
| MW-21R | 4/28/2011 | ***217*** | ***29.9*** | ***97.0*** | ***87.9*** | 431.8 | 7.7 |
| MW-22R | 4/28/2011 | ***792*** | ***57.6*** | ***1,330*** | ***67.4*** | 2,247 | ***32.2*** |
| MW-23 | 4/28/2011 | <1.0 | <1.0 | <1.0 | 2.3 | 2.3 | 1.1 |
| MW-24 | 4/28/2011 | ***9.5*** | <1.0 | <1.0 | 2.7 | 12.2 | ***37.5*** |
| MW-25 | 4/29/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 1.5 |
| MW-26 | 4/28/2011 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-27 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-28 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 2.1 |
| MW-29 | 4/28/2011 | ***83.0*** | 1.2 | 2.7 | 4.9 | 91.8 | <1.0 |
| MW-30 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-31 | 4/28/2011 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-32 | 4/29/2011 | <1.0 | <1.0 | <1.0 | 2.8 | 2.8 | 2.6 |
| MW-33 | 4/29/2011 | ***227*** | 3.4 | 2.9 | ***8.4*** | 241.7 | ***51.4*** |
| MW-34 | 4/28/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-35 | 4/29/2011 | ***857*** | ***12.1*** | 2.1 | ***8.9*** | 880.1 | ***117*** |
| MW-36 | 4/28/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-37 | 4/28/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-38 | 4/29/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-39 | 4/29/2011 | ***90.3*** | 2.9 | 2.2 | ***8.1*** | 103.5 | ***33.8*** |
| MW-40 | 4/28/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-41 | 4/28/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-42 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-43 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 3.0 |
| MW-44 | 4/29/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| TW-01 | 4/28/2010 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-02 | 4/29/2011 | ***19.2*** | 1.5 | <1.0 | 3.6 | 24.3 | 1.3 |
| TW-03 | 4/29/2011 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-04 | 4/29/2011 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-05 | 4/29/2011 | NOT SAMPLED (PRODUCT) | | | | | |
| TW-06 | 4/29/2011 | NOT ACCESSIBLE (FLOODED) | | | | | |

**Notes:**

GW Standard = Values in ***bold and italic*** exceed the Groundwater Standard.

µg/L = micrograms per liter, or parts per billion (ppb)

<X = Parameter detected below the method limit of quantitation (X).



Shell/Motiva 0007329

# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| **Sample Location** | **Date** | **Benzene** | **Toluene** | **Ethylbenzene** | **Xylenes, Total** | **Total BTEX** | **MTBE** |
| **< GW Standard >** | | **< 0.7 >** | **< 5 >** | **< 5 >** | **< 5 >** | **---** | **< 10 >** |
| MW-01 | 8/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-01 | 11/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-01 | 2/13/1990 | ND | ND | ND | ND | ND | NA |
| MW-01 | 5/4/1990 | ND | ND | ND | ND | ND | NA |
| MW-01 | 5/8/1991 | ND | ND | ND | ND | ND | NA |
| MW-01 | 5/13/1992 | ND | ND | ND | ND | ND | NA |
| MW-01 | 5/12/1993 | ND | ND | ND | ND | ND | NA |
| MW-01 | 5/10/1994 | ND | ND | ND | ND | ND | NA |
| MW-01 | 5/22/1995 | ND | ND | ND | ND | ND | NA |
| MW-01 | 5/23/1996 | ND | ND | ND | ND | ND | NA |
| MW-01 | 6/18/1997 | ND | ND | ND | ND | ND | NA |
| MW-01 | 5/29/1998 | ND | ND | ND | ND | ND | NA |
| MW-01 | 5/11/1999 | ND | ND | ND | ND | ND | NA |
| MW-01 | 10/27/1999 | ND | ND | ND | ND | ND | 2 |
| MW-01 | 6/7/2000 | ND | ND | ND | ND | ND | ND |
| MW-01 | 5/29/2001 | ND | ND | ND | ND | ND | ND |
| MW-01 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | < 8.0 | < 1.0 |
| MW-01 | 6/30/2003 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-01 | 6/15/2004 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-01 | 6/7/2005 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-01 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <1.00 | <6.00 | <1.00 |
| MW-01 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-01 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-01 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-01 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-01 | 4/29/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-02 | 6/8/2005 | ***172*** | ***5.5*** | 3.2 | ***16.4*** | 197.1 | 6.3 |
| MW-02 | 5/12/2008 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-02 | 4/29/2009 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-02 | 4/15/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-02 | 4/28/2011 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-03 | 8/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-03 | 11/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-03 | 2/13/1990 | ND | ND | ND | ND | ND | NA |
| MW-03 | 5/4/1990 | ND | ND | ND | ND | ND | NA |
| MW-03 | 5/8/1991 | ND | ND | ND | ND | ND | NA |
| MW-03 | 5/13/1992 | ND | ND | ND | ND | ND | NA |
| MW-03 | 5/12/1993 | ND | ND | ND | ND | ND | NA |
| MW-03 | 5/10/1994 | ND | ND | ND | ND | ND | NA |
| MW-03 | 5/22/1995 | ND | ND | ND | ND | ND | NA |
| MW-03 | 5/23/1996 | ND | ND | ND | ND | ND | NA |
| MW-03 | 6/18/1997 | ND | ND | ND | ND | ND | NA |
| MW-03 | 5/29/1998 | ND | ND | ND | ND | ND | NA |
| MW-03 | 5/11/1999 | ND | ND | ND | ND | ND | NA |
| MW-03 | 10/27/1999 | ND | ND | ND | ND | ND | 1.2 |
| MW-03 | 6/7/2000 | ND | ND | ND | ND | ND | ND |
| MW-03 | 5/29/2001 | ND | ND | ND | ND | ND | 2.1 |
| MW-03 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | < 8.0 | < 1.0 |
| MW-03 | 6/30/2003 | ***0.97***[J] | 0.70[J] | <1.0 | <1.0 | 1.67 | <1.0 |
| MW-03 | 6/15/2004 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | <1.0 |
| MW-03 | 6/7/2005 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | <1.0 |
| MW-03 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-03 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-03 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-03 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-03 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-03 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |



Shell/Motiva 0007330

# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| **Sample Location** | **Date** | **Benzene** | **Toluene** | **Ethylbenzene** | **Xylenes, Total** | **Total BTEX** | **MTBE** |
| **< GW Standard >** | | **< 0.7 >** | **< 5 >** | **< 5 >** | **< 5 >** | **---** | **< 10 >** |
| MW-04 | 5/12/1993 | ***1.8*** | ND | 2 | ***12*** | 15.8 | NA |
| MW-04 | 5/10/1994 | ND | ND | ND | ND | ND | NA |
| MW-04 | 6/18/1997 | ND | ND | 0.49 | ND | 0.49 | NA |
| MW-04 | 6/30/2003 | <2.5 | <2.5 | <2.5 | <2.5 | <10 | ***38.8*** |
| MW-04 | 6/15/2004 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | ***24.8*** |
| MW-04 | 6/7/2005 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | ***11.6*** |
| MW-04 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-04 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 3.1 |
| MW-04 | 4/15/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-04 | 4/28/2011 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-05 | 8/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-05 | 11/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-05 | 2/13/1990 | ***4.6*** | ND | ND | 2 | 6.6 | NA |
| MW-05 | 5/4/1990 | ***2.9*** | ND | ND | ND | 2.9 | NA |
| MW-05 | 5/8/1991 | ND | ND | ND | ND | ND | NA |
| MW-05 | 5/13/1992 | ND | ND | ND | ND | ND | NA |
| MW-05 | 5/12/1993 | ND | ND | ND | ND | ND | NA |
| MW-05 | 5/10/1994 | ND | ND | ND | ND | ND | NA |
| MW-05 | 5/22/1995 | ND | ND | ND | ND | ND | NA |
| MW-05 | 5/23/1996 | ND | ND | ND | ND | ND | NA |
| MW-05 | 6/18/1997 | ND | ND | 0.29 | ND | 0.29 | NA |
| MW-05 | 5/29/1998 | ND | ND | ND | ND | ND | NA |
| MW-05 | 5/11/1999 | ND | ND | ND | ND | ND | NA |
| MW-05 | 10/27/1999 | ND | ND | ND | ND | ND | ***228*** |
| MW-05 | 6/7/2000 | ND | ND | ND | ND | ND | ***19.7*** |
| MW-05 | 5/29/2001 | ND | ND | ND | ND | ND | ***18.5*** |
| MW-05 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | < 8.0 | ***17*** |
| MW-05 | 6/30/2003 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | ***17.1*** |
| MW-05 | 6/15/2004 | ***88.9*** | ***10*** | ***7.8*** | ***32.4*** | 139 | ***38.9*** |
| MW-05 | 6/7/2005 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-05 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-05 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-05 | 5/12/2008 | Not Accessible (Underwater/Flooded) | | | | | |
| MW-05 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-05 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-05 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |



Shell/Motiva 0007331

## Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| **Sample Location** | **Date** | **Benzene** | **Toluene** | **Ethylbenzene** | **Xylenes, Total** | **Total BTEX** | **MTBE** |
| **< GW Standard >** | | **< 0.7 >** | **< 5 >** | **< 5 >** | **< 5 >** | **---** | **< 10 >** |
| MW-06 | 8/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-06 | 11/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-06 | 2/13/1990 | ND | ND | ND | ND | ND | NA |
| MW-06 | 5/4/1990 | ND | ND | ND | ND | ND | NA |
| MW-06 | 5/8/1991 | ND | ND | ND | ND | ND | NA |
| MW-06 | 5/13/1992 | ND | ND | ND | ND | ND | NA |
| MW-06 | 5/12/1993 | ND | ND | ND | ND | ND | NA |
| MW-06 | 5/10/1994 | ND | ND | ND | ND | ND | NA |
| MW-06 | 5/23/1996 | ND | ND | ND | ND | ND | NA |
| MW-06 | 5/29/1998 | ND | ND | ND | ND | ND | NA |
| MW-06 | 5/11/1999 | ND | ND | ND | ND | ND | NA |
| MW-06 | 10/27/1999 | ND | ND | ND | ND | ND | ***28.7*** |
| MW-06 | 6/7/2000 | ND | ND | ND | ND | ND | ***10.5*** |
| MW-06 | 5/29/2001 | ND | ND | ND | ND | ND | ND |
| MW-06 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | < 8.0 | < 1.0 |
| MW-06 | 6/30/2003 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | ***13.4*** |
| MW-06 | 6/15/2004 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | <1.0 |
| MW-06 | 6/7/2005 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | <1.0 |
| MW-06 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-06 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-06 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-06 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-06 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-06 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-07 | 8/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-07 | 11/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-07 | 2/13/1990 | ND | ND | ND | ND | ND | NA |
| MW-07 | 5/4/1990 | ND | ND | ND | ND | ND | NA |
| MW-07 | 5/8/1991 | ND | ND | ND | ND | ND | NA |
| MW-07 | 5/13/1992 | ND | ND | ND | ND | ND | NA |
| MW-07 | 5/12/1993 | ND | ND | ND | ND | ND | NA |
| MW-07 | 5/10/1994 | ND | ND | ND | ND | ND | NA |
| MW-07 | 5/22/1995 | ND | ND | ND | ND | ND | NA |
| MW-07 | 5/23/1996 | ND | ND | ND | ND | ND | NA |
| MW-07 | 6/18/1997 | ND | ND | ND | ND | ND | NA |
| MW-07 | 5/29/1998 | ND | ND | ND | ND | ND | NA |
| MW-07 | 5/11/1999 | ND | ND | ND | ND | ND | NA |
| MW-07 | 10/27/1999 | ND | ND | ND | ND | ND | 1.3 |
| MW-07 | 6/7/2000 | ND | ND | ND | ND | ND | ND |
| MW-07 | 5/29/2001 | ND | ND | ND | ND | ND | 4.0 |
| MW-07 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | < 8.0 | 1.4 |
| MW-07 | 6/30/2003 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | ***13.4*** |
| MW-07 | 6/15/2004 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | 1.8 |
| MW-07 | 6/7/2005 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | <1.0 |
| MW-07 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-07 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-07 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |



Shell/Motiva 0007332

# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| **Sample Location** | **Date** | **Benzene** | **Toluene** | **Ethylbenzene** | **Xylenes, Total** | **Total BTEX** | **MTBE** |
| **< GW Standard >** | | **< 0.7 >** | **< 5 >** | **< 5 >** | **< 5 >** | **---** | **< 10 >** |
| MW-07R | 4/15/2010 | ***16.9*** | <5.00 | <5.00 | <5.00 | 16.9 | ***31.5*** |
| MW-07R | 7/27/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | ***25.6*** |
| MW-07R | 10/8/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | ***36.9*** |
| MW-07R | 1/25/2011 | ***2.4*** | <1.00 | <1.00 | <1.00 | 2.4 | ***39.2*** |
| MW-07R | 4/28/2011 | ***31.3*** | <1.0 | <1.0 | <1.0 | 31.3 | ***36.0*** |
| MW-08 | 8/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-08 | 11/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-08 | 2/13/1990 | ND | ND | ND | ND | ND | NA |
| MW-08 | 5/4/1990 | ND | ND | ND | ND | ND | NA |
| MW-08 | 5/8/1991 | ND | ND | ND | ND | ND | NA |
| MW-08 | 5/13/1992 | ND | ND | ND | ND | ND | NA |
| MW-08 | 5/12/1993 | ***9.5*** | ND | ND | ND | 9.5 | NA |
| MW-08 | 5/10/1994 | ***1.7*** | ND | ND | ND | 1.7 | NA |
| MW-08 | 5/22/1995 | ND | ND | ND | ND | ND | NA |
| MW-08 | 5/23/1996 | ND | ND | ND | ND | ND | NA |
| MW-08 | 6/18/1997 | ND | ND | ND | ND | ND | NA |
| MW-08 | 5/29/1998 | ND | ND | ND | ND | ND | NA |
| MW-08 | 5/11/1999 | ND | ND | ND | ND | ND | NA |
| MW-08 | 10/27/1999 | ND | ND | ND | ND | ND | 3.20 |
| MW-08 | 6/7/2000 | ND | ND | ND | ND | ND | ***21.0*** |
| MW-08 | 5/29/2001 | 0.43 | ND | ND | ND | 0.43 | ***39.0*** |
| MW-08 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | < 8.0 | 1.9 |
| MW-08 | 6/30/2003 | ***18.3*** | <1.0 | <1.0 | <1.0 | 18.3 | ***58.2*** |
| MW-08 | 6/15/2004 | ***1.5*** | <1.0 | <1.0 | <1.0 | 1.5 | 8.50 |
| MW-08 | 6/7/2005 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 5.80 |
| MW-08 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | 5.00 |
| MW-08 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 6.20 |
| MW-08 | 5/15/2009 | ***2.4*** | <1.0 | <1.0 | <1.0 | 2.4 | 6.6 |
| MW-08 | 4/15/2010 | ***44.9*** | <5.00 | <5.00 | <5.00 | 44.9 | ***37.6*** |
| MW-08 | 7/27/2010 | ***24.3*** | <5.00 | <5.00 | <5.00 | 24.3 | ***39.5*** |
| MW-08 | 10/8/2010 | ***<5.00*** | <5.00 | <5.00 | <5.00 | <5.00 | ***21.8*** |
| MW-08 | 1/25/2011 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | ***22.5*** |
| MW-08 | 4/28/2011 | ***87.6*** | <1.0 | <1.0 | <1.0 | 87.6 | ***31.6*** |
| MW-09 | 5/12/1993 | ND | ND | ND | ND | ND | NA |
| MW-09 | 5/10/1994 | ND | ND | ND | ND | ND | NA |
| MW-09 | 5/22/1995 | ND | ND | ND | ND | ND | NA |
| MW-09 | 5/23/1996 | ND | ND | ND | ND | ND | NA |
| MW-09 | 6/18/1997 | ND | ND | ND | ND | ND | NA |
| MW-09 | 5/29/1998 | ND | ND | ND | ND | ND | NA |
| MW-09 | 5/11/1999 | ND | ND | ND | ND | ND | NA |
| MW-09 | 10/27/1999 | ND | ND | ND | ND | ND | 6.5 |
| MW-09 | 6/7/2000 | ND | ND | ND | ND | ND | ND |
| MW-09 | 5/29/2001 | ND | ND | ND | ND | ND | 3.3 |
| MW-09 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | < 8.0 | < 1.0 |
| MW-09 | 6/30/2003 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | 9.2 |
| MW-09 | 6/15/2004 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | 0.79[J] |
| MW-09 | 6/7/2005 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | 5.0 |
| MW-09 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-09 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-09 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-09 | 5/15/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 4.7 |
| MW-09 | 4/15/2010 | ***12.5*** | <5.00 | <5.00 | <5.00 | 12.5 | ***15.2*** |
| MW-09 | 7/27/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-09 | 10/8/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | 7.26 |
| MW-09 | 1/25/2011 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | 1.6 |
| MW-09 | 4/28/2011 | ***11.5*** | <1.0 | <1.0 | <1.0 | 11.5 | 7.6 |



Shell/Motiva 0007333

# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sample Location | Date | Benzene | Toluene | Ethylbenzene | Xylenes, Total | Total BTEX | MTBE |
| < GW Standard > | | < 0.7 > | < 5 > | < 5 > | < 5 > | --- | < 10 > |
| MW-13 | 8/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-13 | 11/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-13 | 2/13/1990 | ND | ND | ND | ND | ND | NA |
| MW-13 | 5/4/1990 | ND | ND | ND | ND | ND | NA |
| MW-13 | 5/8/1991 | ND | ND | ND | ND | ND | NA |
| MW-13 | 5/13/1992 | ND | ND | ND | ND | ND | NA |
| MW-13 | 5/12/1993 | ***8.6*** | ND | ND | ND | 8.6 | NA |
| MW-13 | 5/10/1994 | ND | ND | ND | ND | ND | NA |
| MW-13 | 5/22/1995 | ND | ND | ND | ND | ND | NA |
| MW-13 | 6/18/1997 | ***1.4*** | ND | ND | 1.4 | 2.8 | NA |
| MW-13 | 5/29/1998 | ***1.2*** | ND | ND | ND | 1.2 | NA |
| MW-13 | 5/11/1999 | ND | ND | ND | ND | ND | NA |
| MW-13 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | < 8.0 | 7.4 |
| MW-13 | 6/30/2003 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | <1.0 |
| MW-13 | 6/15/2004 | 0.37[J] | <1.0 | <1.0 | <1.0 | 0.37[J] | 1.1 |
| MW-13 | 6/8/2005 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-13 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-13 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-13 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-13 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-13 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-13 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-14 | 8/14/1989 | ***2.5*** | 1.7 | 4.4 | 4.9 | 13.5 | NA |
| MW-14 | 11/14/1989 | ***6.7*** | ND | 1 | ND | 7.7 | NA |
| MW-14 | 2/13/1990 | ***60*** | ***5.4*** | ND | ***18*** | 83.4 | NA |
| MW-14 | 5/4/1990 | ***68*** | ***2.3*** | ***8.1*** | ***7.1*** | 85.5 | NA |
| MW-14 | 5/8/1991 | ***43*** | 2.6 | ***6.5*** | ***7.2*** | 59.3 | NA |
| MW-14 | 5/13/1992 | ***97*** | 4.8 | ***8.5*** | ***12*** | 122.3 | NA |
| MW-14 | 5/12/1993 | ***45*** | 2.1 | 4.9 | ***7.8*** | 59.8 | NA |
| MW-14 | 5/10/1994 | ***57*** | 2.1 | 2.7 | ***8.3*** | 70.1 | NA |
| MW-14 | 5/22/1995 | ***33*** | 1.8 | 1.1 | ***5.9*** | 41.8 | NA |
| MW-14 | 5/23/1996 | ***25.7*** | 1.6 | 1.3 | ***6.6*** | 35.2 | NA |
| MW-14 | 6/18/1997 | ***13.1*** | 1.1 | 0.98 | ***5.3*** | 20.48 | NA |
| MW-14 | 5/29/1998 | ***24.6*** | 2 | 2.2 | ***9.6*** | 38.4 | NA |
| MW-14 | 5/11/1999 | ***19*** | ND | 0.83 | 2.2 | 22.03 | NA |
| MW-14 | 10/27/1999 | ***24.4*** | 1.3 | ND | 4.8 | 30.5 | ND |
| MW-14 | 6/7/2000 | ***1.5*** | ND | ND | ND | 1.5 | ND |
| MW-14 | 5/29/2001 | ***16.1*** | 0.67 | ND | 3.2 | 19.97 | ND |
| MW-14 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | < 8.0 | < 1.0 |
| MW-14 | 6/30/2003 | ***1.9*** | < 1.0 | < 1.0 | < 1.0 | 1.9 | <1.0 |
| MW-14 | 6/15/2004 | ***5.8*** | <1.0 | <1.0 | 1.3 | 7 | <1.0 |
| MW-14 | 6/8/2005 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-14 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-14 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-14 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-14 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-14 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-14 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |



Shell/Motiva 0007334

## Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| **Sample Location** | **Date** | **Benzene** | **Toluene** | **Ethylbenzene** | **Xylenes, Total** | **Total BTEX** | **MTBE** |
| **< GW Standard >** | | **< 0.7 >** | **< 5 >** | **< 5 >** | **< 5 >** | **---** | **< 10 >** |
| MW-15 | 5/10/1994 | ***1,200*** | ***48*** | ***130*** | ***130*** | 1,508 | NA |
| MW-15 | 6/18/1997 | ***1,600*** | ***624*** | ***686*** | ***3,300*** | 6,210 | NA |
| MW-15 | 5/11/1999 | ***162.0*** | ND | ***122*** | ***408.0*** | 692 | NA |
| MW-15 | 10/27/1999 | ***1,360*** | ***176*** | ***740*** | ***2,350*** | 4,626 | ***8,080*** |
| MW-15 | 6/7/2000 | ***1,050*** | ***143*** | ***584*** | ***1,330*** | 3,107 | ***2,120*** |
| MW-15 | 5/29/2001 | ***507*** | ***81.3*** | ***386*** | ***500*** | 1,474 | ***1,430*** |
| MW-15 | 6/30/2003 | ***281*** | ***21*** | ***158*** | ***250*** | 710 | ***52.7*** |
| MW-15 | 6/7/2005 | ***280*** | ***18.7*** | ***30.6*** | ***53.3*** | 383 | ***45.2*** |
| MW-15 | 6/28/2006 | ***361*** | ***28.0*** | ***22.7*** | ***44.9*** | 457 | ***47.3*** |
| MW-15 | 6/26/2007 | ***234*** | ***15.6*** | ***21.2*** | ***48.6*** | 319 | ***54.7*** |
| MW-15 | 5/12/2008 | ***264*** | ***19.4*** | ***26.2*** | ***71.2*** | 381 | ***40.9*** |
| MW-15 | 4/29/2009 | ***165*** | ***20.4*** | ***13.7*** | ***121*** | 320 | ***45.9*** |
| MW-15 | 4/15/2010 | ***839*** | ***4,350*** | ***556*** | ***3,521*** | 9,266 | ***38.8*** |
| MW-15 | 4/29/2011 | ***183*** | ***8.3*** | ***33.4*** | ***536*** | 760.7 | ***13.4*** |
| MW-16 | 8/14/1989 | ***300*** | ***310*** | ***43*** | ***240*** | 893 | NA |
| MW-16 | 11/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-16 | 5/12/1993 | ***73*** | ND | ***10*** | ***17*** | 100 | NA |
| MW-16 | 5/10/1994 | ***46*** | ND | 1.6 | 4.1 | 51.7 | NA |
| MW-16 | 6/18/1997 | ***2,470*** | ***17,800*** | ***3,760*** | ***19,900*** | 43,930 | NA |
| MW-16 | 5/11/1999 | ***1,040*** | ***350*** | ***469*** | ***3,900*** | 5,759 | NA |
| MW-16 | 6/30/2003 | ***331*** | ***47.7*** | ***76.4*** | ***118*** | 573 | ***335*** |
| MW-16 | 6/15/2004 | ***218*** | ***12.1*** | ***107*** | ***118*** | 455 | ***197*** |
| MW-16 | 6/7/2005 | ***225*** | ***7.6*** | ***29.2*** | ***26.0*** | 288 | ***32.6*** |
| MW-16 | 6/28/2006 | ***52.6*** | 2.88 | ***6.59*** | ***8.90*** | 71.0 | 5.88 |
| MW-16 | 6/26/2007 | ***99.8*** | ***6.20*** | 4.93 | ***17.1*** | 128 | ***34.2*** |
| MW-16 | 5/12/2008 | ***83.8*** | 4.10 | 2.00 | ***20.7*** | 111 | ***13.4*** |
| MW-16 | 4/29/2009 | ***56.2*** | ***5.3*** | 2.2 | ***15.2*** | 78.9 | ***26.7*** |
| MW-16 | 4/15/2010 | ***37.6*** | <5.00 | <5.00 | ***5.22*** | 42.82 | ***14.6*** |
| MW-16 | 4/29/2011 | ***7.2*** | <1.0 | <1.0 | 1.4 | 8.6 | ***11.4*** |



Shell/Motiva 0007335

# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| **Sample Location** | **Date** | **Benzene** | **Toluene** | **Ethylbenzene** | **Xylenes, Total** | **Total BTEX** | **MTBE** |
| **< GW Standard >** | | **< 0.7 >** | **< 5 >** | **< 5 >** | **< 5 >** | **---** | **< 10 >** |
| MW-17 | 8/14/1989 | ***900*** | ***2,600*** | ***600*** | ***3,300*** | 7,400 | NA |
| MW-17 | 11/14/1989 | ***400*** | ***1,200*** | ***590*** | ***2,700*** | 4,890 | NA |
| MW-17 | 2/13/1990 | ***410*** | ***960*** | ND | ***3,100*** | 4,470 | NA |
| MW-17 | 5/12/1993 | ***290*** | ***24*** | ***70*** | ***130*** | 514 | NA |
| MW-17 | 5/10/1994 | ***82*** | ***10*** | ***30*** | ***48*** | 170 | NA |
| MW-17 | 5/29/1998 | ***347*** | ***435*** | ***797*** | ***5,220*** | 6,799 | NA |
| MW-17 | 5/11/1999 | ***133*** | ***42*** | ***162*** | ***370*** | 707 | NA |
| MW-17 | 10/27/1999 | ***213*** | ***161*** | ***615*** | ***2,150*** | 3,139 | ***96.4*** |
| MW-17 | 6/7/2000 | ***136*** | ***30.7*** | ***77.8*** | ***229*** | 474 | ***254*** |
| MW-17 | 5/29/2001 | ***70.9*** | ***16.5*** | ***78.7*** | ***170*** | 336 | ND |
| MW-17 | 5/30/2002 | ***53*** | ***7.1*** | ***12.9*** | ***14*** | 87 | ***13.4*** |
| MW-17 | 6/30/2003 | ***13.9*** | ***5.3*** | 3.9 | ***17.2*** | 40 | ***12.5*** |
| MW-17 | 6/15/2004 | ***13*** | 3.1 | 1.4 | ***8.7*** | 26 | 6.8 |
| MW-17 | 6/7/2005 | ***54.3*** | 4.0 | 1.9 | ***24.7*** | 85 | ***16.1*** |
| MW-17 | 6/28/2006 | ***3.37*** | <1.00 | <1.00 | <3.00 | 3.37 | 3.59 |
| MW-17 | 6/26/2007 | ***67.7*** | 4.44 | 1.54 | ***25.2*** | 98.9 | ***11.8*** |
| MW-17 | 5/12/2008 | ***44.2*** | 3.70 | <1.0 | ***27.9*** | 75.8 | 8.00 |
| MW-17 | 4/29/2009 | ***30.1*** | 2.8 | <1.0 | ***17.2*** | 50.1 | 4.6 |
| MW-17 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | 5.1 |
| MW-17 | 4/29/2011 | ***1.1*** | <1.0 | <1.0 | <1.0 | 1.1 | 5.0 |
| MW-18 | 8/14/1989 | ***1,100*** | ***2,500*** | ***580*** | ***2,900*** | 7,080 | NA |
| MW-18 | 11/14/1989 | ***680*** | ***770*** | ***590*** | ***2,900*** | 4,940 | NA |
| MW-18 | 2/13/1990 | ***630*** | ***570*** | ND | ***3,100*** | 4,300 | NA |
| MW-18 | 5/4/1990 | ***420*** | ***540*** | ***420*** | ***2,800*** | 4,180 | NA |
| MW-18 | 5/13/1992 | ***480*** | ***78*** | ***380*** | ***580*** | 1,518 | NA |
| MW-18 | 5/12/1993 | ***590*** | ***400*** | ***61*** | ***420*** | 1,471 | NA |
| MW-18 | 5/10/1994 | ***210*** | ***20*** | ***70*** | ***130*** | 430 | NA |
| MW-18 | 5/22/1995 | ***5,900*** | ***19,000*** | ***1,600*** | ***12,000*** | 38,500 | NA |
| MW-18 | 5/23/1996 | ***1,520*** | ***12,600*** | ***2,750*** | ***15,200*** | 32,070 | NA |
| MW-18 | 6/18/1997 | ***794*** | ***1,140*** | ***2,280*** | ***11,200*** | 15,414 | NA |
| MW-18 | 5/29/1998 | ***1,010*** | ***294*** | ***2,300*** | ***8,140*** | 11,744 | NA |
| MW-18 | 5/11/1999 | ***501*** | ***127*** | ***1,690*** | ***3,030*** | 5,348 | NA |
| MW-18 | 10/27/1999 | ***432*** | ***95.6*** | ***1,190*** | ***779*** | 2,497 | ***178*** |
| MW-18 | 6/7/2000 | ***378*** | ***85.2*** | ***1,240*** | ***1,080*** | 2,783 | ***704*** |
| MW-18 | 5/29/2001 | ***184*** | ***47*** | ***601*** | ***279*** | 1,111 | ***79*** |
| MW-18 | 5/30/2002 | ***104*** | ***19*** | ***424*** | ***48.5*** | 595.9 | ***22.8*** |
| MW-18 | 6/30/2003 | ***42.2*** | ***11*** | ***154*** | ***37.5*** | 245 | ***12.8*** |
| MW-18 | 6/15/2004 | ***71.7*** | ***10.4*** | ***39*** | ***19.9*** | 141 | ***14.9*** |
| MW-18 | 6/7/2005 | ***97*** | ***7.9*** | ***13.2*** | ***35.0*** | 153 | ***18.4*** |
| MW-18 | 6/28/2006 | ***31.8*** | 4.84 | ***29.3*** | ***15.4*** | 81.3 | 8.77 |
| MW-18 | 6/26/2007 | ***83.1*** | ***8.33*** | ***12.1*** | ***25.6*** | 129 | ***12.2*** |
| MW-18 | 5/12/2008 | ***49.8*** | 4.00 | ***7.50*** | ***21.9*** | 83.2 | 3.70 |
| MW-18 | 4/29/2009 | ***76.9*** | 4.8 | ***7.7*** | ***33.4*** | 123 | 6.6 |
| MW-18 | 4/15/2010 | ***36.6*** | ***5.08*** | ***13.3*** | ***16.9*** | 71.88 | <5.00 |
| MW-18 | 4/29/2011 | ***2.6*** | <1.0 | <1.0 | 3.7 | 6.3 | 1.3 |



Shell/Motiva 0007336

# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| **Sample Location** | **Date** | **Benzene** | **Toluene** | **Ethylbenzene** | **Xylenes, Total** | **Total BTEX** | **MTBE** |
| **< GW Standard >** | | **< 0.7 >** | **< 5 >** | **< 5 >** | **< 5 >** | **---** | **< 10 >** |
| MW-19 | 5/30/2002 | ***165*** | 4.8 | 3.6 | ***10.3*** | 184 | ***56.9*** |
| MW-19 | 6/30/2003 | ***76.7*** | ***9.9*** | ***6.5*** | ***45.5*** | 139 | ***19.8*** |
| MW-19 | 6/15/2004 | ***179*** | ***15.8*** | ***6.1*** | ***37*** | 238 | ***20.4*** |
| MW-19 | 6/7/2005 | ***194*** | ***12.4*** | ***8.8*** | ***41.3*** | 257 | ***16.8*** |
| MW-19 | 6/28/2006 | ***49.5*** | 2.74 | <1.00 | 9.16 | 61.4 | ***11.9*** |
| MW-19 | 6/26/2007 | ***114*** | 4.91 | 2.27 | ***17.7*** | 139 | ***12.0*** |
| MW-19 | 5/12/2008 | ***11.4*** | <1.0 | <1.0 | 1.60 | 13.0 | 4.20 |
| MW-19 | 4/29/2009 | ***7.5*** | 1.5 | <1.0 | 2.9 | 11.9 | 7.7 |
| MW-19 | 4/15/2010 | ***11.2*** | ***6.34*** | <5.00 | ***44.9*** | 62.44 | 5.59 |
| MW-20 | 5/12/1993 | ***410*** | ND | ***180*** | ***62*** | 652 | NA |
| MW-20 | 6/30/2003 | ***525*** | ***103*** | ***34.9*** | ***178*** | 841 | ***3,440*** |
| MW-20 | 6/15/2004 | ***443*** | ***95.5*** | ***48.1*** | ***353*** | 940 | ***220*** |
| MW-20 | 6/7/2005 | ***861*** | ***25.1*** | ***38.9*** | ***90.1*** | 1,015 | ***230*** |
| MW-20 | 6/28/2006 | ***1,420*** | ***2,260*** | ***342*** | ***3,730*** | 7,752 | ***341*** |
| MW-20 | 6/26/2007 | ***1,320*** | ***263*** | ***98.7*** | ***1,420*** | 3,102 | ***188*** |
| MW-20 | 5/12/2008 | ***636*** | ***19.7*** | ***45.4*** | ***119*** | 820 | ***105*** |
| MW-20 | 4/29/2009 | ***59.7*** | 2.5 | ***7.3*** | ***5.9*** | 75.4 | ***56.6*** |
| MW-20 | 4/15/2010 | ***497*** | ***43.2*** | ***20.4*** | ***84.9*** | 645.5 | ***145*** |
| MW-20 | 4/29/2011 | ***205*** | ***102*** | ***8.6*** | ***333*** | 648.6 | ***57.7*** |
| MW-21 | 5/8/1991 | ***140*** | ***6.5*** | ***12.0*** | ***41*** | 199.5 | NA |
| MW-21 | 5/13/1992 | ***20*** | ***5.6*** | ***15.0*** | ***54*** | 94.6 | NA |
| MW-21 | 5/12/1993 | ***66*** | ***17*** | ***40*** | ***160*** | 283 | NA |
| MW-21 | 5/10/1994 | ***41*** | ***12*** | ***46*** | ***170*** | 269 | NA |
| MW-21 | 5/22/1995 | ***14*** | ***9.1*** | ***31*** | ***130*** | 184.1 | NA |
| MW-21 | 6/18/1997 | ***18.4*** | ND | ***32.7*** | ***122*** | 173.1 | NA |
| MW-21 | 5/29/1998 | ***3.4*** | 0.68 | 4.5 | ***15.1*** | 23.68 | NA |
| MW-21 | 5/11/1999 | ***56.9*** | ***10.8*** | ***61.5*** | ***201*** | 330.2 | NA |
| MW-21 | 10/27/1999 | ***13.4*** | ND | ***11.1*** | ***41.6*** | 66.1 | ***275*** |
| MW-21 | 6/7/2000 | ***6.6*** | 1.6 | ***6.6*** | ***24.4*** | 39.2 | ***214*** |
| MW-21 | 5/29/2001 | ***5.2*** | 1.4 | ***8.6*** | ***25.2*** | 40.4 | ***110*** |
| MW-21 | 5/30/2002 | ***1.6*** | < 1.0 | 1.5 | ***5.1*** | 8.2 | ***28.9*** |
| MW-21 | 6/30/2003 | ***10.5*** | 0.66J | 3.2 | ***11.4*** | 25 | ***156*** |
| MW-21 | 6/15/2004 | ***1.4*** | 0.36J | 0.79J | 2.8 | 5.4 | ***48.4*** |
| MW-21 | 6/8/2005 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | ***65.3*** |
| MW-21 | 6/28/2006 | <.1.00 | <1.00 | <1.00 | <3.00 | <6.00 | ***50.0*** |
| MW-21 | 6/26/2007 | ***7.07*** | <1.00 | ***5.57*** | ***14.6*** | 27.2 | ***10.7*** |
| MW-21 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | ***93.2*** |



Shell/Motiva 0007337

# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| **Sample Location** | **Date** | **Benzene** | **Toluene** | **Ethylbenzene** | **Xylenes, Total** | **Total BTEX** | **MTBE** |
| **< GW Standard >** | | **< 0.7 >** | **< 5 >** | **< 5 >** | **< 5 >** | **---** | **< 10 >** |
| MW-21R | 4/15/2010 | ***139*** | ***12.2*** | ***41.5*** | ***54.6*** | 247.3 | <5.00 |
| MW-21R | 7/27/2010 | ***160*** | ***20.0*** | ***52.3*** | ***71.5*** | 303.8 | ***14.2*** |
| MW-21R | 10/8/2010 | ***239*** | ***26.9*** | ***80.5*** | ***108.4*** | 455 | ***28.4*** |
| MW-21R | 1/25/2011 | ***292*** | ***34.0*** | ***112*** | ***113*** | 551 | ***24.6*** |
| MW-21R | 4/28/2011 | ***217*** | ***29.9*** | ***97.0*** | ***87.9*** | 431.8 | 7.7 |
| MW-22 | 5/12/1993 | ***2,300*** | ***24*** | ***620*** | ***210*** | 3,154 | NA |
| MW-22 | 5/10/1994 | ***2,500*** | ***49*** | ***720*** | ***390*** | 3,659 | NA |
| MW-22 | 6/18/1997 | ***819*** | ND | ***375*** | ***76.1*** | 1,270 | NA |
| MW-22 | 5/29/1998 | ***677*** | ***19.9*** | ***232*** | ***41.9*** | 971 | NA |
| MW-22 | 10/27/1999 | ***650*** | ***31.6*** | ***323*** | ***21.8*** | 1,026 | ***478*** |
| MW-22 | 6/30/2003 | ***646*** | ***91.2*** | ***1,240*** | ***86.4*** | 2,064 | ***19.3*** |
| MW-22 | 6/15/2004 | ***285*** | ***23.2*** | ***185*** | ***16.4*** | 510 | ***34.4*** |
| MW-22 | 6/8/2005 | ***346*** | ***24.8*** | ***434*** | ***12.1*** | 817 | ***29.5*** |
| MW-22 | 6/28/2006 | ***251*** | ***38.9*** | ***370*** | ***31.6*** | 692 | ***22.0*** |
| MW-22 | 6/26/2007 | ***444*** | ***38.0*** | ***344*** | ***23.7*** | 850 | ***13.8*** |
| MW-22 | 5/12/2008 | ***270*** | ***20.5*** | ***177*** | ***18.4*** | 486 | ***19.6*** |
| MW-22R | 4/15/2010 | ***386*** | ***68.4*** | ***2140*** | ***111.2*** | 2706 | ***42.8*** |
| MW-22R | 7/27/2010 | ***337*** | ***63.6*** | ***2070*** | ***54.5*** | 2525 | ***31.4*** |
| MW-22R | 10/8/2010 | ***193*** | ***30.1*** | ***678*** | ***33.6*** | 935 | ***25.2*** |
| MW-22R | 1/25/2011 | ***483*** | ***72.0*** | ***1410*** | ***79.6*** | 2045 | ***57.2*** |
| MW-22R | 4/28/2011 | ***792*** | ***57.6*** | ***1,330*** | ***67.4*** | 2,247 | ***32.2*** |
| MW-23 | 5/8/1991 | ***3.9*** | 3 | 1.4 | ***8.2*** | 16.5 | NA |
| MW-23 | 5/12/1993 | ***42*** | 4.1 | ND | 4.9 | 51 | NA |
| MW-23 | 5/10/1994 | ***26*** | 1.6 | ND | 3.3 | 30.9 | NA |
| MW-23 | 5/22/1995 | ***4.6*** | 1.5 | ND | 4.5 | 10.6 | NA |
| MW-23 | 5/23/1996 | ***9.2*** | 1.7 | ND | 3.4 | 14.3 | NA |
| MW-23 | 6/18/1997 | ***7.8*** | 1.4 | 0.55 | ***5.1*** | 14.85 | NA |
| MW-23 | 5/29/1998 | ***11.6*** | 1.8 | ND | ***6.1*** | 19.5 | NA |
| MW-23 | 5/11/1999 | ***6*** | 0.9 | ND | 3.7 | 10.6 | NA |
| MW-23 | 10/27/1999 | ***9.1*** | 2.1 | 0.53 | ***6.3*** | 18.03 | ***20.3*** |
| MW-23 | 6/7/2000 | ***8.5*** | 1.9 | ND | ***5.5*** | 15.9 | ***19.3*** |
| MW-23 | 5/29/2001 | ***4.7*** | 0.98 | ND | 3.3 | 8.98 | ***38.1*** |
| MW-23 | 5/30/2002 | ***1.7*** | 1.3 | < 1.0 | 2 | 5.0 | ***21.7*** |
| MW-23 | 6/30/2003 | ***1.4*** | 1.3 | <1.0 | 3.7 | 6.4 | ***12.9*** |
| MW-23 | 6/15/2004 | ***1.1*** | 1.6 | <1.0 | 3.5 | 6.2 | ***17.9*** |
| MW-23 | 6/8/2005 | <1.0 | <1.0 | <1.0 | 1.6 | 1.6 | ***11.9*** |
| MW-23 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | 7.05 |
| MW-23 | 6/26/2007 | <1.00 | 1.27 | <1.00 | 3.10 | 4.37 | 5.64 |
| MW-23 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 2.70 |
| MW-23 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 2.8 |
| MW-23 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-23 | 4/28/2011 | <1.0 | <1.0 | <1.0 | 2.3 | 2.3 | 1.1 |



Shell/Motiva 0007338

# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| **Sample Location** | **Date** | **Benzene** | **Toluene** | **Ethylbenzene** | **Xylenes, Total** | **Total BTEX** | **MTBE** |
| **< GW Standard >** | | **< 0.7 >** | **< 5 >** | **< 5 >** | **< 5 >** | **---** | **< 10 >** |
| MW-24 | 5/8/1991 | ***230*** | ***180*** | ***83*** | ***270*** | 763 | NA |
| MW-24 | 5/13/1992 | ***240*** | ***64*** | ***200*** | ***300*** | 804 | NA |
| MW-24 | 5/12/1993 | ***31*** | ND | ND | ND | 31 | NA |
| MW-24 | 5/10/1994 | ***460*** | ***16*** | ***130*** | ***230*** | 836 | NA |
| MW-24 | 5/22/1995 | ***100*** | ND | ***86*** | ***7*** | 193 | NA |
| MW-24 | 5/23/1996 | ***168*** | 3.5 | ***50.3*** | ***42.2*** | 264 | NA |
| MW-24 | 6/18/1997 | ***126*** | ***5.7*** | ***17.7*** | ***169*** | 318.4 | NA |
| MW-24 | 5/29/1998 | ***54.6*** | 3.6 | ***10.2*** | ***61.8*** | 130.2 | NA |
| MW-24 | 5/11/1999 | ***78.2*** | 2 | 3.6 | ***10.5*** | 94.5 | NA |
| MW-24 | 10/27/1999 | ***1.3*** | ND | ND | 1.3 | 2.6 | ***26.4*** |
| MW-24 | 6/7/2000 | ***24*** | 1.9 | 3.9 | ***7.3*** | 37.1 | ***234*** |
| MW-24 | 5/29/2001 | ***75.6*** | ***12*** | ***5.6*** | ***37.2*** | 130.4 | ***1,380*** |
| MW-24 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | 4.1 | 4.1 | ***295*** |
| MW-24 | 6/30/2003 | ***99.9*** | 4.2 | ***11.6*** | ***85.9*** | 202 | ***543*** |
| MW-24 | 6/15/2004 | ***7.6*** | 0.67' | <1.0 | 2.2 | 9.8 | ***16.2*** |
| MW-24 | 6/8/2005 | ***15.3*** | 1.2 | <1.0 | 2.0 | 18.5 | ***78.3*** |
| MW-24 | 6/28/2006 | ***27.6*** | <1.00 | <1.00 | <3.00 | 27.6 | ***164*** |
| MW-24 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | 5.13 |
| MW-24 | 5/12/2008 | ***144*** | ***22.1*** | ***28.8*** | ***70.3*** | 265 | ***621*** |
| MW-24 | 4/29/2009 | ***11.3*** | <1.0 | <1.0 | ***6.0*** | 17.3 | ***37.1*** |
| MW-24 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | 6.63 |
| MW-24 | 4/28/2011 | ***9.5*** | <1.0 | <1.0 | 2.7 | 12.2 | ***37.5*** |
| MW-25 | 5/8/1991 | ***210*** | 4.4 | 1.9 | ND | 216.3 | NA |
| MW-25 | 5/13/1992 | ***28*** | ND | ND | 1.5 | 29.5 | NA |
| MW-25 | 5/12/1993 | ***30*** | ND | ND | 3.2 | 33.2 | NA |
| MW-25 | 5/10/1994 | ***4.6*** | ND | ND | 1.5 | 6.1 | NA |
| MW-25 | 5/22/1995 | ND | ND | ND | ND | ND | NA |
| MW-25 | 5/23/1996 | ***0.78*** | ND | ND | ND | 0.78 | NA |
| MW-25 | 6/18/1997 | ND | ND | ND | ND | ND | NA |
| MW-25 | 5/29/1998 | ND | ND | ND | 2.9 | 2.9 | NA |
| MW-25 | 5/11/1999 | ND | ND | ND | ND | ND | NA |
| MW-25 | 10/27/1999 | ND | ND | ND | 1.7 | 1.7 | ***28.2*** |
| MW-25 | 6/7/2000 | ND | ND | ND | ND | ND | ***74.4*** |
| MW-25 | 5/29/2001 | ND | ND | ND | ND | ND | ***25.8*** |
| MW-25 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | < 8.0 | ***18*** |
| MW-25 | 6/30/2003 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | ***12.6*** |
| MW-25 | 6/15/2004 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | ***42.9*** |
| MW-25 | 6/7/2005 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | ***13.6*** |
| MW-25 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | 7.18 |
| MW-25 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | ***12.5*** |
| MW-25 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-25 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 3.8 |
| MW-25 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-25 | 4/29/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 1.5 |
| MW-26 | 6/15/2004 | ***53.5*** | ***8.3*** | ***29.2*** | ***37.2*** | 128 | ***18.2*** |
| MW-26 | 6/8/2005 | ***6.6*** | 1.3 | 1.3 | ***8.6*** | 17.8 | 3.3 |
| MW-26 | 5/12/2008 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-26 | 4/29/2009 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-26 | 4/15/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-26 | 4/28/2011 | NOT SAMPLED (PRODUCT) | | | | | |



Shell/Motiva 0007339

# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Sample Location | Date | (ug/L) Benzene | Toluene | Ethylbenzene | Xylenes, Total | Total BTEX | MTBE |
|---|---|---|---|---|---|---|---|
| < GW Standard > | | < 0.7 > | < 5 > | < 5 > | < 5 > | --- | < 10 > |
| MW-27 | 5/29/1998 | ***0.92*** | ND | ND | 1.8 | 2.72 | NA |
| MW-27 | 5/11/1999 | ND | ND | ND | 1 | 1 | NA |
| MW-27 | 10/27/1999 | ND | ND | ND | 1.9 | 1.9 | ***50.1*** |
| MW-27 | 6/7/2000 | ND | ND | ND | ND | ND | 1.7 |
| MW-27 | 5/29/2001 | ND | ND | ND | ND | ND | ***23.8*** |
| MW-27 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | < 8.0 | ***28.3*** |
| MW-27 | 6/30/2003 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | ***13.1*** |
| MW-27 | 6/15/2004 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | ***18.6*** |
| MW-27 | 6/7/2005 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-27 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-27 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | 8.86 |
| MW-27 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-27 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-27 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-27 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-28 | 5/29/1998 | ND | ND | ND | 1.9 | 1.9 | NA |
| MW-28 | 5/11/1999 | ND | ND | ND | 0.97 | 0.97 | NA |
| MW-28 | 10/27/1999 | ND | ND | ND | 1.4 | 1.4 | ***13.2*** |
| MW-28 | 6/7/2000 | ND | ND | ND | ND | ND | 9.5 |
| MW-28 | 5/29/2001 | ND | ND | ND | 1.5 | 1.5 | 8 |
| MW-28 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | 1.5 | 1.5 | ***12.6*** |
| MW-28 | 6/30/2003 | ***1.3*** | <1.0 | <1.0 | 2.4 | 3.7 | ***20.4*** |
| MW-28 | 6/15/2004 | ***1.3*** | 0.61[J] | <1.0 | 3.8 | 5.7 | ***23.4*** |
| MW-28 | 6/7/2005 | <1.0 | <1.0 | <1.0 | 1.7 | 1.7 | ***10.1*** |
| MW-28 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | 3.96 |
| MW-28 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | 5.75 |
| MW-28 | 5/12/2008 | <1.0 | <1.0 | <1.0 | 2.40 | 2.4 | 6.40 |
| MW-28 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 3.9 |
| MW-28 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-28 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 2.1 |
| MW-29 | 5/29/1998 | ***1,250*** | ***17.2*** | ***62.9*** | ***79.2*** | 1409 | NA |
| MW-29 | 5/11/1999 | ***651*** | ***10.5*** | ***33.3*** | ***50.1*** | 745 | NA |
| MW-29 | 10/27/1999 | ***1,060*** | ***18.1*** | ***40.6*** | ***53.6*** | 1172 | ND |
| MW-29 | 6/7/2000 | ***173*** | 2.8 | 4.4 | ***5.7*** | 186 | ND |
| MW-29 | 5/29/2001 | ***267*** | 4.4 | ***6.3*** | ***9.2*** | 287 | ***11.7*** |
| MW-29 | 6/30/2003 | ***390*** | ***14*** | ***45*** | ***33*** | 482 | 7.5 |
| MW-29 | 6/15/2004 | ***250*** | ***10*** | ***23.6*** | ***30.1*** | 314 | 3.6 |
| MW-29 | 6/7/2005 | ***35.6*** | 1.3 | 4.2 | 3.8 | 44.9 | <1.0 |
| MW-29 | 6/28/2006 | ***184*** | 4.36 | ***12.6*** | ***15.0*** | 216 | <1.00 |
| MW-29 | 6/26/2007 | ***303*** | ***5.46*** | ***10.0*** | ***26.8*** | 345 | <1.00 |
| MW-29 | 5/12/2008 | ***335*** | 4.60 | ***12.5*** | ***22.9*** | 375 | 1.00 |
| MW-29 | 4/29/2009 | ***105*** | 1.9 | 3.9 | ***7.6*** | 118 | <1.0 |
| MW-29 | 4/15/2010 | ***122*** | <5.00 | <5.00 | <5.00 | 122 | <5.00 |
| MW-29 | 4/28/2011 | ***83.0*** | 1.2 | 2.7 | 4.9 | 91.8 | <1.0 |
| MW-30 | 6/30/2003 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 3.5 |
| MW-30 | 6/15/2004 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-30 | 6/7/2005 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-30 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-30 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-30 | 5/12/2008 | NOT ACCESSIBLE (FLOODED) | | | | | |
| MW-30 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-30 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-30 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-31 | 5/12/2008 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-31 | 4/29/2009 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-31 | 4/15/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-31 | 4/28/2011 | NOT SAMPLED (PRODUCT) | | | | | |



Shell/Motiva 0007340

# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| **Sample Location** | **Date** | **Benzene** | **Toluene** | **Ethylbenzene** | **Xylenes, Total** | **Total BTEX** | **MTBE** |
| **< GW Standard >** | | **< 0.7 >** | **< 5 >** | **< 5 >** | **< 5 >** | **---** | **< 10 >** |
| MW-32 | 10/27/1999 | ***21.7*** | ***5.4*** | 3.2 | ***19.2*** | 49.5 | ***37*** |
| MW-32 | 5/30/2002 | ***7.2*** | 2.8 | 1.1 | ***10.9*** | 22 | ***28.6*** |
| MW-32 | 6/30/2003 | ***5.2*** | 2.3 | 1.8 | ***10.8*** | 20 | ***13.5*** |
| MW-32 | 6/15/2004 | ***3.5*** | 1.4 | 0.78[J] | ***5.6*** | 11.3 | ***18.1*** |
| MW-32 | 6/7/2005 | <1.0 | <1.0 | <1.0 | 3.0 | 4.8 | 4.7 |
| MW-32 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | 3.81 |
| MW-32 | 6/26/2007 | ***1.18*** | 1.02 | <1.00 | 4.16 | 4.16 | 4.50 |
| MW-32 | 5/12/2008 | <1.0 | <1.0 | <1.0 | 1.00 | 1.0 | 2.80 |
| MW-32 | 4/29/2009 | <1.0 | <1.0 | <1.0 | 1.6 | 1.6 | 3.2 |
| MW-32 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-32 | 4/29/2011 | <1.0 | <1.0 | <1.0 | 2.8 | 2.8 | 2.6 |
| MW-33 | 6/15/2004 | ***284*** | ***5.7*** | 4.1 | ***16*** | 310 | ***298*** |
| MW-33 | 6/8/2005 | ***212*** | 4.6 | ***9.2*** | ***13.2*** | 239 | ***138*** |
| MW-33 | 6/28/2006 | ***148*** | 1.70 | 4.74 | ***9.17*** | 164 | ***142*** |
| MW-33 | 6/26/2007 | ***240*** | 2.67 | <1.00 | ***5.93*** | 249 | ***89.9*** |
| MW-33 | 5/12/2008 | ***72.4*** | 4.30 | 2.20 | ***10.5*** | 89.4 | ***27.1*** |
| MW-33 | 4/29/2009 | ***13.7*** | <1.0 | <1.0 | ***5.6*** | 19.3 | 7.8 |
| MW-33 | 4/15/2010 | ***223*** | <5.00 | <5.00 | <5.00 | 223 | ***61.9*** |
| MW-33 | 4/29/2011 | ***227*** | 3.4 | 2.9 | ***8.4*** | 241.7 | ***51.4*** |
| MW-34 | 6/8/2005 | ***115*** | 3.8 | 4.4 | ***16.4*** | 140 | ***22.6*** |
| MW-34 | 6/28/2006 | ***83.7*** | 3.14 | 2.31 | ***7.42*** | 96.6 | ***22.2*** |
| MW-34 | 6/26/2007 | ***73.2*** | 3.41 | 1.41 | ***10.80*** | 88.8 | ***19.4*** |
| MW-34 | 5/12/2008 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-34 | 4/29/2009 | ***77.5*** | <1.0 | <1.0 | 4.0 | 81.5 | ***61.6*** |
| MW-34 | 4/15/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-34 | 4/28/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-35 | 6/15/2004 | ***1,180*** | ***22.2*** | ***18.6*** | ***33.3*** | 1,254 | ***472*** |
| MW-35 | 6/8/2005 | ***1,220*** | ***22.8*** | ***30.4*** | ***44.9*** | 1,318 | ***284*** |
| MW-35 | 6/28/2006 | ***693*** | ***7.43*** | 3.49 | ***17.3*** | 721 | ***189*** |
| MW-35 | 6/26/2007 | ***742*** | ***6.87*** | 2.68 | ***17.8*** | 769 | ***142*** |
| MW-35 | 5/12/2008 | ***518*** | ***10.4*** | ***6.50*** | ***28.6*** | 564 | ***79.9*** |
| MW-35 | 4/29/2009 | ***173*** | 4.3 | 2.0 | ***14.1*** | 193 | ***42.4*** |
| MW-35 | 4/15/2010 | ***765*** | ***9.78*** | <5.00 | <5.00 | 774.78 | ***97.4*** |
| MW-35 | 4/29/2011 | ***857*** | ***12.1*** | 2.1 | ***8.9*** | 880.1 | ***117*** |
| MW-36 | 5/12/2008 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-36 | 4/29/2009 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-36 | 4/15/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-36 | 4/28/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-37 | 6/15/2004 | ***259*** | ***8.7*** | 1.4 | ***18*** | 287 | ***64.3*** |
| MW-37 | 6/8/2005 | ***209*** | 4.2 | <1.0 | ***7.4*** | 221 | ***55.5*** |
| MW-37 | 6/28/2006 | ***133*** | 2.39 | <1.00 | 3.81 | 139 | ***49.4*** |
| MW-37 | 5/12/2008 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-37 | 4/29/2009 | ***162*** | 1.9 | <1.0 | 3.0 | 167 | ***36.4*** |
| MW-37 | 4/15/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-37 | 4/28/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-38 | 5/29/2001 | ***9.9*** | ND | 0.76 | ND | 10.7 | ***18.9*** |
| MW-38 | 5/30/2002 | ***5.4*** | 0.72 | < 1.0 | 1.4 | 7.52 | 6.9 |
| MW-38 | 6/30/2003 | ***17.2*** | 4.2 | 0.84[J] | 2.1 | 23.5 | ***29.5*** |
| MW-38 | 6/15/2004 | ***9.6*** | 1.8 | 0.55[J] | 2.1 | 13.5 | ***12.7*** |
| MW-38 | 6/8/2005 | ***5.5*** | <1.0 | <1.0 | <1.0 | 5.5 | 1.8 |
| MW-38 | 6/28/2006 | ***5.71*** | <1.00 | <1.00 | <3.00 | 5.71 | ***22.9*** |
| MW-38 | 6/26/2007 | ***2.33*** | <1.00 | <1.00 | <3.00 | 2.33 | 2.24 |
| MW-38 | 5/12/2008 | ***10.1*** | <1.0 | 3.80 | 1.60 | 15.5 | 3.80 |
| MW-38 | 4/29/2009 | ***2.9*** | <1.0 | <1.0 | <1.0 | 2.9 | 3.4 |
| MW-38 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-38 | 4/29/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |



Shell/Motiva 0007341

# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| **Sample Location** | **Date** | **Benzene** | **Toluene** | **Ethylbenzene** | **Xylenes, Total** | **Total BTEX** | **MTBE** |
| **< GW Standard >** | | **< 0.7 >** | **< 5 >** | **< 5 >** | **< 5 >** | **---** | **< 10 >** |
| MW-39 | 6/15/2004 | ***296*** | ***21*** | ***19.2*** | ***42.4*** | 379 | ***125*** |
| MW-39 | 6/8/2005 | ***246*** | ***14.8*** | ***12.5*** | ***27.6*** | 301 | ***74.8*** |
| MW-39 | 6/28/2006 | ***119*** | ***7.29*** | 3.45 | ***14.1*** | 144 | ***60.9*** |
| MW-39 | 6/26/2007 | ***136*** | ***7.04*** | 3.21 | ***17.0*** | 163 | ***57.3*** |
| MW-39 | 5/12/2008 | ***225*** | ***13.8*** | 4.50 | ***19.3*** | 263 | ***69.9*** |
| MW-39 | 4/29/2009 | ***183*** | ***7.3*** | 4.9 | ***20.6*** | 216 | ***65.5*** |
| MW-39 | 4/15/2010 | ***65.9*** | <5.00 | <5.00 | <5.00 | 65.9 | ***36.7*** |
| MW-39 | 4/29/2011 | ***90.3*** | 2.9 | 2.2 | ***8.1*** | 103.5 | ***33.8*** |
| MW-40 | 5/12/2008 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-40 | 4/29/2009 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-40 | 4/15/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-40 | 4/28/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-41 | 6/8/2005 | ***347*** | ***10.7*** | 2.7 | ***22.1*** | 383 | ***68.2*** |
| MW-41 | 5/12/2008 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-41 | 4/29/2009 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-41 | 4/15/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-41 | 4/28/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-42 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-42 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-43 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | ***17.5*** |
| MW-43 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 3.0 |
| MW-44 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-44 | 4/29/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| TW-01 | 5/12/2008 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-01 | 4/29/2009 | NOT SAMPLED (PRODUCT) | | | | | |
| TW-01 | 4/15/2010 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-01 | 4/28/2010 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-02 | 6/28/2006 | ***41.9*** | 2.63 | 1.84 | 4.22 | 50.6 | 2.97 |
| TW-02 | 5/12/2008 | ***17.3*** | 1.0 | <1.0 | <1.0 | 18.3 | <1.0 |
| TW-02 | 4/29/2009 | ***3.4*** | <1.0 | <1.0 | <1.0 | 3.4 | <1.0 |
| TW-02 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| TW-02 | 4/29/2011 | ***19.2*** | 1.5 | <1.0 | 3.6 | 24.3 | 1.3 |
| TW-03 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| TW-03 | 5/12/2008 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-03 | 4/29/2009 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-03 | 4/15/2010 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-03 | 4/29/2011 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-04 | 5/12/2008 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-04 | 4/29/2009 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-04 | 4/15/2010 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-04 | 4/29/2011 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-05 | 5/12/2008 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-05 | 4/29/2009 | NOT SAMPLED (PRODUCT) | | | | | |
| TW-05 | 4/15/2010 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-05 | 4/29/2011 | NOT SAMPLED (PRODUCT) | | | | | |
| TW-06 | 5/12/2008 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-06 | 4/29/2009 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-06 | 4/15/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| TW-06 | 4/29/2011 | NOT ACCESSIBLE (FLOODED) | | | | | |

**Notes:**

GW Standard = Values in ***bold and italic*** exceed the Groundwater Standard.
µg/L = micrograms per liter, or parts per billion (ppb)
NA = Sample not analyzed for target parameter.
NS = No sample collected from well.
ND(X) = Parameter not-detected at the reporting limit (or method detection limit if shown)(X).
<X = Parameter detected below the method limit of quantitation (X).
J = The target analyte was positively identified below the MQL and above the SQL.



Shell/Motiva 0007342

# Table 3
## Groundwater Elevation Summary
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-01 | 104.99 | — | 2.58 | — | — | 102.41 | 102.41 | — | — |
| 2/21/2006 | MW-01 | 104.99 | — | 2.81 | — | — | 102.18 | 102.18 | — | — |
| 3/7/2006 | MW-01 | 104.99 | — | 3.09 | — | — | 101.90 | 101.90 | — | — |
| 5/18/2006 | MW-01 | 104.99 | — | 2.84 | — | — | 102.15 | 102.15 | — | — |
| 6/28/2006 | MW-01 | 104.99 | — | 2.63 | — | — | 102.36 | 102.36 | — | — |
| 8/16/2006 | MW-01 | 104.99 | — | 2.78 | — | — | 102.21 | 102.21 | — | — |
| 9/29/2006 | MW-01 | 104.99 | — | 2.66 | — | — | 102.33 | 102.33 | — | — |
| 10/20/2006 | MW-01 | 104.99 | — | 2.65 | — | — | 102.34 | 102.34 | — | — |
| 11/22/2006 | MW-01 | 104.99 | — | 2.76 | — | — | 102.23 | 102.23 | — | — |
| 12/15/2006 | MW-01 | 104.99 | — | 3.06 | — | — | 101.93 | 101.93 | — | — |
| 1/23/2007 | MW-01 | 104.99 | — | 3.16 | — | — | 101.83 | 101.83 | — | — |
| 2/2/2007 | MW-01 | 104.99 | — | 3.27 | — | — | 101.72 | 101.72 | — | — |
| 3/5/2007 | MW-01 | 104.99 | — | 2.98 | — | — | 102.01 | 102.01 | — | — |
| 5/1/2007 | MW-01 | 104.99 | — | 2.77 | — | — | 102.22 | 102.22 | — | — |
| 6/22/2007 | MW-01 | 104.99 | — | 3.15 | — | — | 101.84 | 101.84 | — | — |
| 6/26/2007 | MW-01 | 104.99 | — | 2.87 | — | — | 102.12 | 102.12 | — | — |
| 7/6/2007 | MW-01 | 104.99 | — | 2.83 | — | — | 102.16 | 102.16 | — | — |
| 8/1/2007 | MW-01 | 104.99 | — | 2.75 | — | — | 102.24 | 102.24 | — | — |
| 8/7/2007 | MW-01 | 104.99 | — | 2.81 | — | — | 102.18 | 102.18 | — | — |
| 9/14/2007 | MW-01 | 104.99 | — | 3.19 | — | — | 101.80 | 101.80 | — | — |
| 10/8/2007 | MW-01 | 104.99 | — | 3.39 | — | — | 101.60 | 101.60 | — | — |
| 11/20/2007 | MW-01 | 104.99 | — | 3.06 | — | — | 101.93 | 101.93 | — | — |
| 12/26/2007 | MW-01 | 104.99 | — | 3.25 | — | — | 101.74 | 101.74 | — | — |
| 1/2/2008 | MW-01 | 104.99 | — | 3.06 | — | — | 101.93 | 101.93 | — | — |
| 3/5/2008 | MW-01 | 104.99 | — | 3.02 | — | — | 101.97 | 101.97 | — | — |
| 4/23/2008 | MW-01 | 104.99 | — | 3.05 | — | — | 101.94 | 101.94 | — | — |
| 5/12/2008 | MW-01 | 104.99 | — | 3.10 | — | — | 101.89 | 101.89 | — | — |
| 6/27/2008 | MW-01 | 104.99 | — | 3.15 | — | — | 101.84 | 101.84 | — | — |
| 8/5/2008 | MW-01 | 104.99 | — | 3.29 | — | — | 101.70 | 101.70 | — | — |
| 9/10/2008 | MW-01 | 104.99 | — | 3.16 | — | — | 101.83 | 101.83 | — | — |
| 10/27/2008 | MW-01 | 104.99 | — | 3.41 | — | — | 101.58 | 101.58 | — | — |
| 11/4/2008 | MW-01 | 104.99 | — | 3.49 | — | — | 101.50 | 101.50 | — | — |
| 1/5/2009 | MW-01 | 104.99 | — | 3.30 | — | — | 101.69 | 101.69 | — | — |
| 2/27/2009 | MW-01 | 104.99 | — | 3.79 | — | — | 101.20 | 101.20 | — | — |
| 3/9/2009 | MW-01 | 104.99 | — | 3.74 | — | — | 101.25 | 101.25 | — | — |
| 4/20/2009 | MW-01 | 104.99 | — | 3.56 | — | — | 101.43 | 101.43 | — | — |
| 4/29/2009 | MW-01 | 104.99 | — | 3.33 | — | — | 101.66 | 101.66 | — | — |
| 5/6/2009 | MW-01 | 104.99 | — | 3.05 | — | — | 101.94 | 101.94 | — | — |
| 6/2/2009 | MW-01 | 104.99 | — | 3.48 | — | — | 101.51 | 101.51 | — | — |
| 7/6/2009 | MW-01 | 104.99 | — | 3.02 | — | — | 101.97 | 101.97 | — | — |
| 8/14/2009 | MW-01 | 104.99 | — | 3.19 | — | — | 101.80 | 101.80 | — | — |
| 9/28/2009 | MW-01 | 104.99 | — | 3.45 | — | — | 101.54 | 101.54 | — | — |
| 10/13/2009 | MW-01 | 104.99 | — | 3.59 | — | — | 101.40 | 101.40 | — | — |
| 11/23/2009 | MW-01 | 104.99 | — | 3.48 | — | — | 101.51 | 101.51 | — | — |
| 12/2/2009 | MW-01 | 104.99 | — | 3.58 | — | — | 101.41 | 101.41 | — | — |
| 1/12/2010 | MW-01 | 104.99 | — | 3.49 | — | — | 101.50 | 101.50 | — | — |
| 2/2/2010 | MW-01 | 104.99 | — | 3.62 | — | — | 101.37 | 101.37 | — | — |
| 3/2/2010 | MW-01 | 104.99 | — | 2.46 | — | — | 102.53 | 102.53 | — | — |
| 3/15/2010 | MW-01 | 104.99 | — | 2.29 | — | — | 102.70 | 102.70 | — | — |
| 4/15/2010 | MW-01 | 104.99 | — | 2.90 | — | — | 102.09 | 102.09 | — | — |
| 4/22/2010 | MW-01 | 104.99 | — | 2.92 | — | — | 102.07 | 102.07 | — | — |
| 5/3/2010 | MW-01 | 104.99 | — | 2.21 | — | — | 102.78 | 102.78 | — | — |
| 6/21/2010 | MW-01 | 104.99 | — | 3.10 | — | — | 101.89 | 101.89 | — | — |
| 7/2/2010 | MW-01 | 104.99 | — | 2.49 | — | — | 102.50 | 102.50 | — | — |
| 8/13/2010 | MW-01 | 104.99 | — | 3.70 | — | — | 101.29 | 101.29 | — | — |
| 9/1/2010 | MW-01 | 104.99 | — | 3.32 | — | — | 101.67 | 101.67 | — | — |
| 10/8/2010 | MW-01 | 104.99 | — | 3.26 | — | — | 101.73 | 101.73 | — | — |
| 11/23/2010 | MW-01 | 104.99 | — | 3.53 | — | — | 101.46 | 101.46 | — | — |
| 1/3/2011 | MW-01 | 104.99 | — | 3.38 | — | — | 101.61 | 101.61 | — | — |
| 1/25/2011 | MW-01 | 104.99 | — | 3.34 | — | — | 101.65 | 101.65 | — | — |
| 2/4/2011 | MW-01 | 104.99 | — | NG | — | — | — | — | — | — |
| 3/26/2011 | MW-01 | 104.99 | — | 2.82 | — | — | 102.17 | 102.17 | — | — |
| 4/27/2011 | MW-01 | 104.99 | — | 3.01 | — | — | 101.98 | 101.98 | — | — |
| 5/9/2011 | MW-01 | 104.99 | — | 3.25 | — | — | 101.74 | 101.74 | — | — |
| 6/6/2011 | MW-01 | 104.99 | — | 3.25 | — | — | 101.74 | 101.74 | — | — |



Shell/Motiva 0007343

## Table 3
## Groundwater Elevation Summary
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-02 | 103.94 | — | 3.14 | — | — | 100.80 | 100.80 | — | — |
| 2/21/2006 | MW-02 | 103.94 | — | 3.90 | — | — | 100.04 | 100.04 | — | — |
| 3/7/2006 | MW-02 | 103.94 | 4.04 | 4.11 | 0.07 | 99.90 | 99.83 | 99.88 | 0.10 | Hand Bailing |
| 5/18/2006 | MW-02 | 103.94 | 3.59 | 3.69 | 0.10 | 100.35 | 100.25 | 100.32 | 0.25 | — |
| 6/28/2006 | MW-02 | 103.94 | 3.45 | 3.61 | 0.16 | 100.49 | 100.33 | 100.45 | — | — |
| 8/16/2006 | MW-02 | 103.94 | 3.75 | 4.29 | 0.54 | 100.19 | 99.65 | 100.05 | — | — |
| 9/29/2006 | MW-02 | 103.94 | 3.52 | 3.84 | 0.32 | 100.42 | 100.10 | 100.34 | — | — |
| 10/20/2006 | MW-02 | 103.94 | 3.19 | 3.49 | 0.30 | 100.75 | 100.45 | 100.67 | — | — |
| 11/22/2006 | MW-02 | 103.94 | 3.34 | 3.52 | 0.18 | 100.60 | 100.42 | 100.55 | — | — |
| 12/15/2006 | MW-02 | 103.94 | 3.98 | 4.16 | 0.18 | 99.96 | 99.78 | 99.91 | — | — |
| 1/23/2007 | MW-02 | 103.94 | 4.36 | 4.52 | 0.16 | 99.58 | 99.42 | 99.54 | 0.25 | — |
| 2/2/2007 | MW-02 | 103.94 | 4.21 | 4.39 | 0.18 | 99.73 | 99.55 | 99.68 | 0.25 | — |
| 3/5/2007 | MW-02 | 103.94 | 4.00 | 4.18 | 0.18 | 99.94 | 99.76 | 99.89 | 0.25 | — |
| 5/1/2007 | MW-02 | 103.94 | 3.36 | 3.53 | 0.17 | 100.58 | 100.41 | 100.54 | 0.25 | — |
| 6/22/2007 | MW-02 | 103.94 | 3.80 | 4.15 | 0.35 | 100.14 | 99.79 | 100.05 | 0.25 | — |
| 6/26/2007 | MW-02 | 103.94 | 4.02 | 4.42 | 0.40 | 99.92 | 99.52 | 99.82 | — | — |
| 7/6/2007 | MW-02 | 103.94 | 3.92 | 4.32 | 0.40 | 100.02 | 99.62 | 99.92 | 0.25 | — |
| 8/1/2007 | MW-02 | 103.94 | 3.59 | 3.94 | 0.35 | 100.35 | 100.00 | 100.26 | 0.25 | — |
| 8/7/2007 | MW-02 | 103.94 | — | NG | — | — | — | — | — | — |
| 9/14/2007 | MW-02 | 103.94 | — | NG | — | — | — | — | — | — |
| 10/9/2007 | MW-02 | 103.94 | 4.05 | 4.59 | 0.54 | 99.89 | 99.35 | 99.75 | 0.50 | — |
| 11/20/2007 | MW-02 | 103.94 | 4.00 | 4.39 | 0.39 | 99.94 | 99.55 | 99.84 | 0.50 | — |
| 12/26/2007 | MW-02 | 103.94 | — | 3.95 | — | — | 99.99 | 99.99 | — | — |
| 1/2/2008 | MW-02 | 103.94 | 3.73 | 4.09 | 0.36 | 100.21 | 99.85 | 100.12 | 0.50 | — |
| 3/5/2008 | MW-02 | 103.94 | — | NG | — | — | — | — | — | — |
| 4/23/2008 | MW-02 | 103.94 | 4.06 | 4.45 | 0.39 | 99.88 | 99.49 | 99.78 | 0.50 | — |
| 5/12/2008 | MW-02 | 103.94 | 3.15 | 3.35 | 0.20 | 100.79 | 100.59 | 100.74 | — | — |
| 6/27/2008 | MW-02 | 103.94 | 3.68 | 4.10 | 0.42 | 100.26 | 99.84 | 100.15 | 0.50 | — |
| 8/5/2008 | MW-02 | 103.94 | 3.91 | 4.46 | 0.55 | 100.03 | 99.48 | 99.89 | 0.50 | — |
| 9/10/2008 | MW-02 | 103.94 | 3.71 | 4.29 | 0.58 | 100.23 | 99.65 | 100.08 | 0.75 | — |
| 10/27/2008 | MW-02 | 103.94 | — | NG | — | — | — | — | — | — |
| 11/4/2008 | MW-02 | 103.94 | 4.61 | 4.62 | 0.01 | 99.33 | 99.32 | 99.33 | — | — |
| 1/5/2009 | MW-02 | 103.94 | 4.15 | 4.50 | 0.35 | 99.79 | 99.44 | 99.70 | 0.50 | — |
| 2/27/2009 | MW-02 | 103.94 | 4.58 | 4.89 | 0.31 | 99.36 | 99.05 | 99.28 | 0.50 | — |
| 3/9/2009 | MW-02 | 103.94 | 4.00 | 4.53 | 0.53 | 99.94 | 99.41 | 99.80 | 1.00 | — |
| 4/20/2009 | MW-02 | 103.94 | 3.84 | 4.30 | 0.46 | 100.10 | 99.64 | 99.98 | 1.00 | — |
| 4/29/2009 | MW-02 | 103.94 | 4.42 | 5.41 | 0.99 | 99.52 | 98.53 | 99.26 | 0.75 | — |
| 5/6/2009 | MW-02 | 103.94 | 3.49 | 3.97 | 0.48 | 100.45 | 99.97 | 100.33 | 0.75 | — |
| 6/2/2009 | MW-02 | 103.94 | 3.93 | 4.44 | 0.51 | 100.01 | 99.50 | 99.88 | 0.75 | — |
| 7/6/2009 | MW-02 | 103.94 | 3.42 | 3.70 | 0.28 | 100.52 | 100.24 | 100.45 | 0.50 | — |
| 8/14/2009 | MW-02 | 103.94 | 3.70 | 4.07 | 0.37 | 100.24 | 99.87 | 100.14 | 0.50 | — |
| 9/28/2009 | MW-02 | 103.94 | 3.78 | 4.04 | 0.26 | 100.16 | 99.90 | 100.09 | 0.50 | — |
| 10/13/2009 | MW-02 | 103.94 | 4.01 | 4.32 | 0.31 | 99.93 | 99.62 | 99.85 | 0.50 | — |
| 11/23/2009 | MW-02 | 103.94 | 3.77 | 3.79 | 0.02 | 100.17 | 100.15 | 100.16 | 0.50 | — |
| 12/2/2009 | MW-02 | 103.94 | 4.07 | 4.12 | 0.05 | 99.87 | 99.82 | 99.86 | 0.50 | — |
| 1/12/2010 | MW-02 | 103.94 | 4.05 | 4.09 | 0.04 | 99.89 | 99.85 | 99.88 | — | — |
| 2/2/2010 | MW-02 | 103.94 | 4.24 | 4.35 | 0.11 | 99.70 | 99.59 | 99.67 | 0.25 | — |
| 3/2/2010 | MW-02 | 103.94 | 2.56 | 2.81 | 0.25 | 101.38 | 101.13 | 101.32 | 0.25 | — |
| 3/15/2010 | MW-02 | 103.94 | 1.81 | 1.81 | 0.00 | 102.13 | 102.13 | 102.13 | — | Trace LNAPL |
| 4/15/2010 | MW-02 | 103.94 | 3.77 | 3.79 | 0.02 | 100.17 | 100.15 | 100.16 | — | — |
| 4/22/2010 | MW-02 | 103.94 | — | 3.53 | — | — | 100.41 | 100.41 | — | — |
| 5/3/2010 | MW-02 | 103.94 | 3.28 | 3.31 | 0.03 | 100.66 | 100.63 | 100.65 | — | — |
| 6/21/2010 | MW-02 | 103.94 | 3.74 | 3.80 | 0.06 | 100.20 | 100.14 | 100.18 | — | — |
| 7/2/2010 | MW-02 | 103.94 | 4.08 | 4.16 | 0.08 | 99.86 | 99.78 | 99.84 | — | — |
| 8/13/2010 | MW-02 | 103.94 | 3.96 | 4.04 | 0.08 | 99.98 | 99.90 | 99.96 | — | — |
| 9/1/2010 | MW-02 | 103.94 | 3.75 | 3.82 | 0.07 | 100.19 | 100.12 | 100.17 | — | — |
| 10/8/2010 | MW-02 | 103.94 | 3.50 | 3.54 | 0.04 | 100.44 | 100.40 | 100.43 | — | — |
| 11/23/2010 | MW-02 | 103.94 | 3.92 | 3.97 | 0.05 | 100.02 | 99.97 | 100.01 | — | — |
| 1/3/2011 | MW-02 | 103.94 | — | NG | — | — | — | — | — | — |
| 1/25/2011 | MW-02 | 103.94 | — | NG | — | — | — | — | — | — |
| 2/4/2011 | MW-02 | 103.94 | — | NG | — | — | — | — | — | — |
| 3/26/2011 | MW-02 | 103.94 | 3.13 | 3.21 | 0.08 | 100.81 | 100.73 | 100.79 | — | — |
| 4/27/2011 | MW-02 | 103.94 | 3.26 | 3.29 | 0.03 | 100.68 | 100.65 | 100.67 | — | — |
| 5/9/2011 | MW-02 | 103.94 | 3.60 | 3.66 | 0.06 | 100.34 | 100.28 | 100.32 | — | — |
| 6/6/2011 | MW-02 | 103.94 | | 3.73 | | — | 100.21 | 100.21 | — | — |



Shell/Motiva 0007344

# Table 3
## Groundwater Elevation Summary
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-03 | 103.94 | — | 2.15 | — | — | 101.79 | 101.79 | — | — |
| 2/21/2006 | MW-03 | 103.94 | — | 2.40 | — | — | 101.54 | 101.54 | — | — |
| 3/7/2006 | MW-03 | 103.94 | — | 2.72 | — | — | 101.22 | 101.22 | — | — |
| 5/18/2006 | MW-03 | 103.94 | — | 2.39 | — | — | 101.55 | 101.55 | — | — |
| 6/28/2006 | MW-03 | 103.94 | — | 2.12 | — | — | 101.82 | 101.82 | — | — |
| 8/16/2006 | MW-03 | 103.94 | — | 2.31 | — | — | 101.63 | 101.63 | — | — |
| 9/29/2006 | MW-03 | 103.94 | — | 2.35 | — | — | 101.59 | 101.59 | — | — |
| 10/20/2006 | MW-03 | 103.94 | — | 2.04 | — | — | 101.90 | 101.90 | — | — |
| 11/22/2006 | MW-03 | 103.94 | — | 2.31 | — | — | 101.63 | 101.63 | — | — |
| 12/15/2006 | MW-03 | 103.94 | — | 2.63 | — | — | 101.31 | 101.31 | — | — |
| 1/23/2007 | MW-03 | 103.94 | — | 2.81 | — | — | 101.13 | 101.13 | — | — |
| 2/2/2007 | MW-03 | 103.94 | — | 3.51 | — | — | 100.43 | 100.43 | — | — |
| 3/5/2007 | MW-03 | 103.94 | — | 2.49 | — | — | 101.45 | 101.45 | — | — |
| 5/1/2007 | MW-03 | 103.94 | — | 2.14 | — | — | 101.80 | 101.80 | — | — |
| 6/22/2007 | MW-03 | 103.94 | — | 2.65 | — | — | 101.29 | 101.29 | — | — |
| 6/26/2007 | MW-03 | 103.94 | — | 2.74 | — | — | 101.20 | 101.20 | — | — |
| 7/6/2007 | MW-03 | 103.94 | — | 2.52 | — | — | 101.42 | 101.42 | — | — |
| 8/1/2007 | MW-03 | 103.94 | — | 2.29 | — | — | 101.65 | 101.65 | — | — |
| 8/7/2007 | MW-03 | 103.94 | — | 2.43 | — | — | 101.51 | 101.51 | — | — |
| 9/14/2007 | MW-03 | 103.94 | — | 2.63 | — | — | 101.31 | 101.31 | — | — |
| 10/8/2007 | MW-03 | 103.94 | — | 3.04 | — | — | 100.90 | 100.90 | — | — |
| 11/20/2007 | MW-03 | 103.94 | — | 2.99 | — | — | 100.95 | 100.95 | — | — |
| 12/26/2007 | MW-03 | 103.94 | — | 2.65 | — | — | 101.29 | 101.29 | — | — |
| 1/2/2008 | MW-03 | 103.94 | — | 2.48 | — | — | 101.46 | 101.46 | — | — |
| 3/5/2008 | MW-03 | 103.94 | — | 2.56 | — | — | 101.38 | 101.38 | — | — |
| 4/23/2008 | MW-03 | 103.94 | — | 3.04 | — | — | 100.90 | 100.90 | — | — |
| 5/12/2008 | MW-03 | 103.94 | — | 2.70 | — | — | 101.24 | 101.24 | — | — |
| 6/27/2008 | MW-03 | 103.94 | — | 2.68 | — | — | 101.26 | 101.26 | — | — |
| 8/5/2008 | MW-03 | 103.94 | — | 2.94 | — | — | 101.00 | 101.00 | — | — |
| 9/10/2008 | MW-03 | 103.94 | — | 2.71 | — | — | 101.23 | 101.23 | — | — |
| 10/27/2008 | MW-03 | 103.94 | — | 2.79 | — | — | 101.15 | 101.15 | — | — |
| 11/4/2008 | MW-03 | 103.94 | — | 2.95 | — | — | 100.99 | 100.99 | — | — |
| 1/5/2009 | MW-03 | 103.94 | — | 2.67 | — | — | 101.27 | 101.27 | — | — |
| 2/27/2009 | MW-03 | 103.94 | — | 3.29 | — | — | 100.65 | 100.65 | — | — |
| 3/9/2009 | MW-03 | 103.94 | — | 2.93 | — | — | 101.01 | 101.01 | — | — |
| 4/20/2009 | MW-03 | 103.94 | — | 3.02 | — | — | 100.92 | 100.92 | — | — |
| 4/29/2009 | MW-03 | 103.94 | — | 2.87 | — | — | 101.07 | 101.07 | — | — |
| 5/6/2009 | MW-03 | 103.94 | — | 2.59 | — | — | 101.35 | 101.35 | — | — |
| 6/2/2009 | MW-03 | 103.94 | — | 2.94 | — | — | 101.00 | 101.00 | — | — |
| 7/6/2009 | MW-03 | 103.94 | — | 2.35 | — | — | 101.59 | 101.59 | — | — |
| 8/14/2009 | MW-03 | 103.94 | — | 2.58 | — | — | 101.36 | 101.36 | — | — |
| 9/28/2009 | MW-03 | 103.94 | — | 2.76 | — | — | 101.18 | 101.18 | — | — |
| 10/13/2009 | MW-03 | 103.94 | — | 3.07 | — | — | 100.87 | 100.87 | — | — |
| 11/23/2009 | MW-03 | 103.94 | — | 2.81 | — | — | 101.13 | 101.13 | — | — |
| 12/2/2009 | MW-03 | 103.94 | — | 2.94 | — | — | 101.00 | 101.00 | — | — |
| 1/12/2010 | MW-03 | 103.94 | — | 2.87 | — | — | 101.07 | 101.07 | — | — |
| 2/2/2010 | MW-03 | 103.94 | — | 3.05 | — | — | 100.89 | 100.89 | — | — |
| 3/2/2010 | MW-03 | 103.94 | — | 1.28 | — | — | 102.66 | 102.66 | — | — |
| 3/15/2010 | MW-03 | 103.94 | — | 1.43 | — | — | 102.51 | 102.51 | — | — |
| 4/15/2010 | MW-03 | 103.94 | — | 2.53 | — | — | 101.41 | 101.41 | — | — |
| 4/22/2010 | MW-03 | 103.94 | — | 2.61 | — | — | 101.33 | 101.33 | — | — |
| 5/3/2010 | MW-03 | 103.94 | — | 2.42 | — | — | 101.52 | 101.52 | — | — |
| 6/21/2010 | MW-03 | 103.94 | — | 2.90 | — | — | 101.04 | 101.04 | — | — |
| 7/2/2010 | MW-03 | 103.94 | — | 3.08 | — | — | 100.86 | 100.86 | — | — |
| 8/13/2010 | MW-03 | 103.94 | — | 3.36 | — | — | 100.58 | 100.58 | — | — |
| 9/1/2010 | MW-03 | 103.94 | — | 3.01 | — | — | 100.93 | 100.93 | — | — |
| 10/8/2010 | MW-03 | 103.94 | — | 2.78 | — | — | 101.16 | 101.16 | — | — |
| 11/23/2010 | MW-03 | 103.94 | — | 3.16 | — | — | 100.78 | 100.78 | — | — |
| 1/3/2011 | MW-03 | 103.94 | — | NG | — | — | — | — | — | — |
| 1/25/2011 | MW-03 | 103.94 | — | NG | — | — | — | — | — | — |
| 2/4/2011 | MW-03 | 103.94 | — | NG | — | — | — | — | — | — |
| 3/26/2011 | MW-03 | 103.94 | — | 2.22 | — | — | 101.72 | 101.72 | — | — |
| 4/27/2011 | MW-03 | 103.94 | — | 2.39 | — | — | 101.55 | 101.55 | — | — |
| 5/9/2011 | MW-03 | 103.94 | — | 2.72 | — | — | 101.22 | 101.22 | — | — |
| 6/6/2011 | MW-03 | 103.94 | — | 2.79 | — | — | 101.15 | 101.15 | — | — |



Shell/Motiva 0007345

# Table 3
## Groundwater Elevation Summary
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-04 | 103.24 | 1.90 | 1.92 | 0.02 | 101.34 | 101.32 | 101.33 | 0.10 | — |
| 2/21/2006 | MW-04 | 103.24 | 2.20 | 2.21 | 0.01 | 101.04 | 101.03 | 101.04 | 0.10 | — |
| 3/7/2006 | MW-04 | 103.24 | 2.40 | 2.42 | 0.02 | 100.84 | 100.82 | 100.83 | 0.10 | Hand Bailing |
| 5/18/2006 | MW-04 | 103.24 | — | 2.08 | — | — | 101.16 | 101.16 | — | — |
| 6/28/2006 | MW-04 | 103.24 | 1.91 | 1.93 | 0.02 | 101.33 | 101.31 | 101.32 | — | — |
| 8/16/2006 | MW-04 | 103.24 | 2.20 | 2.21 | 0.01 | 101.04 | 101.03 | 101.04 | — | — |
| 9/29/2006 | MW-04 | 103.24 | — | 2.15 | — | — | 101.09 | 101.09 | — | — |
| 10/20/2006 | MW-04 | 103.24 | 1.86 | 1.97 | 0.11 | 101.38 | 101.27 | 101.35 | — | — |
| 11/22/2006 | MW-04 | 103.24 | 2.06 | 2.16 | 0.10 | 101.18 | 101.08 | 101.15 | — | — |
| 12/15/2006 | MW-04 | 103.24 | 2.30 | 2.39 | 0.09 | 100.94 | 100.85 | 100.92 | — | — |
| 1/23/2007 | MW-04 | 103.24 | 2.53 | 2.57 | 0.04 | 100.71 | 100.67 | 100.70 | — | — |
| 2/2/2007 | MW-04 | 103.24 | 2.63 | 2.72 | 0.09 | 100.61 | 100.52 | 100.59 | 0.25 | — |
| 3/5/2007 | MW-04 | 103.24 | 2.38 | 2.39 | 0.01 | 100.86 | 100.85 | 100.86 | 0.25 | — |
| 5/1/2007 | MW-04 | 103.24 | 1.78 | 1.82 | 0.04 | 101.46 | 101.42 | 101.45 | 0.25 | — |
| 6/22/2007 | MW-04 | 103.24 | 2.17 | 2.26 | 0.09 | 101.07 | 100.98 | 101.05 | — | — |
| 6/26/2007 | MW-04 | 103.24 | 2.30 | 2.42 | 0.12 | 100.94 | 100.82 | 100.91 | — | — |
| 7/6/2007 | MW-04 | 103.24 | 2.28 | 2.40 | 0.12 | 100.96 | 100.84 | 100.93 | 0.25 | — |
| 8/1/2007 | MW-04 | 103.24 | 2.00 | 2.11 | 0.11 | 101.24 | 101.13 | 101.21 | — | — |
| 8/7/2007 | MW-04 | 103.24 | 2.11 | 2.21 | 0.10 | 101.13 | 101.03 | 101.10 | — | — |
| 9/14/2007 | MW-04 | 103.24 | 2.34 | 2.48 | 0.14 | 100.90 | 100.76 | 100.86 | — | — |
| 10/8/2007 | MW-04 | 103.24 | 2.63 | 2.72 | 0.09 | 100.61 | 100.52 | 100.59 | — | — |
| 11/20/2007 | MW-04 | 103.24 | 2.65 | 2.67 | 0.02 | 100.59 | 100.57 | 100.58 | — | — |
| 12/26/2007 | MW-04 | 103.24 | — | 2.42 | — | — | 100.82 | 100.82 | — | — |
| 1/2/2008 | MW-04 | 103.24 | — | 2.29 | — | — | 100.95 | 100.95 | — | — |
| 3/5/2008 | MW-04 | 103.24 | — | 2.32 | — | — | 100.92 | 100.92 | — | — |
| 4/23/2008 | MW-04 | 103.24 | — | 2.64 | — | — | 100.60 | 100.60 | — | — |
| 5/6/2008 | MW-04 | 103.24 | 2.35 | 2.36 | 0.01 | 100.89 | 100.88 | 100.89 | — | — |
| 5/12/2008 | MW-04 | 103.24 | — | 2.26 | — | — | 100.98 | 100.98 | — | — |
| 6/27/2008 | MW-04 | 103.24 | 2.26 | 2.28 | 0.02 | 100.98 | 100.96 | 100.97 | — | — |
| 8/5/2008 | MW-04 | 103.24 | — | 2.49 | — | — | 100.75 | 100.75 | — | — |
| 9/10/2008 | MW-04 | 103.24 | 2.48 | 2.52 | 0.04 | 100.76 | 100.72 | 100.75 | — | — |
| 10/27/2008 | MW-04 | 103.24 | — | 2.46 | — | — | 100.78 | 100.78 | — | — |
| 11/4/2008 | MW-04 | 103.24 | 2.61 | 2.63 | 0.02 | 100.63 | 100.61 | 100.62 | — | — |
| 1/5/2009 | MW-04 | 103.24 | 2.40 | 2.44 | 0.04 | 100.84 | 100.80 | 100.83 | — | — |
| 2/27/2009 | MW-04 | 103.24 | 2.88 | 2.95 | 0.07 | 100.36 | 100.29 | 100.34 | — | — |
| 3/9/2009 | MW-04 | 103.24 | 2.81 | 2.84 | 0.03 | 100.43 | 100.40 | 100.42 | — | — |
| 4/20/2009 | MW-04 | 103.24 | — | 2.67 | — | — | 100.57 | 100.57 | — | — |
| 4/29/2009 | MW-04 | 103.24 | — | 2.56 | — | — | 100.68 | 100.68 | — | — |
| 6/2/2009 | MW-04 | 103.24 | 2.48 | 2.50 | 0.02 | 100.76 | 100.74 | 100.75 | — | — |
| 7/6/2009 | MW-04 | 103.24 | 1.97 | 1.98 | 0.01 | 101.27 | 101.26 | 101.27 | — | — |
| 8/14/2009 | MW-04 | 103.24 | 2.25 | 2.42 | 0.17 | 100.99 | 100.82 | 100.95 | 0.25 | — |
| 9/28/2009 | MW-04 | 103.24 | 2.37 | 2.39 | 0.02 | 100.87 | 100.85 | 100.86 | — | — |
| 10/13/2009 | MW-04 | 103.24 | 2.59 | 2.68 | 0.09 | 100.65 | 100.56 | 100.63 | 0.25 | — |
| 11/23/2009 | MW-04 | 103.24 | 2.40 | 2.46 | 0.06 | 100.84 | 100.78 | 100.82 | 0.25 | — |
| 12/2/2009 | MW-04 | 103.24 | 2.54 | 2.58 | 0.04 | 100.70 | 100.66 | 100.69 | 0.25 | — |
| 1/12/2010 | MW-04 | 103.24 | 2.49 | 2.54 | 0.05 | 100.75 | 100.70 | 100.74 | — | — |
| 2/2/2010 | MW-04 | 103.24 | 2.64 | 2.69 | 0.05 | 100.60 | 100.55 | 100.59 | — | — |
| 3/2/2010 | MW-04 | 103.24 | — | 1.59 | — | — | 101.65 | 101.65 | — | — |
| 3/15/2010 | MW-04 | 103.24 | 0.98 | 0.98 | 0.00 | 102.26 | 102.26 | 102.26 | — | Trace LNAPL |
| 4/15/2010 | MW-04 | 103.24 | 2.11 | 2.16 | 0.05 | 101.13 | 101.08 | 101.12 | — | — |
| 4/22/2010 | MW-04 | 103.24 | 2.13 | 2.15 | 0.02 | 101.11 | 101.09 | 101.10 | — | — |
| 5/3/2010 | MW-04 | 103.24 | 1.91 | 1.95 | 0.04 | 101.33 | 101.29 | 101.32 | — | — |
| 6/21/2010 | MW-04 | 103.24 | 2.33 | 2.39 | 0.06 | 100.91 | 100.85 | 100.89 | — | — |
| 7/2/2010 | MW-04 | 103.24 | 2.58 | 2.60 | 0.02 | 100.66 | 100.64 | 100.65 | — | — |
| 8/13/2010 | MW-04 | 103.24 | 2.80 | 2.95 | 0.15 | 100.44 | 100.29 | 100.40 | — | — |
| 9/1/2010 | MW-04 | 103.24 | 2.49 | 2.52 | 0.03 | 100.75 | 100.72 | 100.74 | — | — |
| 10/8/2010 | MW-04 | 103.24 | 2.35 | 2.44 | 0.09 | 100.89 | 100.80 | 100.87 | — | — |
| 11/23/2010 | MW-04 | 103.24 | — | 2.65 | — | — | 100.59 | 100.59 | — | — |
| 1/3/2011 | MW-04 | 103.24 | 2.63 | 2.64 | 0.01 | 100.61 | 100.60 | 100.61 | — | — |
| 1/25/2011 | MW-04 | 103.24 | 2.53 | 2.58 | 0.05 | 100.71 | 100.66 | 100.70 | — | — |
| 2/4/2011 | MW-04 | 103.24 | 2.29 | 2.32 | 0.03 | 100.95 | 100.92 | 100.94 | — | — |
| 3/26/2011 | MW-04 | 103.24 | 1.74 | 1.77 | 0.03 | 101.50 | 101.47 | 101.49 | — | — |
| 4/27/2011 | MW-04 | 103.24 | 2.09 | 2.12 | 0.03 | 101.15 | 101.12 | 101.14 | — | — |
| 5/9/2011 | MW-04 | 103.24 | 2.25 | 2.32 | 0.07 | 100.99 | 100.92 | 100.97 | — | — |
| 6/6/2011 | MW-04 | 103.24 | 2.67 | 2.82 | 0.15 | 100.57 | 100.42 | 100.53 | 0.50 | — |



Shell/Motiva 0007346

# Table 3
## Groundwater Elevation Summary
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-05 | 102.64 | — | 1.78 | — | — | 100.86 | 100.86 | — | — |
| 2/21/2006 | MW-05 | 102.64 | — | 1.60 | — | — | 101.04 | 101.04 | — | — |
| 3/7/2006 | MW-05 | 102.64 | — | 1.85 | — | — | 100.79 | 100.79 | — | — |
| 5/18/2006 | MW-05 | 102.64 | — | 1.52 | — | — | 101.12 | 101.12 | — | — |
| 6/28/2006 | MW-05 | 102.64 | — | 1.01 | — | — | 101.63 | 101.63 | — | — |
| 8/16/2006 | MW-05 | 102.64 | — | 1.61 | — | — | 101.03 | 101.03 | — | — |
| 9/29/2006 | MW-05 | 102.64 | — | 1.61 | — | — | 101.03 | 101.03 | — | — |
| 10/20/2006 | MW-05 | 102.64 | — | 0.79 | — | — | 101.85 | 101.85 | — | — |
| 11/22/2006 | MW-05 | 102.64 | — | 1.54 | — | — | 101.10 | 101.10 | — | — |
| 12/15/2006 | MW-05 | 102.64 | — | 1.74 | — | — | 100.90 | 100.90 | — | — |
| 1/23/2007 | MW-05 | 102.64 | — | NG | — | — | — | — | — | — |
| 2/2/2007 | MW-05 | 102.64 | — | 2.12 | — | — | 100.52 | 100.52 | — | — |
| 3/5/2007 | MW-05 | 102.64 | — | 1.88 | — | — | 100.76 | 100.76 | — | — |
| 5/1/2007 | MW-05 | 102.64 | — | 1.26 | — | — | 101.38 | 101.38 | — | — |
| 6/22/2007 | MW-05 | 102.64 | — | 1.65 | — | — | 100.99 | 100.99 | — | — |
| 6/26/2007 | MW-05 | 102.64 | — | 1.80 | — | — | 100.84 | 100.84 | — | — |
| 7/6/2007 | MW-05 | 102.64 | — | 1.70 | — | — | 100.94 | 100.94 | — | — |
| 8/1/2007 | MW-05 | 102.64 | — | 1.42 | — | — | 101.22 | 101.22 | — | — |
| 8/7/2007 | MW-05 | 102.64 | — | 1.55 | — | — | 101.09 | 101.09 | — | — |
| 9/14/2007 | MW-05 | 102.64 | — | 1.84 | — | — | 100.80 | 100.80 | — | — |
| 10/8/2007 | MW-05 | 102.64 | — | 2.12 | — | — | 100.52 | 100.52 | — | — |
| 11/20/2007 | MW-05 | 102.64 | — | 2.00 | — | — | 100.64 | 100.64 | — | — |
| 12/26/2007 | MW-05 | 102.64 | — | 1.80 | — | — | 100.84 | 100.84 | — | — |
| 1/2/2008 | MW-05 | 102.64 | — | 1.74 | — | — | 100.90 | 100.90 | — | — |
| 3/5/2008 | MW-05 | 102.64 | — | 2.10 | — | — | 100.54 | 100.54 | — | — |
| 4/23/2008 | MW-05 | 102.64 | — | NG | — | — | — | — | — | — |
| 5/6/2008 | MW-05 | 102.64 | — | 1.78 | — | — | 100.86 | 100.86 | — | — |
| 5/12/2008 | MW-05 | 102.64 | — | NG | — | — | — | — | — | — |
| 6/27/2008 | MW-05 | 102.64 | — | 1.78 | — | — | 100.86 | 100.86 | — | — |
| 8/5/2008 | MW-05 | 102.64 | — | 1.95 | — | — | 100.69 | 100.69 | — | — |
| 9/10/2008 | MW-05 | 102.64 | — | 1.95 | — | — | 100.69 | 100.69 | — | — |
| 10/27/2008 | MW-05 | 102.64 | — | NG | — | — | — | — | — | — |
| 11/4/2008 | MW-05 | 102.64 | — | 2.09 | — | — | 100.55 | 100.55 | — | — |
| 1/5/2009 | MW-05 | 102.64 | — | 1.88 | — | — | 100.76 | 100.76 | — | — |
| 2/27/2009 | MW-05 | 102.64 | — | 2.32 | — | — | 100.32 | 100.32 | — | — |
| 3/9/2009 | MW-05 | 102.64 | — | 2.29 | — | — | 100.35 | 100.35 | — | — |
| 4/20/2009 | MW-05 | 102.64 | — | 2.13 | — | — | 100.51 | 100.51 | — | — |
| 4/29/2009 | MW-05 | 102.64 | — | 2.24 | — | — | 100.40 | 100.40 | — | — |
| 6/2/2009 | MW-05 | 102.64 | — | 1.99 | — | — | 100.65 | 100.65 | — | — |
| 7/6/2009 | MW-05 | 102.64 | — | 1.48 | — | — | 101.16 | 101.16 | — | — |
| 8/14/2009 | MW-05 | 102.64 | — | 1.75 | — | — | 100.89 | 100.89 | — | — |
| 9/28/2009 | MW-05 | 102.64 | — | 1.85 | — | — | 100.79 | 100.79 | — | — |
| 10/13/2009 | MW-05 | 102.64 | — | 2.09 | — | — | 100.55 | 100.55 | — | — |
| 11/23/2009 | MW-05 | 102.64 | — | 1.89 | — | — | 100.75 | 100.75 | — | — |
| 12/2/2009 | MW-05 | 102.64 | — | 1.99 | — | — | 100.65 | 100.65 | — | — |
| 1/12/2010 | MW-05 | 102.64 | — | 1.95 | — | — | 100.69 | 100.69 | — | — |
| 2/2/2010 | MW-05 | 102.64 | — | 2.07 | — | — | 100.57 | 100.57 | — | — |
| 3/2/2010 | MW-05 | 102.64 | — | 1.06 | — | — | 101.58 | 101.58 | — | — |
| 3/15/2010 | MW-05 | 102.64 | — | NG | — | — | — | — | — | Flooded |
| 4/15/2010 | MW-05 | 102.64 | — | 1.37 | — | — | 101.27 | 101.27 | — | — |
| 4/22/2010 | MW-05 | 102.64 | — | 1.59 | — | — | 101.05 | 101.05 | — | — |
| 5/3/2010 | MW-05 | 102.64 | — | NG | — | — | — | — | — | — |
| 6/21/2010 | MW-05 | 102.64 | — | 1.85 | — | — | 100.79 | 100.79 | — | — |
| 7/2/2010 | MW-05 | 102.64 | — | 2.04 | — | — | 100.60 | 100.60 | — | — |
| 8/13/2010 | MW-05 | 102.64 | — | 2.27 | — | — | 100.37 | 100.37 | — | — |
| 9/1/2010 | MW-05 | 102.64 | — | 1.98 | — | — | 100.66 | 100.66 | — | — |
| 10/8/2010 | MW-05 | 102.64 | — | 1.79 | — | — | 100.85 | 100.85 | — | — |
| 11/23/2010 | MW-05 | 102.64 | — | 2.12 | — | — | 100.52 | 100.52 | — | — |
| 1/3/2011 | MW-05 | 102.64 | — | 0.82 | — | — | 101.82 | 101.82 | — | — |
| 1/25/2011 | MW-05 | 102.64 | — | 2.02 | — | — | 100.62 | 100.62 | — | — |
| 2/4/2011 | MW-05 | 102.64 | — | NG | — | — | — | — | — | — |
| 3/26/2011 | MW-05 | 102.64 | — | 1.30 | — | — | 101.34 | 101.34 | — | — |
| 4/27/2011 | MW-05 | 102.64 | — | 1.49 | — | — | 101.15 | 101.15 | — | — |
| 5/9/2011 | MW-05 | 102.64 | — | 1.72 | — | — | 100.92 | 100.92 | — | — |
| 6/6/2011 | MW-05 | 102.64 | — | 1.78 | — | — | 100.86 | 100.86 | — | — |



Shell/Motiva 0007347

# Table 3
## Groundwater Elevation Summary
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-06 | 103.42 | — | 3.23 | — | — | 100.19 | 100.19 | — | — |
| 2/21/2006 | MW-06 | 103.42 | — | 4.59 | — | — | 98.83 | 98.83 | — | — |
| 3/7/2006 | MW-06 | 103.42 | — | 4.37 | — | — | 99.05 | 99.05 | — | — |
| 5/18/2006 | MW-06 | 103.42 | — | 3.46 | — | — | 99.96 | 99.96 | — | — |
| 6/28/2006 | MW-06 | 103.42 | — | 2.28 | — | — | 101.14 | 101.14 | — | — |
| 8/16/2006 | MW-06 | 103.42 | — | 4.69 | — | — | 98.73 | 98.73 | — | — |
| 9/29/2006 | MW-06 | 103.42 | — | 3.65 | — | — | 99.77 | 99.77 | — | — |
| 10/20/2006 | MW-06 | 103.42 | — | 2.57 | — | — | 100.85 | 100.85 | — | — |
| 11/22/2006 | MW-06 | 103.42 | — | 2.84 | — | — | 100.58 | 100.58 | — | — |
| 12/15/2006 | MW-06 | 103.42 | — | 4.21 | — | — | 99.21 | 99.21 | — | — |
| 1/23/2007 | MW-06 | 103.42 | — | 4.65 | — | — | 98.77 | 98.77 | — | — |
| 2/2/2007 | MW-06 | 103.42 | — | 2.45 | — | — | 100.97 | 100.97 | — | — |
| 3/5/2007 | MW-06 | 103.42 | — | 3.67 | — | — | 99.75 | 99.75 | — | — |
| 5/1/2007 | MW-06 | 103.42 | — | 3.41 | — | — | 100.01 | 100.01 | — | — |
| 6/22/2007 | MW-06 | 103.42 | — | 4.29 | — | — | 99.13 | 99.13 | — | — |
| 6/26/2007 | MW-06 | 103.42 | — | 4.10 | — | — | 99.32 | 99.32 | — | — |
| 7/6/2007 | MW-06 | 103.42 | — | 4.73 | — | — | 98.69 | 98.69 | — | — |
| 8/1/2007 | MW-06 | 103.42 | — | 3.69 | — | — | 99.73 | 99.73 | — | — |
| 8/7/2007 | MW-06 | 103.42 | — | 3.91 | — | — | 99.51 | 99.51 | — | — |
| 9/14/2007 | MW-06 | 103.42 | — | 4.12 | — | — | 99.30 | 99.30 | — | — |
| 10/8/2007 | MW-06 | 103.42 | — | 2.81 | — | — | 100.61 | 100.61 | — | — |
| 11/20/2007 | MW-06 | 103.42 | — | 3.49 | — | — | 99.93 | 99.93 | — | — |
| 12/26/2007 | MW-06 | 103.42 | — | 3.76 | — | — | 99.66 | 99.66 | — | — |
| 1/2/2008 | MW-06 | 103.42 | — | 4.05 | — | — | 99.37 | 99.37 | — | — |
| 3/5/2008 | MW-06 | 103.42 | — | 3.00 | — | — | 100.42 | 100.42 | — | — |
| 4/23/2008 | MW-06 | 103.42 | — | 4.30 | — | — | 99.12 | 99.12 | — | — |
| 5/12/2008 | MW-06 | 103.42 | — | 2.80 | — | — | 100.62 | 100.62 | — | — |
| 6/27/2008 | MW-06 | 103.42 | — | 3.93 | — | — | 99.49 | 99.49 | — | — |
| 8/5/2008 | MW-06 | 103.42 | — | 4.19 | — | — | 99.23 | 99.23 | — | — |
| 9/10/2008 | MW-06 | 103.42 | — | 3.89 | — | — | 99.53 | 99.53 | — | — |
| 10/27/2008 | MW-06 | 103.42 | — | 2.00 | — | — | 101.42 | 101.42 | — | — |
| 11/4/2008 | MW-06 | 103.42 | — | 4.79 | — | — | 98.63 | 98.63 | — | — |
| 1/5/2009 | MW-06 | 103.42 | — | 4.39 | — | — | 99.03 | 99.03 | — | — |
| 2/27/2009 | MW-06 | 103.42 | — | 4.18 | — | — | 99.24 | 99.24 | — | — |
| 3/9/2009 | MW-06 | 103.42 | — | 2.36 | — | — | 101.06 | 101.06 | — | — |
| 4/20/2009 | MW-06 | 103.42 | — | 3.54 | — | — | 99.88 | 99.88 | — | — |
| 4/29/2009 | MW-06 | 103.42 | — | 6.20 | — | — | 97.22 | 97.22 | — | — |
| 5/6/2009 | MW-06 | 103.42 | — | 3.06 | — | — | 100.36 | 100.36 | — | — |
| 6/2/2009 | MW-06 | 103.42 | — | 4.63 | — | — | 98.79 | 98.79 | — | — |
| 7/6/2009 | MW-06 | 103.42 | — | 3.68 | — | — | 99.74 | 99.74 | — | — |
| 8/14/2009 | MW-06 | 103.42 | — | 4.96 | — | — | 98.46 | 98.46 | — | — |
| 9/28/2009 | MW-06 | 103.42 | — | 4.34 | — | — | 99.08 | 99.08 | — | — |
| 10/13/2009 | MW-06 | 103.42 | — | 4.49 | — | — | 98.93 | 98.93 | — | — |
| 11/23/2009 | MW-06 | 103.42 | — | 4.24 | — | — | 99.18 | 99.18 | — | — |
| 12/2/2009 | MW-06 | 103.42 | — | 2.55 | — | — | 100.87 | 100.87 | — | — |
| 1/12/2010 | MW-06 | 103.42 | — | 3.87 | — | — | 99.55 | 99.55 | — | — |
| 2/2/2010 | MW-06 | 103.42 | — | 4.45 | — | — | 98.97 | 98.97 | — | — |
| 3/2/2010 | MW-06 | 103.42 | — | 2.34 | — | — | 101.08 | 101.08 | — | — |
| 3/15/2010 | MW-06 | 103.42 | — | 1.86 | — | — | 101.56 | 101.56 | — | — |
| 4/15/2010 | MW-06 | 103.42 | — | 5.08 | — | — | 98.34 | 98.34 | — | — |
| 4/22/2010 | MW-06 | 103.42 | — | 5.08 | — | — | 98.34 | 98.34 | — | — |
| 5/3/2010 | MW-06 | 103.42 | — | 4.59 | — | — | 98.83 | 98.83 | — | — |
| 6/21/2010 | MW-06 | 103.42 | — | 5.39 | — | — | 98.03 | 98.03 | — | — |
| 7/2/2010 | MW-06 | 103.42 | — | 6.93 | — | — | 96.49 | 96.49 | — | — |
| 8/13/2010 | MW-06 | 103.42 | — | 3.87 | — | — | 99.55 | 99.55 | — | — |
| 9/1/2010 | MW-06 | 103.42 | — | 5.28 | — | — | 98.14 | 98.14 | — | — |
| 10/8/2010 | MW-06 | 103.42 | — | 3.30 | — | — | 100.12 | 100.12 | — | — |
| 11/23/2010 | MW-06 | 103.42 | — | 3.33 | — | — | 100.09 | 100.09 | — | — |
| 1/3/2011 | MW-06 | 103.42 | — | 3.25 | — | — | 100.17 | 100.17 | — | — |
| 1/25/2011 | MW-06 | 103.42 | — | 6.21 | — | — | 97.21 | 97.21 | — | — |
| 2/4/2011 | MW-06 | 103.42 | — | NG | — | — | — | — | — | — |
| 3/26/2011 | MW-06 | 103.42 | — | 4.25 | — | — | 99.17 | 99.17 | — | — |
| 4/27/2011 | MW-06 | 103.42 | — | 3.78 | — | — | 99.64 | 99.64 | — | — |
| 5/9/2011 | MW-06 | 103.42 | — | 5.04 | — | — | 98.38 | 98.38 | — | — |
| 6/6/2011 | MW-06 | 103.42 | — | 5.25 | — | — | 98.17 | 98.17 | — | — |



Shell/Motiva 0007348

## Table 3
## Groundwater Elevation Summary
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-07 | 102.86 | — | 4.81 | — | — | 98.05 | 98.05 | — | — |
| 2/21/2006 | MW-07 | 102.86 | — | 4.94 | — | — | 97.92 | 97.92 | — | — |
| 3/7/2006 | MW-07 | 102.86 | — | 4.84 | — | — | 98.02 | 98.02 | — | — |
| 5/18/2006 | MW-07 | 102.86 | — | 4.91 | — | — | 97.95 | 97.95 | — | — |
| 6/28/2006 | MW-07 | 102.86 | — | 4.11 | — | — | 98.75 | 98.75 | — | — |
| 8/16/2006 | MW-07 | 102.86 | — | 4.85 | — | — | 98.01 | 98.01 | — | — |
| 9/29/2006 | MW-07 | 102.86 | — | 4.63 | — | — | 98.23 | 98.23 | — | — |
| 10/20/2006 | MW-07 | 102.86 | — | 3.50 | — | — | 99.36 | 99.36 | — | — |
| 11/22/2006 | MW-07 | 102.86 | — | 4.43 | — | — | 98.43 | 98.43 | — | — |
| 12/15/2006 | MW-07 | 102.86 | — | 4.57 | — | — | 98.29 | 98.29 | — | — |
| 1/23/2007 | MW-07 | 102.86 | — | 4.11 | — | — | 98.75 | 98.75 | — | — |
| 2/2/2007 | MW-07 | 102.86 | — | 2.95 | — | — | 99.91 | 99.91 | — | — |
| 3/5/2007 | MW-07 | 102.86 | — | 4.55 | — | — | 98.31 | 98.31 | — | — |
| 5/1/2007 | MW-07 | 102.86 | — | 3.97 | — | — | 98.89 | 98.89 | — | — |
| 6/22/2007 | MW-07 | 102.86 | — | 4.55 | — | — | 98.31 | 98.31 | — | — |
| 6/26/2007 | MW-07 | 102.86 | — | 4.53 | — | — | 98.33 | 98.33 | — | — |
| 7/6/2007 | MW-07 | 102.86 | — | 4.61 | — | — | 98.25 | 98.25 | — | — |
| 8/1/2007 | MW-07 | 102.86 | — | 4.61 | — | — | 98.25 | 98.25 | — | — |
| 8/7/2007 | MW-07 | 102.86 | — | 4.53 | — | — | 98.33 | 98.33 | — | — |
| 9/14/2007 | MW-07 | 102.86 | — | 4.55 | — | — | 98.31 | 98.31 | — | — |
| 10/8/2007 | MW-07 | 102.86 | — | 3.03 | — | — | 99.83 | 99.83 | — | — |
| 11/20/2007 | MW-07 | 102.86 | — | 4.48 | — | — | 98.38 | 98.38 | — | — |
| 12/26/2007 | MW-07 | 102.86 | — | 4.22 | — | — | 98.64 | 98.64 | — | — |
| 1/2/2008 | MW-07 | 102.86 | — | 4.55 | — | — | 98.31 | 98.31 | — | — |
| 3/5/2008 | MW-07 | 102.86 | — | 4.59 | — | — | 98.27 | 98.27 | — | — |
| 4/23/2008 | MW-07 | 102.86 | — | 4.36 | — | — | 98.50 | 98.50 | — | — |
| 5/12/2008 | MW-07 | 102.86 | — | 4.20 | — | — | 98.66 | 98.66 | — | — |
| 6/27/2008 | MW-07 | 102.86 | — | 4.50 | — | — | 98.36 | 98.36 | — | — |
| 8/5/2008 | MW-07 | 102.86 | — | 4.59 | — | — | 98.27 | 98.27 | — | — |
| 9/10/2008 | MW-07 | 102.86 | — | 4.49 | — | — | 98.37 | 98.37 | — | — |
| 10/27/2008 | MW-07 | 102.86 | — | NG | — | — | — | — | — | — |
| 1/5/2009 | MW-07 | 102.86 | — | NG | — | — | — | — | — | Abandoned |
| 3/2/2010 | MW-07R | — | — | 2.52 | — | — | — | — | — | — |
| 3/15/2010 | MW-07R | — | — | 3.78 | — | — | — | — | — | — |
| 4/15/2010 | MW-07R | — | — | 5.80 | — | — | — | — | — | — |
| 4/22/2010 | MW-07R | — | — | 5.67 | — | — | — | — | — | — |
| 5/3/2010 | MW-07R | — | — | 5.45 | — | — | — | — | — | — |
| 6/21/2010 | MW-07R | — | — | 5.92 | — | — | — | — | — | — |
| 7/2/2010 | MW-07R | — | — | 6.15 | — | — | — | — | — | — |
| 7/27/2010 | MW-07R | — | — | 5.97 | — | — | — | — | — | — |
| 8/13/2010 | MW-07R | — | — | 4.04 | — | — | — | — | — | — |
| 9/1/2010 | MW-07R | — | — | 5.78 | — | — | — | — | — | — |
| 10/8/2010 | MW-07R | — | — | 2.35 | — | — | — | — | — | — |
| 11/23/2010 | MW-07R | — | — | 3.94 | — | — | — | — | — | — |
| 1/3/2011 | MW-07R | — | — | 4.02 | — | — | — | — | — | — |
| 1/25/2011 | MW-07R | — | — | 6.62 | — | — | — | — | — | — |
| 2/4/2011 | MW-07R | — | — | NG | — | — | — | — | — | — |
| 3/26/2011 | MW-07R | — | — | 5.38 | — | — | — | — | — | — |
| 4/27/2011 | MW-07R | — | — | 4.48 | — | — | — | — | — | — |
| 5/9/2011 | MW-07R | — | — | 5.77 | — | — | — | — | — | — |
| 6/6/2011 | MW-07R | — | — | 5.99 | — | — | — | — | — | — |



Shell/Motiva 0007349

# Table 3
## Groundwater Elevation Summary
(Sorted by Well)
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25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/23/2006 | MW-08 | 104.05 | — | 4.67 | — | — | 99.38 | 99.38 | — | — |
| 3/7/2006 | MW-08 | 104.05 | — | NG | — | — | — | — | — | — |
| 5/18/2006 | MW-08 | 104.05 | — | NG | — | — | — | — | — | — |
| 6/28/2006 | MW-08 | 104.05 | — | NG | — | — | — | — | — | — |
| 9/29/2006 | MW-08 | 104.05 | — | NG | — | — | — | — | — | — |
| 10/20/2006 | MW-08 | 104.05 | — | 3.84 | — | — | 100.21 | 100.21 | — | — |
| 11/22/2006 | MW-08 | 104.05 | — | 5.06 | — | — | 98.99 | 98.99 | — | — |
| 12/15/2006 | MW-08 | 104.05 | — | 5.91 | — | — | 98.14 | 98.14 | — | — |
| 2/2/2007 | MW-08 | 104.05 | — | 3.40 | — | — | 100.65 | 100.65 | — | — |
| 3/5/2007 | MW-08 | 104.05 | — | 5.13 | — | — | 98.92 | 98.92 | — | — |
| 5/1/2007 | MW-08 | 104.05 | — | 4.44 | — | — | 99.61 | 99.61 | — | — |
| 6/22/2007 | MW-08 | 104.05 | — | 5.81 | — | — | 98.24 | 98.24 | — | — |
| 6/26/2007 | MW-08 | 104.05 | — | 5.58 | — | — | 98.47 | 98.47 | — | — |
| 7/6/2007 | MW-08 | 104.05 | — | 6.07 | — | — | 97.98 | 97.98 | — | — |
| 8/1/2007 | MW-08 | 104.05 | — | 5.36 | — | — | 98.69 | 98.69 | — | — |
| 8/7/2007 | MW-08 | 104.05 | — | 5.85 | — | — | 98.20 | 98.20 | — | — |
| 9/14/2007 | MW-08 | 104.05 | — | 5.05 | — | — | 99.00 | 99.00 | — | — |
| 10/8/2007 | MW-08 | 104.05 | — | 3.53 | — | — | 100.52 | 100.52 | — | — |
| 11/20/2007 | MW-08 | 104.05 | — | 5.79 | — | — | 98.26 | 98.26 | — | — |
| 12/26/2007 | MW-08 | 104.05 | — | 4.87 | — | — | 99.18 | 99.18 | — | — |
| 1/2/2008 | MW-08 | 104.05 | — | 5.88 | — | — | 98.17 | 98.17 | — | — |
| 3/5/2008 | MW-08 | 104.05 | — | 5.15 | — | — | 98.90 | 98.90 | — | — |
| 4/23/2008 | MW-08 | 104.05 | — | 5.88 | — | — | 98.17 | 98.17 | — | — |
| 5/12/2008 | MW-08 | 104.05 | — | 4.63 | — | — | 99.42 | 99.42 | — | — |
| 6/27/2008 | MW-08 | 104.05 | — | 5.78 | — | — | 98.27 | 98.27 | — | — |
| 8/5/2008 | MW-08 | 104.05 | — | 6.00 | — | — | 98.05 | 98.05 | — | — |
| 9/10/2008 | MW-08 | 104.05 | — | 5.47 | — | — | 98.58 | 98.58 | — | — |
| 10/27/2008 | MW-08 | 104.05 | — | NG | — | — | — | — | — | — |
| 1/5/2009 | MW-08 | 104.05 | — | NG | — | — | — | — | — | — |
| 5/15/2009 | MW-08 | 104.05 | — | 5.62 | — | — | 98.43 | 98.43 | — | — |
| 6/2/2009 | MW-08 | 104.05 | — | 5.49 | — | — | 98.56 | 98.56 | — | — |
| 7/6/2009 | MW-08 | 104.05 | — | 5.48 | — | — | 98.57 | 98.57 | — | — |
| 8/14/2009 | MW-08 | 104.05 | — | 5.97 | — | — | 98.08 | 98.08 | — | — |
| 9/28/2009 | MW-08 | 104.05 | — | 5.92 | — | — | 98.13 | 98.13 | — | — |
| 10/13/2009 | MW-08 | 104.05 | — | 6.15 | — | — | 97.90 | 97.90 | — | — |
| 11/23/2009 | MW-08 | 104.05 | — | 5.24 | — | — | 98.81 | 98.81 | — | — |
| 12/2/2009 | MW-08 | 104.05 | — | 3.65 | — | — | 100.40 | 100.40 | — | — |
| 1/12/2010 | MW-08 | 104.05 | — | 5.54 | — | — | 98.51 | 98.51 | — | — |
| 2/2/2010 | MW-08 | 104.05 | — | 5.34 | — | — | 98.71 | 98.71 | — | — |
| 3/2/2010 | MW-08 | 104.05 | — | 3.04 | — | — | 101.01 | 101.01 | — | — |
| 3/15/2010 | MW-08 | 104.05 | — | 4.41 | — | — | 99.64 | 99.64 | — | — |
| 4/15/2010 | MW-08 | 104.05 | — | 6.48 | — | — | 97.57 | 97.57 | — | — |
| 4/22/2010 | MW-08 | 104.05 | — | 6.18 | — | — | 97.87 | 97.87 | — | — |
| 5/3/2010 | MW-08 | 104.05 | — | 6.10 | — | — | 97.95 | 97.95 | — | — |
| 6/21/2010 | MW-08 | 104.05 | — | 6.40 | — | — | 97.65 | 97.65 | — | — |
| 7/2/2010 | MW-08 | 104.05 | — | 6.79 | — | — | 97.26 | 97.26 | — | — |
| 7/27/2010 | MW-08 | 104.05 | — | 6.64 | — | — | 97.41 | 97.41 | — | — |
| 8/13/2010 | MW-08 | 104.05 | — | 4.82 | — | — | 99.23 | 99.23 | — | — |
| 9/1/2010 | MW-08 | 104.05 | — | 6.44 | — | — | 97.61 | 97.61 | — | — |
| 10/8/2010 | MW-08 | 104.05 | — | 3.03 | — | — | 101.02 | 101.02 | — | — |
| 11/23/2010 | MW-08 | 104.05 | — | 4.75 | — | — | 99.30 | 99.30 | — | — |
| 1/3/2011 | MW-08 | 104.05 | — | 4.89 | — | — | 99.16 | 99.16 | — | — |
| 1/25/2011 | MW-08 | 104.05 | — | 6.73 | — | — | 97.32 | 97.32 | — | — |
| 2/4/2011 | MW-08 | 104.05 | — | NG | — | — | — | — | — | — |
| 3/26/2011 | MW-08 | 104.05 | — | 5.81 | — | — | 98.24 | 98.24 | — | — |
| 4/27/2011 | MW-08 | 104.05 | — | 5.01 | — | — | 99.04 | 99.04 | — | — |
| 5/9/2011 | MW-08 | 104.05 | — | 6.32 | — | — | 97.73 | 97.73 | — | — |
| 6/6/2011 | MW-08 | 104.05 | — | 6.56 | — | — | 97.49 | 97.49 | — | — |



Shell/Motiva 0007350

## Table 3
## Groundwater Elevation Summary
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-09 | 103.83 | — | 5.12 | — | — | 98.71 | 98.71 | — | — |
| 2/21/2006 | MW-09 | 103.83 | — | 5.90 | — | — | 97.93 | 97.93 | — | — |
| 3/7/2006 | MW-09 | 103.83 | — | NG | — | — | — | — | — | — |
| 5/18/2006 | MW-09 | 103.83 | — | 5.69 | — | — | 98.14 | 98.14 | — | — |
| 6/28/2006 | MW-09 | 103.83 | — | 4.36 | — | — | 99.47 | 99.47 | — | — |
| 8/16/2006 | MW-09 | 103.83 | — | 5.92 | — | — | 97.91 | 97.91 | — | — |
| 9/29/2006 | MW-09 | 103.83 | — | 5.75 | — | — | 98.08 | 98.08 | — | — |
| 10/20/2006 | MW-09 | 103.83 | — | 3.97 | — | — | 99.86 | 99.86 | — | — |
| 11/22/2006 | MW-09 | 103.83 | — | 4.88 | — | — | 98.95 | 98.95 | — | — |
| 12/15/2006 | MW-09 | 103.83 | — | 5.75 | — | — | 98.08 | 98.08 | — | — |
| 1/23/2007 | MW-09 | 103.83 | — | 4.40 | — | — | 99.43 | 99.43 | — | — |
| 2/2/2007 | MW-09 | 103.83 | — | 3.21 | — | — | 100.62 | 100.62 | — | — |
| 3/5/2007 | MW-09 | 103.83 | — | NG | — | — | — | — | — | — |
| 5/1/2007 | MW-09 | 103.83 | — | 4.18 | — | — | 99.65 | 99.65 | — | — |
| 6/22/2007 | MW-09 | 103.83 | — | 5.79 | — | — | 98.04 | 98.04 | — | — |
| 6/26/2007 | MW-09 | 103.83 | — | 5.41 | — | — | 98.42 | 98.42 | — | — |
| 7/6/2007 | MW-09 | 103.83 | — | 5.91 | — | — | 97.92 | 97.92 | — | — |
| 8/1/2007 | MW-09 | 103.83 | — | 5.14 | — | — | 98.69 | 98.69 | — | — |
| 8/7/2007 | MW-09 | 103.83 | — | 6.77 | — | — | 97.06 | 97.06 | — | — |
| 9/14/2007 | MW-09 | 103.83 | — | 4.71 | — | — | 99.12 | 99.12 | — | — |
| 10/8/2007 | MW-09 | 103.83 | — | 3.29 | — | — | 100.54 | 100.54 | — | — |
| 11/20/2007 | MW-09 | 103.83 | — | 5.72 | — | — | 98.11 | 98.11 | — | — |
| 12/26/2007 | MW-09 | 103.83 | — | 4.40 | — | — | 99.43 | 99.43 | — | — |
| 1/2/2008 | MW-09 | 103.83 | — | 5.77 | — | — | 98.06 | 98.06 | — | — |
| 3/5/2008 | MW-09 | 103.83 | — | 5.00 | — | — | 98.83 | 98.83 | — | — |
| 4/23/2008 | MW-09 | 103.83 | — | 5.81 | — | — | 98.02 | 98.02 | — | — |
| 5/12/2008 | MW-09 | 103.83 | — | 4.40 | — | — | 99.43 | 99.43 | — | — |
| 6/27/2008 | MW-09 | 103.83 | — | 5.75 | — | — | 98.08 | 98.08 | — | — |
| 8/5/2008 | MW-09 | 103.83 | — | 5.91 | — | — | 97.92 | 97.92 | — | — |
| 9/10/2008 | MW-09 | 103.83 | — | 5.41 | — | — | 98.42 | 98.42 | — | — |
| 10/27/2008 | MW-09 | 103.83 | — | NG | — | — | — | — | — | — |
| 1/5/2009 | MW-09 | 103.83 | — | NG | — | — | — | — | — | — |
| 5/15/2009 | MW-09 | 103.83 | — | 5.63 | — | — | 98.20 | 98.20 | — | — |
| 6/2/2009 | MW-09 | 103.83 | — | 5.45 | — | — | 98.38 | 98.38 | — | — |
| 7/6/2009 | MW-09 | 103.83 | — | 5.34 | — | — | 98.49 | 98.49 | — | — |
| 8/14/2009 | MW-09 | 103.83 | — | 5.91 | — | — | 97.92 | 97.92 | — | — |
| 9/28/2009 | MW-09 | 103.83 | — | 5.82 | — | — | 98.01 | 98.01 | — | — |
| 10/13/2009 | MW-09 | 103.83 | — | 6.08 | — | — | 97.75 | 97.75 | — | — |
| 11/23/2009 | MW-09 | 103.83 | — | 5.25 | — | — | 98.58 | 98.58 | — | — |
| 12/2/2009 | MW-09 | 103.83 | — | 3.63 | — | — | 100.20 | 100.20 | — | — |
| 1/12/2010 | MW-09 | 103.83 | — | 5.67 | — | — | 98.16 | 98.16 | — | — |
| 2/2/2010 | MW-09 | 103.83 | — | 5.33 | — | — | 98.50 | 98.50 | — | — |
| 3/2/2010 | MW-09 | 103.83 | — | 2.97 | — | — | 100.86 | 100.86 | — | — |
| 3/15/2010 | MW-09 | 103.83 | — | 4.26 | — | — | 99.57 | 99.57 | — | — |
| 4/15/2010 | MW-09 | 103.83 | — | 6.46 | — | — | 97.37 | 97.37 | — | — |
| 4/22/2010 | MW-09 | 103.83 | — | 6.12 | — | — | 97.71 | 97.71 | — | — |
| 5/3/2010 | MW-09 | 103.83 | — | 6.05 | — | — | 97.78 | 97.78 | — | — |
| 6/21/2010 | MW-09 | 103.83 | — | 6.30 | — | — | 97.53 | 97.53 | — | — |
| 7/2/2010 | MW-09 | 103.83 | — | 6.69 | — | — | 97.14 | 97.14 | — | — |
| 7/27/2010 | MW-09 | 103.83 | — | 6.59 | — | — | 97.24 | 97.24 | — | — |
| 8/13/2010 | MW-09 | 103.83 | — | 4.79 | — | — | 99.04 | 99.04 | — | — |
| 9/1/2010 | MW-09 | 103.83 | — | 6.41 | — | — | 97.42 | 97.42 | — | — |
| 10/8/2010 | MW-09 | 103.83 | — | 2.94 | — | — | 100.89 | 100.89 | — | — |
| 11/23/2010 | MW-09 | 103.83 | — | 4.72 | — | — | 99.11 | 99.11 | — | — |
| 1/3/2011 | MW-09 | 103.83 | — | 4.83 | — | — | 99.00 | 99.00 | — | — |
| 1/25/2011 | MW-09 | 103.83 | — | 6.68 | — | — | 97.15 | 97.15 | — | — |
| 2/4/2011 | MW-09 | 103.83 | — | NG | — | — | — | — | — | — |
| 3/26/2011 | MW-09 | 103.83 | — | 5.78 | — | — | 98.05 | 98.05 | — | — |
| 4/27/2011 | MW-09 | 103.83 | — | 4.95 | — | — | 98.88 | 98.88 | — | — |
| 5/9/2011 | MW-09 | 103.83 | — | 6.26 | — | — | 97.57 | 97.57 | — | — |
| 6/6/2011 | MW-09 | 103.83 | — | 6.46 | — | — | 97.37 | 97.37 | — | — |



Shell/Motiva 0007351

## Table 3
## Groundwater Elevation Summary
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-13 | 107.78 | — | 6.79 | — | — | 100.99 | 100.99 | — | — |
| 2/21/2006 | MW-13 | 107.78 | — | 7.99 | — | — | 99.79 | 99.79 | — | — |
| 3/7/2006 | MW-13 | 107.78 | — | 7.39 | — | — | 100.39 | 100.39 | — | — |
| 5/18/2006 | MW-13 | 107.78 | — | 6.82 | — | — | 100.96 | 100.96 | — | — |
| 6/28/2006 | MW-13 | 107.78 | — | 6.90 | — | — | 100.88 | 100.88 | — | — |
| 8/16/2006 | MW-13 | 107.78 | — | 7.16 | — | — | 100.62 | 100.62 | — | — |
| 9/29/2006 | MW-13 | 107.78 | — | 7.21 | — | — | 100.57 | 100.57 | — | — |
| 10/20/2006 | MW-13 | 107.78 | — | 6.69 | — | — | 101.09 | 101.09 | — | — |
| 11/22/2006 | MW-13 | 107.78 | — | 6.91 | — | — | 100.87 | 100.87 | — | — |
| 12/15/2006 | MW-13 | 107.78 | — | 7.41 | — | — | 100.37 | 100.37 | — | — |
| 1/23/2007 | MW-13 | 107.78 | — | 7.31 | — | — | 100.47 | 100.47 | — | — |
| 2/2/2007 | MW-13 | 107.78 | — | 7.51 | — | — | 100.27 | 100.27 | — | — |
| 3/5/2007 | MW-13 | 107.78 | — | 6.57 | — | — | 101.21 | 101.21 | — | — |
| 5/1/2007 | MW-13 | 107.78 | — | 7.05 | — | — | 100.73 | 100.73 | — | — |
| 6/22/2007 | MW-13 | 107.78 | — | 7.45 | — | — | 100.33 | 100.33 | — | — |
| 6/26/2007 | MW-13 | 107.78 | — | 7.62 | — | — | 100.16 | 100.16 | — | — |
| 7/6/2007 | MW-13 | 107.78 | — | 6.99 | — | — | 100.79 | 100.79 | — | — |
| 8/1/2007 | MW-13 | 107.78 | — | 7.15 | — | — | 100.63 | 100.63 | — | — |
| 8/7/2007 | MW-13 | 107.78 | — | 7.25 | — | — | 100.53 | 100.53 | — | — |
| 9/14/2007 | MW-13 | 107.78 | — | 7.38 | — | — | 100.40 | 100.40 | — | — |
| 10/8/2007 | MW-13 | 107.78 | — | 7.55 | — | — | 100.23 | 100.23 | — | — |
| 11/20/2007 | MW-13 | 107.78 | — | 7.23 | — | — | 100.55 | 100.55 | — | — |
| 12/26/2007 | MW-13 | 107.78 | — | 7.09 | — | — | 100.69 | 100.69 | — | — |
| 1/2/2008 | MW-13 | 107.78 | — | 7.00 | — | — | 100.78 | 100.78 | — | — |
| 3/5/2008 | MW-13 | 107.78 | — | 7.00 | — | — | 100.78 | 100.78 | — | — |
| 4/23/2008 | MW-13 | 107.78 | — | 7.44 | — | — | 100.34 | 100.34 | — | — |
| 5/12/2008 | MW-13 | 107.78 | — | 6.75 | — | — | 101.03 | 101.03 | — | — |
| 6/27/2008 | MW-13 | 107.78 | — | 7.35 | — | — | 100.43 | 100.43 | — | — |
| 8/5/2008 | MW-13 | 107.78 | — | 7.24 | — | — | 100.54 | 100.54 | — | — |
| 9/10/2008 | MW-13 | 107.78 | — | 6.94 | — | — | 100.84 | 100.84 | — | — |
| 10/27/2008 | MW-13 | 107.78 | — | 6.66 | — | — | 101.12 | 101.12 | — | — |
| 11/4/2008 | MW-13 | 107.78 | — | 7.21 | — | — | 100.57 | 100.57 | — | — |
| 1/5/2009 | MW-13 | 107.78 | — | 7.31 | — | — | 100.47 | 100.47 | — | — |
| 2/27/2009 | MW-13 | 107.78 | — | 7.78 | — | — | 100.00 | 100.00 | — | — |
| 3/9/2009 | MW-13 | 107.78 | — | 7.64 | — | — | 100.14 | 100.14 | — | — |
| 4/20/2009 | MW-13 | 107.78 | — | 7.18 | — | — | 100.60 | 100.60 | — | — |
| 4/29/2009 | MW-13 | 107.78 | — | 7.20 | — | — | 100.58 | 100.58 | — | — |
| 5/6/2009 | MW-13 | 107.78 | — | 6.59 | — | — | 101.19 | 101.19 | — | — |
| 6/2/2009 | MW-13 | 107.78 | — | 7.49 | — | — | 100.29 | 100.29 | — | — |
| 7/6/2009 | MW-13 | 107.78 | — | 7.10 | — | — | 100.68 | 100.68 | — | — |
| 8/14/2009 | MW-13 | 107.78 | — | 7.25 | — | — | 100.53 | 100.53 | — | — |
| 9/28/2009 | MW-13 | 107.78 | — | 7.08 | — | — | 100.70 | 100.70 | — | — |
| 10/13/2009 | MW-13 | 107.78 | — | 7.41 | — | — | 100.37 | 100.37 | — | — |
| 11/23/2009 | MW-13 | 107.78 | — | 7.18 | — | — | 100.60 | 100.60 | — | — |
| 12/2/2009 | MW-13 | 107.78 | — | 7.35 | — | — | 100.43 | 100.43 | — | — |
| 1/12/2010 | MW-13 | 107.78 | — | 7.43 | — | — | 100.35 | 100.35 | — | — |
| 2/2/2010 | MW-13 | 107.78 | — | 7.28 | — | — | 100.50 | 100.50 | — | — |
| 3/2/2010 | MW-13 | 107.78 | — | 6.49 | — | — | 101.29 | 101.29 | — | — |
| 3/15/2010 | MW-13 | 107.78 | — | 5.99 | — | — | 101.79 | 101.79 | — | — |
| 4/15/2010 | MW-13 | 107.78 | — | 2.37 | — | — | 105.41 | 105.41 | — | — |
| 4/22/2010 | MW-13 | 107.78 | — | 7.32 | — | — | 100.46 | 100.46 | — | — |
| 5/3/2010 | MW-13 | 107.78 | — | 6.52 | — | — | 101.26 | 101.26 | — | — |
| 6/21/2010 | MW-13 | 107.78 | — | 7.31 | — | — | 100.47 | 100.47 | — | — |
| 7/2/2010 | MW-13 | 107.78 | — | 7.61 | — | — | 100.17 | 100.17 | — | — |
| 8/13/2010 | MW-13 | 107.78 | — | 7.17 | — | — | 100.61 | 100.61 | — | — |
| 9/1/2010 | MW-13 | 107.78 | — | 7.28 | — | — | 100.50 | 100.50 | — | — |
| 10/8/2010 | MW-13 | 107.78 | — | 7.21 | — | — | 100.57 | 100.57 | — | — |
| 11/23/2010 | MW-13 | 107.78 | — | 7.38 | — | — | 100.40 | 100.40 | — | — |
| 1/3/2011 | MW-13 | 107.78 | — | 7.09 | — | — | 100.69 | 100.69 | — | — |
| 1/25/2011 | MW-13 | 107.78 | — | 7.23 | — | — | 100.55 | 100.55 | — | — |
| 2/4/2011 | MW-13 | 107.78 | — | 7.14 | — | — | 100.64 | 100.64 | — | — |
| 3/26/2011 | MW-13 | 107.78 | — | 7.04 | — | — | 100.74 | 100.74 | — | — |
| 4/27/2011 | MW-13 | 107.78 | — | 7.09 | — | — | 100.69 | 100.69 | — | — |
| 5/9/2011 | MW-13 | 107.78 | — | 7.28 | — | — | 100.50 | 100.50 | — | — |
| 6/6/2011 | MW-13 | 107.78 | — | 7.32 | — | — | 100.46 | 100.46 | — | — |



Shell/Motiva 0007352

## Table 3
## Groundwater Elevation Summary
(Sorted by Well)
**Motiva Enterprises LLC Terminal #58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09980

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-14 | 107.74 | — | 5.72 | — | — | 102.02 | 102.02 | — | — |
| 2/21/2006 | MW-14 | 107.74 | — | 6.97 | — | — | 100.77 | 100.77 | — | — |
| 3/7/2006 | MW-14 | 107.74 | — | 6.58 | — | — | 101.16 | 101.16 | — | — |
| 5/18/2006 | MW-14 | 107.74 | — | 5.99 | — | — | 101.75 | 101.75 | — | — |
| 6/28/2006 | MW-14 | 107.74 | — | 5.95 | — | — | 101.79 | 101.79 | — | — |
| 8/16/2006 | MW-14 | 107.74 | — | 6.22 | — | — | 101.52 | 101.52 | — | — |
| 9/29/2006 | MW-14 | 107.74 | — | 6.38 | — | — | 101.36 | 101.36 | — | — |
| 10/20/2006 | MW-14 | 107.74 | — | 5.85 | — | — | 101.89 | 101.89 | — | — |
| 11/22/2006 | MW-14 | 107.74 | — | 6.23 | — | — | 101.51 | 101.51 | — | — |
| 12/15/2006 | MW-14 | 107.74 | — | 6.67 | — | — | 101.07 | 101.07 | — | — |
| 1/23/2007 | MW-14 | 107.74 | — | 6.63 | — | — | 101.11 | 101.11 | — | — |
| 2/2/2007 | MW-14 | 107.74 | — | 6.94 | — | — | 100.80 | 100.80 | — | — |
| 3/5/2007 | MW-14 | 107.74 | — | 5.79 | — | — | 101.95 | 101.95 | — | — |
| 5/1/2007 | MW-14 | 107.74 | — | 5.68 | — | — | 102.06 | 102.06 | — | — |
| 6/22/2007 | MW-14 | 107.74 | — | 6.54 | — | — | 101.20 | 101.20 | — | — |
| 6/26/2007 | MW-14 | 107.74 | — | 6.68 | — | — | 101.06 | 101.06 | — | — |
| 7/6/2007 | MW-14 | 107.74 | — | 5.93 | — | — | 101.81 | 101.81 | — | — |
| 8/1/2007 | MW-14 | 107.74 | — | 6.05 | — | — | 101.69 | 101.69 | — | — |
| 8/7/2007 | MW-14 | 107.74 | — | 6.25 | — | — | 101.49 | 101.49 | — | — |
| 9/14/2007 | MW-14 | 107.74 | — | 6.54 | — | — | 101.20 | 101.20 | — | — |
| 10/8/2007 | MW-14 | 107.74 | — | 6.95 | — | — | 100.79 | 100.79 | — | — |
| 11/20/2007 | MW-14 | 107.74 | — | 6.45 | — | — | 101.29 | 101.29 | — | — |
| 12/26/2007 | MW-14 | 107.74 | — | 6.01 | — | — | 101.73 | 101.73 | — | — |
| 1/2/2008 | MW-14 | 107.74 | — | 5.85 | — | — | 101.89 | 101.89 | — | — |
| 3/5/2008 | MW-14 | 107.74 | — | 6.19 | — | — | 101.55 | 101.55 | — | — |
| 4/23/2008 | MW-14 | 107.74 | — | 6.80 | — | — | 100.94 | 100.94 | — | — |
| 5/6/2008 | MW-14 | 107.74 | — | 5.57 | — | — | 102.17 | 102.17 | — | — |
| 5/12/2008 | MW-14 | 107.74 | — | 6.00 | — | — | 101.74 | 101.74 | — | — |
| 6/27/2008 | MW-14 | 107.74 | — | 6.53 | — | — | 101.21 | 101.21 | — | — |
| 8/5/2008 | MW-14 | 107.74 | — | 6.33 | — | — | 101.41 | 101.41 | — | — |
| 9/10/2008 | MW-14 | 107.74 | — | 5.68 | — | — | 102.06 | 102.06 | — | — |
| 10/27/2008 | MW-14 | 107.74 | — | 6.00 | — | — | 101.74 | 101.74 | — | — |
| 11/4/2008 | MW-14 | 107.74 | — | 6.25 | — | — | 101.49 | 101.49 | — | — |
| 1/5/2009 | MW-14 | 107.74 | — | 6.31 | — | — | 101.43 | 101.43 | — | — |
| 2/27/2009 | MW-14 | 107.74 | — | 6.94 | — | — | 100.80 | 100.80 | — | — |
| 3/9/2009 | MW-14 | 107.74 | — | 6.95 | — | — | 100.79 | 100.79 | — | — |
| 4/20/2009 | MW-14 | 107.74 | — | 6.39 | — | — | 101.35 | 101.35 | — | — |
| 4/29/2009 | MW-14 | 107.74 | — | 6.30 | — | — | 101.44 | 101.44 | — | — |
| 6/2/2009 | MW-14 | 107.74 | — | 6.75 | — | — | 100.99 | 100.99 | — | — |
| 7/6/2009 | MW-14 | 107.74 | — | 8.93 | — | — | 98.81 | 98.81 | — | — |
| 8/14/2009 | MW-14 | 107.74 | — | 6.33 | — | — | 101.41 | 101.41 | — | — |
| 9/28/2009 | MW-14 | 107.74 | — | 6.12 | — | — | 101.62 | 101.62 | — | — |
| 10/13/2009 | MW-14 | 107.74 | — | 6.53 | — | — | 101.21 | 101.21 | — | — |
| 11/23/2009 | MW-14 | 107.74 | — | 6.27 | — | — | 101.47 | 101.47 | — | — |
| 12/2/2009 | MW-14 | 107.74 | — | 6.68 | — | — | 101.06 | 101.06 | — | — |
| 1/12/2010 | MW-14 | 107.74 | — | 6.64 | — | — | 101.10 | 101.10 | — | — |
| 2/2/2010 | MW-14 | 107.74 | — | 6.43 | — | — | 101.31 | 101.31 | — | — |
| 3/2/2010 | MW-14 | 107.74 | — | 5.44 | — | — | 102.30 | 102.30 | — | — |
| 3/15/2010 | MW-14 | 107.74 | — | 5.09 | — | — | 102.65 | 102.65 | — | — |
| 4/15/2010 | MW-14 | 107.74 | — | 6.55 | — | — | 101.19 | 101.19 | — | — |
| 4/22/2010 | MW-14 | 107.74 | — | 6.94 | — | — | 100.80 | 100.80 | — | — |
| 5/3/2010 | MW-14 | 107.74 | — | 5.61 | — | — | 102.13 | 102.13 | — | — |
| 6/21/2010 | MW-14 | 107.74 | — | 6.56 | — | — | 101.18 | 101.18 | — | — |
| 7/2/2010 | MW-14 | 107.74 | — | 6.82 | — | — | 100.92 | 100.92 | — | — |
| 8/13/2010 | MW-14 | 107.74 | — | 6.86 | — | — | 100.88 | 100.88 | — | — |
| 9/1/2010 | MW-14 | 107.74 | — | 6.22 | — | — | 101.52 | 101.52 | — | — |
| 10/8/2010 | MW-14 | 107.74 | — | 6.05 | — | — | 101.69 | 101.69 | — | — |
| 11/23/2010 | MW-14 | 107.74 | — | 6.63 | — | — | 101.11 | 101.11 | — | — |
| 1/3/2011 | MW-14 | 107.74 | — | 6.06 | — | — | 101.68 | 101.68 | — | — |
| 1/25/2011 | MW-14 | 107.74 | — | 6.24 | — | — | 101.50 | 101.50 | — | — |
| 2/4/2011 | MW-14 | 107.74 | — | 6.03 | — | — | 101.71 | 101.71 | — | — |
| 3/26/2011 | MW-14 | 107.74 | — | 5.86 | — | — | 101.88 | 101.88 | — | — |
| 4/27/2011 | MW-14 | 107.74 | — | 5.92 | — | — | 101.82 | 101.82 | — | — |
| 5/9/2011 | MW-14 | 107.74 | — | 6.49 | — | — | 101.25 | 101.25 | — | — |
| 6/6/2011 | MW-14 | 107.74 | — | 6.71 | — | — | 101.03 | 101.03 | — | — |



Shell/Motiva 0007353

# Table 3
## Groundwater Elevation Summary
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-15 | 103.99 | — | 2.87 | — | — | 101.12 | 101.12 | — | — |
| 2/21/2006 | MW-15 | 103.99 | — | 2.94 | — | — | 101.05 | 101.05 | — | — |
| 3/7/2006 | MW-15 | 103.99 | — | 3.31 | — | — | 100.68 | 100.68 | — | — |
| 5/18/2006 | MW-15 | 103.99 | — | 3.10 | — | — | 100.89 | 100.89 | — | — |
| 6/28/2006 | MW-15 | 103.99 | — | 2.85 | — | — | 101.14 | 101.14 | — | — |
| 8/16/2006 | MW-15 | 103.99 | — | 3.02 | — | — | 100.97 | 100.97 | — | — |
| 9/29/2006 | MW-15 | 103.99 | — | 3.00 | — | — | 100.99 | 100.99 | — | — |
| 10/20/2006 | MW-15 | 103.99 | — | 2.93 | — | — | 101.06 | 101.06 | — | — |
| 11/22/2006 | MW-15 | 103.99 | — | 2.93 | — | — | 101.06 | 101.06 | — | — |
| 12/15/2006 | MW-15 | 103.99 | — | 3.29 | — | — | 100.70 | 100.70 | — | — |
| 2/2/2007 | MW-15 | 103.99 | — | 3.58 | — | — | 100.41 | 100.41 | — | — |
| 3/5/2007 | MW-15 | 103.99 | — | 3.34 | — | — | 100.65 | 100.65 | — | — |
| 5/1/2007 | MW-15 | 103.99 | — | 2.70 | — | — | 101.29 | 101.29 | — | — |
| 6/22/2007 | MW-15 | 103.99 | — | 3.25 | — | — | 100.74 | 100.74 | — | — |
| 6/26/2007 | MW-15 | 103.99 | — | 3.37 | — | — | 100.62 | 100.62 | — | — |
| 7/6/2007 | MW-15 | 103.99 | — | 3.38 | — | — | 100.61 | 100.61 | — | — |
| 8/1/2007 | MW-15 | 103.99 | — | 2.99 | — | — | 101.00 | 101.00 | — | — |
| 8/7/2007 | MW-15 | 103.99 | — | 3.09 | — | — | 100.90 | 100.90 | — | — |
| 9/14/2007 | MW-15 | 103.99 | — | 3.48 | — | — | 100.51 | 100.51 | — | — |
| 10/8/2007 | MW-15 | 103.99 | — | 3.79 | — | — | 100.20 | 100.20 | — | — |
| 11/20/2007 | MW-15 | 103.99 | — | 3.66 | — | — | 100.33 | 100.33 | — | — |
| 12/26/2007 | MW-15 | 103.99 | — | 3.27 | — | — | 100.72 | 100.72 | — | — |
| 1/2/2008 | MW-15 | 103.99 | — | 3.15 | — | — | 100.84 | 100.84 | — | — |
| 3/5/2008 | MW-15 | 103.99 | — | 3.16 | — | — | 100.83 | 100.83 | — | — |
| 4/23/2008 | MW-15 | 103.99 | — | 3.50 | — | — | 100.49 | 100.49 | — | — |
| 5/12/2008 | MW-15 | 103.99 | — | 3.22 | — | — | 100.77 | 100.77 | — | — |
| 6/27/2008 | MW-15 | 103.99 | — | 3.13 | — | — | 100.86 | 100.86 | — | — |
| 8/5/2008 | MW-15 | 103.99 | — | 3.49 | — | — | 100.50 | 100.50 | — | — |
| 9/10/2008 | MW-15 | 103.99 | — | 3.46 | — | — | 100.53 | 100.53 | — | — |
| 10/27/2008 | MW-15 | 103.99 | — | 3.39 | — | — | 100.60 | 100.60 | — | — |
| 11/4/2008 | MW-15 | 103.99 | — | NG | — | — | — | — | — | — |
| 1/5/2009 | MW-15 | 103.99 | — | 3.33 | — | — | 100.66 | 100.66 | — | — |
| 2/27/2009 | MW-15 | 103.99 | — | 3.95 | — | — | 100.04 | 100.04 | — | — |
| 3/9/2009 | MW-15 | 103.99 | — | 3.89 | — | — | 100.10 | 100.10 | — | — |
| 4/20/2009 | MW-15 | 103.99 | — | 3.57 | — | — | 100.42 | 100.42 | — | — |
| 4/29/2009 | MW-15 | 103.99 | — | 3.48 | — | — | 100.51 | 100.51 | — | — |
| 5/6/2009 | MW-15 | 103.99 | — | 3.28 | — | — | 100.71 | 100.71 | — | — |
| 6/2/2009 | MW-15 | 103.99 | — | 3.49 | — | — | 100.50 | 100.50 | — | — |
| 7/6/2009 | MW-15 | 103.99 | — | 2.90 | — | — | 101.09 | 101.09 | — | — |
| 8/14/2009 | MW-15 | 103.99 | — | 3.22 | — | — | 100.77 | 100.77 | — | — |
| 9/28/2009 | MW-15 | 103.99 | — | 3.54 | — | — | 100.45 | 100.45 | — | — |
| 10/13/2009 | MW-15 | 103.99 | — | 3.67 | — | — | 100.32 | 100.32 | — | — |
| 11/23/2009 | MW-15 | 103.99 | — | 3.39 | — | — | 100.60 | 100.60 | — | — |
| 12/2/2009 | MW-15 | 103.99 | — | 3.62 | — | — | 100.37 | 100.37 | — | — |
| 1/12/2010 | MW-15 | 103.99 | — | 3.39 | — | — | 100.60 | 100.60 | — | — |
| 2/2/2010 | MW-15 | 103.99 | — | 3.48 | — | — | 100.51 | 100.51 | — | — |
| 3/2/2010 | MW-15 | 103.99 | — | 2.45 | — | — | 101.54 | 101.54 | — | — |
| 3/15/2010 | MW-15 | 103.99 | — | 1.89 | — | — | 102.10 | 102.10 | — | — |
| 4/15/2010 | MW-15 | 103.99 | — | 2.94 | — | — | 101.05 | 101.05 | — | — |
| 4/22/2010 | MW-15 | 103.99 | — | 2.94 | — | — | 101.05 | 101.05 | — | — |
| 5/3/2010 | MW-15 | 103.99 | — | 2.48 | — | — | 101.51 | 101.51 | — | — |
| 6/21/2010 | MW-15 | 103.99 | — | 2.16 | — | — | 101.83 | 101.83 | — | — |
| 7/2/2010 | MW-15 | 103.99 | — | 3.35 | — | — | 100.64 | 100.64 | — | — |
| 8/13/2010 | MW-15 | 103.99 | — | 3.71 | — | — | 100.28 | 100.28 | — | — |
| 9/1/2010 | MW-15 | 103.99 | — | 3.18 | — | — | 100.81 | 100.81 | — | — |
| 10/8/2010 | MW-15 | 103.99 | — | 3.13 | — | — | 100.86 | 100.86 | — | — |
| 11/23/2010 | MW-15 | 103.99 | — | 3.53 | — | — | 100.46 | 100.46 | — | — |
| 1/3/2011 | MW-15 | 103.99 | — | 3.54 | — | — | 100.45 | 100.45 | — | — |
| 1/25/2011 | MW-15 | 103.99 | — | 3.23 | — | — | 100.76 | 100.76 | — | — |
| 2/4/2011 | MW-15 | 103.99 | — | 3.09 | — | — | 100.90 | 100.90 | — | — |
| 3/26/2011 | MW-15 | 103.99 | — | 2.62 | — | — | 101.37 | 101.37 | — | — |
| 4/27/2011 | MW-15 | 103.99 | — | 2.79 | — | — | 101.20 | 101.20 | — | — |
| 5/9/2011 | MW-15 | 103.99 | — | 3.04 | — | — | 100.95 | 100.95 | — | — |
| 6/6/2011 | MW-15 | 103.99 | — | 3.12 | — | — | 100.87 | 100.87 | — | — |



Shell/Motiva 0007354

## Table 3
## Groundwater Elevation Summary
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 97-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-16 | 104.03 | — | 2.94 | — | — | 101.09 | 101.09 | — | — |
| 2/21/2006 | MW-16 | 104.03 | — | 3.09 | — | — | 100.94 | 100.94 | — | — |
| 3/7/2006 | MW-16 | 104.03 | — | 3.18 | — | — | 100.85 | 100.85 | — | — |
| 5/18/2006 | MW-16 | 104.03 | — | 2.89 | — | — | 101.14 | 101.14 | — | — |
| 6/28/2006 | MW-16 | 104.03 | — | 2.89 | — | — | 101.14 | 101.14 | — | — |
| 8/16/2006 | MW-16 | 104.03 | — | 2.91 | — | — | 101.12 | 101.12 | — | — |
| 9/29/2006 | MW-16 | 104.03 | — | 2.98 | — | — | 101.05 | 101.05 | — | — |
| 10/20/2006 | MW-16 | 104.03 | — | 2.95 | — | — | 101.08 | 101.08 | — | — |
| 11/22/2006 | MW-16 | 104.03 | — | 2.91 | — | — | 101.12 | 101.12 | — | — |
| 12/15/2006 | MW-16 | 104.03 | — | 3.21 | — | — | 100.82 | 100.82 | — | — |
| 1/23/2007 | MW-16 | 104.03 | — | 3.36 | — | — | 100.67 | 100.67 | — | — |
| 2/2/2007 | MW-16 | 104.03 | — | 3.49 | — | — | 100.54 | 100.54 | — | — |
| 3/5/2007 | MW-16 | 104.03 | — | 3.13 | — | — | 100.90 | 100.90 | — | — |
| 5/1/2007 | MW-16 | 104.03 | — | 2.64 | — | — | 101.39 | 101.39 | — | — |
| 6/22/2007 | MW-16 | 104.03 | — | 3.13 | — | — | 100.90 | 100.90 | — | — |
| 6/26/2007 | MW-16 | 104.03 | — | 2.17 | — | — | 101.86 | 101.86 | — | — |
| 7/6/2007 | MW-16 | 104.03 | — | 3.15 | — | — | 100.88 | 100.88 | — | — |
| 8/1/2007 | MW-16 | 104.03 | — | NG | — | — | — | — | — | — |
| 8/7/2007 | MW-16 | 104.03 | — | NG | — | — | — | — | — | — |
| 9/14/2007 | MW-16 | 104.03 | — | NG | — | — | — | — | — | — |
| 10/8/2007 | MW-16 | 104.03 | — | 3.58 | — | — | 100.45 | 100.45 | — | — |
| 11/20/2007 | MW-16 | 104.03 | — | 3.51 | — | — | 100.52 | 100.52 | — | — |
| 12/26/2007 | MW-16 | 104.03 | — | 3.16 | — | — | 100.87 | 100.87 | — | — |
| 1/2/2008 | MW-16 | 104.03 | — | 3.05 | — | — | 100.98 | 100.98 | — | — |
| 3/5/2008 | MW-16 | 104.03 | — | 3.09 | — | — | 100.94 | 100.94 | — | — |
| 4/23/2008 | MW-16 | 104.03 | — | 3.42 | — | — | 100.61 | 100.61 | — | — |
| 5/12/2008 | MW-16 | 104.03 | — | 3.00 | — | — | 101.03 | 101.03 | — | — |
| 6/27/2008 | MW-16 | 104.03 | — | 3.03 | — | — | 101.00 | 101.00 | — | — |
| 8/5/2008 | MW-16 | 104.03 | — | 3.29 | — | — | 100.74 | 100.74 | — | — |
| 9/10/2008 | MW-16 | 104.03 | — | 3.18 | — | — | 100.85 | 100.85 | — | — |
| 10/27/2008 | MW-16 | 104.03 | — | 3.19 | — | — | 100.84 | 100.84 | — | — |
| 11/4/2008 | MW-16 | 104.03 | — | 4.00 | — | — | 100.03 | 100.03 | — | — |
| 1/5/2009 | MW-16 | 104.03 | — | 3.18 | — | — | 100.85 | 100.85 | — | — |
| 2/27/2009 | MW-16 | 104.03 | — | 3.79 | — | — | 100.24 | 100.24 | — | — |
| 3/9/2009 | MW-16 | 104.03 | — | 3.81 | — | — | 100.22 | 100.22 | — | — |
| 4/20/2009 | MW-16 | 104.03 | — | 3.44 | — | — | 100.59 | 100.59 | — | — |
| 4/29/2009 | MW-16 | 104.03 | — | 3.31 | — | — | 100.72 | 100.72 | — | — |
| 5/6/2009 | MW-16 | 104.03 | — | 3.12 | — | — | 100.91 | 100.91 | — | — |
| 6/2/2009 | MW-16 | 104.03 | — | 3.39 | — | — | 100.64 | 100.64 | — | — |
| 7/6/2009 | MW-16 | 104.03 | — | NG | — | — | — | — | — | — |
| 8/14/2009 | MW-16 | 104.03 | — | NG | — | — | — | — | — | — |
| 9/28/2009 | MW-16 | 104.03 | — | 2.98 | — | — | 101.05 | 101.05 | — | — |
| 10/13/2009 | MW-16 | 104.03 | — | 3.49 | — | — | 100.54 | 100.54 | — | — |
| 11/23/2009 | MW-16 | 104.03 | — | NG | — | — | — | — | — | — |
| 12/2/2009 | MW-16 | 104.03 | — | 3.46 | — | — | 100.57 | 100.57 | — | — |
| 1/12/2010 | MW-16 | 104.03 | — | 3.32 | — | — | 100.71 | 100.71 | — | — |
| 2/2/2010 | MW-16 | 104.03 | — | 3.28 | — | — | 100.75 | 100.75 | — | — |
| 3/2/2010 | MW-16 | 104.03 | — | 2.12 | — | — | 101.91 | 101.91 | — | — |
| 3/15/2010 | MW-16 | 104.03 | — | NG | — | — | — | — | — | Obstruction |
| 4/15/2010 | MW-16 | 104.03 | — | 2.24 | — | — | 101.79 | 101.79 | — | — |
| 4/22/2010 | MW-16 | 104.03 | — | 2.86 | — | — | 101.17 | 101.17 | — | — |
| 5/3/2010 | MW-16 | 104.03 | — | 1.86 | — | — | 102.17 | 102.17 | — | — |
| 6/21/2010 | MW-16 | 104.03 | — | 3.04 | — | — | 100.99 | 100.99 | — | — |
| 7/2/2010 | MW-16 | 104.03 | — | 3.16 | — | — | 100.87 | 100.87 | — | — |
| 8/13/2010 | MW-16 | 104.03 | — | 3.42 | — | — | 100.61 | 100.61 | — | — |
| 9/1/2010 | MW-16 | 104.03 | — | 3.08 | — | — | 100.95 | 100.95 | — | — |
| 10/8/2010 | MW-16 | 104.03 | — | 3.02 | — | — | 101.01 | 101.01 | — | — |
| 11/23/2010 | MW-16 | 104.03 | — | 3.44 | — | — | 100.59 | 100.59 | — | — |
| 1/3/2011 | MW-16 | 104.03 | — | 3.52 | — | — | 100.51 | 100.51 | — | — |
| 1/25/2011 | MW-16 | 104.03 | — | 3.16 | — | — | 100.87 | 100.87 | — | — |
| 2/4/2011 | MW-16 | 104.03 | — | 2.92 | — | — | 101.11 | 101.11 | — | — |
| 3/26/2011 | MW-16 | 104.03 | — | 2.61 | — | — | 101.42 | 101.42 | — | — |
| 4/27/2011 | MW-16 | 104.03 | — | 2.74 | — | — | 101.29 | 101.29 | — | — |
| 5/9/2011 | MW-16 | 104.03 | — | 3.02 | — | — | 101.01 | 101.01 | — | — |
| 6/6/2011 | MW-16 | 104.03 | — | 3.13 | — | — | 100.90 | 100.90 | — | — |



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| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-17 | 104.06 | — | 2.25 | — | — | 101.81 | 101.81 | — | — |
| 2/21/2006 | MW-17 | 104.06 | — | 3.11 | — | — | 100.95 | 100.95 | — | — |
| 3/7/2006 | MW-17 | 104.06 | — | 3.44 | — | — | 100.62 | 100.62 | — | — |
| 5/18/2006 | MW-17 | 104.06 | — | 3.14 | — | — | 100.92 | 100.92 | — | — |
| 6/28/2006 | MW-17 | 104.06 | — | 2.96 | — | — | 101.10 | 101.10 | — | — |
| 8/16/2006 | MW-17 | 104.06 | — | 3.12 | — | — | 100.94 | 100.94 | — | — |
| 9/29/2006 | MW-17 | 104.06 | — | 3.15 | — | — | 100.91 | 100.91 | — | — |
| 10/20/2006 | MW-17 | 104.06 | — | 3.04 | — | — | 101.02 | 101.02 | — | — |
| 11/22/2006 | MW-17 | 104.06 | — | 3.04 | — | — | 101.02 | 101.02 | — | — |
| 12/15/2006 | MW-17 | 104.06 | — | 3.60 | — | — | 100.46 | 100.46 | — | — |
| 1/23/2007 | MW-17 | 104.06 | — | 3.68 | — | — | 100.38 | 100.38 | — | — |
| 2/2/2007 | MW-17 | 104.06 | — | 3.90 | — | — | 100.16 | 100.16 | — | — |
| 3/5/2007 | MW-17 | 104.06 | — | 3.28 | — | — | 100.78 | 100.78 | — | — |
| 5/1/2007 | MW-17 | 104.06 | — | 2.73 | — | — | 101.33 | 101.33 | — | — |
| 6/22/2007 | MW-17 | 104.06 | — | 3.38 | — | — | 100.68 | 100.68 | — | — |
| 6/26/2007 | MW-17 | 104.06 | — | 3.54 | — | — | 100.52 | 100.52 | — | — |
| 7/6/2007 | MW-17 | 104.06 | — | 3.48 | — | — | 100.58 | 100.58 | — | — |
| 8/1/2007 | MW-17 | 104.06 | — | 2.99 | — | — | 101.07 | 101.07 | — | — |
| 8/7/2007 | MW-17 | 104.06 | — | 3.15 | — | — | 100.91 | 100.91 | — | — |
| 9/14/2007 | MW-17 | 104.06 | — | 3.65 | — | — | 100.41 | 100.41 | — | — |
| 10/8/2007 | MW-17 | 104.06 | — | 3.97 | — | — | 100.09 | 100.09 | — | — |
| 11/20/2007 | MW-17 | 104.06 | — | 3.72 | — | — | 100.34 | 100.34 | — | — |
| 12/26/2007 | MW-17 | 104.06 | — | 3.27 | — | — | 100.79 | 100.79 | — | — |
| 1/2/2008 | MW-17 | 104.06 | — | 3.11 | — | — | 100.95 | 100.95 | — | — |
| 3/5/2008 | MW-17 | 104.06 | — | 3.19 | — | — | 100.87 | 100.87 | — | — |
| 4/23/2008 | MW-17 | 104.06 | — | 3.70 | — | — | 100.36 | 100.36 | — | — |
| 5/12/2008 | MW-17 | 104.06 | — | 3.20 | — | — | 100.86 | 100.86 | — | — |
| 6/27/2008 | MW-17 | 104.06 | — | 3.23 | — | — | 100.83 | 100.83 | — | — |
| 8/5/2008 | MW-17 | 104.06 | — | 3.41 | — | — | 100.65 | 100.65 | — | — |
| 9/10/2008 | MW-17 | 104.06 | — | 3.00 | — | — | 101.06 | 101.06 | — | — |
| 10/27/2008 | MW-17 | 104.06 | — | 3.66 | — | — | 100.40 | 100.40 | — | — |
| 11/4/2008 | MW-17 | 104.06 | — | 3.53 | — | — | 100.53 | 100.53 | — | — |
| 1/5/2009 | MW-17 | 104.06 | — | 3.31 | — | — | 100.75 | 100.75 | — | — |
| 2/27/2009 | MW-17 | 104.06 | — | 4.21 | — | — | 99.85 | 99.85 | — | — |
| 3/9/2009 | MW-17 | 104.06 | — | 4.16 | — | — | 99.90 | 99.90 | — | — |
| 4/20/2009 | MW-17 | 104.06 | — | 3.63 | — | — | 100.43 | 100.43 | — | — |
| 4/29/2009 | MW-17 | 104.06 | — | 3.35 | — | — | 100.71 | 100.71 | — | — |
| 5/6/2009 | MW-17 | 104.06 | — | 3.23 | — | — | 100.83 | 100.83 | — | — |
| 6/2/2009 | MW-17 | 104.06 | — | 3.65 | — | — | 100.41 | 100.41 | — | — |
| 7/6/2009 | MW-17 | 104.06 | — | 2.90 | — | — | 101.16 | 101.16 | — | — |
| 8/14/2009 | MW-17 | 104.06 | — | 3.12 | — | — | 100.94 | 100.94 | — | — |
| 9/28/2009 | MW-17 | 104.06 | — | 3.64 | — | — | 100.42 | 100.42 | — | — |
| 10/13/2009 | MW-17 | 104.06 | — | 3.68 | — | — | 100.38 | 100.38 | — | — |
| 11/23/2009 | MW-17 | 104.06 | — | 4.38 | — | — | 99.68 | 99.68 | — | — |
| 12/2/2009 | MW-17 | 104.06 | — | 3.65 | — | — | 100.41 | 100.41 | — | — |
| 1/12/2010 | MW-17 | 104.06 | — | 3.59 | — | — | 100.47 | 100.47 | — | — |
| 2/2/2010 | MW-17 | 104.06 | — | 3.46 | — | — | 100.60 | 100.60 | — | — |
| 3/2/2010 | MW-17 | 104.06 | — | 2.27 | — | — | 101.79 | 101.79 | — | — |
| 3/15/2010 | MW-17 | 104.06 | — | 1.66 | — | — | 102.40 | 102.40 | — | — |
| 4/15/2010 | MW-17 | 104.06 | — | 3.17 | — | — | 100.89 | 100.89 | — | — |
| 4/22/2010 | MW-17 | 104.06 | — | 2.58 | — | — | 101.48 | 101.48 | — | — |
| 5/3/2010 | MW-17 | 104.06 | — | NG | — | — | — | — | — | — |
| 6/21/2010 | MW-17 | 104.06 | — | 2.66 | — | — | 101.40 | 101.40 | — | — |
| 7/2/2010 | MW-17 | 104.06 | — | 2.88 | — | — | 101.18 | 101.18 | — | — |
| 8/13/2010 | MW-17 | 104.06 | — | 3.25 | — | — | 100.81 | 100.81 | — | — |
| 9/1/2010 | MW-17 | 104.06 | — | 2.61 | — | — | 101.45 | 101.45 | — | — |
| 10/8/2010 | MW-17 | 104.06 | — | 2.38 | — | — | 101.68 | 101.68 | — | — |
| 11/23/2010 | MW-17 | 104.06 | — | 3.03 | — | — | 101.03 | 101.03 | — | — |
| 1/3/2011 | MW-17 | 104.06 | — | 3.13 | — | — | 100.93 | 100.93 | — | — |
| 1/25/2011 | MW-17 | 104.06 | — | 2.57 | — | — | 101.49 | 101.49 | — | — |
| 2/4/2011 | MW-17 | 104.06 | — | 2.47 | — | — | 101.59 | 101.59 | — | — |
| 3/26/2011 | MW-17 | 104.06 | — | 2.08 | — | — | 101.98 | 101.98 | — | — |
| 4/27/2011 | MW-17 | 104.06 | — | 2.21 | — | — | 101.85 | 101.85 | — | — |
| 5/9/2011 | MW-17 | 104.06 | — | 2.55 | — | — | 101.51 | 101.51 | — | — |
| 6/6/2011 | MW-17 | 104.06 | — | 2.65 | — | — | 101.41 | 101.41 | — | — |



Shell/Motiva 0007356

## Table 3
## Groundwater Elevation Summary
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-18 | 104.05 | — | 2.56 | — | — | 101.49 | 101.49 | — | — |
| 2/21/2006 | MW-18 | 104.05 | — | 3.12 | — | — | 100.93 | 100.93 | — | — |
| 3/7/2006 | MW-18 | 104.05 | — | 3.41 | — | — | 100.64 | 100.64 | — | — |
| 5/18/2006 | MW-18 | 104.05 | — | 3.12 | — | — | 100.93 | 100.93 | — | — |
| 6/28/2006 | MW-18 | 104.05 | — | 2.96 | — | — | 101.09 | 101.09 | — | — |
| 8/16/2006 | MW-18 | 104.05 | — | 3.11 | — | — | 100.94 | 100.94 | — | — |
| 9/29/2006 | MW-18 | 104.05 | — | 3.15 | — | — | 100.90 | 100.90 | — | — |
| 10/20/2006 | MW-18 | 104.05 | — | 3.04 | — | — | 101.01 | 101.01 | — | — |
| 11/22/2006 | MW-18 | 104.05 | — | 3.04 | — | — | 101.01 | 101.01 | — | — |
| 12/15/2006 | MW-18 | 104.05 | — | 3.57 | — | — | 100.48 | 100.48 | — | — |
| 1/23/2007 | MW-18 | 104.05 | — | 3.64 | — | — | 100.41 | 100.41 | — | — |
| 2/2/2007 | MW-18 | 104.05 | — | 4.04 | — | — | 100.01 | 100.01 | — | — |
| 3/5/2007 | MW-18 | 104.05 | — | 3.24 | — | — | 100.81 | 100.81 | — | — |
| 5/1/2007 | MW-18 | 104.05 | — | 2.73 | — | — | 101.32 | 101.32 | — | — |
| 6/22/2007 | MW-18 | 104.05 | — | 3.32 | — | — | 100.73 | 100.73 | — | — |
| 6/26/2007 | MW-18 | 104.05 | — | 3.47 | — | — | 100.58 | 100.58 | — | — |
| 7/6/2007 | MW-18 | 104.05 | — | 3.43 | — | — | 100.62 | 100.62 | — | — |
| 8/1/2007 | MW-18 | 104.05 | — | 2.98 | — | — | 101.07 | 101.07 | — | — |
| 8/7/2007 | MW-18 | 104.05 | — | 3.13 | — | — | 100.92 | 100.92 | — | — |
| 9/14/2007 | MW-18 | 104.05 | — | NG | — | — | — | — | — | — |
| 10/8/2007 | MW-18 | 104.05 | — | 4.11 | — | — | 99.94 | 99.94 | — | — |
| 11/20/2007 | MW-18 | 104.05 | — | 3.69 | — | — | 100.36 | 100.36 | — | — |
| 12/26/2007 | MW-18 | 104.05 | — | 3.21 | — | — | 100.84 | 100.84 | — | — |
| 1/2/2008 | MW-18 | 104.05 | — | 3.10 | — | — | 100.95 | 100.95 | — | — |
| 3/5/2008 | MW-18 | 104.05 | — | 3.17 | — | — | 100.88 | 100.88 | — | — |
| 4/23/2008 | MW-18 | 104.05 | — | 3.63 | — | — | 100.42 | 100.42 | — | — |
| 5/12/2008 | MW-18 | 104.05 | — | 3.17 | — | — | 100.88 | 100.88 | — | — |
| 6/27/2008 | MW-18 | 104.05 | — | 3.17 | — | — | 100.88 | 100.88 | — | — |
| 8/5/2008 | MW-18 | 104.05 | — | 3.35 | — | — | 100.70 | 100.70 | — | — |
| 9/10/2008 | MW-18 | 104.05 | — | 3.06 | — | — | 100.99 | 100.99 | — | — |
| 10/27/2008 | MW-18 | 104.05 | — | 3.54 | — | — | 100.51 | 100.51 | — | — |
| 11/4/2008 | MW-18 | 104.05 | — | 3.45 | — | — | 100.60 | 100.60 | — | — |
| 1/5/2009 | MW-18 | 104.05 | — | 3.30 | — | — | 100.75 | 100.75 | — | — |
| 2/27/2009 | MW-18 | 104.05 | — | 4.28 | — | — | 99.77 | 99.77 | — | — |
| 3/9/2009 | MW-18 | 104.05 | — | 4.21 | — | — | 99.84 | 99.84 | — | — |
| 4/20/2009 | MW-18 | 104.05 | — | 3.58 | — | — | 100.47 | 100.47 | — | — |
| 4/29/2009 | MW-18 | 104.05 | — | 3.31 | — | — | 100.74 | 100.74 | — | — |
| 5/6/2009 | MW-18 | 104.05 | — | 3.24 | — | — | 100.81 | 100.81 | — | — |
| 6/2/2009 | MW-18 | 104.05 | — | 3.64 | — | — | 100.41 | 100.41 | — | — |
| 7/6/2009 | MW-18 | 104.05 | — | 2.87 | — | — | 101.18 | 101.18 | — | — |
| 8/14/2009 | MW-18 | 104.05 | — | 3.14 | — | — | 100.91 | 100.91 | — | — |
| 9/28/2009 | MW-18 | 104.05 | — | 3.62 | — | — | 100.43 | 100.43 | — | — |
| 10/13/2009 | MW-18 | 104.05 | — | 3.69 | — | — | 100.36 | 100.36 | — | — |
| 11/23/2009 | MW-18 | 104.05 | — | 3.34 | — | — | 100.71 | 100.71 | — | — |
| 12/2/2009 | MW-18 | 104.05 | — | 3.63 | — | — | 100.42 | 100.42 | — | — |
| 1/12/2010 | MW-18 | 104.05 | — | 3.56 | — | — | 100.49 | 100.49 | — | — |
| 2/2/2010 | MW-18 | 104.05 | — | 3.43 | — | — | 100.62 | 100.62 | — | — |
| 3/2/2010 | MW-18 | 104.05 | — | 2.26 | — | — | 101.79 | 101.79 | — | — |
| 3/15/2010 | MW-18 | 104.05 | — | 1.61 | — | — | 102.44 | 102.44 | — | — |
| 4/15/2010 | MW-18 | 104.05 | — | 3.01 | — | — | 101.04 | 101.04 | — | — |
| 4/22/2010 | MW-18 | 104.05 | — | 3.06 | — | — | 100.99 | 100.99 | — | — |
| 5/3/2010 | MW-18 | 104.05 | — | 2.12 | — | — | 101.93 | 101.93 | — | — |
| 6/21/2010 | MW-18 | 104.05 | — | 3.14 | — | — | 100.91 | 100.91 | — | — |
| 7/2/2010 | MW-18 | 104.05 | — | 3.35 | — | — | 100.70 | 100.70 | — | — |
| 8/13/2010 | MW-18 | 104.05 | — | 3.80 | — | — | 100.25 | 100.25 | — | — |
| 9/1/2010 | MW-18 | 104.05 | — | 3.05 | — | — | 101.00 | 101.00 | — | — |
| 10/8/2010 | MW-18 | 104.05 | — | 2.87 | — | — | 101.18 | 101.18 | — | — |
| 11/23/2010 | MW-18 | 104.05 | — | 3.51 | — | — | 100.54 | 100.54 | — | — |
| 1/3/2011 | MW-18 | 104.05 | — | 3.64 | — | — | 100.41 | 100.41 | — | — |
| 1/25/2011 | MW-18 | 104.05 | — | 3.06 | — | — | 100.99 | 100.99 | — | — |
| 2/4/2011 | MW-18 | 104.05 | — | 2.93 | — | — | 101.12 | 101.12 | — | — |
| 3/26/2011 | MW-18 | 104.05 | — | 2.54 | — | — | 101.51 | 101.51 | — | — |
| 4/27/2011 | MW-18 | 104.05 | — | 2.70 | — | — | 101.35 | 101.35 | — | — |
| 5/9/2011 | MW-18 | 104.05 | — | 3.02 | — | — | 101.03 | 101.03 | — | — |
| 6/6/2011 | MW-18 | 104.05 | — | 3.11 | — | — | 100.94 | 100.94 | — | — |



Shell/Motiva 0007357

## Table 3
## Groundwater Elevation Summary
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-19 | 104.20 | — | 3.10 | — | — | 101.10 | 101.10 | — | — |
| 2/21/2006 | MW-19 | 104.20 | — | 3.61 | — | — | 100.59 | 100.59 | — | — |
| 3/7/2006 | MW-19 | 104.20 | — | 4.29 | — | — | 99.91 | 99.91 | — | — |
| 5/18/2006 | MW-19 | 104.20 | — | 3.69 | — | — | 100.51 | 100.51 | — | — |
| 6/28/2006 | MW-19 | 104.20 | — | 3.53 | — | — | 100.67 | 100.67 | — | — |
| 8/16/2006 | MW-19 | 104.20 | 3.80 | 3.81 | 0.01 | 100.40 | 100.39 | 100.40 | — | — |
| 9/29/2006 | MW-19 | 104.20 | — | 3.70 | — | — | 100.50 | 100.50 | — | — |
| 10/20/2006 | MW-19 | 104.20 | — | 3.53 | — | — | 100.67 | 100.67 | — | — |
| 11/22/2006 | MW-19 | 104.20 | — | 3.58 | — | — | 100.62 | 100.62 | — | — |
| 12/15/2006 | MW-19 | 104.20 | — | 4.36 | — | — | 99.84 | 99.84 | — | — |
| 1/23/2007 | MW-19 | 104.20 | — | 4.64 | — | — | 99.56 | 99.56 | — | — |
| 2/2/2007 | MW-19 | 104.20 | — | 4.73 | — | — | 99.47 | 99.47 | — | — |
| 3/5/2007 | MW-19 | 104.20 | — | 4.27 | — | — | 99.93 | 99.93 | — | — |
| 5/1/2007 | MW-19 | 104.20 | — | 3.29 | — | — | 100.91 | 100.91 | — | — |
| 6/22/2007 | MW-19 | 104.20 | — | 3.99 | — | — | 100.21 | 100.21 | — | — |
| 6/26/2007 | MW-19 | 104.20 | — | 4.29 | — | — | 99.91 | 99.91 | — | — |
| 7/6/2007 | MW-19 | 104.20 | — | 4.24 | — | — | 99.96 | 99.96 | — | — |
| 8/1/2007 | MW-19 | 104.20 | — | 3.55 | — | — | 100.65 | 100.65 | — | — |
| 8/7/2007 | MW-19 | 104.20 | — | 3.71 | — | — | 100.49 | 100.49 | — | — |
| 9/14/2007 | MW-19 | 104.20 | — | NG | — | — | — | — | — | — |
| 10/8/2007 | MW-19 | 104.20 | 4.56 | 4.61 | 0.05 | 99.64 | 99.59 | 99.63 | — | — |
| 11/20/2007 | MW-19 | 104.20 | — | 4.42 | — | — | 99.78 | 99.78 | — | — |
| 12/26/2007 | MW-19 | 104.20 | — | 3.85 | — | — | 100.35 | 100.35 | — | — |
| 12/26/2007 | MW-19 | 104.20 | — | NG | — | — | — | — | — | — |
| 3/5/2008 | MW-19 | 104.20 | — | 3.59 | — | — | 100.61 | 100.61 | — | — |
| 4/23/2008 | MW-19 | 104.20 | — | 4.30 | — | — | 99.90 | 99.90 | — | — |
| 5/12/2008 | MW-19 | 104.20 | — | 3.57 | — | — | 100.63 | 100.63 | — | — |
| 6/27/2008 | MW-19 | 104.20 | — | 3.63 | — | — | 100.57 | 100.57 | — | — |
| 8/5/2008 | MW-19 | 104.20 | — | 3.39 | — | — | 100.81 | 100.81 | — | — |
| 9/10/2008 | MW-19 | 104.20 | — | 3.59 | — | — | 100.61 | 100.61 | — | — |
| 10/27/2008 | MW-19 | 104.20 | — | 3.98 | — | — | 100.22 | 100.22 | — | — |
| 11/4/2008 | MW-19 | 104.20 | — | 4.38 | — | — | 99.82 | 99.82 | — | — |
| 1/5/2009 | MW-19 | 104.20 | — | 3.80 | — | — | 100.40 | 100.40 | — | — |
| 2/27/2009 | MW-19 | 104.20 | — | 4.91 | — | — | 99.29 | 99.29 | — | — |
| 3/9/2009 | MW-19 | 104.20 | — | 4.69 | — | — | 99.51 | 99.51 | — | — |
| 4/20/2009 | MW-19 | 104.20 | — | 4.29 | — | — | 99.91 | 99.91 | — | — |
| 4/29/2009 | MW-19 | 104.20 | — | 3.98 | — | — | 100.22 | 100.22 | — | — |
| 5/6/2009 | MW-19 | 104.20 | — | 3.69 | — | — | 100.51 | 100.51 | — | — |
| 6/2/2009 | MW-19 | 104.20 | — | 4.25 | — | — | 99.95 | 99.95 | — | — |
| 7/6/2009 | MW-19 | 104.20 | — | 3.28 | — | — | 100.92 | 100.92 | — | — |
| 8/14/2009 | MW-19 | 104.20 | — | 3.49 | — | — | 100.71 | 100.71 | — | — |
| 9/28/2009 | MW-19 | 104.20 | — | 4.09 | — | — | 100.11 | 100.11 | — | — |
| 10/13/2009 | MW-19 | 104.20 | — | 4.33 | — | — | 99.87 | 99.87 | — | — |
| 11/23/2009 | MW-19 | 104.20 | — | 3.76 | — | — | 100.44 | 100.44 | — | — |
| 12/2/2009 | MW-19 | 104.20 | — | 4.36 | — | — | 99.84 | 99.84 | — | — |
| 1/12/2010 | MW-19 | 104.20 | — | 4.29 | — | — | 99.91 | 99.91 | — | — |
| 2/2/2010 | MW-19 | 104.20 | — | 4.34 | — | — | 99.86 | 99.86 | — | — |
| 3/2/2010 | MW-19 | 104.20 | — | 2.72 | — | — | 101.48 | 101.48 | — | — |
| 3/15/2010 | MW-19 | 104.20 | — | 1.92 | — | — | 102.28 | 102.28 | — | — |
| 4/15/2010 | MW-19 | 104.20 | — | 3.57 | — | — | 100.63 | 100.63 | — | — |
| 4/22/2010 | MW-19 | 104.20 | — | 3.58 | — | — | 100.62 | 100.62 | — | — |
| 5/3/2010 | MW-19 | 104.20 | — | 2.98 | — | — | 101.22 | 101.22 | — | — |
| 6/21/2010 | MW-19 | 104.20 | — | NG | — | — | — | — | — | — |
| 7/2/2010 | MW-19 | 104.20 | — | NG | — | — | — | — | — | — |
| 8/13/2010 | MW-19 | 104.20 | — | — | — | — | — | — | — | — |
| 9/1/2010 | MW-19 | 104.20 | — | — | — | — | — | — | — | — |
| 10/8/2010 | MW-19 | 104.20 | — | — | — | — | — | — | — | — |
| 11/23/2010 | MW-19 | 104.20 | — | — | — | — | — | — | — | — |
| 1/3/2011 | MW-19 | 104.20 | — | — | — | — | — | — | — | — |
| 1/25/2011 | MW-19 | 104.20 | — | — | — | — | — | — | — | — |
| 2/4/2011 | MW-19 | 104.20 | — | NG | — | — | — | — | — | — |
| 4/27/2011 | MW-19 | 104.20 | — | | — | — | — | — | — | — |
| 5/9/2011 | MW-19 | 104.20 | — | NG | — | — | — | — | — | — |
| 6/6/2011 | MW-19 | 104.20 | — | NG | — | — | — | — | — | — |



Shell/Motiva 0007358

# Table 3
## Groundwater Elevation Summary
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-20 | 103.90 | — | 2.54 | — | — | 101.36 | 101.36 | — | — |
| 2/21/2006 | MW-20 | 103.90 | — | 2.80 | — | — | 101.10 | 101.10 | — | — |
| 3/7/2006 | MW-20 | 103.90 | — | 3.14 | — | — | 100.76 | 100.76 | — | — |
| 5/18/2006 | MW-20 | 103.90 | — | 2.93 | — | — | 100.97 | 100.97 | — | — |
| 6/28/2006 | MW-20 | 103.90 | — | 2.69 | — | — | 101.21 | 101.21 | — | — |
| 8/16/2006 | MW-20 | 103.90 | — | NG | — | — | — | — | — | — |
| 9/29/2006 | MW-20 | 103.90 | — | 2.87 | — | — | 101.03 | 101.03 | — | — |
| 10/20/2006 | MW-20 | 103.90 | — | 2.55 | — | — | 101.35 | 101.35 | — | — |
| 11/22/2006 | MW-20 | 103.90 | — | 2.79 | — | — | 101.11 | 101.11 | — | — |
| 12/15/2006 | MW-20 | 103.90 | — | 3.10 | — | — | 100.80 | 100.80 | — | — |
| 2/2/2007 | MW-20 | 103.90 | — | 3.46 | — | — | 100.44 | 100.44 | — | — |
| 3/5/2007 | MW-20 | 103.90 | — | 3.24 | — | — | 100.66 | 100.66 | — | — |
| 5/1/2007 | MW-20 | 103.90 | 2.55 | 2.56 | 0.01 | 101.35 | 101.34 | 101.35 | — | — |
| 6/22/2007 | MW-20 | 103.90 | — | 3.08 | — | — | 100.82 | 100.82 | — | — |
| 6/26/2007 | MW-20 | 103.90 | — | 3.22 | — | — | 100.68 | 100.68 | — | — |
| 7/6/2007 | MW-20 | 103.90 | — | 3.38 | — | — | 100.52 | 100.52 | — | — |
| 8/1/2007 | MW-20 | 103.90 | — | 2.89 | — | — | 101.01 | 101.01 | — | — |
| 8/7/2007 | MW-20 | 103.90 | — | 2.99 | — | — | 100.91 | 100.91 | — | — |
| 9/14/2007 | MW-20 | 103.90 | — | 2.36 | — | — | 101.54 | 101.54 | — | — |
| 10/8/2007 | MW-20 | 103.90 | — | 3.65 | — | — | 100.25 | 100.25 | — | — |
| 11/20/2007 | MW-20 | 103.90 | — | 3.59 | — | — | 100.31 | 100.31 | — | — |
| 12/26/2007 | MW-20 | 103.90 | — | 3.20 | — | — | 100.70 | 100.70 | — | — |
| 1/2/2008 | MW-20 | 103.90 | — | 3.05 | — | — | 100.85 | 100.85 | — | — |
| 3/5/2008 | MW-20 | 103.90 | — | NG | — | — | — | — | — | — |
| 4/23/2008 | MW-20 | 103.90 | — | 3.34 | — | — | 100.56 | 100.56 | — | — |
| 5/12/2008 | MW-20 | 103.90 | — | 3.10 | — | — | 100.80 | 100.80 | — | — |
| 6/27/2008 | MW-20 | 103.90 | — | 3.10 | — | — | 100.80 | 100.80 | — | — |
| 8/5/2008 | MW-20 | 103.90 | — | 3.33 | — | — | 100.57 | 100.57 | — | — |
| 9/10/2008 | MW-20 | 103.90 | — | 3.39 | — | — | 100.51 | 100.51 | — | — |
| 10/27/2008 | MW-20 | 103.90 | — | 3.25 | — | — | 100.65 | 100.65 | — | — |
| 11/4/2008 | MW-20 | 103.90 | — | 3.35 | — | — | 100.55 | 100.55 | — | — |
| 1/5/2009 | MW-20 | 103.90 | — | 3.15 | — | — | 100.75 | 100.75 | — | — |
| 2/27/2009 | MW-20 | 103.90 | — | 3.76 | — | — | 100.14 | 100.14 | — | — |
| 3/9/2009 | MW-20 | 103.90 | — | 3.71 | — | — | 100.19 | 100.19 | — | — |
| 4/20/2009 | MW-20 | 103.90 | — | 3.42 | — | — | 100.48 | 100.48 | — | — |
| 4/29/2009 | MW-20 | 103.90 | — | 3.36 | — | — | 100.54 | 100.54 | — | — |
| 5/6/2009 | MW-20 | 103.90 | — | 3.09 | — | — | 100.81 | 100.81 | — | — |
| 6/2/2009 | MW-20 | 103.90 | — | 3.29 | — | — | 100.61 | 100.61 | — | — |
| 7/6/2009 | MW-20 | 103.90 | — | 2.73 | — | — | 101.17 | 101.17 | — | — |
| 8/14/2009 | MW-20 | 103.90 | — | 3.03 | — | — | 100.87 | 100.87 | — | — |
| 9/28/2009 | MW-20 | 103.90 | — | 3.38 | — | — | 100.52 | 100.52 | — | — |
| 10/13/2009 | MW-20 | 103.90 | — | 3.49 | — | — | 100.41 | 100.41 | — | — |
| 11/23/2009 | MW-20 | 103.90 | — | 3.24 | — | — | 100.66 | 100.66 | — | — |
| 12/2/2009 | MW-20 | 103.90 | — | 3.44 | — | — | 100.46 | 100.46 | — | — |
| 1/12/2010 | MW-20 | 103.90 | — | 3.24 | — | — | 100.66 | 100.66 | — | — |
| 2/2/2010 | MW-20 | 103.90 | — | 3.35 | — | — | 100.55 | 100.55 | — | — |
| 3/2/2010 | MW-20 | 103.90 | — | 2.18 | — | — | 101.72 | 101.72 | — | — |
| 3/15/2010 | MW-20 | 103.90 | — | 1.68 | — | — | 102.22 | 102.22 | — | — |
| 4/15/2010 | MW-20 | 103.90 | — | 2.75 | — | — | 101.15 | 101.15 | — | — |
| 4/22/2010 | MW-20 | 103.90 | — | 2.76 | — | — | 101.14 | 101.14 | — | — |
| 5/3/2010 | MW-20 | 103.90 | — | 2.61 | — | — | 101.29 | 101.29 | — | — |
| 6/21/2010 | MW-20 | 103.90 | — | 3.03 | — | — | 100.87 | 100.87 | — | — |
| 7/2/2010 | MW-20 | 103.90 | — | 3.15 | — | — | 100.75 | 100.75 | — | — |
| 8/13/2010 | MW-20 | 103.90 | — | 3.55 | — | — | 100.35 | 100.35 | — | — |
| 9/1/2010 | MW-20 | 103.90 | — | 3.26 | — | — | 100.64 | 100.64 | — | — |
| 10/8/2010 | MW-20 | 103.90 | — | 3.12 | — | — | 100.78 | 100.78 | — | — |
| 11/23/2010 | MW-20 | 103.90 | — | 3.41 | — | — | 100.49 | 100.49 | — | — |
| 1/3/2011 | MW-20 | 103.90 | — | 3.49 | — | — | 100.41 | 100.41 | — | — |
| 1/25/2011 | MW-20 | 103.90 | — | 3.19 | — | — | 100.71 | 100.71 | — | — |
| 2/4/2011 | MW-20 | 103.90 | — | 3.03 | — | — | 100.87 | 100.87 | — | — |
| 3/26/2011 | MW-20 | 103.90 | — | 2.46 | — | — | 101.44 | 101.44 | — | — |
| 4/27/2011 | MW-20 | 103.90 | — | 2.66 | — | — | 101.24 | 101.24 | — | — |
| 5/9/2011 | MW-20 | 103.90 | — | 2.84 | — | — | 101.06 | 101.06 | — | — |
| 6/6/2011 | MW-20 | 103.90 | — | 2.95 | — | — | 100.95 | 100.95 | — | — |



Shell/Motiva 0007359

**Table 3**
**Groundwater Elevation Summary**
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-21 | 104.63 | — | 4.93 | — | — | 99.70 | 99.70 | — | — |
| 2/21/2006 | MW-21 | 104.63 | — | 5.28 | — | — | 99.35 | 99.35 | — | — |
| 3/7/2006 | MW-21 | 104.63 | — | 5.17 | — | — | 99.46 | 99.46 | — | — |
| 5/18/2006 | MW-21 | 104.63 | — | 4.94 | — | — | 99.69 | 99.69 | — | — |
| 6/28/2006 | MW-21 | 104.63 | — | 4.92 | — | — | 99.71 | 99.71 | — | — |
| 8/16/2006 | MW-21 | 104.63 | — | 5.11 | — | — | 99.52 | 99.52 | — | — |
| 9/29/2006 | MW-21 | 104.63 | — | 4.99 | — | — | 99.64 | 99.64 | — | — |
| 10/20/2006 | MW-21 | 104.63 | — | 3.71 | — | — | 100.92 | 100.92 | — | — |
| 11/22/2006 | MW-21 | 104.63 | — | 4.80 | — | — | 99.83 | 99.83 | — | — |
| 12/15/2006 | MW-21 | 104.63 | — | 5.20 | — | — | 99.43 | 99.43 | — | — |
| 1/23/2007 | MW-21 | 104.63 | — | 5.03 | — | — | 99.60 | 99.60 | — | — |
| 2/2/2007 | MW-21 | 104.63 | — | 3.25 | — | — | 101.38 | 101.38 | — | — |
| 3/5/2007 | MW-21 | 104.63 | — | 4.84 | — | — | 99.79 | 99.79 | — | — |
| 5/1/2007 | MW-21 | 104.63 | — | 4.91 | — | — | 99.72 | 99.72 | — | — |
| 6/22/2007 | MW-21 | 104.63 | — | 5.15 | — | — | 99.48 | 99.48 | — | — |
| 6/26/2007 | MW-21 | 104.63 | — | 5.31 | — | — | 99.32 | 99.32 | — | — |
| 7/6/2007 | MW-21 | 104.63 | — | 5.09 | — | — | 99.54 | 99.54 | — | — |
| 8/1/2007 | MW-21 | 104.63 | — | 4.89 | — | — | 99.74 | 99.74 | — | — |
| 8/7/2007 | MW-21 | 104.63 | — | 5.05 | — | — | 99.58 | 99.58 | — | — |
| 9/14/2007 | MW-21 | 104.63 | — | 5.04 | — | — | 99.59 | 99.59 | — | — |
| 10/8/2007 | MW-21 | 104.63 | — | 4.15 | — | — | 100.48 | 100.48 | — | — |
| 11/20/2007 | MW-21 | 104.63 | — | 5.02 | — | — | 99.61 | 99.61 | — | — |
| 12/26/2007 | MW-21 | 104.63 | — | 4.71 | — | — | 99.92 | 99.92 | — | — |
| 1/2/2008 | MW-21 | 104.63 | — | 5.05 | — | — | 99.58 | 99.58 | — | — |
| 3/5/2008 | MW-21 | 104.63 | — | 4.99 | — | — | 99.64 | 99.64 | — | — |
| 4/23/2008 | MW-21 | 104.63 | — | 5.09 | — | — | 99.54 | 99.54 | — | — |
| 5/12/2008 | MW-21 | 104.63 | — | 4.88 | — | — | 99.75 | 99.75 | — | — |
| 6/27/2008 | MW-21 | 104.63 | — | 5.08 | — | — | 99.55 | 99.55 | — | — |
| 8/5/2008 | MW-21 | 104.63 | — | 4.98 | — | — | 99.65 | 99.65 | — | — |
| 9/10/2008 | MW-21 | 104.63 | — | 4.97 | — | — | 99.66 | 99.66 | — | — |
| 10/21/2008 | MW-21 | 104.63 | — | NG | — | — | — | — | — | Abandoned |
| 3/2/2010 | MW-21R | — | — | 2.96 | — | — | — | — | — | — |
| 3/15/2010 | MW-21R | — | — | 2.49 | — | — | — | — | — | — |
| 4/15/2010 | MW-21R | — | — | 3.95 | — | — | — | — | — | — |
| 4/22/2010 | MW-21R | — | — | 3.89 | — | — | — | — | — | — |
| 5/3/2010 | MW-21R | — | — | 3.29 | — | — | — | — | — | — |
| 6/21/2010 | MW-21R | — | — | 3.86 | — | — | — | — | — | — |
| 7/2/2010 | MW-21R | — | — | 3.99 | — | — | — | — | — | — |
| 7/27/2010 | MW-21R | — | — | 3.95 | — | — | — | — | — | — |
| 8/13/2010 | MW-21R | — | — | 3.70 | — | — | — | — | — | — |
| 9/1/2010 | MW-21R | — | — | 3.93 | — | — | — | — | — | — |
| 10/8/2010 | MW-21R | — | — | 3.54 | — | — | — | — | — | — |
| 11/23/2010 | MW-21R | — | — | 4.02 | — | — | — | — | — | — |
| 1/3/2011 | MW-21R | — | — | 3.57 | — | — | — | — | — | — |
| 1/25/2011 | MW-21R | — | — | 3.97 | — | — | — | — | — | — |
| 2/4/2011 | MW-21R | — | — | 3.73 | — | — | — | — | — | — |
| 3/26/2011 | MW-21R | — | — | 3.66 | — | — | — | — | — | — |
| 4/27/2011 | MW-21R | — | — | 3.81 | — | — | — | — | — | — |
| 5/9/2011 | MW-21R | — | — | 3.97 | — | — | — | — | — | — |
| 6/6/2011 | MW-21R | — | — | 4.00 | — | — | — | — | — | — |
| 1/6/2006 | MW-22 | 104.57 | — | 4.54 | — | — | 100.03 | 100.03 | — | — |
| 2/21/2006 | MW-22 | 104.57 | — | 5.01 | — | — | 99.56 | 99.56 | — | — |
| 3/7/2006 | MW-22 | 104.57 | — | 5.18 | — | — | 99.39 | 99.39 | — | — |
| 5/18/2006 | MW-22 | 104.57 | — | 4.67 | — | — | 99.90 | 99.90 | — | — |
| 6/28/2006 | MW-22 | 104.57 | — | 4.66 | — | — | 99.91 | 99.91 | — | — |
| 8/16/2006 | MW-22 | 104.57 | — | 4.91 | — | — | 99.66 | 99.66 | — | — |
| 9/29/2006 | MW-22 | 104.57 | — | 4.82 | — | — | 99.75 | 99.75 | — | — |
| 10/20/2006 | MW-22 | 104.57 | — | 3.97 | — | — | 100.60 | 100.60 | — | — |
| 11/22/2006 | MW-22 | 104.57 | — | 4.24 | — | — | 100.33 | 100.33 | — | — |
| 12/15/2006 | MW-22 | 104.57 | — | 5.17 | — | — | 99.40 | 99.40 | — | — |
| 1/23/2007 | MW-22 | 104.57 | — | 4.91 | — | — | 99.66 | 99.66 | — | — |
| 2/2/2007 | MW-22 | 104.57 | — | 4.41 | — | — | 100.16 | 100.16 | — | — |
| 3/5/2007 | MW-22 | 104.57 | — | 4.02 | — | — | 100.55 | 100.55 | — | — |
| 5/1/2007 | MW-22 | 104.57 | — | 4.70 | — | — | 99.87 | 99.87 | — | — |
| 6/22/2007 | MW-22 | 104.57 | — | 4.99 | — | — | 99.58 | 99.58 | — | — |
| 6/26/2007 | MW-22 | 104.57 | — | 5.14 | — | — | 99.43 | 99.43 | — | — |
| 7/6/2007 | MW-22 | 104.57 | — | 4.71 | — | — | 99.86 | 99.86 | — | — |
| 8/1/2007 | MW-22 | 104.57 | — | 4.59 | — | — | 99.98 | 99.98 | — | — |
| 8/7/2007 | MW-22 | 104.57 | — | 4.72 | — | — | 99.85 | 99.85 | — | — |
| 9/14/2007 | MW-22 | 104.57 | — | 4.79 | — | — | 99.78 | 99.78 | — | — |
| 10/8/2007 | MW-22 | 104.57 | — | 4.54 | — | — | 100.03 | 100.03 | — | — |
| 11/20/2007 | MW-22 | 104.57 | — | 4.81 | — | — | 99.76 | 99.76 | — | — |
| 12/26/2007 | MW-22 | 104.57 | — | 4.71 | — | — | 99.86 | 99.86 | — | — |
| 1/2/2008 | MW-22 | 104.57 | — | 4.85 | — | — | 99.72 | 99.72 | — | — |
| 3/5/2008 | MW-22 | 104.57 | — | 4.75 | — | — | 99.82 | 99.82 | — | — |
| 4/23/2008 | MW-22 | 104.57 | — | 5.03 | — | — | 99.54 | 99.54 | — | — |
| 5/12/2008 | MW-22 | 104.57 | — | 4.05 | — | — | 100.52 | 100.52 | — | — |
| 6/27/2008 | MW-22 | 104.57 | — | 5.02 | — | — | 99.55 | 99.55 | — | — |
| 8/5/2008 | MW-22 | 104.57 | — | 4.75 | — | — | 99.82 | 99.82 | — | — |
| 9/10/2008 | MW-22 | 104.57 | — | 4.65 | — | — | 99.92 | 99.92 | — | — |
| 10/27/2008 | MW-22 | 104.57 | — | NG | — | — | — | — | — | Abandoned |



Shell/Motiva 0007360

# Table 3
## Groundwater Elevation Summary
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 3/2/2010 | MW-22R | — | — | 2.81 | — | — | — | — | — | — |
| 3/15/2010 | MW-22R | — | — | 2.53 | — | — | — | — | — | — |
| 4/15/2010 | MW-22R | — | — | 4.06 | — | — | — | — | — | — |
| 4/22/2010 | MW-22R | — | — | 3.92 | — | — | — | — | — | — |
| 5/3/2010 | MW-22R | — | — | 3.10 | — | — | — | — | — | — |
| 6/21/2010 | MW-22R | — | — | 3.84 | — | — | — | — | — | — |
| 7/2/2010 | MW-22R | — | — | 4.17 | — | — | — | — | — | — |
| 7/27/2010 | MW-22R | — | — | 3.94 | — | — | — | — | — | — |
| 8/13/2010 | MW-22R | — | — | 3.50 | — | — | — | — | — | — |
| 9/1/2010 | MW-22R | — | — | 3.98 | — | — | — | — | — | — |
| 10/8/2010 | MW-22R | — | — | 3.11 | — | — | — | — | — | — |
| 11/23/2010 | MW-22R | — | — | 3.88 | — | — | — | — | — | — |
| 1/3/2011 | MW-22R | — | — | 3.44 | — | — | — | — | — | — |
| 1/25/2011 | MW-22R | — | — | 4.00 | — | — | — | — | — | — |
| 2/4/2011 | MW-22R | — | — | 3.69 | — | — | — | — | — | — |
| 3/26/2011 | MW-22R | — | — | 3.72 | — | — | — | — | — | — |
| 4/27/2011 | MW-22R | — | — | 3.82 | — | — | — | — | — | — |
| 5/9/2011 | MW-22R | — | — | 3.96 | — | — | — | — | — | — |
| 6/6/2011 | MW-22R | — | — | 3.98 | — | — | — | — | — | — |
| 1/6/2006 | MW-23 | 105.33 | — | 3.74 | — | — | 101.59 | 101.59 | — | — |
| 2/21/2006 | MW-23 | 105.33 | — | 3.74 | — | — | 101.59 | 101.59 | — | — |
| 3/7/2006 | MW-23 | 105.33 | — | 4.10 | — | — | 101.23 | 101.23 | — | — |
| 5/18/2006 | MW-23 | 105.33 | — | 3.49 | — | — | 101.84 | 101.84 | — | — |
| 6/28/2006 | MW-23 | 105.33 | — | 3.60 | — | — | 101.73 | 101.73 | — | — |
| 8/16/2006 | MW-23 | 105.33 | — | 3.82 | — | — | 101.51 | 101.51 | — | — |
| 9/29/2006 | MW-23 | 105.33 | — | 3.95 | — | — | 101.38 | 101.38 | — | — |
| 10/20/2006 | MW-23 | 105.33 | — | 3.53 | — | — | 101.80 | 101.80 | — | — |
| 11/22/2006 | MW-23 | 105.33 | — | 3.82 | — | — | 101.51 | 101.51 | — | — |
| 12/15/2006 | MW-23 | 105.33 | — | 4.18 | — | — | 101.15 | 101.15 | — | — |
| 1/23/2007 | MW-23 | 105.33 | — | 4.18 | — | — | 101.15 | 101.15 | — | — |
| 2/2/2007 | MW-23 | 105.33 | — | 4.44 | — | — | 100.89 | 100.89 | — | — |
| 3/5/2007 | MW-23 | 105.33 | — | NG | — | — | — | — | — | — |
| 5/1/2007 | MW-23 | 105.33 | — | 3.54 | — | — | 101.79 | 101.79 | — | — |
| 6/22/2007 | MW-23 | 105.33 | — | 4.11 | — | — | 101.22 | 101.22 | — | — |
| 6/26/2007 | MW-23 | 105.33 | — | 4.19 | — | — | 101.14 | 101.14 | — | — |
| 7/6/2007 | MW-23 | 105.33 | — | 3.72 | — | — | 101.61 | 101.61 | — | — |
| 8/1/2007 | MW-23 | 105.33 | — | 3.71 | — | — | 101.62 | 101.62 | — | — |
| 8/7/2007 | MW-23 | 105.33 | — | 3.89 | — | — | 101.44 | 101.44 | — | — |
| 9/14/2007 | MW-23 | 105.33 | — | 4.19 | — | — | 101.14 | 101.14 | — | — |
| 10/8/2007 | MW-23 | 105.33 | — | 4.52 | — | — | 100.81 | 100.81 | — | — |
| 11/20/2007 | MW-23 | 105.33 | — | 4.12 | — | — | 101.21 | 101.21 | — | — |
| 12/26/2007 | MW-23 | 105.33 | — | 3.69 | — | — | 101.64 | 101.64 | — | — |
| 1/2/2008 | MW-23 | 105.33 | — | 3.57 | — | — | 101.76 | 101.76 | — | — |
| 3/5/2008 | MW-23 | 105.33 | — | 3.82 | — | — | 101.51 | 101.51 | — | — |
| 4/23/2008 | MW-23 | 105.33 | — | 4.30 | — | — | 101.03 | 101.03 | — | — |
| 5/12/2008 | MW-23 | 105.33 | — | 3.73 | — | — | 101.60 | 101.60 | — | — |
| 6/27/2008 | MW-23 | 105.33 | 3.99 | 4.00 | 0.01 | 101.34 | 101.33 | 101.34 | — | — |
| 8/5/2008 | MW-23 | 105.33 | — | 3.99 | — | — | 101.34 | 101.34 | — | — |
| 9/10/2008 | MW-23 | 105.33 | — | 3.39 | — | — | 101.94 | 101.94 | — | — |
| 10/27/2008 | MW-23 | 105.33 | — | 3.92 | — | — | 101.41 | 101.41 | — | — |
| 11/4/2008 | MW-23 | 105.33 | — | 3.89 | — | — | 101.44 | 101.44 | — | — |
| 1/5/2009 | MW-23 | 105.33 | — | 3.98 | — | — | 101.35 | 101.35 | — | — |
| 2/27/2009 | MW-23 | 105.33 | — | 4.45 | — | — | 100.88 | 100.88 | — | — |
| 3/9/2009 | MW-23 | 105.33 | — | 4.49 | — | — | 100.84 | 100.84 | — | — |
| 4/29/2009 | MW-23 | 105.33 | — | 3.23 | — | — | 102.10 | 102.10 | — | — |
| 5/6/2009 | MW-23 | 105.33 | — | 3.50 | — | — | 101.83 | 101.83 | — | — |
| 6/2/2009 | MW-23 | 105.33 | — | 4.34 | — | — | 100.99 | 100.99 | — | — |
| 7/6/2009 | MW-23 | 105.33 | — | 3.64 | — | — | 101.69 | 101.69 | — | — |
| 8/14/2009 | MW-23 | 105.33 | — | 3.97 | — | — | 101.36 | 101.36 | — | — |
| 9/28/2009 | MW-23 | 105.33 | — | 3.93 | — | — | 101.40 | 101.40 | — | — |
| 10/13/2009 | MW-23 | 105.33 | — | 4.18 | — | — | 101.15 | 101.15 | — | — |
| 11/23/2009 | MW-23 | 105.33 | — | 3.94 | — | — | 101.39 | 101.39 | — | — |
| 12/2/2009 | MW-23 | 105.33 | — | 4.22 | — | — | 101.11 | 101.11 | — | — |
| 1/12/2010 | MW-23 | 105.33 | — | 4.16 | — | — | 101.17 | 101.17 | — | — |
| 2/2/2010 | MW-23 | 105.33 | — | 4.04 | — | — | 101.29 | 101.29 | — | — |
| 3/2/2010 | MW-23 | 105.33 | — | 2.18 | — | — | 103.15 | 103.15 | — | — |
| 3/15/2010 | MW-23 | 105.33 | — | 1.89 | — | — | 103.44 | 103.44 | — | — |
| 4/15/2010 | MW-23 | 105.33 | — | 3.98 | — | — | 101.35 | 101.35 | — | — |
| 4/22/2010 | MW-23 | 105.33 | — | 4.10 | — | — | 101.23 | 101.23 | — | — |
| 5/3/2010 | MW-23 | 105.33 | — | 3.65 | — | — | 101.68 | 101.68 | — | — |
| 6/21/2010 | MW-23 | 105.33 | — | 4.13 | — | — | 101.20 | 101.20 | — | — |
| 7/2/2010 | MW-23 | 105.33 | — | 4.33 | — | — | 101.00 | 101.00 | — | — |
| 8/13/2010 | MW-23 | 105.33 | — | 4.50 | — | — | 100.83 | 100.83 | — | — |
| 9/1/2010 | MW-23 | 105.33 | — | 3.84 | — | — | 101.49 | 101.49 | — | — |
| 10/8/2010 | MW-23 | 105.33 | — | 3.69 | — | — | 101.64 | 101.64 | — | — |
| 11/23/2010 | MW-23 | 105.33 | — | 4.27 | — | — | 101.06 | 101.06 | — | — |
| 1/3/2011 | MW-23 | 105.33 | — | 3.91 | — | — | 101.42 | 101.42 | — | — |
| 1/25/2011 | MW-23 | 105.33 | — | 3.82 | — | — | 101.51 | 101.51 | — | — |
| 2/4/2011 | MW-23 | 105.33 | — | 3.59 | — | — | 101.74 | 101.74 | — | — |
| 3/26/2011 | MW-23 | 105.33 | — | 3.46 | — | — | 101.87 | 101.87 | — | — |
| 4/27/2011 | MW-23 | 105.33 | — | 3.57 | — | — | 101.76 | 101.76 | — | — |
| 5/9/2011 | MW-23 | 105.33 | — | 4.01 | — | — | 101.32 | 101.32 | — | — |
| 6/6/2011 | MW-23 | 105.33 | — | 4.16 | — | — | 101.17 | 101.17 | — | — |



Shell/Motiva 0007361

## Table 3
## Groundwater Elevation Summary
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-24 | 105.09 | — | 3.30 | — | — | 101.79 | 101.79 | — | — |
| 2/21/2006 | MW-24 | 105.09 | — | 3.69 | — | — | 101.40 | 101.40 | — | — |
| 3/7/2006 | MW-24 | 105.09 | — | 3.99 | — | — | 101.10 | 101.10 | — | — |
| 5/18/2006 | MW-24 | 105.09 | — | 3.65 | — | — | 101.44 | 101.44 | — | — |
| 6/28/2006 | MW-24 | 105.09 | — | 3.64 | — | — | 101.45 | 101.45 | — | — |
| 8/16/2006 | MW-24 | 105.09 | — | 3.79 | — | — | 101.30 | 101.30 | — | — |
| 9/29/2006 | MW-24 | 105.09 | — | 3.91 | — | — | 101.18 | 101.18 | — | — |
| 10/20/2006 | MW-24 | 105.09 | — | 3.66 | — | — | 101.43 | 101.43 | — | — |
| 11/22/2006 | MW-24 | 105.09 | — | 3.76 | — | — | 101.33 | 101.33 | — | — |
| 12/15/2006 | MW-24 | 105.09 | — | 4.10 | — | — | 100.99 | 100.99 | — | — |
| 1/23/2007 | MW-24 | 105.09 | — | 4.11 | — | — | 100.98 | 100.98 | — | — |
| 2/2/2007 | MW-24 | 105.09 | — | 4.31 | — | — | 100.78 | 100.78 | — | — |
| 3/5/2007 | MW-24 | 105.09 | — | 3.46 | — | — | 101.63 | 101.63 | — | — |
| 5/1/2007 | MW-24 | 105.09 | — | 3.50 | — | — | 101.59 | 101.59 | — | — |
| 6/22/2007 | MW-24 | 105.09 | — | 4.05 | — | — | 101.04 | 101.04 | — | — |
| 6/26/2007 | MW-24 | 105.09 | — | 4.13 | — | — | 100.96 | 100.96 | — | — |
| 7/6/2007 | MW-24 | 105.09 | — | 3.92 | — | — | 101.17 | 101.17 | — | — |
| 8/1/2007 | MW-24 | 105.09 | — | 3.72 | — | — | 101.37 | 101.37 | — | — |
| 8/7/2007 | MW-24 | 105.09 | — | 3.86 | — | — | 101.23 | 101.23 | — | — |
| 9/14/2007 | MW-24 | 105.09 | — | 4.16 | — | — | 100.93 | 100.93 | — | — |
| 10/8/2007 | MW-24 | 105.09 | — | 4.45 | — | — | 100.64 | 100.64 | — | — |
| 11/20/2007 | MW-24 | 105.09 | — | 4.11 | — | — | 100.98 | 100.98 | — | — |
| 12/26/2007 | MW-24 | 105.09 | — | 3.74 | — | — | 101.35 | 101.35 | — | — |
| 1/2/2008 | MW-24 | 105.09 | — | 3.62 | — | — | 101.47 | 101.47 | — | — |
| 3/5/2008 | MW-24 | 105.09 | — | 3.79 | — | — | 101.30 | 101.30 | — | — |
| 4/23/2008 | MW-24 | 105.09 | — | 4.21 | — | — | 100.88 | 100.88 | — | — |
| 5/12/2008 | MW-24 | 105.09 | — | 3.80 | — | — | 101.29 | 101.29 | — | — |
| 6/27/2008 | MW-24 | 105.09 | — | 3.93 | — | — | 101.16 | 101.16 | — | — |
| 8/5/2008 | MW-24 | 105.09 | — | 4.00 | — | — | 101.09 | 101.09 | — | — |
| 9/10/2008 | MW-24 | 105.09 | — | 3.42 | — | — | 101.67 | 101.67 | — | — |
| 10/27/2008 | MW-24 | 105.09 | — | 4.00 | — | — | 101.09 | 101.09 | — | — |
| 11/4/2008 | MW-24 | 105.09 | — | 3.96 | — | — | 101.13 | 101.13 | — | — |
| 1/5/2009 | MW-24 | 105.09 | — | 3.90 | — | — | 101.19 | 101.19 | — | — |
| 2/27/2009 | MW-24 | 105.09 | — | 4.35 | — | — | 100.74 | 100.74 | — | — |
| 3/9/2009 | MW-24 | 105.09 | — | 4.43 | — | — | 100.66 | 100.66 | — | — |
| 4/20/2009 | MW-24 | 105.09 | — | 3.99 | — | — | 101.10 | 101.10 | — | — |
| 4/29/2009 | MW-24 | 105.09 | — | 3.84 | — | — | 101.25 | 101.25 | — | — |
| 5/6/2009 | MW-24 | 105.09 | — | 3.61 | — | — | 101.48 | 101.48 | — | — |
| 6/2/2009 | MW-24 | 105.09 | — | 4.18 | — | — | 100.91 | 100.91 | — | — |
| 7/6/2009 | MW-24 | 105.09 | — | 3.60 | — | — | 101.49 | 101.49 | — | — |
| 8/14/2009 | MW-24 | 105.09 | — | 3.87 | — | — | 101.22 | 101.22 | — | — |
| 9/28/2009 | MW-24 | 105.09 | — | 3.92 | — | — | 101.17 | 101.17 | — | — |
| 10/13/2009 | MW-24 | 105.09 | — | 4.14 | — | — | 100.95 | 100.95 | — | — |
| 11/23/2009 | MW-24 | 105.09 | — | 3.88 | — | — | 101.21 | 101.21 | — | — |
| 12/2/2009 | MW-24 | 105.09 | — | 4.11 | — | — | 100.98 | 100.98 | — | — |
| 1/12/2010 | MW-24 | 105.09 | — | 4.02 | — | — | 101.07 | 101.07 | — | — |
| 2/2/2010 | MW-24 | 105.09 | — | 3.95 | — | — | 101.14 | 101.14 | — | — |
| 3/2/2010 | MW-24 | 105.09 | — | 3.14 | — | — | 101.95 | 101.95 | — | — |
| 3/15/2010 | MW-24 | 105.09 | — | 2.69 | — | — | 102.40 | 102.40 | — | — |
| 4/15/2010 | MW-24 | 105.09 | — | 3.82 | — | — | 101.27 | 101.27 | — | — |
| 4/22/2010 | MW-24 | 105.09 | — | 3.91 | — | — | 101.18 | 101.18 | — | — |
| 5/3/2010 | MW-24 | 105.09 | — | 3.66 | — | — | 101.43 | 101.43 | — | — |
| 6/21/2010 | MW-24 | 105.09 | — | 4.01 | — | — | 101.08 | 101.08 | — | — |
| 7/2/2010 | MW-24 | 105.09 | — | 4.18 | — | — | 100.91 | 100.91 | — | — |
| 8/13/2010 | MW-24 | 105.09 | — | 4.38 | — | — | 100.71 | 100.71 | — | — |
| 9/1/2010 | MW-24 | 105.09 | — | 3.82 | — | — | 101.27 | 101.27 | — | — |
| 10/8/2010 | MW-24 | 105.09 | — | 3.65 | — | — | 101.44 | 101.44 | — | — |
| 11/23/2010 | MW-24 | 105.09 | — | 4.19 | — | — | 100.90 | 100.90 | — | — |
| 1/3/2011 | MW-24 | 105.09 | — | 3.86 | — | — | 101.23 | 101.23 | — | — |
| 1/25/2011 | MW-24 | 105.09 | — | 3.75 | — | — | 101.34 | 101.34 | — | — |
| 2/4/2011 | MW-24 | 105.09 | — | 3.54 | — | — | 101.55 | 101.55 | — | — |
| 3/26/2011 | MW-24 | 105.09 | — | 3.36 | — | — | 101.73 | 101.73 | — | — |
| 4/27/2011 | MW-24 | 105.09 | — | 3.45 | — | — | 101.64 | 101.64 | — | — |
| 5/9/2011 | MW-24 | 105.09 | — | 3.86 | — | — | 101.23 | 101.23 | — | — |
| 6/6/2011 | MW-24 | 105.09 | — | 4.00 | — | — | 101.09 | 101.09 | — | — |



Shell/Motiva 0007362

## Table 3
## Groundwater Elevation Summary
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-25 | 104.10 | — | 2.44 | — | — | 101.66 | 101.66 | — | — |
| 2/21/2006 | MW-25 | 104.10 | — | 2.84 | — | — | 101.26 | 101.26 | — | — |
| 3/7/2006 | MW-25 | 104.10 | — | 3.14 | — | — | 100.96 | 100.96 | — | — |
| 5/18/2006 | MW-25 | 104.10 | — | 2.81 | — | — | 101.29 | 101.29 | — | — |
| 6/28/2006 | MW-25 | 104.10 | — | 2.76 | — | — | 101.34 | 101.34 | — | — |
| 8/16/2006 | MW-25 | 104.10 | — | 2.91 | — | — | 101.19 | 101.19 | — | — |
| 9/29/2006 | MW-25 | 104.10 | — | 3.00 | — | — | 101.10 | 101.10 | — | — |
| 10/20/2006 | MW-25 | 104.10 | — | 2.68 | — | — | 101.42 | 101.42 | — | — |
| 11/22/2006 | MW-25 | 104.10 | — | 2.87 | — | — | 101.23 | 101.23 | — | — |
| 12/15/2006 | MW-25 | 104.10 | — | 3.23 | — | — | 100.87 | 100.87 | — | — |
| 1/23/2007 | MW-25 | 104.10 | — | 3.26 | — | — | 100.84 | 100.84 | — | — |
| 2/2/2007 | MW-25 | 104.10 | — | 3.47 | — | — | 100.63 | 100.63 | — | — |
| 3/5/2007 | MW-25 | 104.10 | — | 2.68 | — | — | 101.42 | 101.42 | — | — |
| 5/1/2007 | MW-25 | 104.10 | — | 2.58 | — | — | 101.52 | 101.52 | — | — |
| 6/22/2007 | MW-25 | 104.10 | — | 3.11 | — | — | 100.99 | 100.99 | — | — |
| 6/26/2007 | MW-25 | 104.10 | — | 3.19 | — | — | 100.91 | 100.91 | — | — |
| 7/6/2007 | MW-25 | 104.10 | — | 3.01 | — | — | 101.09 | 101.09 | — | — |
| 8/1/2007 | MW-25 | 104.10 | — | 2.79 | — | — | 101.31 | 101.31 | — | — |
| 8/7/2007 | MW-25 | 104.10 | — | 2.96 | — | — | 101.14 | 101.14 | — | — |
| 9/14/2007 | MW-25 | 104.10 | — | 3.25 | — | — | 100.85 | 100.85 | — | — |
| 10/8/2007 | MW-25 | 104.10 | — | 3.55 | — | — | 100.55 | 100.55 | — | — |
| 11/20/2007 | MW-25 | 104.10 | — | 3.23 | — | — | 100.87 | 100.87 | — | — |
| 12/26/2007 | MW-25 | 104.10 | — | 2.88 | — | — | 101.22 | 101.22 | — | — |
| 1/2/2008 | MW-25 | 104.10 | — | 2.76 | — | — | 101.34 | 101.34 | — | — |
| 3/5/2008 | MW-25 | 104.10 | — | 2.79 | — | — | 101.31 | 101.31 | — | — |
| 4/23/2008 | MW-25 | 104.10 | — | 3.30 | — | — | 100.80 | 100.80 | — | — |
| 5/12/2008 | MW-25 | 104.10 | — | 2.80 | — | — | 101.30 | 101.30 | — | — |
| 6/27/2008 | MW-25 | 104.10 | — | 3.00 | — | — | 101.10 | 101.10 | — | — |
| 8/5/2008 | MW-25 | 104.10 | — | 3.10 | — | — | 101.00 | 101.00 | — | — |
| 9/10/2008 | MW-25 | 104.10 | — | 2.59 | — | — | 101.51 | 101.51 | — | — |
| 10/27/2008 | MW-25 | 104.10 | — | 2.74 | — | — | 101.36 | 101.36 | — | — |
| 11/4/2008 | MW-25 | 104.10 | — | 3.06 | — | — | 101.04 | 101.04 | — | — |
| 1/5/2009 | MW-25 | 104.10 | — | 3.00 | — | — | 101.10 | 101.10 | — | — |
| 2/27/2009 | MW-25 | 104.10 | — | 3.54 | — | — | 100.56 | 100.56 | — | — |
| 3/9/2009 | MW-25 | 104.10 | — | 3.62 | — | — | 100.48 | 100.48 | — | — |
| 4/20/2009 | MW-25 | 104.10 | — | 3.12 | — | — | 100.98 | 100.98 | — | — |
| 4/29/2009 | MW-25 | 104.10 | — | 3.01 | — | — | 101.09 | 101.09 | — | — |
| 5/6/2009 | MW-25 | 104.10 | — | 2.73 | — | — | 101.37 | 101.37 | — | — |
| 6/2/2009 | MW-25 | 104.10 | — | 3.29 | — | — | 100.81 | 100.81 | — | — |
| 7/6/2009 | MW-25 | 104.10 | — | 2.75 | — | — | 101.35 | 101.35 | — | — |
| 8/14/2009 | MW-25 | 104.10 | — | 2.96 | — | — | 101.14 | 101.14 | — | — |
| 9/28/2009 | MW-25 | 104.10 | — | 3.02 | — | — | 101.08 | 101.08 | — | — |
| 10/13/2009 | MW-25 | 104.10 | — | 3.26 | — | — | 100.84 | 100.84 | — | — |
| 11/23/2009 | MW-25 | 104.10 | — | 2.97 | — | — | 101.13 | 101.13 | — | — |
| 12/2/2009 | MW-25 | 104.10 | — | 3.21 | — | — | 100.89 | 100.89 | — | — |
| 1/12/2010 | MW-25 | 104.10 | — | 3.12 | — | — | 100.98 | 100.98 | — | — |
| 2/2/2010 | MW-25 | 104.10 | — | 3.06 | — | — | 101.04 | 101.04 | — | — |
| 3/2/2010 | MW-25 | 104.10 | — | 2.21 | — | — | 101.89 | 101.89 | — | — |
| 3/15/2010 | MW-25 | 104.10 | — | 1.62 | — | — | 102.48 | 102.48 | — | — |
| 4/15/2010 | MW-25 | 104.10 | — | 2.89 | — | — | 101.21 | 101.21 | — | — |
| 4/22/2010 | MW-25 | 104.10 | — | 2.93 | — | — | 101.17 | 101.17 | — | — |
| 5/3/2010 | MW-25 | 104.10 | — | NG | — | — | — | — | — | — |
| 6/21/2010 | MW-25 | 104.10 | — | 3.09 | — | — | 101.01 | 101.01 | — | — |
| 7/2/2010 | MW-25 | 104.10 | — | 3.26 | — | — | 100.84 | 100.84 | — | — |
| 8/13/2010 | MW-25 | 104.10 | — | NG | — | — | — | — | — | — |
| 9/1/2010 | MW-25 | 104.10 | — | 2.94 | — | — | 101.16 | 101.16 | — | — |
| 10/8/2010 | MW-25 | 104.10 | — | 2.76 | — | — | 101.34 | 101.34 | — | — |
| 11/23/2010 | MW-25 | 104.10 | — | 3.30 | — | — | 100.80 | 100.80 | — | — |
| 1/3/2011 | MW-25 | 104.10 | — | NG | — | — | — | — | — | — |
| 1/25/2011 | MW-25 | 104.10 | — | NG | — | — | — | — | — | — |
| 2/4/2011 | MW-25 | 104.10 | — | NG | — | — | — | — | — | — |
| 3/26/2011 | MW-25 | 104.10 | — | 2.47 | — | — | 101.63 | 101.63 | — | — |
| 4/27/2011 | MW-25 | 104.10 | — | NG | — | — | — | — | — | — |
| 5/9/2011 | MW-25 | 104.10 | — | 2.97 | — | — | 101.13 | 101.13 | — | — |
| 6/6/2011 | MW-25 | 104.10 | — | 3.09 | — | — | 101.01 | 101.01 | — | — |



Shell/Motiva 0007363

# Table 3
## Groundwater Elevation Summary
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-26 | — | — | 3.22 | — | — | — | — | — | — |
| 2/21/2006 | MW-26 | — | — | 3.95 | — | — | — | — | — | — |
| 3/7/2006 | MW-26 | — | — | 4.17 | — | — | — | — | — | — |
| 5/18/2006 | MW-26 | — | — | 3.61 | — | — | — | — | — | — |
| 6/28/2006 | MW-26 | — | 3.55 | 3.58 | 0.03 | — | — | — | — | — |
| 8/16/2006 | MW-26 | — | 3.78 | 3.79 | 0.01 | — | — | — | — | — |
| 9/29/2006 | MW-26 | — | 3.63 | 3.65 | 0.02 | — | — | — | — | — |
| 10/20/2006 | MW-26 | — | 3.53 | 3.55 | 0.02 | — | — | — | — | — |
| 11/21/2006 | MW-26 | — | 3.70 | 3.72 | 0.02 | — | — | — | — | — |
| 12/15/2006 | MW-26 | — | 4.21 | 4.23 | 0.02 | — | — | — | — | — |
| 1/23/2007 | MW-26 | — | — | 4.41 | — | — | — | — | — | — |
| 2/2/2007 | MW-26 | — | — | 4.58 | — | — | — | — | — | — |
| 3/5/2007 | MW-26 | — | — | 4.09 | — | — | — | — | — | — |
| 5/1/2007 | MW-26 | — | 2.56 | 2.57 | 0.01 | — | — | — | — | — |
| 6/22/2007 | MW-26 | — | 3.89 | 3.90 | 0.01 | — | — | — | — | — |
| 6/26/2007 | MW-26 | — | 4.16 | 4.22 | 0.06 | — | — | — | — | — |
| 7/6/2007 | MW-26 | — | 4.03 | 4.06 | 0.03 | — | — | — | — | — |
| 8/1/2007 | MW-26 | — | 3.56 | 3.59 | 0.03 | — | — | — | — | — |
| 8/7/2007 | MW-26 | — | — | NG | — | — | — | — | — | — |
| 9/14/2007 | MW-26 | — | — | NG | — | — | — | — | — | — |
| 10/8/2007 | MW-26 | — | 4.41 | 4.45 | 0.04 | — | — | — | — | — |
| 11/20/2007 | MW-26 | — | 4.29 | 4.31 | 0.02 | — | — | — | — | — |
| 12/26/2007 | MW-26 | — | 4.06 | 4.09 | 0.03 | — | — | — | — | — |
| 1/2/2008 | MW-26 | — | 3.79 | 3.81 | 0.02 | — | — | — | — | — |
| 3/5/2008 | MW-26 | — | 3.79 | 3.82 | 0.03 | — | — | — | — | — |
| 4/23/2008 | MW-26 | — | 4.10 | 4.28 | 0.18 | — | — | — | 0.25 | — |
| 5/12/2008 | MW-26 | — | 3.38 | 3.43 | 0.05 | — | — | — | — | — |
| 6/27/2008 | MW-26 | — | 3.84 | 3.86 | 0.02 | — | — | — | — | — |
| 8/5/2008 | MW-26 | — | 3.95 | 4.01 | 0.06 | — | — | — | — | — |
| 9/10/2008 | MW-26 | — | 3.85 | 3.86 | 0.01 | — | — | — | — | — |
| 10/27/2008 | MW-26 | — | 3.88 | 3.89 | 0.01 | — | — | — | — | — |
| 11/4/2008 | MW-26 | — | 4.29 | 4.31 | 0.02 | — | — | — | — | — |
| 1/5/2009 | MW-26 | — | 4.20 | 4.28 | 0.08 | — | — | — | — | — |
| 2/27/2009 | MW-26 | — | — | 4.78 | — | — | — | — | — | — |
| 3/9/2009 | MW-26 | — | 4.53 | 4.55 | 0.02 | — | — | — | — | — |
| 4/20/2009 | MW-26 | — | 4.01 | 4.09 | 0.08 | — | — | — | 0.25 | — |
| 4/29/2009 | MW-26 | — | 4.29 | 4.48 | 0.19 | — | — | — | — | — |
| 5/6/2009 | MW-26 | — | 3.80 | 3.81 | 0.01 | — | — | — | — | — |
| 6/2/2009 | MW-26 | — | 4.11 | 4.15 | 0.04 | — | — | — | — | — |
| 7/6/2009 | MW-26 | — | — | 3.30 | — | — | — | — | — | — |
| 8/14/2009 | MW-26 | — | 3.72 | 3.76 | 0.04 | — | — | — | — | — |
| 9/28/2009 | MW-26 | — | 3.87 | 3.89 | 0.02 | — | — | — | — | — |
| 10/13/2009 | MW-26 | — | 4.24 | 4.26 | 0.02 | — | — | — | — | — |
| 11/23/2009 | MW-26 | — | 2.86 | 2.87 | 0.01 | — | — | — | — | — |
| 12/2/2009 | MW-26 | — | 4.35 | 4.37 | 0.02 | — | — | — | — | — |
| 1/12/2010 | MW-26 | — | 4.25 | 4.27 | 0.02 | — | — | — | — | — |
| 2/2/2010 | MW-26 | — | 4.26 | 4.27 | 0.01 | — | — | — | — | — |
| 3/2/2010 | MW-26 | — | 2.85 | 2.86 | 0.01 | — | — | — | — | — |
| 3/15/2010 | MW-26 | — | — | NG | — | — | — | — | — | Flooded |
| 4/15/2010 | MW-26 | — | 3.68 | 3.70 | 0.02 | — | — | — | — | — |
| 4/22/2010 | MW-26 | — | 3.71 | 3.72 | 0.01 | — | — | — | — | — |
| 5/3/2010 | MW-26 | — | — | NG | — | — | — | — | — | — |
| 6/21/2010 | MW-26 | — | 3.85 | 3.86 | 0.01 | — | — | — | — | — |
| 7/2/2010 | MW-26 | — | — | 4.10 | — | — | — | — | — | — |
| 8/13/2010 | MW-26 | — | 3.93 | 3.96 | 0.03 | — | — | — | — | — |
| 9/1/2010 | MW-26 | — | 3.67 | 3.75 | 0.08 | — | — | — | — | — |
| 10/8/2010 | MW-26 | — | 3.48 | 3.49 | 0.01 | — | — | — | — | — |
| 11/23/2010 | MW-26 | — | 4.27 | 4.31 | 0.04 | — | — | — | — | — |
| 1/3/2011 | MW-26 | — | 3.87 | 3.91 | 0.04 | — | — | — | — | — |
| 1/25/2011 | MW-26 | — | 3.90 | 3.92 | 0.02 | — | — | — | — | — |
| 2/4/2011 | MW-26 | — | 3.66 | 3.69 | 0.03 | — | — | — | — | — |
| 3/26/2011 | MW-26 | — | — | NG | — | — | — | — | — | — |
| 4/27/2011 | MW-26 | — | 3.42 | 3.43 | 0.01 | — | — | — | — | — |
| 5/9/2011 | MW-26 | — | 3.69 | 3.73 | 0.04 | — | — | — | — | — |
| 6/6/2011 | MW-26 | — | 3.75 | 3.77 | 0.02 | — | — | — | — | — |



Shell/Motiva 0007364

# Table 3
## Groundwater Elevation Summary
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
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NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-27 | 102.89 | — | 1.79 | — | — | 101.10 | 101.10 | — | — |
| 2/21/2006 | MW-27 | 102.89 | — | 2.21 | — | — | 100.68 | 100.68 | — | — |
| 3/7/2006 | MW-27 | 102.89 | — | 2.44 | — | — | 100.45 | 100.45 | — | — |
| 5/18/2006 | MW-27 | 102.89 | — | 1.95 | — | — | 100.94 | 100.94 | — | — |
| 6/28/2006 | MW-27 | 102.89 | — | 1.65 | — | — | 101.24 | 101.24 | — | — |
| 8/16/2006 | MW-27 | 102.89 | — | 2.10 | — | — | 100.79 | 100.79 | — | — |
| 9/29/2006 | MW-27 | 102.89 | — | 2.09 | — | — | 100.80 | 100.80 | — | — |
| 10/20/2006 | MW-27 | 102.89 | — | 1.44 | — | — | 101.45 | 101.45 | — | — |
| 11/22/2006 | MW-27 | 102.89 | — | 2.01 | — | — | 100.88 | 100.88 | — | — |
| 12/15/2006 | MW-27 | 102.89 | — | 2.28 | — | — | 100.61 | 100.61 | — | — |
| 1/23/2007 | MW-27 | 102.89 | — | NG | — | — | — | — | — | — |
| 2/2/2007 | MW-27 | 102.89 | — | 2.61 | — | — | 100.28 | 100.28 | — | — |
| 3/5/2007 | MW-27 | 102.89 | — | 2.27 | — | — | 100.62 | 100.62 | — | — |
| 5/1/2007 | MW-27 | 102.89 | — | 1.81 | — | — | 101.08 | 101.08 | — | — |
| 6/22/2007 | MW-27 | 102.89 | — | 2.15 | — | — | 100.74 | 100.74 | — | — |
| 6/26/2007 | MW-27 | 102.89 | — | 2.31 | — | — | 100.58 | 100.58 | — | — |
| 7/6/2007 | MW-27 | 102.89 | — | 1.84 | — | — | 101.05 | 101.05 | — | — |
| 8/1/2007 | MW-27 | 102.89 | — | 1.92 | — | — | 100.97 | 100.97 | — | — |
| 8/7/2007 | MW-27 | 102.89 | — | 2.11 | — | — | 100.78 | 100.78 | — | — |
| 9/14/2007 | MW-27 | 102.89 | — | 2.32 | — | — | 100.57 | 100.57 | — | — |
| 10/8/2007 | MW-27 | 102.89 | — | 2.54 | — | — | 100.35 | 100.35 | — | — |
| 11/20/2007 | MW-27 | 102.89 | — | 2.48 | — | — | 100.41 | 100.41 | — | — |
| 12/26/2007 | MW-27 | 102.89 | — | 2.40 | — | — | 100.49 | 100.49 | — | — |
| 1/2/2008 | MW-27 | 102.89 | — | 2.02 | — | — | 100.87 | 100.87 | — | — |
| 3/5/2008 | MW-27 | 102.89 | — | 1.96 | — | — | 100.93 | 100.93 | — | — |
| 4/23/2008 | MW-27 | 102.89 | — | 2.57 | — | — | 100.32 | 100.32 | — | — |
| 5/6/2008 | MW-27 | 102.89 | — | 1.64 | — | — | 101.25 | 101.25 | — | — |
| 5/12/2008 | MW-27 | 102.89 | — | 1.74 | — | — | 101.15 | 101.15 | — | — |
| 6/27/2008 | MW-27 | 102.89 | — | 2.27 | — | — | 100.62 | 100.62 | — | — |
| 8/5/2008 | MW-27 | 102.89 | — | 2.37 | — | — | 100.52 | 100.52 | — | — |
| 9/10/2008 | MW-27 | 102.89 | — | 2.38 | — | — | 100.51 | 100.51 | — | — |
| 10/27/2008 | MW-27 | 102.89 | — | NG | — | — | — | — | — | — |
| 11/4/2008 | MW-27 | 102.89 | — | 2.54 | — | — | 100.35 | 100.35 | — | — |
| 1/5/2009 | MW-27 | 102.89 | — | 2.45 | — | — | 100.44 | 100.44 | — | — |
| 2/27/2009 | MW-27 | 102.89 | — | 2.89 | — | — | 100.00 | 100.00 | — | — |
| 3/9/2009 | MW-27 | 102.89 | — | 2.82 | — | — | 100.07 | 100.07 | — | — |
| 4/20/2009 | MW-27 | 102.89 | — | 2.64 | — | — | 100.25 | 100.25 | — | — |
| 4/29/2009 | MW-27 | 102.89 | — | 2.60 | — | — | 100.29 | 100.29 | — | — |
| 6/2/2009 | MW-27 | 102.89 | — | 2.45 | — | — | 100.44 | 100.44 | — | — |
| 7/6/2009 | MW-27 | 102.89 | — | 1.97 | — | — | 100.92 | 100.92 | — | — |
| 8/14/2009 | MW-27 | 102.89 | — | 2.26 | — | — | 100.63 | 100.63 | — | — |
| 9/28/2009 | MW-27 | 102.89 | — | 1.53 | — | — | 101.36 | 101.36 | — | — |
| 10/13/2009 | MW-27 | 102.89 | — | 2.57 | — | — | 100.32 | 100.32 | — | — |
| 11/23/2009 | MW-27 | 102.89 | — | 2.34 | — | — | 100.55 | 100.55 | — | — |
| 12/2/2009 | MW-27 | 102.89 | — | 2.52 | — | — | 100.37 | 100.37 | — | — |
| 1/12/2010 | MW-27 | 102.89 | — | 2.59 | — | — | 100.30 | 100.30 | — | — |
| 2/2/2010 | MW-27 | 102.89 | — | 2.66 | — | — | 100.23 | 100.23 | — | — |
| 3/2/2010 | MW-27 | 102.89 | — | 1.54 | — | — | 101.35 | 101.35 | — | — |
| 3/15/2010 | MW-27 | 102.89 | — | NG | — | — | — | — | — | Flooded |
| 4/15/2010 | MW-27 | 102.89 | — | 2.23 | — | — | 100.66 | 100.66 | — | — |
| 4/22/2010 | MW-27 | 102.89 | — | 2.13 | — | — | 100.76 | 100.76 | — | — |
| 5/3/2010 | MW-27 | 102.89 | — | 0.80 | — | — | 102.09 | 102.09 | — | — |
| 6/21/2010 | MW-27 | 102.89 | — | 2.38 | — | — | 100.51 | 100.51 | — | — |
| 7/2/2010 | MW-27 | 102.89 | — | 2.55 | — | — | 100.34 | 100.34 | — | — |
| 8/13/2010 | MW-27 | 102.89 | — | 2.68 | — | — | 100.21 | 100.21 | — | — |
| 9/1/2010 | MW-27 | 102.89 | — | 2.42 | — | — | 100.47 | 100.47 | — | — |
| 10/8/2010 | MW-27 | 102.89 | — | 2.21 | — | — | 100.68 | 100.68 | — | — |
| 11/23/2010 | MW-27 | 102.89 | — | 2.56 | — | — | 100.33 | 100.33 | — | — |
| 1/3/2011 | MW-27 | 102.89 | — | 2.51 | — | — | 100.38 | 100.38 | — | — |
| 1/25/2011 | MW-27 | 102.89 | — | 2.55 | — | — | 100.34 | 100.34 | — | — |
| 2/4/2011 | MW-27 | 102.89 | — | 2.23 | — | — | 100.66 | 100.66 | — | — |
| 3/26/2011 | MW-27 | 102.89 | — | 1.71 | — | — | 101.18 | 101.18 | — | — |
| 4/27/2011 | MW-27 | 102.89 | — | 2.02 | — | — | 100.87 | 100.87 | — | — |
| 5/9/2011 | MW-27 | 102.89 | — | 2.25 | — | — | 100.64 | 100.64 | — | — |
| 6/6/2011 | MW-27 | 102.89 | — | 2.29 | — | — | 100.60 | 100.60 | — | — |



Shell/Motiva 0007365

# Table 3
## Groundwater Elevation Summary
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-28 | 102.57 | — | 1.17 | — | — | 101.40 | 101.40 | — | — |
| 2/21/2006 | MW-28 | 102.57 | — | 1.41 | — | — | 101.16 | 101.16 | — | — |
| 3/7/2006 | MW-28 | 102.57 | — | 1.69 | — | — | 100.88 | 100.88 | — | — |
| 5/18/2006 | MW-28 | 102.57 | — | 1.34 | — | — | 101.23 | 101.23 | — | — |
| 6/22/2006 | MW-28 | 102.57 | — | 1.51 | — | — | 101.06 | 101.06 | — | — |
| 6/28/2006 | MW-28 | 102.57 | — | 1.18 | — | — | 101.39 | 101.39 | — | — |
| 8/16/2006 | MW-28 | 102.57 | — | 1.41 | — | — | 101.16 | 101.16 | — | — |
| 9/29/2006 | MW-28 | 102.57 | — | 1.42 | — | — | 101.15 | 101.15 | — | — |
| 10/20/2006 | MW-28 | 102.57 | — | 1.69 | — | — | 100.88 | 100.88 | — | — |
| 11/22/2006 | MW-28 | 102.57 | — | 1.34 | — | — | 101.23 | 101.23 | — | — |
| 12/15/2006 | MW-28 | 102.57 | — | 1.55 | — | — | 101.02 | 101.02 | — | — |
| 1/23/2007 | MW-28 | 102.57 | — | 1.79 | — | — | 100.78 | 100.78 | — | — |
| 2/2/2007 | MW-28 | 102.57 | — | 1.93 | — | — | 100.64 | 100.64 | — | — |
| 3/5/2007 | MW-28 | 102.57 | — | 1.65 | — | — | 100.92 | 100.92 | — | — |
| 5/1/2007 | MW-28 | 102.57 | — | 1.10 | — | — | 101.47 | 101.47 | — | — |
| 6/26/2007 | MW-28 | 102.57 | — | 1.62 | — | — | 100.95 | 100.95 | — | — |
| 7/6/2007 | MW-28 | 102.57 | — | 1.47 | — | — | 101.10 | 101.10 | — | — |
| 8/1/2007 | MW-28 | 102.57 | — | 1.23 | — | — | 101.34 | 101.34 | — | — |
| 8/7/2007 | MW-28 | 102.57 | — | 1.35 | — | — | 101.22 | 101.22 | — | — |
| 9/14/2007 | MW-28 | 102.57 | — | 1.62 | — | — | 100.95 | 100.95 | — | — |
| 10/8/2007 | MW-28 | 102.57 | — | 1.94 | — | — | 100.63 | 100.63 | — | — |
| 11/20/2007 | MW-28 | 102.57 | — | 2.01 | — | — | 100.56 | 100.56 | — | — |
| 12/26/2007 | MW-28 | 102.57 | — | 1.78 | — | — | 100.79 | 100.79 | — | — |
| 1/2/2008 | MW-28 | 102.57 | — | 1.64 | — | — | 100.93 | 100.93 | — | — |
| 3/5/2008 | MW-28 | 102.57 | — | 1.61 | — | — | 100.96 | 100.96 | — | — |
| 4/23/2008 | MW-28 | 102.57 | — | 1.98 | — | — | 100.59 | 100.59 | — | — |
| 5/6/2008 | MW-28 | 102.57 | — | 1.66 | — | — | 100.91 | 100.91 | — | — |
| 5/12/2008 | MW-28 | 102.57 | — | 1.65 | — | — | 100.92 | 100.92 | — | — |
| 6/27/2008 | MW-28 | 102.57 | 1.10 | 1.11 | 0.01 | 101.47 | 101.46 | 101.47 | — | — |
| 8/5/2008 | MW-28 | 102.57 | — | 1.85 | — | — | 100.72 | 100.72 | — | — |
| 9/10/2008 | MW-28 | 102.57 | — | 1.89 | — | — | 100.68 | 100.68 | — | — |
| 10/27/2008 | MW-28 | 102.57 | — | 1.85 | — | — | 100.72 | 100.72 | — | — |
| 11/4/2008 | MW-28 | 102.57 | — | 1.92 | — | — | 100.65 | 100.65 | — | — |
| 1/5/2009 | MW-28 | 102.57 | — | 1.68 | — | — | 100.89 | 100.89 | — | — |
| 2/27/2009 | MW-28 | 102.57 | — | 2.19 | — | — | 100.38 | 100.38 | — | — |
| 3/9/2009 | MW-28 | 102.57 | — | 2.11 | — | — | 100.46 | 100.46 | — | — |
| 4/20/2009 | MW-28 | 102.57 | — | 3.01 | — | — | 99.56 | 99.56 | — | — |
| 4/29/2009 | MW-28 | 102.57 | — | 1.95 | — | — | 100.62 | 100.62 | — | — |
| 6/2/2009 | MW-28 | 102.57 | — | 1.84 | — | — | 100.73 | 100.73 | — | — |
| 7/6/2009 | MW-28 | 102.57 | — | 1.28 | — | — | 101.29 | 101.29 | — | — |
| 8/14/2009 | MW-28 | 102.57 | — | 1.54 | — | — | 101.03 | 101.03 | — | — |
| 9/28/2009 | MW-28 | 102.57 | — | 1.69 | — | — | 100.88 | 100.88 | — | — |
| 10/13/2009 | MW-28 | 102.57 | — | 1.89 | — | — | 100.68 | 100.68 | — | — |
| 11/23/2009 | MW-28 | 102.57 | — | 1.73 | — | — | 100.84 | 100.84 | — | — |
| 12/2/2009 | MW-28 | 102.57 | — | 1.83 | — | — | 100.74 | 100.74 | — | — |
| 1/12/2010 | MW-28 | 102.57 | — | 1.64 | — | — | 100.93 | 100.93 | — | — |
| 2/2/2010 | MW-28 | 102.57 | — | 1.92 | — | — | 100.65 | 100.65 | — | — |
| 3/2/2010 | MW-28 | 102.57 | — | 0.91 | — | — | 101.66 | 101.66 | — | — |
| 3/15/2010 | MW-28 | 102.57 | — | 0.53 | — | — | 102.04 | 102.04 | — | — |
| 4/15/2010 | MW-28 | 102.57 | — | 1.43 | — | — | 101.14 | 101.14 | — | — |
| 4/22/2010 | MW-28 | 102.57 | — | 1.43 | — | — | 101.14 | 101.14 | — | — |
| 5/3/2010 | MW-28 | 102.57 | — | 1.26 | — | — | 101.31 | 101.31 | — | — |
| 6/21/2010 | MW-28 | 102.57 | — | 1.75 | — | — | 100.82 | 100.82 | — | — |
| 7/2/2010 | MW-28 | 102.57 | — | 1.85 | — | — | 100.72 | 100.72 | — | — |
| 8/13/2010 | MW-28 | 102.57 | — | 2.11 | — | — | 100.46 | 100.46 | — | — |
| 9/1/2010 | MW-28 | 102.57 | — | 1.79 | — | — | 100.78 | 100.78 | — | — |
| 10/8/2010 | MW-28 | 102.57 | — | 1.67 | — | — | 100.90 | 100.90 | — | — |
| 11/23/2010 | MW-28 | 102.57 | — | 1.95 | — | — | 100.62 | 100.62 | — | — |
| 1/3/2011 | MW-28 | 102.57 | — | 1.93 | — | — | 100.64 | 100.64 | — | — |
| 1/25/2011 | MW-28 | 102.57 | — | 1.89 | — | — | 100.68 | 100.68 | — | — |
| 2/4/2011 | MW-28 | 102.57 | — | NG | — | — | — | — | — | — |
| 3/26/2011 | MW-28 | 102.57 | — | 1.14 | — | — | 101.43 | 101.43 | — | — |
| 4/27/2011 | MW-28 | 102.57 | — | 1.34 | — | — | 101.23 | 101.23 | — | — |
| 5/9/2011 | MW-28 | 102.57 | — | 1.57 | — | — | 101.00 | 101.00 | — | — |
| 6/6/2011 | MW-28 | 102.57 | — | 1.66 | — | — | 100.91 | 100.91 | — | — |



Shell/Motiva 0007366

**Table 3**
**Groundwater Elevation Summary**
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-29 | 102.71 | — | 1.36 | — | — | 101.35 | 101.35 | — | — |
| 2/21/2006 | MW-29 | 102.71 | — | 1.58 | — | — | 101.13 | 101.13 | — | — |
| 3/7/2006 | MW-29 | 102.71 | — | 1.86 | — | — | 100.85 | 100.85 | — | — |
| 5/18/2006 | MW-29 | 102.71 | — | 1.56 | — | — | 101.15 | 101.15 | — | — |
| 6/28/2006 | MW-29 | 102.71 | — | 1.31 | — | — | 101.40 | 101.40 | — | — |
| 8/16/2006 | MW-29 | 102.71 | — | 1.60 | — | — | 101.11 | 101.11 | — | — |
| 9/29/2006 | MW-29 | 102.71 | — | 1.50 | — | — | 101.21 | 101.21 | — | — |
| 10/20/2006 | MW-29 | 102.71 | — | 1.02 | — | — | 101.69 | 101.69 | — | — |
| 11/22/2006 | MW-29 | 102.71 | — | 1.50 | — | — | 101.21 | 101.21 | — | — |
| 12/15/2006 | MW-29 | 102.71 | — | 1.80 | — | — | 100.91 | 100.91 | — | — |
| 1/23/2007 | MW-29 | 102.71 | — | 1.99 | — | — | 100.72 | 100.72 | — | — |
| 2/2/2007 | MW-29 | 102.71 | — | 2.12 | — | — | 100.59 | 100.59 | — | — |
| 3/5/2007 | MW-29 | 102.71 | — | 1.92 | — | — | 100.79 | 100.79 | — | — |
| 5/1/2007 | MW-29 | 102.71 | — | 1.28 | — | — | 101.43 | 101.43 | — | — |
| 6/22/2007 | MW-29 | 102.71 | — | 1.71 | — | — | 101.00 | 101.00 | — | — |
| 6/26/2007 | MW-29 | 102.71 | — | 1.78 | — | — | 100.93 | 100.93 | — | — |
| 7/6/2007 | MW-29 | 102.71 | — | 1.60 | — | — | 101.11 | 101.11 | — | — |
| 8/1/2007 | MW-29 | 102.71 | — | 1.46 | — | — | 101.25 | 101.25 | — | — |
| 8/7/2007 | MW-29 | 102.71 | — | 1.59 | — | — | 101.12 | 101.12 | — | — |
| 9/14/2007 | MW-29 | 102.71 | — | 1.83 | — | — | 100.88 | 100.88 | — | — |
| 10/8/2007 | MW-29 | 102.71 | — | 2.12 | — | — | 100.59 | 100.59 | — | — |
| 11/20/2007 | MW-29 | 102.71 | — | NG | — | — | — | — | — | — |
| 12/26/2007 | MW-29 | 102.71 | — | 1.94 | — | — | 100.77 | 100.77 | — | — |
| 1/2/2008 | MW-29 | 102.71 | — | NG | — | — | — | — | — | — |
| 3/5/2008 | MW-29 | 102.71 | — | NG | — | — | — | — | — | — |
| 4/23/2008 | MW-29 | 102.71 | — | 2.14 | — | — | 100.57 | 100.57 | — | — |
| 5/12/2008 | MW-29 | 102.71 | — | 1.84 | — | — | 100.87 | 100.87 | — | — |
| 6/27/2008 | MW-29 | 102.71 | — | NG | — | — | — | — | — | — |
| 8/5/2008 | MW-29 | 102.71 | — | 1.99 | — | — | 100.72 | 100.72 | — | — |
| 9/10/2008 | MW-29 | 102.71 | — | 2.09 | — | — | 100.62 | 100.62 | — | — |
| 10/27/2008 | MW-29 | 102.71 | — | NG | — | — | — | — | — | — |
| 11/4/2008 | MW-29 | 102.71 | — | 2.19 | — | — | 100.52 | 100.52 | — | — |
| 1/5/2009 | MW-29 | 102.71 | — | 1.81 | — | — | 100.90 | 100.90 | — | — |
| 2/27/2009 | MW-29 | 102.71 | — | 2.48 | — | — | 100.23 | 100.23 | — | — |
| 3/9/2009 | MW-29 | 102.71 | — | 2.38 | — | — | 100.33 | 100.33 | — | — |
| 4/20/2009 | MW-29 | 102.71 | — | 2.19 | — | — | 100.52 | 100.52 | — | — |
| 4/29/2009 | MW-29 | 102.71 | — | 1.98 | — | — | 100.73 | 100.73 | — | — |
| 5/6/2009 | MW-29 | 102.71 | — | 1.86 | — | — | 100.85 | 100.85 | — | — |
| 6/2/2009 | MW-29 | 102.71 | — | 1.96 | — | — | 100.75 | 100.75 | — | — |
| 7/6/2009 | MW-29 | 102.71 | — | 1.43 | — | — | 101.28 | 101.28 | — | — |
| 8/14/2009 | MW-29 | 102.71 | — | 1.72 | — | — | 100.99 | 100.99 | — | — |
| 9/28/2009 | MW-29 | 102.71 | — | 2.04 | — | — | 100.67 | 100.67 | — | — |
| 10/13/2009 | MW-29 | 102.71 | — | 2.14 | — | — | 100.57 | 100.57 | — | — |
| 11/23/2009 | MW-29 | 102.71 | — | 1.96 | — | — | 100.75 | 100.75 | — | — |
| 12/2/2009 | MW-29 | 102.71 | — | 2.12 | — | — | 100.59 | 100.59 | — | — |
| 1/12/2010 | MW-29 | 102.71 | — | 1.96 | — | — | 100.75 | 100.75 | — | — |
| 2/2/2010 | MW-29 | 102.71 | — | 2.12 | — | — | 100.59 | 100.59 | — | — |
| 3/2/2010 | MW-29 | 102.71 | — | 1.04 | — | — | 101.67 | 101.67 | — | — |
| 3/15/2010 | MW-29 | 102.71 | — | 0.59 | — | — | 102.12 | 102.12 | — | — |
| 4/15/2010 | MW-29 | 102.71 | — | 1.53 | — | — | 101.18 | 101.18 | — | — |
| 4/22/2010 | MW-29 | 102.71 | — | NG | — | — | — | — | — | — |
| 5/3/2010 | MW-29 | 102.71 | — | 1.00 | — | — | 101.71 | 101.71 | — | — |
| 6/21/2010 | MW-29 | 102.71 | — | 1.88 | — | — | 100.83 | 100.83 | — | — |
| 7/2/2010 | MW-29 | 102.71 | — | 2.08 | — | — | 100.63 | 100.63 | — | — |
| 8/13/2010 | MW-29 | 102.71 | — | 2.48 | — | — | 100.23 | 100.23 | — | — |
| 9/1/2010 | MW-29 | 102.71 | — | 2.09 | — | — | 100.62 | 100.62 | — | — |
| 10/8/2010 | MW-29 | 102.71 | — | 2.01 | — | — | 100.70 | 100.70 | — | — |
| 11/23/2010 | MW-29 | 102.71 | — | 2.28 | — | — | 100.43 | 100.43 | — | — |
| 1/3/2011 | MW-29 | 102.71 | — | 2.35 | — | — | 100.36 | 100.36 | — | — |
| 1/25/2011 | MW-29 | 102.71 | — | 2.70 | — | — | 100.01 | 100.01 | — | — |
| 2/4/2011 | MW-29 | 102.71 | — | 1.93 | — | — | 100.78 | 100.78 | — | — |
| 3/26/2011 | MW-29 | 102.71 | — | 1.35 | — | — | 101.36 | 101.36 | — | — |
| 4/27/2011 | MW-29 | 102.71 | — | 1.53 | — | — | 101.18 | 101.18 | — | — |
| 5/9/2011 | MW-29 | 102.71 | — | 1.78 | — | — | 100.93 | 100.93 | — | — |
| 6/6/2011 | MW-29 | 102.71 | — | 1.79 | — | — | 100.92 | 100.92 | — | — |



Shell/Motiva 0007367

# Table 3
## Groundwater Elevation Summary
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-30 | — | — | 1.64 | — | — | — | — | — | — |
| 2/21/2006 | MW-30 | — | — | 2.10 | — | — | — | — | — | — |
| 3/7/2006 | MW-30 | — | — | 2.34 | — | — | — | — | — | — |
| 5/18/2006 | MW-30 | — | — | 2.01 | — | — | — | — | — | — |
| 6/28/2006 | MW-30 | — | — | 0.47 | — | — | — | — | — | — |
| 8/16/2006 | MW-30 | — | — | 1.98 | — | — | — | — | — | — |
| 9/29/2006 | MW-30 | — | — | 1.22 | — | — | — | — | — | — |
| 10/20/2006 | MW-30 | — | — | 0.58 | — | — | — | — | — | — |
| 11/22/2006 | MW-30 | — | — | 1.76 | — | — | — | — | — | — |
| 12/15/2006 | MW-30 | — | — | 1.00 | — | — | — | — | — | — |
| 1/23/2007 | MW-30 | — | — | 2.41 | — | — | — | — | — | — |
| 2/2/2007 | MW-30 | — | — | 2.54 | — | — | — | — | — | — |
| 3/5/2007 | MW-30 | — | — | 2.38 | — | — | — | — | — | — |
| 5/1/2007 | MW-30 | — | — | 1.84 | — | — | — | — | — | — |
| 6/22/2007 | MW-30 | — | — | NG | — | — | — | — | — | — |
| 6/26/2007 | MW-30 | — | — | 2.22 | — | — | — | — | — | — |
| 7/6/2007 | MW-30 | — | — | 1.60 | — | — | — | — | — | — |
| 8/1/2007 | MW-30 | — | — | 1.75 | — | — | — | — | — | — |
| 8/7/2007 | MW-30 | — | — | 1.89 | — | — | — | — | — | — |
| 9/14/2007 | MW-30 | — | — | 2.18 | — | — | — | — | — | — |
| 10/8/2007 | MW-30 | — | — | 2.42 | — | — | — | — | — | — |
| 11/20/2007 | MW-30 | — | — | NG | — | — | — | — | — | — |
| 12/26/2007 | MW-30 | — | — | 2.28 | — | — | — | — | — | — |
| 1/2/2008 | MW-30 | — | — | 1.69 | — | — | — | — | — | — |
| 3/5/2008 | MW-30 | — | — | NG | — | — | — | — | — | — |
| 4/23/2008 | MW-30 | — | — | 2.50 | — | — | — | — | — | — |
| 5/6/2008 | MW-30 | — | — | 1.81 | — | — | — | — | — | — |
| 5/12/2008 | MW-30 | — | — | NG | — | — | — | — | — | — |
| 6/27/2008 | MW-30 | — | — | 6.65 | — | — | — | — | — | — |
| 8/5/2008 | MW-30 | — | — | 2.24 | — | — | — | — | — | — |
| 9/10/2008 | MW-30 | — | — | 1.91 | — | — | — | — | — | — |
| 10/27/2008 | MW-30 | — | — | NG | — | — | — | — | — | — |
| 11/4/2008 | MW-30 | — | — | 2.35 | — | — | — | — | — | — |
| 1/5/2009 | MW-30 | — | — | 2.38 | — | — | — | — | — | — |
| 2/27/2009 | MW-30 | — | — | 3.11 | — | — | — | — | — | — |
| 3/9/2009 | MW-30 | — | — | 2.92 | — | — | — | — | — | — |
| 4/20/2009 | MW-30 | — | — | 2.61 | — | — | — | — | — | — |
| 4/29/2009 | MW-30 | — | — | 2.72 | — | — | — | — | — | — |
| 6/2/2009 | MW-30 | — | — | 2.54 | — | — | — | — | — | — |
| 7/6/2009 | MW-30 | — | — | 1.88 | — | — | — | — | — | — |
| 8/14/2009 | MW-30 | — | — | 2.14 | — | — | — | — | — | — |
| 9/28/2009 | MW-30 | — | — | 1.23 | — | — | — | — | — | — |
| 10/13/2009 | MW-30 | — | — | 2.43 | — | — | — | — | — | — |
| 11/23/2009 | MW-30 | — | — | 2.18 | — | — | — | — | — | — |
| 12/2/2009 | MW-30 | — | — | 1.72 | — | — | — | — | — | — |
| 1/12/2010 | MW-30 | — | — | 2.56 | — | — | — | — | — | — |
| 2/2/2010 | MW-30 | — | — | 2.68 | — | — | — | — | — | — |
| 3/2/2010 | MW-30 | — | — | NG | — | — | — | — | — | Under Water |
| 3/15/2010 | MW-30 | — | — | NG | — | — | — | — | — | Flooded |
| 4/15/2010 | MW-30 | — | — | 2.14 | — | — | — | — | — | — |
| 4/22/2010 | MW-30 | — | — | 2.03 | — | — | — | — | — | — |
| 5/3/2010 | MW-30 | — | — | 0.60 | — | — | — | — | — | — |
| 6/21/2010 | MW-30 | — | — | 2.23 | — | — | — | — | — | — |
| 7/2/2010 | MW-30 | — | — | 2.47 | — | — | — | — | — | — |
| 8/13/2010 | MW-30 | — | — | 2.56 | — | — | — | — | — | — |
| 9/1/2010 | MW-30 | — | — | 2.23 | — | — | — | — | — | — |
| 10/8/2010 | MW-30 | — | — | 1.90 | — | — | — | — | — | — |
| 11/23/2010 | MW-30 | — | — | 2.43 | — | — | — | — | — | — |
| 1/3/2011 | MW-30 | — | — | 0.00 | — | — | — | — | — | — |
| 1/25/2011 | MW-30 | — | — | 2.47 | — | — | — | — | — | — |
| 2/4/2011 | MW-30 | — | — | NG | — | — | — | — | — | — |
| 3/26/2011 | MW-30 | — | — | 1.72 | — | — | — | — | — | — |
| 4/27/2011 | MW-30 | — | — | 1.89 | — | — | — | — | — | — |
| 5/9/2011 | MW-30 | — | — | 2.17 | — | — | — | — | — | — |
| 6/6/2011 | MW-30 | — | — | 2.24 | — | — | — | — | — | — |



Shell/Motiva 0007368

## Table 3
## Groundwater Elevation Summary
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-31 | 103.36 | 2.95 | 2.99 | 0.04 | 100.41 | 100.37 | 100.40 | 0.10 | — |
| 2/21/2006 | MW-31 | 103.36 | 3.60 | 4.15 | 0.55 | 99.76 | 99.21 | 99.62 | 1.00 | — |
| 3/7/2006 | MW-31 | 103.36 | 3.84 | 4.86 | 1.02 | 99.52 | 98.50 | 99.25 | 0.66 | Hand Bailing |
| 5/18/2006 | MW-31 | 103.36 | 3.09 | 3.36 | 0.27 | 100.27 | 100.00 | 100.20 | 0.50 | — |
| 6/28/2006 | MW-31 | 103.36 | 3.26 | 3.59 | 0.33 | 100.10 | 99.77 | 100.01 | 0.50 | — |
| 8/16/2006 | MW-31 | 103.36 | 3.65 | 4.01 | 0.36 | 99.71 | 99.35 | 99.62 | — | — |
| 9/29/2006 | MW-31 | 103.36 | 3.38 | 3.65 | 0.27 | 99.98 | 99.71 | 99.91 | — | — |
| 10/20/2006 | MW-31 | 103.36 | — | NG | — | — | — | — | — | — |
| 11/22/2006 | MW-31 | 103.36 | 3.24 | 3.56 | 0.32 | 100.12 | 99.80 | 100.04 | — | — |
| 12/15/2006 | MW-31 | 103.36 | 3.69 | 4.64 | 0.95 | 99.67 | 98.72 | 99.42 | 0.75 | — |
| 1/23/2007 | MW-31 | 103.36 | 4.09 | 4.84 | 0.75 | 99.27 | 98.52 | 99.08 | 1.50 | — |
| 2/2/2007 | MW-31 | 103.36 | 3.99 | 4.72 | 0.73 | 99.37 | 98.64 | 99.18 | 0.25 | — |
| 3/5/2007 | MW-31 | 103.36 | 3.79 | 4.68 | 0.89 | 99.57 | 98.68 | 99.34 | 1.25 | — |
| 5/1/2007 | MW-31 | 103.36 | 3.05 | 3.58 | 0.53 | 100.31 | 99.78 | 100.17 | 0.25 | — |
| 6/22/2007 | MW-31 | 103.36 | 3.55 | 4.15 | 0.60 | 99.81 | 99.21 | 99.65 | 0.25 | — |
| 6/26/2007 | MW-31 | 103.36 | 3.81 | 4.62 | 0.81 | 99.55 | 98.74 | 99.34 | — | — |
| 7/6/2007 | MW-31 | 103.36 | 3.58 | 4.73 | 1.15 | 99.78 | 98.63 | 99.48 | 0.50 | — |
| 8/1/2007 | MW-31 | 103.36 | 3.44 | 3.78 | 0.34 | 99.92 | 99.58 | 99.83 | 0.25 | — |
| 8/7/2007 | MW-31 | 103.36 | 3.51 | 3.61 | 0.10 | 99.85 | 99.75 | 99.82 | — | — |
| 9/14/2007 | MW-31 | 103.36 | 3.99 | 4.73 | 0.74 | 99.37 | 98.63 | 99.18 | 1.00 | — |
| 10/8/2007 | MW-31 | 103.36 | 3.85 | 4.75 | 0.90 | 99.51 | 98.61 | 99.28 | 1.00 | — |
| 11/20/2007 | MW-31 | 103.36 | 3.75 | 4.85 | 1.10 | 99.61 | 98.51 | 99.32 | 1.00 | — |
| 12/26/2007 | MW-31 | 103.36 | 3.90 | 4.69 | 0.79 | 99.46 | 98.67 | 99.25 | — | — |
| 1/2/2008 | MW-31 | 103.36 | — | NG | — | — | — | — | — | — |
| 3/5/2008 | MW-31 | 103.36 | — | NG | — | — | — | — | — | — |
| 4/23/2008 | MW-31 | 103.36 | — | NG | — | — | — | — | — | — |
| 5/12/2008 | MW-31 | 103.36 | 2.92 | 3.34 | 0.42 | 100.44 | 100.02 | 100.33 | — | — |
| 6/27/2008 | MW-31 | 103.36 | 3.52 | 4.17 | 0.65 | 99.84 | 99.19 | 99.67 | 1.00 | — |
| 8/5/2008 | MW-31 | 103.36 | 3.75 | 4.66 | 0.91 | 99.61 | 98.70 | 99.37 | 1.00 | — |
| 9/10/2008 | MW-31 | 103.36 | 3.63 | 4.67 | 1.04 | 99.73 | 98.69 | 99.46 | 1.00 | — |
| 10/27/2008 | MW-31 | 103.36 | 3.19 | 4.05 | 0.86 | 100.17 | 99.31 | 99.95 | 1.00 | — |
| 11/4/2008 | MW-31 | 103.36 | 4.09 | 5.25 | 1.16 | 99.27 | 98.11 | 98.97 | 1.25 | — |
| 1/5/2009 | MW-31 | 103.36 | 4.02 | 4.80 | 0.78 | 99.34 | 98.56 | 99.14 | 1.25 | — |
| 2/27/2009 | MW-31 | 103.36 | 4.42 | 4.85 | 0.43 | 98.94 | 98.51 | 98.83 | 0.75 | — |
| 3/9/2009 | MW-31 | 103.36 | 3.81 | 4.34 | 0.53 | 99.55 | 99.02 | 99.41 | 1.00 | — |
| 4/20/2009 | MW-31 | 103.36 | 3.68 | 4.47 | 0.79 | 99.68 | 98.89 | 99.47 | 1.50 | — |
| 4/29/2009 | MW-31 | 103.36 | 4.20 | 4.60 | 0.40 | 99.16 | 98.76 | 99.06 | 1.00 | — |
| 5/6/2009 | MW-31 | 103.36 | 3.39 | 3.91 | 0.52 | 99.97 | 99.45 | 99.83 | 1.00 | — |
| 6/2/2009 | MW-31 | 103.36 | 3.71 | 4.81 | 1.10 | 99.65 | 98.55 | 99.36 | 1.00 | — |
| 7/6/2009 | MW-31 | 103.36 | 3.29 | 3.75 | 0.46 | 100.07 | 99.61 | 99.95 | 0.50 | — |
| 8/14/2009 | MW-31 | 103.36 | 3.59 | 4.05 | 0.46 | 99.77 | 99.31 | 99.65 | 0.75 | — |
| 9/28/2009 | MW-31 | 103.36 | 3.42 | 4.13 | 0.71 | 99.94 | 99.23 | 99.76 | 0.75 | — |
| 10/13/2009 | MW-31 | 103.36 | 3.81 | 4.80 | 0.99 | 99.55 | 98.56 | 99.29 | 1.00 | — |
| 11/23/2009 | MW-31 | 103.36 | 3.66 | 3.91 | 0.25 | 99.70 | 99.45 | 99.64 | — | — |
| 12/2/2009 | MW-31 | 103.36 | — | 4.84 | — | — | 98.52 | 98.52 | 2.00 | — |
| 1/12/2010 | MW-31 | 103.36 | 3.85 | 4.56 | 0.71 | 99.51 | 98.80 | 99.33 | 0.75 | — |
| 2/2/2010 | MW-31 | 103.36 | 4.23 | 4.79 | 0.56 | 99.13 | 98.57 | 98.98 | 0.75 | — |
| 3/2/2010 | MW-31 | 103.36 | 2.39 | 2.93 | 0.54 | 100.97 | 100.43 | 100.83 | 0.75 | — |
| 3/15/2010 | MW-31 | 103.36 | 1.69 | 1.75 | 0.06 | 101.67 | 101.61 | 101.65 | — | — |
| 4/15/2010 | MW-31 | 103.36 | 3.68 | 3.78 | 0.10 | 99.68 | 99.58 | 99.65 | — | — |
| 4/22/2010 | MW-31 | 103.36 | 3.26 | 3.43 | 0.17 | 100.10 | 99.93 | 100.06 | 0.25 | — |
| 5/3/2010 | MW-31 | 103.36 | 3.09 | 3.15 | 0.06 | 100.27 | 100.21 | 100.25 | — | — |
| 6/21/2010 | MW-31 | 103.36 | 3.58 | 4.40 | 0.82 | 99.78 | 98.96 | 99.57 | — | — |
| 7/2/2010 | MW-31 | 103.36 | 3.83 | 4.63 | 0.80 | 99.53 | 98.73 | 99.32 | 1.00 | — |
| 8/13/2010 | MW-31 | 103.36 | 3.71 | 4.46 | 0.75 | 99.65 | 98.90 | 99.46 | 1.00 | — |
| 9/1/2010 | MW-31 | 103.36 | 3.62 | 3.90 | 0.28 | 99.74 | 99.46 | 99.67 | 0.50 | — |
| 10/8/2010 | MW-31 | 103.36 | 3.31 | 3.49 | 0.18 | 100.05 | 99.87 | 100.00 | 0.25 | — |
| 11/23/2010 | MW-31 | 103.36 | 3.67 | 4.46 | 0.79 | 99.69 | 98.90 | 99.48 | 1.00 | — |
| 1/3/2011 | MW-31 | 103.36 | — | NG | — | — | — | — | — | — |
| 1/25/2011 | MW-31 | 103.36 | — | NG | — | — | — | — | — | — |
| 2/4/2011 | MW-31 | 103.36 | — | NG | — | — | — | — | — | — |
| 3/26/2011 | MW-31 | 103.36 | 2.83 | 3.16 | 0.33 | 100.53 | 100.20 | 100.44 | 1.00 | — |
| 4/27/2011 | MW-31 | 103.36 | 3.01 | 3.26 | 0.25 | 100.35 | 100.10 | 100.29 | 0.25 | — |
| 5/9/2011 | MW-31 | 103.36 | 3.35 | 3.59 | 0.24 | 100.01 | 99.77 | 99.95 | 0.25 | — |
| 6/6/2011 | MW-31 | 103.36 | 3.50 | 3.61 | 0.11 | 99.86 | 99.75 | 99.83 | 0.50 | — |



Shell/Motiva 0007369

## Table 3
## Groundwater Elevation Summary
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-32 | 104.44 | — | 3.04 | — | — | 101.40 | 101.40 | — | — |
| 2/21/2006 | MW-32 | 104.44 | — | 3.79 | — | — | 100.65 | 100.65 | — | — |
| 3/7/2006 | MW-32 | 104.44 | — | 4.50 | — | — | 99.94 | 99.94 | — | — |
| 5/18/2006 | MW-32 | 104.44 | — | 3.73 | — | — | 100.71 | 100.71 | — | — |
| 6/28/2006 | MW-32 | 104.44 | — | 3.59 | — | — | 100.85 | 100.85 | — | — |
| 8/16/2006 | MW-32 | 104.44 | — | 3.71 | — | — | 100.73 | 100.73 | — | — |
| 9/29/2006 | MW-32 | 104.44 | — | 3.72 | — | — | 100.72 | 100.72 | — | — |
| 10/20/2006 | MW-32 | 104.44 | — | 3.55 | — | — | 100.89 | 100.89 | — | — |
| 11/21/2006 | MW-32 | 104.44 | — | 3.57 | — | — | 100.87 | 100.87 | — | — |
| 12/15/2006 | MW-32 | 104.44 | — | 4.55 | — | — | 99.89 | 99.89 | — | — |
| 1/23/2007 | MW-32 | 104.44 | — | 4.72 | — | — | 99.72 | 99.72 | — | — |
| 2/2/2007 | MW-32 | 104.44 | — | 5.01 | — | — | 99.43 | 99.43 | — | — |
| 3/5/2007 | MW-32 | 104.44 | — | 3.79 | — | — | 100.65 | 100.65 | — | — |
| 5/1/2007 | MW-32 | 104.44 | — | 3.25 | — | — | 101.19 | 101.19 | — | — |
| 6/22/2007 | MW-32 | 104.44 | — | 4.11 | — | — | 100.33 | 100.33 | — | — |
| 6/26/2007 | MW-32 | 104.44 | — | 4.42 | — | — | 100.02 | 100.02 | — | — |
| 7/6/2007 | MW-32 | 104.44 | — | 4.34 | — | — | 100.10 | 100.10 | — | — |
| 8/1/2007 | MW-32 | 104.44 | — | 3.71 | — | — | 100.73 | 100.73 | — | — |
| 8/7/2007 | MW-32 | 104.44 | — | 3.85 | — | — | 100.59 | 100.59 | — | — |
| 9/14/2007 | MW-32 | 104.44 | — | 4.66 | — | — | 99.78 | 99.78 | — | — |
| 10/8/2007 | MW-32 | 104.44 | — | 4.84 | — | — | 99.60 | 99.60 | — | — |
| 11/20/2007 | MW-32 | 104.44 | — | 4.63 | — | — | 99.81 | 99.81 | — | — |
| 12/26/2007 | MW-32 | 104.44 | — | 4.12 | — | — | 100.32 | 100.32 | — | — |
| 1/2/2008 | MW-32 | 104.44 | — | 3.71 | — | — | 100.73 | 100.73 | — | — |
| 3/5/2008 | MW-32 | 104.44 | — | 3.85 | — | — | 100.59 | 100.59 | — | — |
| 4/23/2008 | MW-32 | 104.44 | — | 4.61 | — | — | 99.83 | 99.83 | — | — |
| 5/12/2008 | MW-32 | 104.44 | — | 3.54 | — | — | 100.90 | 100.90 | — | — |
| 6/27/2008 | MW-32 | 104.44 | — | 4.06 | — | — | 100.38 | 100.38 | — | — |
| 8/5/2008 | MW-32 | 104.44 | — | 4.25 | — | — | 100.19 | 100.19 | — | — |
| 9/10/2008 | MW-32 | 104.44 | — | 3.60 | — | — | 100.84 | 100.84 | — | — |
| 10/27/2008 | MW-32 | 104.44 | — | 4.11 | — | — | 100.33 | 100.33 | — | — |
| 11/4/2008 | MW-32 | 104.44 | — | 4.45 | — | — | 99.99 | 99.99 | — | — |
| 1/5/2009 | MW-32 | 104.44 | — | 4.30 | — | — | 100.14 | 100.14 | — | — |
| 2/27/2009 | MW-32 | 104.44 | — | 5.26 | — | — | 99.18 | 99.18 | — | — |
| 3/9/2009 | MW-32 | 104.44 | — | 4.94 | — | — | 99.50 | 99.50 | — | — |
| 4/20/2009 | MW-32 | 104.44 | — | 4.45 | — | — | 99.99 | 99.99 | — | — |
| 4/29/2009 | MW-32 | 104.44 | — | 4.39 | — | — | 100.05 | 100.05 | — | — |
| 5/6/2009 | MW-32 | 104.44 | — | 3.92 | — | — | 100.52 | 100.52 | — | — |
| 6/2/2009 | MW-32 | 104.44 | — | 4.59 | — | — | 99.85 | 99.85 | — | — |
| 7/6/2009 | MW-32 | 104.44 | — | 3.54 | — | — | 100.90 | 100.90 | — | — |
| 8/14/2009 | MW-32 | 104.44 | — | 3.94 | — | — | 100.50 | 100.50 | — | — |
| 9/28/2009 | MW-32 | 104.44 | — | 4.24 | — | — | 100.20 | 100.20 | — | — |
| 10/13/2009 | MW-32 | 104.44 | — | 4.63 | — | — | 99.81 | 99.81 | — | — |
| 11/23/2009 | MW-32 | 104.44 | — | 4.06 | — | — | 100.38 | 100.38 | — | — |
| 12/2/2009 | MW-32 | 104.44 | — | 4.77 | — | — | 99.67 | 99.67 | — | — |
| 1/12/2010 | MW-32 | 104.44 | — | 4.45 | — | — | 99.99 | 99.99 | — | — |
| 2/2/2010 | MW-32 | 104.44 | — | 4.59 | — | — | 99.85 | 99.85 | — | — |
| 3/2/2010 | MW-32 | 104.44 | — | 2.77 | — | — | 101.67 | 101.67 | — | — |
| 3/15/2010 | MW-32 | 104.44 | — | 1.59 | — | — | 102.85 | 102.85 | — | — |
| 4/15/2010 | MW-32 | 104.44 | — | 3.62 | — | — | 100.82 | 100.82 | — | — |
| 4/22/2010 | MW-32 | 104.44 | — | 3.66 | — | — | 100.78 | 100.78 | — | — |
| 5/3/2010 | MW-32 | 104.44 | — | 2.95 | — | — | 101.49 | 101.49 | — | — |
| 6/21/2010 | MW-32 | 104.44 | — | 4.19 | — | — | 100.25 | 100.25 | — | — |
| 7/2/2010 | MW-32 | 104.44 | — | 4.54 | — | — | 99.90 | 99.90 | — | — |
| 8/13/2010 | MW-32 | 104.44 | — | 4.53 | — | — | 99.91 | 99.91 | — | — |
| 9/1/2010 | MW-32 | 104.44 | — | 3.99 | — | — | 100.45 | 100.45 | — | — |
| 10/8/2010 | MW-32 | 104.44 | — | 3.51 | — | — | 100.93 | 100.93 | — | — |
| 11/23/2010 | MW-32 | 104.44 | — | 4.62 | — | — | 99.82 | 99.82 | — | — |
| 1/3/2011 | MW-32 | 104.44 | — | 4.51 | — | — | 99.93 | 99.93 | — | — |
| 1/25/2011 | MW-32 | 104.44 | — | 3.89 | — | — | 100.55 | 100.55 | — | — |
| 2/4/2011 | MW-32 | 104.44 | — | 3.46 | — | — | 100.98 | 100.98 | — | — |
| 3/26/2011 | MW-32 | 104.44 | — | 3.11 | — | — | 101.33 | 101.33 | — | — |
| 4/27/2011 | MW-32 | 104.44 | — | 3.29 | — | — | 101.15 | 101.15 | — | — |
| 5/9/2011 | MW-32 | 104.44 | — | 3.72 | — | — | 100.72 | 100.72 | — | — |
| 6/6/2011 | MW-32 | 104.44 | — | 3.99 | — | — | 100.45 | 100.45 | — | — |



Shell/Motiva 0007370

## Table 3
## Groundwater Elevation Summary
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-33 | 103.15 | — | 5.00 | — | — | 98.15 | 98.15 | — | — |
| 2/21/2006 | MW-33 | 103.15 | — | 5.71 | — | — | 97.44 | 97.44 | — | — |
| 3/7/2006 | MW-33 | 103.15 | — | 5.76 | — | — | 97.39 | 97.39 | — | — |
| 5/18/2006 | MW-33 | 103.15 | — | 5.61 | — | — | 97.54 | 97.54 | — | — |
| 6/28/2006 | MW-33 | 103.15 | — | 5.62 | — | — | 97.53 | 97.53 | — | — |
| 8/16/2006 | MW-33 | 103.15 | — | 5.61 | — | — | 97.54 | 97.54 | — | — |
| 9/29/2006 | MW-33 | 103.15 | — | 5.67 | — | — | 97.48 | 97.48 | — | — |
| 10/20/2006 | MW-33 | 103.15 | — | 5.43 | — | — | 97.72 | 97.72 | — | — |
| 11/22/2006 | MW-33 | 103.15 | — | 5.68 | — | — | 97.47 | 97.47 | — | — |
| 12/15/2006 | MW-33 | 103.15 | — | 5.76 | — | — | 97.39 | 97.39 | — | — |
| 1/23/2007 | MW-33 | 103.15 | — | 5.85 | — | — | 97.30 | 97.30 | — | — |
| 2/2/2007 | MW-33 | 103.15 | — | 6.41 | — | — | 96.74 | 96.74 | — | — |
| 3/5/2007 | MW-33 | 103.15 | — | 5.63 | — | — | 97.52 | 97.52 | — | — |
| 5/1/2007 | MW-33 | 103.15 | — | 5.38 | — | — | 97.77 | 97.77 | — | — |
| 6/22/2007 | MW-33 | 103.15 | — | 5.66 | — | — | 97.49 | 97.49 | — | — |
| 6/26/2007 | MW-33 | 103.15 | — | 5.69 | — | — | 97.46 | 97.46 | — | — |
| 7/6/2007 | MW-33 | 103.15 | — | 5.65 | — | — | 97.50 | 97.50 | — | — |
| 8/1/2007 | MW-33 | 103.15 | — | 5.61 | — | — | 97.54 | 97.54 | — | — |
| 8/7/2007 | MW-33 | 103.15 | — | 5.65 | — | — | 97.50 | 97.50 | — | — |
| 9/14/2007 | MW-33 | 103.15 | — | 7.29 | — | — | 95.86 | 95.86 | — | — |
| 10/8/2007 | MW-33 | 103.15 | — | 5.81 | — | — | 97.34 | 97.34 | — | — |
| 11/20/2007 | MW-33 | 103.15 | — | 5.79 | — | — | 97.36 | 97.36 | — | — |
| 12/26/2007 | MW-33 | 103.15 | — | 5.66 | — | — | 97.49 | 97.49 | — | — |
| 1/2/2008 | MW-33 | 103.15 | — | 5.67 | — | — | 97.48 | 97.48 | — | — |
| 3/5/2008 | MW-33 | 103.15 | — | 5.69 | — | — | 97.46 | 97.46 | — | — |
| 4/23/2008 | MW-33 | 103.15 | — | 5.74 | — | — | 97.41 | 97.41 | — | — |
| 5/12/2008 | MW-33 | 103.15 | — | 5.39 | — | — | 97.76 | 97.76 | — | — |
| 6/27/2008 | MW-33 | 103.15 | — | 5.65 | — | — | 97.50 | 97.50 | — | — |
| 8/5/2008 | MW-33 | 103.15 | — | 5.68 | — | — | 97.47 | 97.47 | — | — |
| 9/10/2008 | MW-33 | 103.15 | — | 7.21 | — | — | 95.94 | 95.94 | — | — |
| 10/27/2008 | MW-33 | 103.15 | — | 5.59 | — | — | 97.56 | 97.56 | — | — |
| 11/4/2008 | MW-33 | 103.15 | — | 5.71 | — | — | 97.44 | 97.44 | — | — |
| 1/5/2009 | MW-33 | 103.15 | — | 5.74 | — | — | 97.41 | 97.41 | — | — |
| 2/27/2009 | MW-33 | 103.15 | — | 6.57 | — | — | 96.58 | 96.58 | — | — |
| 3/9/2009 | MW-33 | 103.15 | — | 5.96 | — | — | 97.19 | 97.19 | — | — |
| 4/20/2009 | MW-33 | 103.15 | — | 5.72 | — | — | 97.43 | 97.43 | — | — |
| 4/29/2009 | MW-33 | 103.15 | — | 5.70 | — | — | 97.45 | 97.45 | — | — |
| 5/6/2009 | MW-33 | 103.15 | — | 5.51 | — | — | 97.64 | 97.64 | — | — |
| 6/2/2009 | MW-33 | 103.15 | — | 5.72 | — | — | 97.43 | 97.43 | — | — |
| 7/6/2009 | MW-33 | 103.15 | — | 5.60 | — | — | 97.55 | 97.55 | — | — |
| 8/14/2009 | MW-33 | 103.15 | — | 5.64 | — | — | 97.51 | 97.51 | — | — |
| 9/28/2009 | MW-33 | 103.15 | — | 5.59 | — | — | 97.56 | 97.56 | — | — |
| 10/13/2009 | MW-33 | 103.15 | — | 5.71 | — | — | 97.44 | 97.44 | — | — |
| 11/23/2009 | MW-33 | 103.15 | — | 5.25 | — | — | 97.90 | 97.90 | — | — |
| 12/2/2009 | MW-33 | 103.15 | — | 5.70 | — | — | 97.45 | 97.45 | — | — |
| 1/12/2010 | MW-33 | 103.15 | — | 5.71 | — | — | 97.44 | 97.44 | — | — |
| 2/2/2010 | MW-33 | 103.15 | — | 5.72 | — | — | 97.43 | 97.43 | — | — |
| 3/2/2010 | MW-33 | 103.15 | — | 4.85 | — | — | 98.30 | 98.30 | — | — |
| 3/15/2010 | MW-33 | 103.15 | 5.69 | 5.69 | 0.00 | 97.46 | 97.46 | 97.46 | — | Trace LNAPL |
| 4/15/2010 | MW-33 | 103.15 | — | 5.62 | — | — | 97.53 | 97.53 | — | — |
| 4/22/2010 | MW-33 | 103.15 | — | 5.59 | — | — | 97.56 | 97.56 | — | — |
| 5/3/2010 | MW-33 | 103.15 | — | 5.35 | — | — | 97.80 | 97.80 | — | — |
| 6/21/2010 | MW-33 | 103.15 | — | 5.62 | — | — | 97.53 | 97.53 | — | — |
| 7/2/2010 | MW-33 | 103.15 | — | 5.69 | — | — | 97.46 | 97.46 | — | — |
| 8/13/2010 | MW-33 | 103.15 | — | 5.75 | — | — | 97.40 | 97.40 | — | — |
| 9/1/2010 | MW-33 | 103.15 | — | 5.61 | — | — | 97.54 | 97.54 | — | — |
| 10/8/2010 | MW-33 | 103.15 | — | 5.63 | — | — | 97.52 | 97.52 | — | — |
| 11/23/2010 | MW-33 | 103.15 | — | 5.72 | — | — | 97.43 | 97.43 | — | — |
| 1/3/2011 | MW-33 | 103.15 | — | 5.65 | — | — | 97.50 | 97.50 | — | — |
| 1/25/2011 | MW-33 | 103.15 | — | 5.68 | — | — | 97.47 | 97.47 | — | — |
| 2/4/2011 | MW-33 | 103.15 | — | 5.32 | — | — | 97.83 | 97.83 | — | — |
| 3/26/2011 | MW-33 | 103.15 | — | 5.22 | — | — | 97.93 | 97.93 | — | — |
| 4/27/2011 | MW-33 | 103.15 | — | 5.53 | — | — | 97.62 | 97.62 | — | — |
| 5/9/2011 | MW-33 | 103.15 | — | 5.61 | — | — | 97.54 | 97.54 | — | — |
| 6/6/2011 | MW-33 | 103.15 | — | 5.65 | — | — | 97.50 | 97.50 | — | — |



Shell/Motiva 0007371

## Table 3
## Groundwater Elevation Summary
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-34 / RW-34 | — | — | 6.56 | — | — | — | — | — | — |
| 2/21/2006 | MW-34 / RW-34 | — | — | 7.31 | — | — | — | — | — | — |
| 3/7/2006 | MW-34 / RW-34 | — | — | 7.47 | — | — | — | — | — | — |
| 5/18/2006 | MW-34 / RW-34 | — | — | 7.13 | — | — | — | — | — | — |
| 6/28/2006 | MW-34 / RW-34 | — | — | 7.12 | — | — | — | — | — | — |
| 8/16/2006 | MW-34 / RW-34 | — | — | 7.05 | — | — | — | — | — | — |
| 9/29/2006 | MW-34 / RW-34 | — | — | 7.18 | — | — | — | — | — | — |
| 10/20/2006 | MW-34 / RW-34 | — | — | 6.42 | — | — | — | — | — | — |
| 11/22/2006 | MW-34 / RW-34 | — | — | 5.48 | — | — | — | — | — | — |
| 12/15/2006 | MW-34 / RW-34 | — | — | 7.81 | — | — | — | — | — | — |
| 1/23/2007 | MW-34 / RW-34 | — | — | 7.96 | — | — | — | — | — | — |
| 2/2/2007 | MW-34 / RW-34 | — | — | 8.11 | — | — | — | — | — | — |
| 3/5/2007 | MW-34 / RW-34 | — | — | 7.11 | — | — | — | — | — | — |
| 5/1/2007 | MW-34 / RW-34 | — | — | 6.86 | — | — | — | — | — | — |
| 6/22/2007 | MW-34 / RW-34 | — | — | 7.15 | — | — | — | — | — | — |
| 6/26/2007 | MW-34 / RW-34 | — | — | 7.22 | — | — | — | — | — | — |
| 7/6/2007 | MW-34 / RW-34 | — | — | 7.18 | — | — | — | — | — | — |
| 8/1/2007 | MW-34 / RW-34 | — | — | 7.09 | — | — | — | — | — | — |
| 8/7/2007 | MW-34 / RW-34 | — | — | 7.14 | — | — | — | — | — | — |
| 9/14/2007 | MW-34 / RW-34 | — | — | 5.71 | — | — | — | — | — | — |
| 10/8/2007 | MW-34 / RW-34 | — | — | 7.79 | — | — | — | — | — | — |
| 11/20/2007 | MW-34 / RW-34 | — | — | 7.43 | — | — | — | — | — | — |
| 12/26/2007 | MW-34 / RW-34 | — | — | 7.19 | — | — | — | — | — | — |
| 1/2/2008 | MW-34 / RW-34 | — | — | 7.14 | — | — | — | — | — | — |
| 3/5/2008 | MW-34 / RW-34 | — | — | 7.14 | — | — | — | — | — | — |
| 4/23/2008 | MW-34 / RW-34 | — | — | 7.39 | — | — | — | — | — | — |
| 5/12/2008 | MW-34 / RW-34 | — | 6.70 | 6.85 | 0.15 | — | — | — | — | — |
| 6/27/2008 | MW-34 / RW-34 | — | — | 7.15 | — | — | — | — | — | — |
| 8/5/2008 | MW-34 / RW-34 | — | 7.11 | 7.21 | 0.10 | — | — | — | 0.25 | — |
| 9/10/2008 | MW-34 / RW-34 | — | — | 5.70 | — | — | — | — | — | — |
| 10/27/2008 | MW-34 / RW-34 | — | — | 7.02 | — | — | — | — | — | — |
| 11/4/2008 | MW-34 / RW-34 | — | — | 7.19 | — | — | — | — | — | — |
| 1/5/2009 | MW-34 / RW-34 | — | — | 7.39 | — | — | — | — | — | — |
| 2/27/2009 | MW-34 / RW-34 | — | — | 8.30 | — | — | — | — | — | — |
| 3/9/2009 | MW-34 / RW-34 | — | — | 8.09 | — | — | — | — | — | — |
| 4/20/2009 | MW-34 / RW-34 | — | — | 7.41 | — | — | — | — | — | — |
| 4/29/2009 | MW-34 / RW-34 | — | — | 7.24 | — | — | — | — | — | — |
| 5/6/2009 | MW-34 / RW-34 | — | — | 7.02 | — | — | — | — | — | — |
| 6/2/2009 | MW-34 / RW-34 | — | — | 7.29 | — | — | — | — | — | — |
| 7/6/2009 | MW-34 / RW-34 | — | 7.10 | 7.11 | 0.01 | — | — | — | 0.50 | — |
| 8/14/2009 | MW-34 / RW-34 | — | 7.09 | 7.13 | 0.04 | — | — | — | — | — |
| 9/28/2009 | MW-34 / RW-34 | — | 7.07 | 7.13 | 0.06 | — | — | — | — | — |
| 10/13/2009 | MW-34 / RW-34 | — | 7.38 | 7.45 | 0.07 | — | — | — | — | — |
| 11/23/2009 | MW-34 / RW-34 | — | 7.18 | 7.22 | 0.04 | — | — | — | — | — |
| 12/2/2009 | MW-34 / RW-34 | — | 7.28 | 7.32 | 0.04 | — | — | — | — | — |
| 1/12/2010 | MW-34 / RW-34 | — | 7.31 | 7.33 | 0.02 | — | — | — | — | — |
| 2/2/2010 | MW-34 / RW-34 | — | — | 7.35 | — | — | — | — | — | — |
| 3/2/2010 | MW-34 / RW-34 | — | — | 6.33 | — | — | — | — | — | — |
| 3/15/2010 | MW-34 / RW-34 | — | — | 4.04 | — | — | — | — | — | — |
| 4/15/2010 | MW-34 /RW-34 | — | 7.11 | 7.16 | 0.05 | — | — | — | — | — |
| 4/22/2010 | MW-34 /RW-34 | — | 7.09 | 7.14 | 0.05 | — | — | — | — | — |
| 5/3/2010 | MW-34 /RW-34 | — | 6.81 | 6.85 | 0.04 | — | — | — | — | — |
| 6/21/2010 | MW-34 /RW-34 | — | 7.14 | 7.17 | 0.03 | — | — | — | — | — |
| 7/2/2010 | MW-34 /RW-34 | — | 7.16 | 7.18 | 0.02 | — | — | — | — | — |
| 8/13/2010 | MW-34 /RW-34 | — | 7.45 | 7.55 | 0.10 | — | — | — | — | — |
| 9/1/2010 | MW-34 /RW-34 | — | 7.09 | 7.12 | 0.03 | — | — | — | — | — |
| 10/8/2010 | MW-34 /RW-34 | — | 7.12 | 7.16 | 0.04 | — | — | — | — | — |
| 11/23/2010 | MW-34 /RW-34 | — | 7.32 | 7.34 | 0.02 | — | — | — | — | — |
| 1/3/2011 | MW-34 /RW-34 | — | 7.14 | 7.16 | 0.02 | — | — | — | — | — |
| 1/25/2011 | MW-34 /RW-34 | — | 7.21 | 7.24 | 0.03 | — | — | — | — | — |
| 2/4/2011 | MW-34 /RW-34 | — | 6.85 | 6.87 | 0.02 | — | — | — | — | — |
| 3/26/2011 | MW-34 /RW-34 | — | 6.69 | 6.71 | 0.02 | — | — | — | — | — |
| 4/27/2011 | MW-34 /RW-34 | — | 7.05 | 7.09 | 0.04 | — | — | — | — | — |
| 5/9/2011 | MW-34 /RW-34 | — | 7.11 | 7.16 | 0.05 | — | — | — | — | — |
| 6/6/2011 | MW-34 /RW-34 | — | 7.12 | 7.16 | 0.04 | — | — | — | — | — |



Shell/Motiva 0007372

**Table 3**
**Groundwater Elevation Summary**
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-35 | 103.89 | — | 5.74 | — | — | 98.15 | 98.15 | — | — |
| 2/21/2006 | MW-35 | 103.89 | — | 6.42 | — | — | 97.47 | 97.47 | — | — |
| 3/7/2006 | MW-35 | 103.89 | — | 6.53 | — | — | 97.36 | 97.36 | — | — |
| 5/18/2006 | MW-35 | 103.89 | — | 6.42 | — | — | 97.47 | 97.47 | — | — |
| 6/28/2006 | MW-35 | 103.89 | — | 6.44 | — | — | 97.45 | 97.45 | — | — |
| 8/16/2006 | MW-35 | 103.89 | — | 6.40 | — | — | 97.49 | 97.49 | — | — |
| 9/29/2006 | MW-35 | 103.89 | — | 6.49 | — | — | 97.40 | 97.40 | — | — |
| 10/20/2006 | MW-35 | 103.89 | — | 6.27 | — | — | 97.62 | 97.62 | — | — |
| 11/22/2006 | MW-35 | 103.89 | — | 6.46 | — | — | 97.43 | 97.43 | — | — |
| 12/15/2006 | MW-35 | 103.89 | — | 6.56 | — | — | 97.33 | 97.33 | — | — |
| 1/23/2007 | MW-35 | 103.89 | — | 6.69 | — | — | 97.20 | 97.20 | — | — |
| 2/2/2007 | MW-35 | 103.89 | — | 6.88 | — | — | 97.01 | 97.01 | — | — |
| 3/5/2007 | MW-35 | 103.89 | — | 6.38 | — | — | 97.51 | 97.51 | — | — |
| 5/1/2007 | MW-35 | 103.89 | — | 6.13 | — | — | 97.76 | 97.76 | — | — |
| 6/22/2007 | MW-35 | 103.89 | — | 6.49 | — | — | 97.40 | 97.40 | — | — |
| 6/26/2007 | MW-35 | 103.89 | — | 6.49 | — | — | 97.40 | 97.40 | — | — |
| 7/6/2007 | MW-35 | 103.89 | — | 6.48 | — | — | 97.41 | 97.41 | — | — |
| 8/1/2007 | MW-35 | 103.89 | — | 6.42 | — | — | 97.47 | 97.47 | — | — |
| 8/7/2007 | MW-35 | 103.89 | — | 6.48 | — | — | 97.41 | 97.41 | — | — |
| 9/14/2007 | MW-35 | 103.89 | — | 6.49 | — | — | 97.40 | 97.40 | — | — |
| 10/8/2007 | MW-35 | 103.89 | — | 6.61 | — | — | 97.28 | 97.28 | — | — |
| 11/20/2007 | MW-35 | 103.89 | — | 6.52 | — | — | 97.37 | 97.37 | — | — |
| 12/26/2007 | MW-35 | 103.89 | — | 6.45 | — | — | 97.44 | 97.44 | — | — |
| 1/2/2008 | MW-35 | 103.89 | — | 6.46 | — | — | 97.43 | 97.43 | — | — |
| 3/5/2008 | MW-35 | 103.89 | — | 6.49 | — | — | 97.40 | 97.40 | — | — |
| 4/23/2008 | MW-35 | 103.89 | — | 6.58 | — | — | 97.31 | 97.31 | — | — |
| 5/12/2008 | MW-35 | 103.89 | — | 6.14 | — | — | 97.75 | 97.75 | — | — |
| 6/27/2008 | MW-35 | 103.89 | — | 6.49 | — | — | 97.40 | 97.40 | — | — |
| 8/5/2008 | MW-35 | 103.89 | — | 6.48 | — | — | 97.41 | 97.41 | — | — |
| 9/10/2008 | MW-35 | 103.89 | — | 6.47 | — | — | 97.42 | 97.42 | — | — |
| 10/27/2008 | MW-35 | 103.89 | — | 6.39 | — | — | 97.50 | 97.50 | — | — |
| 11/4/2008 | MW-35 | 103.89 | — | 6.51 | — | — | 97.38 | 97.38 | — | — |
| 1/5/2009 | MW-35 | 103.89 | — | 6.55 | — | — | 97.34 | 97.34 | — | — |
| 2/27/2009 | MW-35 | 103.89 | — | 6.83 | — | — | 97.06 | 97.06 | — | — |
| 3/9/2009 | MW-35 | 103.89 | — | 6.81 | — | — | 97.08 | 97.08 | — | — |
| 4/20/2009 | MW-35 | 103.89 | — | 6.56 | — | — | 97.33 | 97.33 | — | — |
| 4/29/2009 | MW-35 | 103.89 | — | 6.51 | — | — | 97.38 | 97.38 | — | — |
| 5/6/2009 | MW-35 | 103.89 | — | 6.45 | — | — | 97.44 | 97.44 | — | — |
| 6/2/2009 | MW-35 | 103.89 | — | 6.51 | — | — | 97.38 | 97.38 | — | — |
| 7/6/2009 | MW-35 | 103.89 | — | 6.46 | — | — | 97.43 | 97.43 | — | — |
| 8/14/2009 | MW-35 | 103.89 | — | 6.49 | — | — | 97.40 | 97.40 | — | — |
| 9/28/2009 | MW-35 | 103.89 | — | 6.47 | — | — | 97.42 | 97.42 | — | — |
| 10/13/2009 | MW-35 | 103.89 | — | 6.50 | — | — | 97.39 | 97.39 | — | — |
| 11/23/2009 | MW-35 | 103.89 | — | 6.48 | — | — | 97.41 | 97.41 | — | — |
| 12/2/2009 | MW-35 | 103.89 | — | 6.49 | — | — | 97.40 | 97.40 | — | — |
| 1/12/2010 | MW-35 | 103.89 | — | 6.49 | — | — | 97.40 | 97.40 | — | — |
| 2/2/2010 | MW-35 | 103.89 | — | 6.53 | — | — | 97.36 | 97.36 | — | — |
| 3/2/2010 | MW-35 | 103.89 | — | 5.61 | — | — | 98.28 | 98.28 | — | — |
| 3/15/2010 | MW-35 | 103.89 | — | 5.02 | — | — | 98.87 | 98.87 | — | — |
| 4/15/2010 | MW-35 | 103.89 | — | 6.47 | — | — | 97.42 | 97.42 | — | — |
| 4/22/2010 | MW-35 | 103.89 | — | 6.46 | — | — | 97.43 | 97.43 | — | — |
| 5/3/2010 | MW-35 | 103.89 | — | 6.47 | — | — | 97.42 | 97.42 | — | — |
| 6/21/2010 | MW-35 | 103.89 | — | 6.48 | — | — | 97.41 | 97.41 | — | — |
| 7/2/2010 | MW-35 | 103.89 | — | 6.48 | — | — | 97.41 | 97.41 | — | — |
| 8/13/2010 | MW-35 | 103.89 | — | 6.56 | — | — | 97.33 | 97.33 | — | — |
| 9/1/2010 | MW-35 | 103.89 | — | 6.47 | — | — | 97.42 | 97.42 | — | — |
| 10/8/2010 | MW-35 | 103.89 | — | 6.47 | — | — | 97.42 | 97.42 | — | — |
| 11/23/2010 | MW-35 | 103.89 | — | 6.51 | — | — | 97.38 | 97.38 | — | — |
| 1/3/2011 | MW-35 | 103.89 | — | 6.43 | — | — | 97.46 | 97.46 | — | — |
| 1/25/2011 | MW-35 | 103.89 | — | 6.50 | — | — | 97.39 | 97.39 | — | — |
| 2/4/2011 | MW-35 | 103.89 | — | 6.06 | — | — | 97.83 | 97.83 | — | — |
| 3/26/2011 | MW-35 | 103.89 | — | 5.96 | — | — | 97.93 | 97.93 | — | — |
| 4/27/2011 | MW-35 | 103.89 | — | 6.40 | — | — | 97.49 | 97.49 | — | — |
| 5/9/2011 | MW-35 | 103.89 | — | 6.48 | — | — | 97.41 | 97.41 | — | — |
| 6/6/2011 | MW-35 | 103.89 | — | 6.49 | — | — | 97.40 | 97.40 | — | — |



Shell/Motiva 0007373

## Table 3
## Groundwater Elevation Summary
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-36 / RW-36 | 103.87 | 7.99 | 8.21 | 0.22 | 95.88 | 95.66 | 95.82 | 0.50 | — |
| 2/21/2006 | MW-36 / RW-36 | 103.87 | 9.10 | 9.22 | 0.12 | 94.77 | 94.65 | 94.74 | 0.10 | — |
| 3/7/2006 | MW-36 / RW-36 | 103.87 | 9.51 | 10.02 | 0.51 | 94.36 | 93.85 | 94.23 | 1.00 | — |
| 5/18/2006 | MW-36 / RW-36 | 103.87 | 8.59 | 8.82 | 0.23 | 95.28 | 95.05 | 95.22 | 0.25 | — |
| 6/28/2006 | MW-36 / RW-36 | 103.87 | 8.37 | 8.69 | 0.32 | 95.50 | 95.18 | 95.42 | — | — |
| 8/16/2006 | MW-36 / RW-36 | 103.87 | 8.75 | 8.76 | 0.01 | 95.12 | 95.11 | 95.12 | — | — |
| 9/29/2006 | MW-36 / RW-36 | 103.87 | 8.62 | 8.89 | 0.27 | 95.25 | 94.98 | 95.18 | — | — |
| 10/20/2006 | MW-36 / RW-36 | 103.87 | 7.80 | 7.98 | 0.18 | 96.07 | 95.89 | 96.02 | — | — |
| 11/22/2006 | MW-36 / RW-36 | 103.87 | 8.05 | 8.33 | 0.28 | 95.82 | 95.54 | 95.75 | — | — |
| 12/15/2006 | MW-36 / RW-36 | 103.87 | 8.86 | 8.95 | 0.09 | 95.01 | 94.92 | 94.99 | — | — |
| 1/23/2007 | MW-36 / RW-36 | 103.87 | 9.48 | 9.53 | 0.05 | 94.39 | 94.34 | 94.38 | — | — |
| 2/2/2007 | MW-36 / RW-36 | 103.87 | 8.58 | 8.60 | 0.02 | 95.29 | 95.27 | 95.28 | — | — |
| 3/5/2007 | MW-36 / RW-36 | 103.87 | 9.04 | 9.11 | 0.07 | 94.83 | 94.76 | 94.81 | — | — |
| 5/1/2007 | MW-36 / RW-36 | 103.87 | 8.15 | 8.52 | 0.37 | 95.72 | 95.35 | 95.62 | 1.25 | — |
| 6/22/2007 | MW-36 / RW-36 | 103.87 | 8.95 | 9.25 | 0.30 | 94.92 | 94.62 | 94.84 | 0.25 | — |
| 6/26/2007 | MW-36 / RW-36 | 103.87 | 9.29 | 9.63 | 0.34 | 94.58 | 94.24 | 94.49 | — | — |
| 7/6/2007 | MW-36 / RW-36 | 103.87 | 9.41 | 9.92 | 0.51 | 94.46 | 93.95 | 94.33 | 0.50 | — |
| 8/1/2007 | MW-36 / RW-36 | 103.87 | 8.77 | 9.05 | 0.28 | 95.10 | 94.82 | 95.03 | 0.25 | — |
| 8/7/2007 | MW-36 / RW-36 | 103.87 | 8.64 | 8.88 | 0.24 | 95.23 | 94.99 | 95.17 | 0.25 | — |
| 9/14/2007 | MW-36 / RW-36 | 103.87 | 8.91 | 9.51 | 0.60 | 94.96 | 94.36 | 94.80 | 0.75 | — |
| 10/8/2007 | MW-36 / RW-36 | 103.87 | 8.51 | 8.85 | 0.34 | 95.36 | 95.02 | 95.27 | 0.25 | — |
| 11/20/2007 | MW-36 / RW-36 | 103.87 | 8.91 | 9.22 | 0.31 | 94.96 | 94.65 | 94.88 | 0.50 | — |
| 12/26/2007 | MW-36 / RW-36 | 103.87 | 8.85 | 9.05 | 0.20 | 95.02 | 94.82 | 94.97 | — | — |
| 1/2/2008 | MW-36 / RW-36 | 103.87 | 8.95 | 9.45 | 0.50 | 94.92 | 94.42 | 94.79 | 0.75 | — |
| 3/5/2008 | MW-36 / RW-36 | 103.87 | 8.38 | 8.53 | 0.15 | 95.49 | 95.34 | 95.45 | 0.25 | — |
| 4/23/2008 | MW-36 / RW-36 | 103.87 | 9.50 | 9.56 | 0.06 | 94.37 | 94.31 | 94.35 | — | — |
| 5/12/2008 | MW-36 / RW-36 | 103.87 | 7.89 | 8.03 | 0.14 | 95.98 | 95.84 | 95.94 | — | — |
| 6/27/2008 | MW-36 / RW-36 | 103.87 | — | 8.95 | — | — | 94.92 | 94.92 | — | — |
| 8/5/2008 | MW-36 / RW-36 | 103.87 | 9.13 | 9.98 | 0.85 | 94.74 | 93.89 | 94.52 | 1.00 | — |
| 9/10/2008 | MW-36 / RW-36 | 103.87 | 8.77 | 9.69 | 0.92 | 95.10 | 94.18 | 94.86 | 1.00 | — |
| 10/27/2008 | MW-36 / RW-36 | 103.87 | 7.78 | 7.91 | 0.13 | 96.09 | 95.96 | 96.06 | 0.25 | — |
| 11/4/2008 | MW-36 / RW-36 | 103.87 | 9.55 | 9.64 | 0.09 | 94.32 | 94.23 | 94.30 | — | — |
| 1/5/2009 | MW-36 / RW-36 | 103.87 | 10.50 | 10.51 | 0.01 | 93.37 | 93.36 | 93.37 | — | — |
| 2/27/2009 | MW-36 / RW-36 | 103.87 | 9.19 | 9.21 | 0.02 | 94.68 | 94.66 | 94.67 | — | — |
| 3/9/2009 | MW-36 / RW-36 | 103.87 | 7.99 | 8.00 | 0.01 | 95.88 | 95.87 | 95.88 | — | — |
| 4/20/2009 | MW-36 / RW-36 | 103.87 | 8.60 | 8.68 | 0.08 | 95.27 | 95.19 | 95.25 | 0.25 | — |
| 4/29/2009 | MW-36 / RW-36 | 103.87 | — | 10.52 | — | — | 93.35 | 93.35 | — | — |
| 5/6/2009 | MW-36 / RW-36 | 103.87 | 8.22 | 8.47 | 0.25 | 95.65 | 95.40 | 95.59 | 0.50 | — |
| 6/2/2009 | MW-36 / RW-36 | 103.87 | 9.09 | 9.45 | 0.36 | 94.78 | 94.42 | 94.69 | 0.50 | — |
| 7/6/2009 | MW-36 / RW-36 | 103.87 | 8.41 | 8.59 | 0.18 | 95.46 | 95.28 | 95.41 | 0.50 | — |
| 8/14/2009 | MW-36 / RW-36 | 103.87 | 8.98 | 9.34 | 0.36 | 94.89 | 94.53 | 94.80 | 0.50 | — |
| 9/28/2009 | MW-36 / RW-36 | 103.87 | 9.03 | 9.31 | 0.28 | 94.84 | 94.56 | 94.77 | 0.50 | — |
| 10/13/2009 | MW-36 / RW-36 | 103.87 | 9.69 | 9.86 | 0.17 | 94.18 | 94.01 | 94.14 | 0.25 | — |
| 11/23/2009 | MW-36 / RW-36 | 103.87 | — | 8.78 | — | — | 95.09 | 95.09 | — | — |
| 12/2/2009 | MW-36 / RW-36 | 103.87 | 8.08 | 8.13 | 0.05 | 95.79 | 95.74 | 95.78 | — | — |
| 1/12/2010 | MW-36 / RW-36 | 103.87 | 8.88 | 8.95 | 0.07 | 94.99 | 94.92 | 94.97 | — | — |
| 2/2/2010 | MW-36 / RW-36 | 103.87 | 9.35 | 9.39 | 0.04 | 94.52 | 94.48 | 94.51 | — | — |
| 3/2/2010 | MW-36 / RW-36 | 103.87 | — | NG | — | — | — | — | — | — |
| 3/15/2010 | MW-36 / RW-36 | 103.87 | 6.73 | 6.82 | 0.09 | 97.14 | 97.05 | 97.12 | — | — |
| 4/15/2010 | MW-36 / RW-36 | 103.87 | 8.68 | 8.76 | 0.08 | 95.19 | 95.11 | 95.17 | — | — |
| 4/22/2010 | MW-36 / RW-36 | 103.87 | 8.62 | 8.65 | 0.03 | 95.25 | 95.22 | 95.24 | — | — |
| 5/3/2010 | MW-36 / RW-36 | 103.87 | 8.64 | 8.78 | 0.14 | 95.23 | 95.09 | 95.19 | 0.25 | — |
| 6/21/2010 | MW-36 / RW-36 | 103.87 | 8.95 | 9.20 | 0.25 | 94.92 | 94.67 | 94.86 | — | — |
| 7/2/2010 | MW-36 / RW-36 | 103.87 | 10.16 | 10.36 | 0.20 | 93.71 | 93.51 | 93.66 | 0.25 | — |
| 8/13/2010 | MW-36 / RW-36 | 103.87 | 8.66 | 8.75 | 0.09 | 95.21 | 95.12 | 95.19 | — | — |
| 9/1/2010 | MW-36 / RW-36 | 103.87 | 9.56 | 9.78 | 0.22 | 94.31 | 94.09 | 94.25 | 0.25 | — |
| 10/8/2010 | MW-36 / RW-36 | 103.87 | 8.27 | 8.32 | 0.05 | 95.60 | 95.55 | 95.59 | — | — |
| 11/23/2010 | MW-36 / RW-36 | 103.87 | 8.09 | 8.13 | 0.04 | 95.78 | 95.74 | 95.77 | — | — |
| 1/3/2011 | MW-36 / RW-36 | 103.87 | 8.25 | 8.36 | 0.11 | 95.62 | 95.51 | 95.59 | 0.25 | — |
| 1/25/2011 | MW-36 / RW-36 | 103.87 | 9.93 | 10.25 | 0.32 | 93.94 | 93.62 | 93.86 | 1.00 | — |
| 2/4/2011 | MW-36 / RW-36 | 103.87 | — | 8.06 | — | — | 95.81 | 95.81 | — | — |
| 3/26/2011 | MW-36 / RW-36 | 103.87 | 7.99 | 8.08 | 0.09 | 95.88 | 95.79 | 95.86 | — | — |
| 4/27/2011 | MW-36 / RW-36 | 103.87 | 8.31 | 8.43 | 0.12 | 95.56 | 95.44 | 95.53 | 0.25 | — |
| 5/9/2011 | MW-36 / RW-36 | 103.87 | 8.63 | 8.81 | 0.18 | 95.24 | 95.06 | 95.19 | 0.25 | — |
| 6/6/2011 | MW-36 / RW-36 | 103.87 | 8.91 | 9.17 | 0.26 | 94.96 | 94.70 | 94.89 | 1.00 | — |



Shell/Motiva 0007374

**Table 3**
**Groundwater Elevation Summary**
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-37 / RW-37 | 103.49 | — | 6.98 | — | — | 96.51 | 96.51 | — | — |
| 2/21/2006 | MW-37 / RW-37 | 103.49 | — | 8.15 | — | — | 95.34 | 95.34 | — | — |
| 3/7/2006 | MW-37 / RW-37 | 103.49 | — | 7.86 | — | — | 95.63 | 95.63 | — | — |
| 5/18/2006 | MW-37 / RW-37 | 103.49 | — | NG | — | — | — | — | — | — |
| 6/28/2006 | MW-37 / RW-37 | 103.49 | — | 7.59 | — | — | 95.90 | 95.90 | — | — |
| 8/16/2006 | MW-37 / RW-37 | 103.49 | — | 7.56 | — | — | 95.93 | 95.93 | — | — |
| 9/29/2006 | MW-37 / RW-37 | 103.49 | — | 7.58 | — | — | 95.91 | 95.91 | — | — |
| 10/20/2006 | MW-37 / RW-37 | 103.49 | — | 7.54 | — | — | 95.95 | 95.95 | — | — |
| 11/22/2006 | MW-37 / RW-37 | 103.49 | — | 7.59 | — | — | 95.90 | 95.90 | — | — |
| 12/15/2006 | MW-37 / RW-37 | 103.49 | — | 7.92 | — | — | 95.57 | 95.57 | — | — |
| 1/23/2007 | MW-37 / RW-37 | 103.49 | — | 8.18 | — | — | 95.31 | 95.31 | — | — |
| 2/2/2007 | MW-37 / RW-37 | 103.49 | — | 8.53 | — | — | 94.96 | 94.96 | — | — |
| 3/5/2007 | MW-37 / RW-37 | 103.49 | — | 7.47 | — | — | 96.02 | 96.02 | — | — |
| 5/1/2007 | MW-37 / RW-37 | 103.49 | 7.19 | 7.20 | 0.01 | 96.30 | 96.29 | 96.30 | — | — |
| 6/22/2007 | MW-37 / RW-37 | 103.49 | 7.61 | 7.64 | 0.03 | 95.88 | 95.85 | 95.87 | — | — |
| 6/26/2007 | MW-37 / RW-37 | 103.49 | 8.04 | 8.11 | 0.07 | 95.45 | 95.38 | 95.43 | — | — |
| 7/6/2007 | MW-37 / RW-37 | 103.49 | 7.78 | 7.79 | 0.01 | 95.71 | 95.70 | 95.71 | — | — |
| 8/1/2007 | MW-37 / RW-37 | 103.49 | 7.59 | 7.61 | 0.02 | 95.90 | 95.88 | 95.89 | — | — |
| 8/7/2007 | MW-37 / RW-37 | 103.49 | 7.61 | 7.75 | 0.14 | 95.88 | 95.74 | 95.84 | 0.25 | — |
| 9/14/2007 | MW-37 / RW-37 | 103.49 | 7.83 | 7.87 | 0.04 | 95.66 | 95.62 | 95.65 | — | — |
| 10/8/2007 | MW-37 / RW-37 | 103.49 | 7.99 | 8.00 | 0.01 | 95.50 | 95.49 | 95.50 | — | — |
| 11/20/2007 | MW-37 / RW-37 | 103.49 | — | 7.89 | — | — | 95.60 | 95.60 | — | — |
| 12/26/2007 | MW-37 / RW-37 | 103.49 | — | 7.60 | — | — | 95.89 | 95.89 | — | — |
| 1/2/2008 | MW-37 / RW-37 | 103.49 | — | 7.65 | — | — | 95.84 | 95.84 | — | — |
| 3/5/2008 | MW-37 / RW-37 | 103.49 | — | 7.61 | — | — | 95.88 | 95.88 | — | — |
| 4/23/2008 | MW-37 / RW-37 | 103.49 | — | 7.80 | — | — | 95.69 | 95.69 | — | — |
| 5/12/2008 | MW-37 / RW-37 | 103.49 | 7.39 | 7.41 | 0.02 | 96.10 | 96.08 | 96.09 | — | — |
| 6/27/2008 | MW-37 / RW-37 | 103.49 | 7.66 | 7.69 | 0.03 | 95.83 | 95.80 | 95.82 | — | — |
| 8/5/2008 | MW-37 / RW-37 | 103.49 | 7.86 | 7.88 | 0.02 | 95.63 | 95.61 | 95.62 | — | — |
| 9/10/2008 | MW-37 / RW-37 | 103.49 | — | 7.69 | — | — | 95.80 | 95.80 | — | — |
| 10/27/2008 | MW-37 / RW-37 | 103.49 | — | 7.13 | — | — | 96.36 | 96.36 | — | — |
| 11/4/2008 | MW-37 / RW-37 | 103.49 | — | 7.98 | — | — | 95.51 | 95.51 | — | — |
| 1/5/2009 | MW-37 / RW-37 | 103.49 | — | 7.90 | — | — | 95.59 | 95.59 | — | — |
| 2/27/2009 | MW-37 / RW-37 | 103.49 | 8.35 | 8.37 | 0.02 | 95.14 | 95.12 | 95.13 | — | — |
| 3/9/2009 | MW-37 / RW-37 | 103.49 | — | 8.25 | — | — | 95.24 | 95.24 | — | — |
| 4/20/2009 | MW-37 / RW-37 | 103.49 | — | 7.89 | — | — | 95.60 | 95.60 | — | — |
| 4/29/2009 | MW-37 / RW-37 | 103.49 | — | 7.91 | — | — | 95.58 | 95.58 | — | — |
| 5/6/2009 | MW-37 / RW-37 | 103.49 | — | 6.75 | — | — | 96.74 | 96.74 | — | — |
| 6/2/2009 | MW-37 / RW-37 | 103.49 | — | 7.89 | — | — | 95.60 | 95.60 | — | — |
| 7/6/2009 | MW-37 / RW-37 | 103.49 | — | 7.56 | — | — | 95.93 | 95.93 | — | — |
| 8/14/2009 | MW-37 / RW-37 | 103.49 | 7.64 | 7.69 | 0.05 | 95.85 | 95.80 | 95.84 | — | — |
| 9/28/2009 | MW-37 / RW-37 | 103.49 | — | 7.71 | — | — | 95.78 | 95.78 | — | — |
| 10/13/2009 | MW-37 / RW-37 | 103.49 | 7.84 | 7.87 | 0.03 | 95.65 | 95.62 | 95.64 | — | — |
| 11/23/2009 | MW-37 / RW-37 | 103.49 | — | 7.59 | — | — | 95.90 | 95.90 | — | — |
| 12/2/2009 | MW-37 / RW-37 | 103.49 | — | 7.75 | — | — | 95.74 | 95.74 | — | — |
| 1/12/2010 | MW-37 / RW-37 | 103.49 | 7.74 | 7.75 | 0.01 | 95.75 | 95.74 | 95.75 | — | — |
| 2/2/2010 | MW-37 / RW-37 | 103.49 | 7.86 | 7.89 | 0.03 | 95.63 | 95.60 | 95.62 | — | — |
| 3/2/2010 | MW-37 / RW-37 | 103.49 | — | NG | — | — | — | — | — | — |
| 3/15/2010 | MW-37 / RW-37 | 103.49 | 6.08 | 6.09 | 0.01 | 97.41 | 97.40 | 97.41 | — | — |
| 4/15/2010 | MW-37 / RW-37 | 103.49 | 7.58 | 7.62 | 0.04 | 95.91 | 95.87 | 95.90 | — | — |
| 4/22/2010 | MW-37 / RW-37 | 103.49 | 7.56 | 7.58 | 0.02 | 95.93 | 95.91 | 95.92 | — | — |
| 5/3/2010 | MW-37 / RW-37 | 103.49 | 7.48 | 7.50 | 0.02 | 96.01 | 95.99 | 96.00 | — | — |
| 6/21/2010 | MW-37 / RW-37 | 103.49 | 7.68 | 7.70 | 0.02 | 95.81 | 95.79 | 95.80 | — | — |
| 7/2/2010 | MW-37 / RW-37 | 103.49 | 7.73 | 7.78 | 0.05 | 95.76 | 95.71 | 95.75 | — | — |
| 8/13/2010 | MW-37 / RW-37 | 103.49 | 7.89 | 7.92 | 0.03 | 95.60 | 95.57 | 95.59 | — | — |
| 9/1/2010 | MW-37 / RW-37 | 103.49 | 7.64 | 7.65 | 0.01 | 95.85 | 95.84 | 95.85 | — | — |
| 10/8/2010 | MW-37 / RW-37 | 103.49 | — | 7.49 | — | — | 96.00 | 96.00 | — | — |
| 11/23/2010 | MW-37 / RW-37 | 103.49 | — | 7.77 | — | — | 95.72 | 95.72 | — | — |
| 1/3/2011 | MW-37 / RW-37 | 103.49 | — | 7.54 | — | — | 95.95 | 95.95 | — | — |
| 1/25/2011 | MW-37 / RW-37 | 103.49 | — | 7.52 | — | — | 95.97 | 95.97 | — | — |
| 2/4/2011 | MW-37 / RW-37 | 103.49 | — | 7.22 | — | — | 96.27 | 96.27 | — | — |
| 3/26/2011 | MW-37 / RW-37 | 103.49 | 7.07 | 7.09 | 0.02 | 96.42 | 96.40 | 96.41 | — | — |
| 4/27/2011 | MW-37 / RW-37 | 103.49 | 7.48 | 7.49 | 0.01 | 96.01 | 96.00 | 96.01 | — | — |
| 5/9/2011 | MW-37 / RW-37 | 103.49 | 7.60 | 7.61 | 0.01 | 95.89 | 95.88 | 95.89 | — | — |
| 6/6/2011 | MW-37 / RW-37 | 103.49 | | 7.58 | | — | 95.91 | 95.91 | — | — |



Shell/Motiva 0007375

# Table 3
## Groundwater Elevation Summary
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-38 | — | — | 6.49 | — | — | — | — | — | — |
| 2/21/2006 | MW-38 | — | — | 7.01 | — | — | — | — | — | — |
| 3/7/2006 | MW-38 | — | — | 7.26 | — | — | — | — | — | — |
| 5/18/2006 | MW-38 | — | — | 6.95 | — | — | — | — | — | — |
| 6/28/2006 | MW-38 | — | — | 6.83 | — | — | — | — | — | — |
| 8/16/2006 | MW-38 | — | — | 6.90 | — | — | — | — | — | — |
| 10/20/2006 | MW-38 | — | — | 6.65 | — | — | — | — | — | — |
| 11/22/2006 | MW-38 | — | — | 6.76 | — | — | — | — | — | — |
| 12/15/2006 | MW-38 | — | — | 7.25 | — | — | — | — | — | — |
| 1/23/2007 | MW-38 | — | — | 7.48 | — | — | — | — | — | — |
| 2/2/2007 | MW-38 | — | — | 7.62 | — | — | — | — | — | — |
| 3/5/2007 | MW-38 | — | — | 7.27 | — | — | — | — | — | — |
| 5/1/2007 | MW-38 | — | — | 6.60 | — | — | — | — | — | — |
| 6/22/2007 | MW-38 | — | — | 6.65 | — | — | — | — | — | — |
| 6/26/2007 | MW-38 | — | — | 7.12 | — | — | — | — | — | — |
| 7/6/2007 | MW-38 | — | — | 7.16 | — | — | — | — | — | — |
| 8/1/2007 | MW-38 | — | — | 6.81 | — | — | — | — | — | — |
| 8/7/2007 | MW-38 | — | — | 6.86 | — | — | — | — | — | — |
| 9/14/2007 | MW-38 | — | — | 7.19 | — | — | — | — | — | — |
| 10/8/2007 | MW-38 | — | — | 7.49 | — | — | — | — | — | — |
| 11/20/2007 | MW-38 | — | — | 7.35 | — | — | — | — | — | — |
| 12/26/2007 | MW-38 | — | — | 7.07 | — | — | — | — | — | — |
| 1/2/2008 | MW-38 | — | — | 6.94 | — | — | — | — | — | — |
| 3/5/2008 | MW-38 | — | — | 7.05 | — | — | — | — | — | — |
| 4/23/2008 | MW-38 | — | — | 7.35 | — | — | — | — | — | — |
| 5/12/2008 | MW-38 | — | — | 6.85 | — | — | — | — | — | — |
| 6/27/2008 | MW-38 | — | — | 7.07 | — | — | — | — | — | — |
| 8/5/2008 | MW-38 | — | — | 7.17 | — | — | — | — | — | — |
| 9/10/2008 | MW-38 | — | — | 7.16 | — | — | — | — | — | — |
| 10/27/2008 | MW-38 | — | — | 5.82 | — | — | — | — | — | — |
| 11/4/2008 | MW-38 | — | — | 7.29 | — | — | — | — | — | — |
| 1/5/2009 | MW-38 | — | — | 7.38 | — | — | — | — | — | — |
| 2/27/2009 | MW-38 | — | — | 7.92 | — | — | — | — | — | — |
| 3/9/2009 | MW-38 | — | — | 7.94 | — | — | — | — | — | — |
| 4/20/2009 | MW-38 | — | — | 7.45 | — | — | — | — | — | — |
| 4/29/2009 | MW-38 | — | — | 7.38 | — | — | — | — | — | — |
| 5/6/2009 | MW-38 | — | — | 7.22 | — | — | — | — | — | — |
| 6/2/2009 | MW-38 | — | — | 7.39 | — | — | — | — | — | — |
| 7/6/2009 | MW-38 | — | — | 6.70 | — | — | — | — | — | — |
| 8/14/2009 | MW-38 | — | — | 6.93 | — | — | — | — | — | — |
| 9/28/2009 | MW-38 | — | — | 7.05 | — | — | — | — | — | — |
| 10/13/2009 | MW-38 | — | — | 7.24 | — | — | — | — | — | — |
| 11/23/2009 | MW-38 | — | — | 6.93 | — | — | — | — | — | — |
| 12/2/2009 | MW-38 | — | — | 7.23 | — | — | — | — | — | — |
| 1/12/2010 | MW-38 | — | — | 7.28 | — | — | — | — | — | — |
| 2/2/2010 | MW-38 | — | — | 7.38 | — | — | — | — | — | — |
| 3/2/2010 | MW-38 | — | — | NG | — | — | — | — | — | — |
| 3/15/2010 | MW-38 | — | — | 5.71 | — | — | — | — | — | — |
| 4/15/2010 | MW-38 | — | — | 6.83 | — | — | — | — | — | — |
| 4/22/2010 | MW-38 | — | — | 6.84 | — | — | — | — | — | — |
| 5/3/2010 | MW-38 | — | — | 6.63 | — | — | — | — | — | — |
| 6/21/2010 | MW-38 | — | — | 7.02 | — | — | — | — | — | — |
| 7/2/2010 | MW-38 | — | — | 7.14 | — | — | — | — | — | — |
| 8/13/2010 | MW-38 | — | — | 7.44 | — | — | — | — | — | — |
| 9/1/2010 | MW-38 | — | — | 7.01 | — | — | — | — | — | — |
| 10/8/2010 | MW-38 | — | — | 6.80 | — | — | — | — | — | — |
| 11/23/2010 | MW-38 | — | — | 7.26 | — | — | — | — | — | — |
| 1/3/2011 | MW-38 | — | — | 7.21 | — | — | — | — | — | — |
| 1/25/2011 | MW-38 | — | — | 7.09 | — | — | — | — | — | — |
| 2/4/2011 | MW-38 | — | — | 6.91 | — | — | — | — | — | — |
| 3/26/2011 | MW-38 | — | — | 6.56 | — | — | — | — | — | — |
| 4/27/2011 | MW-38 | — | — | 6.69 | — | — | — | — | — | — |
| 5/9/2011 | MW-38 | — | — | 6.90 | — | — | — | — | — | — |
| 6/6/2011 | MW-38 | — | — | 7.01 | — | — | — | — | — | — |



Shell/Motiva 0007376

## Table 3
## Groundwater Elevation Summary
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-39 | — | — | 6.50 | — | — | — | — | — | — |
| 2/21/2006 | MW-39 | — | — | 7.06 | — | — | — | — | — | — |
| 3/7/2006 | MW-39 | — | — | 7.01 | — | — | — | — | — | — |
| 5/18/2006 | MW-39 | — | — | 6.86 | — | — | — | — | — | — |
| 6/28/2006 | MW-39 | — | — | 6.45 | — | — | — | — | — | — |
| 8/16/2006 | MW-39 | — | — | 6.79 | — | — | — | — | — | — |
| 9/29/2006 | MW-39 | — | — | 6.52 | — | — | — | — | — | — |
| 10/20/2006 | MW-39 | — | — | 5.42 | — | — | — | — | — | — |
| 11/22/2006 | MW-39 | — | — | 5.60 | — | — | — | — | — | — |
| 12/15/2006 | MW-39 | — | — | 6.49 | — | — | — | — | — | — |
| 1/23/2007 | MW-39 | — | — | 7.14 | — | — | — | — | — | — |
| 2/2/2007 | MW-39 | — | — | 6.47 | — | — | — | — | — | — |
| 3/5/2007 | MW-39 | — | — | 6.84 | — | — | — | — | — | — |
| 5/1/2007 | MW-39 | — | — | 6.26 | — | — | — | — | — | — |
| 6/22/2007 | MW-39 | — | — | 6.95 | — | — | — | — | — | — |
| 6/26/2007 | MW-39 | — | — | 6.97 | — | — | — | — | — | — |
| 7/6/2007 | MW-39 | — | — | 7.18 | — | — | — | — | — | — |
| 8/1/2007 | MW-39 | — | — | 6.88 | — | — | — | — | — | — |
| 8/7/2007 | MW-39 | — | — | 6.61 | — | — | — | — | — | — |
| 9/14/2007 | MW-39 | — | — | 6.95 | — | — | — | — | — | — |
| 10/8/2007 | MW-39 | — | — | 6.24 | — | — | — | — | — | — |
| 11/20/2007 | MW-39 | — | — | 6.55 | — | — | — | — | — | — |
| 12/26/2007 | MW-39 | — | — | 6.84 | — | — | — | — | — | — |
| 1/2/2008 | MW-39 | — | — | 6.85 | — | — | — | — | — | — |
| 3/5/2008 | MW-39 | — | — | 6.14 | — | — | — | — | — | — |
| 4/23/2008 | MW-39 | — | — | 7.12 | — | — | — | — | — | — |
| 5/12/2008 | MW-39 | — | — | 5.64 | — | — | — | — | — | — |
| 6/27/2008 | MW-39 | — | — | NM | — | — | — | — | — | — |
| 8/5/2008 | MW-39 | — | — | 7.16 | — | — | — | — | — | — |
| 9/10/2008 | MW-39 | — | — | 6.73 | — | — | — | — | — | — |
| 10/27/2008 | MW-39 | — | — | 5.33 | — | — | — | — | — | — |
| 11/4/2008 | MW-39 | — | — | 7.34 | — | — | — | — | — | — |
| 1/5/2009 | MW-39 | — | — | 7.53 | — | — | — | — | — | — |
| 2/27/2009 | MW-39 | — | — | 7.52 | — | — | — | — | — | — |
| 3/9/2009 | MW-39 | — | — | 5.23 | — | — | — | — | — | — |
| 4/20/2009 | MW-39 | — | — | 6.12 | — | — | — | — | — | — |
| 4/29/2009 | MW-39 | — | — | 7.76 | — | — | — | — | — | — |
| 5/6/2009 | MW-39 | — | — | 5.89 | — | — | — | — | — | — |
| 6/2/2009 | MW-39 | — | — | 6.63 | — | — | — | — | — | — |
| 7/6/2009 | MW-39 | — | — | 6.70 | — | — | — | — | — | — |
| 8/14/2009 | MW-39 | — | — | 6.64 | — | — | — | — | — | — |
| 9/28/2009 | MW-39 | — | — | 6.63 | — | — | — | — | — | — |
| 10/13/2009 | MW-39 | — | — | 6.77 | — | — | — | — | — | — |
| 11/23/2009 | MW-39 | — | — | 6.67 | — | — | — | — | — | — |
| 12/2/2009 | MW-39 | — | — | 5.49 | — | — | — | — | — | — |
| 1/12/2010 | MW-39 | — | — | 6.65 | — | — | — | — | — | — |
| 2/2/2010 | MW-39 | — | — | 7.49 | — | — | — | — | — | — |
| 3/2/2010 | MW-39 | — | — | 4.68 | — | — | — | — | — | — |
| 3/15/2010 | MW-39 | — | — | 5.43 | — | — | — | — | — | — |
| 4/15/2010 | MW-39 | — | — | 7.07 | — | — | — | — | — | — |
| 4/22/2010 | MW-39 | — | — | 6.60 | — | — | — | — | — | — |
| 5/3/2010 | MW-39 | — | — | 6.71 | — | — | — | — | — | — |
| 6/21/2010 | MW-39 | — | — | 6.75 | — | — | — | — | — | — |
| 7/2/2010 | MW-39 | — | — | 7.42 | — | — | — | — | — | — |
| 8/13/2010 | MW-39 | — | — | 6.82 | — | — | — | — | — | — |
| 9/1/2010 | MW-39 | — | — | 7.11 | — | — | — | — | — | — |
| 10/8/2010 | MW-39 | — | — | 6.51 | — | — | — | — | — | — |
| 11/23/2010 | MW-39 | — | — | 6.06 | — | — | — | — | — | — |
| 1/3/2011 | MW-39 | — | — | 6.22 | — | — | — | — | — | — |
| 1/25/2011 | MW-39 | — | — | 7.49 | — | — | — | — | — | — |
| 2/4/2011 | MW-39 | — | — | 6.21 | — | — | — | — | — | — |
| 3/26/2011 | MW-39 | — | — | 5.99 | — | — | — | — | — | — |
| 4/27/2011 | MW-39 | — | — | 6.10 | — | — | — | — | — | — |
| 5/9/2011 | MW-39 | — | — | 6.88 | — | — | — | — | — | — |
| 6/6/2011 | MW-39 | — | — | 7.26 | — | — | — | — | — | — |



Shell/Motiva 0007377

## Table 3
## Groundwater Elevation Summary
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
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| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-40 / RW-40 | — | 7.64 | 8.25 | 0.61 | — | — | — | — | — |
| 2/21/2006 | MW-40 / RW-40 | — | 8.20 | 8.47 | 0.27 | — | — | — | — | — |
| 3/7/2006 | MW-40 / RW-40 | — | 9.29 | 10.14 | 0.85 | — | — | — | — | — |
| 5/18/2006 | MW-40 / RW-40 | — | 7.87 | 8.69 | 0.82 | — | — | — | — | — |
| 6/28/2006 | MW-40 / RW-40 | — | 8.14 | 8.86 | 0.72 | — | — | — | — | — |
| 8/16/2006 | MW-40 / RW-40 | — | 8.40 | 8.95 | 0.55 | — | — | — | — | — |
| 9/29/2006 | MW-40 / RW-40 | — | 7.98 | 8.40 | 0.42 | — | — | — | — | — |
| 10/20/2006 | MW-40 / RW-40 | — | 8.04 | 8.98 | 0.94 | — | — | — | — | — |
| 11/22/2006 | MW-40 / RW-40 | — | 7.50 | 8.39 | 0.89 | — | — | — | — | — |
| 12/15/2006 | MW-40 / RW-40 | — | 8.50 | 8.65 | 0.15 | — | — | — | 0.50 | — |
| 1/23/2007 | MW-40 / RW-40 | — | 8.90 | 8.92 | 0.02 | — | — | — | — | — |
| 2/2/2007 | MW-40 / RW-40 | — | 8.56 | 8.90 | 0.34 | — | — | — | — | — |
| 3/5/2007 | MW-40 / RW-40 | — | 7.49 | 8.29 | 0.80 | — | — | — | 0.50 | — |
| 5/1/2007 | MW-40 / RW-40 | — | 7.35 | 8.21 | 0.86 | — | — | — | 1.50 | — |
| 6/22/2007 | MW-40 / RW-40 | — | 8.09 | 9.21 | 1.12 | — | — | — | 2.00 | — |
| 6/26/2007 | MW-40 / RW-40 | — | 8.43 | 9.53 | 1.10 | — | — | — | — | — |
| 7/6/2007 | MW-40 / RW-40 | — | 8.67 | 8.89 | 0.22 | — | — | — | 0.25 | — |
| 8/1/2007 | MW-40 / RW-40 | — | 7.87 | 8.79 | 0.92 | — | — | — | 2.00 | — |
| 8/7/2007 | MW-40 / RW-40 | — | 8.06 | 8.35 | 0.29 | — | — | — | 0.25 | — |
| 9/14/2007 | MW-40 / RW-40 | — | 8.81 | 8.83 | 0.02 | — | — | — | — | — |
| 10/8/2007 | MW-40 / RW-40 | — | 8.29 | 8.31 | 0.02 | — | — | — | — | — |
| 11/20/2007 | MW-40 / RW-40 | — | 8.41 | 8.51 | 0.10 | — | — | — | 0.25 | — |
| 12/26/2007 | MW-40 / RW-40 | — | 7.55 | 9.30 | 1.75 | — | — | — | — | — |
| 1/2/2008 | MW-40 / RW-40 | — | 7.59 | 9.41 | 1.82 | — | — | — | 2.00 | — |
| 3/5/2008 | MW-40 / RW-40 | — | 7.75 | 8.39 | 0.64 | — | — | — | 0.50 | — |
| 4/23/2008 | MW-40 / RW-40 | — | 8.66 | 9.10 | 0.44 | — | — | — | 0.75 | — |
| 5/12/2008 | MW-40 / RW-40 | — | 7.21 | 7.81 | 0.60 | — | — | — | — | — |
| 6/27/2008 | MW-40 / RW-40 | — | — | 8.60 | — | — | — | — | — | — |
| 8/5/2008 | MW-40 / RW-40 | — | 8.85 | 9.10 | 0.25 | — | — | — | 0.25 | — |
| 9/10/2008 | MW-40 / RW-40 | — | 7.70 | 8.68 | 0.98 | — | — | — | 1.00 | — |
| 10/27/2008 | MW-40 / RW-40 | — | 7.32 | 9.06 | 1.74 | — | — | — | 2.00 | — |
| 11/4/2008 | MW-40 / RW-40 | — | 9.35 | 10.25 | 0.90 | — | — | — | 1.25 | — |
| 1/5/2009 | MW-40 / RW-40 | — | 9.90 | 9.93 | 0.03 | — | — | — | — | — |
| 2/27/2009 | MW-40 / RW-40 | — | 8.99 | 9.00 | 0.01 | — | — | — | — | — |
| 3/9/2009 | MW-40 / RW-40 | — | 7.49 | 7.51 | 0.02 | — | — | — | — | — |
| 4/20/2009 | MW-40 / RW-40 | — | 8.10 | 8.33 | 0.23 | — | — | — | 0.50 | — |
| 4/29/2009 | MW-40 / RW-40 | — | 10.40 | 10.46 | 0.06 | — | — | — | 0.25 | — |
| 5/6/2009 | MW-40 / RW-40 | — | 7.79 | 7.89 | 0.10 | — | — | — | 0.25 | — |
| 6/2/2009 | MW-40 / RW-40 | — | 8.88 | 9.07 | 0.19 | — | — | — | 0.25 | — |
| 7/6/2009 | MW-40 / RW-40 | — | 8.23 | 9.50 | 1.27 | — | — | — | 1.50 | — |
| 8/14/2009 | MW-40 / RW-40 | — | 8.98 | 9.08 | 0.10 | — | — | — | 0.25 | — |
| 9/28/2009 | MW-40 / RW-40 | — | 8.87 | 9.14 | 0.27 | — | — | — | 0.50 | — |
| 10/13/2009 | MW-40 / RW-40 | — | 8.97 | 9.23 | 0.26 | — | — | — | 0.25 | — |
| 11/23/2009 | MW-40 / RW-40 | — | — | 8.65 | — | — | — | — | — | — |
| 12/2/2009 | MW-40 / RW-40 | — | 7.32 | 7.35 | 0.03 | — | — | — | — | — |
| 1/12/2010 | MW-40 / RW-40 | — | 8.76 | 8.87 | 0.11 | — | — | — | — | — |
| 2/2/2010 | MW-40 / RW-40 | — | 9.31 | 9.42 | 0.11 | — | — | — | 0.25 | — |
| 3/2/2010 | MW-40 / RW-40 | — | 6.92 | 7.04 | 0.12 | — | — | — | 0.25 | — |
| 3/15/2010 | MW-40 / RW-40 | — | 6.16 | 7.41 | 1.25 | — | — | — | — | — |
| 4/15/2010 | MW-40 / RW-40 | — | 9.09 | 9.11 | 0.02 | — | — | — | — | — |
| 4/22/2010 | MW-40 / RW-40 | — | 8.56 | 8.79 | 0.23 | — | — | — | 0.25 | — |
| 5/3/2010 | MW-40 / RW-40 | — | 8.59 | 10.55 | 1.96 | — | — | — | 2.00 | — |
| 6/21/2010 | MW-40 / RW-40 | — | 9.01 | 9.06 | 0.05 | — | — | — | — | — |
| 7/2/2010 | MW-40 / RW-40 | — | — | 9.71 | — | — | — | — | — | — |
| 8/13/2010 | MW-40 / RW-40 | — | 8.66 | 8.69 | 0.03 | — | — | — | — | — |
| 9/1/2010 | MW-40 / RW-40 | — | — | 9.30 | — | — | — | — | — | — |
| 10/8/2010 | MW-40 / RW-40 | — | 7.57 | 9.44 | 1.87 | — | — | — | 3.00 | — |
| 11/23/2010 | MW-40 / RW-40 | — | 7.71 | 7.83 | 0.12 | — | — | — | 0.25 | — |
| 1/3/2011 | MW-40 / RW-40 | — | 7.53 | 7.99 | 0.46 | — | — | — | 1.00 | — |
| 1/25/2011 | MW-40 / RW-40 | — | 8.17 | 8.85 | 0.68 | — | — | — | 2.50 | — |
| 2/4/2011 | MW-40 / RW-40 | — | 7.26 | 7.85 | 0.59 | — | — | — | | — |
| 3/26/2011 | MW-40 / RW-40 | — | 7.45 | 8.42 | 0.97 | — | — | — | 2.00 | — |
| 4/27/2011 | MW-40 / RW-40 | — | 7.84 | 9.81 | 1.97 | — | — | — | 3.00 | — |
| 5/9/2011 | MW-40 / RW-40 | — | 8.77 | 9.82 | 1.05 | — | — | — | 1.25 | — |
| 6/6/2011 | MW-40 / RW-40 | — | 7.95 | 10.25 | 2.30 | — | — | — | 3.75 | — |



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# Table 3
## Groundwater Elevation Summary
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| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | MW-41 | — | 7.59 | 7.63 | 0.04 | — | — | — | 0.10 | — |
| 2/21/2006 | MW-41 | — | 8.20 | 8.21 | 0.01 | — | — | — | 0.10 | — |
| 3/7/2006 | MW-41 | — | — | 8.14 | — | — | — | — | — | — |
| 5/18/2006 | MW-41 | — | — | 8.19 | — | — | — | — | — | — |
| 6/28/2006 | MW-41 | — | 7.32 | 7.39 | 0.07 | — | — | — | — | — |
| 8/16/2006 | MW-41 | — | 7.95 | 8.01 | 0.06 | — | — | — | — | — |
| 9/29/2006 | MW-41 | — | 7.78 | 7.94 | 0.16 | — | — | — | — | — |
| 10/20/2006 | MW-41 | — | — | 6.34 | — | — | — | — | — | — |
| 11/22/2006 | MW-41 | — | 6.68 | 6.71 | 0.03 | — | — | — | — | — |
| 12/15/2006 | MW-41 | — | 7.60 | 7.62 | 0.02 | — | — | — | — | — |
| 1/23/2007 | MW-41 | — | — | 8.16 | — | — | — | — | — | — |
| 2/2/2007 | MW-41 | — | — | 6.85 | — | — | — | — | — | — |
| 3/5/2007 | MW-41 | — | — | 7.99 | — | — | — | — | — | — |
| 5/1/2007 | MW-41 | — | 7.05 | 7.16 | 0.11 | — | — | — | — | — |
| 6/22/2007 | MW-41 | — | 8.12 | 8.18 | 0.06 | — | — | — | — | — |
| 6/26/2007 | MW-41 | — | 7.69 | 7.72 | 0.03 | — | — | — | — | — |
| 7/6/2007 | MW-41 | — | 8.16 | 8.21 | 0.05 | — | — | — | — | — |
| 8/1/2007 | MW-41 | — | 7.79 | 7.91 | 0.12 | — | — | — | — | — |
| 8/7/2007 | MW-41 | — | 7.69 | 7.79 | 0.10 | — | — | — | — | — |
| 9/14/2007 | MW-41 | — | 7.84 | 7.96 | 0.12 | — | — | — | 0.25 | — |
| 10/8/2007 | MW-41 | — | 7.12 | 7.15 | 0.03 | — | — | — | 0.25 | — |
| 11/20/2007 | MW-41 | — | 7.61 | 7.63 | 0.02 | — | — | — | — | — |
| 12/26/2007 | MW-41 | — | — | 8.05 | — | — | — | — | — | — |
| 1/2/2008 | MW-41 | — | 8.00 | 8.09 | 0.09 | — | — | — | 0.25 | — |
| 3/5/2008 | MW-41 | — | 7.09 | 7.18 | 0.09 | — | — | — | 0.25 | — |
| 4/23/2008 | MW-41 | — | 8.11 | 8.16 | 0.05 | — | — | — | — | — |
| 5/12/2008 | MW-41 | — | 6.48 | 6.49 | 0.01 | — | — | — | — | — |
| 6/27/2008 | MW-41 | — | 7.67 | 7.82 | 0.15 | — | — | — | 0.25 | — |
| 8/5/2008 | MW-41 | — | 8.12 | 8.18 | 0.06 | — | — | — | — | — |
| 9/10/2008 | MW-41 | — | 7.68 | 7.75 | 0.07 | — | — | — | — | — |
| 10/27/2008 | MW-41 | — | — | 7.60 | — | — | — | — | — | — |
| 11/4/2008 | MW-41 | — | 8.21 | 8.22 | 0.01 | — | — | — | — | — |
| 1/5/2009 | MW-41 | — | 9.96 | 9.98 | 0.02 | — | — | — | — | — |
| 2/27/2009 | MW-41 | — | — | 8.11 | — | — | — | — | — | — |
| 3/9/2009 | MW-41 | — | — | 5.94 | — | — | — | — | — | — |
| 4/20/2009 | MW-41 | — | — | 7.31 | — | — | — | — | — | — |
| 4/29/2009 | MW-41 | — | 9.13 | 9.14 | 0.01 | — | — | — | — | — |
| 5/6/2009 | MW-41 | — | 6.61 | 6.62 | 0.01 | — | — | — | — | — |
| 6/2/2009 | MW-41 | — | 8.09 | 8.15 | 0.06 | — | — | — | — | — |
| 7/6/2009 | MW-41 | — | — | 7.35 | — | — | — | — | — | — |
| 8/14/2009 | MW-41 | — | 8.15 | 8.25 | 0.10 | — | — | — | 0.25 | — |
| 9/28/2009 | MW-41 | — | 8.15 | 8.24 | 0.09 | — | — | — | — | — |
| 10/13/2009 | MW-41 | — | 8.24 | 8.33 | 0.09 | — | — | — | 0.25 | — |
| 11/23/2009 | MW-41 | — | 7.51 | 7.55 | 0.04 | — | — | — | — | — |
| 12/2/2009 | MW-41 | — | — | 6.13 | — | — | — | — | — | — |
| 1/12/2010 | MW-41 | — | 8.01 | 8.04 | 0.03 | — | — | — | — | — |
| 2/2/2010 | MW-41 | — | 8.05 | 8.07 | 0.02 | — | — | — | — | — |
| 3/2/2010 | MW-41 | — | — | NG | — | — | — | — | — | — |
| 3/15/2010 | MW-41 | — | 5.94 | 5.95 | 0.01 | — | — | — | — | — |
| 4/15/2010 | MW-41 | — | 8.01 | 8.21 | 0.20 | — | — | — | — | — |
| 4/22/2010 | MW-41 | — | 8.24 | 8.41 | 0.17 | — | — | — | 0.25 | — |
| 5/3/2010 | MW-41 | — | 8.11 | 8.28 | 0.17 | — | — | — | 0.25 | — |
| 6/21/2010 | MW-41 | — | 8.08 | 8.37 | 0.29 | — | — | — | — | — |
| 7/2/2010 | MW-41 | — | 8.76 | 8.82 | 0.06 | — | — | — | — | — |
| 8/13/2010 | MW-41 | — | 7.11 | 7.19 | 0.08 | — | — | — | — | — |
| 9/1/2010 | MW-41 | — | 8.42 | 8.45 | 0.03 | — | — | — | — | — |
| 10/8/2010 | MW-41 | — | 6.69 | 6.72 | 0.03 | — | — | — | — | — |
| 11/23/2010 | MW-41 | — | 6.20 | 6.21 | 0.01 | — | — | — | — | — |
| 1/3/2011 | MW-41 | — | 6.68 | 6.70 | 0.02 | — | — | — | — | — |
| 1/25/2011 | MW-41 | — | — | 9.03 | — | — | — | — | — | — |
| 2/4/2011 | MW-41 | — | — | 6.75 | — | — | — | — | — | — |
| 3/26/2011 | MW-41 | — | 7.61 | 7.65 | 0.04 | — | — | — | — | — |
| 4/27/2011 | MW-41 | — | 7.63 | 7.71 | 0.08 | — | — | — | — | — |
| 5/9/2011 | MW-41 | — | 8.07 | 8.13 | 0.06 | — | — | — | — | — |
| 6/6/2011 | MW-41 | — | 8.25 | 8.31 | 0.06 | — | — | — | — | — |
| 3/2/2010 | MW-42 | — | — | 2.90 | — | — | — | — | — | — |
| 3/15/2010 | MW-42 | — | — | 2.50 | — | — | — | — | — | — |
| 4/15/2010 | MW-42 | — | — | 3.54 | — | — | — | — | — | — |
| 4/22/2010 | MW-42 | — | — | 3.78 | — | — | — | — | — | — |
| 5/3/2010 | MW-42 | — | — | 3.45 | — | — | — | — | — | — |
| 6/21/2010 | MW-42 | — | — | 3.91 | — | — | — | — | — | — |
| 7/2/2010 | MW-42 | — | — | 4.03 | — | — | — | — | — | — |
| 8/13/2010 | MW-42 | — | — | 4.23 | — | — | — | — | — | — |
| 9/1/2010 | MW-42 | — | — | 3.69 | — | — | — | — | — | — |
| 10/8/2010 | MW-42 | — | — | 3.45 | — | — | — | — | — | — |
| 11/23/2010 | MW-42 | — | — | 4.03 | — | — | — | — | — | — |
| 1/3/2011 | MW-42 | — | — | 3.71 | — | — | — | — | — | — |
| 1/25/2011 | MW-42 | — | — | 3.54 | — | — | — | — | — | — |
| 2/4/2011 | MW-42 | — | — | NG | — | — | — | — | — | — |
| 3/26/2011 | MW-42 | — | — | 3.07 | — | — | — | — | — | — |
| 4/27/2011 | MW-42 | — | — | 3.19 | — | — | — | — | — | — |
| 5/9/2011 | MW-42 | — | — | 3.67 | — | — | — | — | — | — |
| 6/6/2011 | MW-42 | — | — | 3.85 | — | — | — | — | — | — |



Shell/Motiva 0007379

**Table 3**
**Groundwater Elevation Summary**
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 3/2/2010 | MW-43 | — | — | 2.91 | — | — | — | — | — | — |
| 3/15/2010 | MW-43 | — | — | 2.64 | — | — | — | — | — | — |
| 4/15/2010 | MW-43 | — | — | 3.47 | — | — | — | — | — | — |
| 4/22/2010 | MW-43 | — | — | 3.64 | — | — | — | — | — | — |
| 5/3/2010 | MW-43 | — | — | 3.41 | — | — | — | — | — | — |
| 6/21/2010 | MW-43 | — | — | 3.74 | — | — | — | — | — | — |
| 7/2/2010 | MW-43 | — | — | 3.91 | — | — | — | — | — | — |
| 8/13/2010 | MW-43 | — | — | 4.11 | — | — | — | — | — | — |
| 9/1/2010 | MW-43 | — | — | 3.56 | — | — | — | — | — | — |
| 10/8/2010 | MW-43 | — | — | 3.38 | — | — | — | — | — | — |
| 11/23/2010 | MW-43 | — | — | 3.94 | — | — | — | — | — | — |
| 1/3/2011 | MW-43 | — | — | 3.63 | — | — | — | — | — | — |
| 1/25/2011 | MW-43 | — | — | 3.48 | — | — | — | — | — | — |
| 2/4/2011 | MW-43 | — | — | 3.28 | — | — | — | — | — | — |
| 3/26/2011 | MW-43 | — | — | 3.10 | — | — | — | — | — | — |
| 4/27/2011 | MW-43 | — | — | 3.22 | — | — | — | — | — | — |
| 5/9/2011 | MW-43 | — | — | 3.59 | — | — | — | — | — | — |
| 6/6/2011 | MW-43 | — | — | 3.73 | — | — | — | — | — | — |
| 3/2/2010 | MW-44 | — | — | 2.87 | — | — | — | — | — | — |
| 3/15/2010 | MW-44 | — | — | 2.47 | — | — | — | — | — | — |
| 4/15/2010 | MW-44 | — | — | 3.58 | — | — | — | — | — | — |
| 4/22/2010 | MW-44 | — | — | 3.59 | — | — | — | — | — | — |
| 5/3/2010 | MW-44 | — | — | 3.37 | — | — | — | — | — | — |
| 6/21/2010 | MW-44 | — | — | 3.68 | — | — | — | — | — | — |
| 7/2/2010 | MW-44 | — | — | 3.85 | — | — | — | — | — | — |
| 8/13/2010 | MW-44 | — | — | 4.04 | — | — | — | — | — | — |
| 9/1/2010 | MW-44 | — | — | 3.50 | — | — | — | — | — | — |
| 10/8/2010 | MW-44 | — | — | 3.32 | — | — | — | — | — | — |
| 11/23/2010 | MW-44 | — | — | 3.89 | — | — | — | — | — | — |
| 1/3/2011 | MW-44 | — | — | 3.60 | — | — | — | — | — | — |
| 1/25/2011 | MW-44 | — | — | 3.43 | — | — | — | — | — | — |
| 2/4/2011 | MW-44 | — | — | NG | — | — | — | — | — | — |
| 3/26/2011 | MW-44 | — | — | 3.04 | — | — | — | — | — | — |
| 4/27/2011 | MW-44 | — | — | 3.16 | — | — | — | — | — | — |
| 5/9/2011 | MW-44 | — | — | 3.53 | — | — | — | — | — | — |
| 6/6/2011 | MW-44 | — | — | 3.69 | — | — | — | — | — | — |
| 6/21/2010 | MW-45 | — | — | NG | — | — | — | — | — | — |
| 7/2/2010 | MW-45 | — | 3.48 | 3.52 | 0.04 | — | — | — | — | — |
| 8/13/2010 | MW-45 | — | — | NG | — | — | — | — | — | — |
| 9/1/2010 | MW-45 | — | 3.19 | 3.23 | 0.04 | — | — | — | — | — |
| 10/8/2010 | MW-45 | — | — | NG | — | — | — | — | — | — |
| 11/23/2010 | MW-45 | — | — | NG | — | — | — | — | — | — |
| 1/3/2011 | MW-45 | — | — | NG | — | — | — | — | — | — |
| 1/25/2011 | MW-45 | — | — | | — | — | — | — | — | — |
| 2/4/2011 | MW-45 | — | — | NG | — | — | — | — | — | — |
| 4/27/2011 | MW-45 | — | — | | — | — | — | — | — | — |
| 5/9/2011 | MW-45 | — | — | NG | — | — | — | — | — | — |
| 6/6/2011 | MW-45 | — | — | NG | — | — | — | — | — | — |



Shell/Motiva 0007380

# Table 3
## Groundwater Elevation Summary
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
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| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | TW-01 | — | — | 3.36 | — | — | — | — | — | — |
| 2/21/2006 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 3/7/2006 | TW-01 | — | 4.28 | 4.34 | 0.06 | — | — | — | 0.10 | — |
| 5/18/2006 | TW-01 | — | 3.78 | 3.81 | 0.03 | — | — | — | 0.25 | — |
| 6/28/2006 | TW-01 | — | 3.79 | 3.84 | 0.05 | — | — | — | — | — |
| 8/16/2006 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 9/29/2006 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 10/20/2006 | TW-01 | — | 4.17 | 4.21 | 0.04 | — | — | — | — | — |
| 12/15/2006 | TW-01 | — | 4.28 | 4.32 | 0.04 | — | — | — | — | — |
| 1/23/2007 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 2/2/2007 | TW-01 | — | — | 4.21 | — | — | — | — | — | — |
| 3/5/2007 | TW-01 | — | 4.21 | 4.22 | 0.01 | — | — | — | — | — |
| 5/1/2007 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 6/22/2007 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 6/26/2007 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 7/6/2007 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 8/1/2007 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 8/7/2007 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 9/14/2007 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 10/8/2007 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 11/20/2007 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 12/26/2007 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 1/2/2008 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 3/5/2008 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 4/23/2008 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 5/12/2008 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 6/27/2008 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 8/5/2008 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 9/10/2008 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 10/27/2008 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 11/4/2008 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 1/5/2009 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 2/27/2009 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 3/9/2009 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 4/20/2009 | TW-01 | — | 4.21 | 4.28 | 0.07 | — | — | — | — | — |
| 4/29/2009 | TW-01 | — | 4.35 | 4.40 | 0.05 | — | — | — | — | Under water |
| 5/6/2009 | TW-01 | — | — | NG | — | — | — | — | — | Under water |
| 6/2/2009 | TW-01 | — | — | NG | — | — | — | — | — | Under Water |
| 7/6/2009 | TW-01 | — | — | NG | — | — | — | — | — | Under Water |
| 8/14/2009 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 9/28/2009 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 10/13/2009 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 11/23/2009 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 12/2/2009 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 1/12/2010 | TW-01 | — | 4.30 | 4.33 | 0.03 | — | — | — | — | — |
| 2/2/2010 | TW-01 | — | 4.42 | 4.44 | 0.02 | — | — | — | — | — |
| 3/2/2010 | TW-01 | — | — | NG | — | — | — | — | — | Under Water |
| 3/15/2010 | TW-01 | — | — | NG | — | — | — | — | — | Flooded |
| 4/15/2010 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 4/22/2010 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 5/3/2010 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 6/21/2010 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 7/2/2010 | TW-01 | — | 4.28 | 4.35 | 0.07 | — | — | — | — | — |
| 8/13/2010 | TW-01 | — | 4.26 | 4.28 | 0.02 | — | — | — | — | — |
| 9/1/2010 | TW-01 | — | 3.94 | 3.95 | 0.01 | — | — | — | — | — |
| 10/8/2010 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 11/23/2010 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 1/3/2011 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 1/25/2011 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 2/4/2011 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 3/26/2011 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 4/27/2011 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 5/9/2011 | TW-01 | — | — | NG | — | — | — | — | — | — |
| 6/6/2011 | TW-01 | — | — | NG | — | — | — | — | — | — |



Shell/Motiva 0007381

## Table 3
## Groundwater Elevation Summary
(Sorted by Well)
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25 Paidge Avenue
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| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/6/2006 | TW-02 | — | — | 3.17 | — | — | — | — | — | — |
| 2/21/2006 | TW-02 | — | — | 3.98 | — | — | — | — | — | — |
| 3/7/2006 | TW-02 | — | — | 4.21 | — | — | — | — | — | — |
| 5/18/2006 | TW-02 | — | — | 3.59 | — | — | — | — | — | — |
| 6/28/2006 | TW-02 | — | — | 3.58 | — | — | — | — | — | — |
| 8/16/2006 | TW-02 | — | — | 3.89 | — | — | — | — | — | — |
| 9/29/2006 | TW-02 | — | — | 3.65 | — | — | — | — | — | — |
| 10/20/2006 | TW-02 | — | — | 3.98 | — | — | — | — | — | — |
| 12/15/2006 | TW-02 | — | — | 4.16 | — | — | — | — | — | — |
| 1/23/2007 | TW-02 | — | — | 4.49 | — | — | — | — | — | — |
| 2/2/2007 | TW-02 | — | — | 4.37 | — | — | — | — | — | — |
| 3/5/2007 | TW-02 | — | 4.15 | 4.16 | 0.01 | — | — | — | — | — |
| 5/1/2007 | TW-02 | — | 3.52 | 3.54 | 0.02 | — | — | — | — | — |
| 6/22/2007 | TW-02 | — | — | NG | — | — | — | — | — | — |
| 6/26/2007 | TW-02 | — | 4.16 | 4.18 | 0.02 | — | — | — | — | — |
| 7/6/2007 | TW-02 | — | 4.02 | 4.05 | 0.03 | — | — | — | — | — |
| 8/1/2007 | TW-02 | — | 3.64 | 4.02 | 0.38 | — | — | — | — | — |
| 8/7/2007 | TW-02 | — | — | NG | — | — | — | — | — | — |
| 9/14/2007 | TW-02 | — | — | NG | — | — | — | — | — | — |
| 10/8/2007 | TW-02 | — | — | NG | — | — | — | — | — | — |
| 11/20/2007 | TW-02 | — | — | NG | — | — | — | — | — | — |
| 12/26/2007 | TW-02 | — | — | 4.07 | — | — | — | — | — | — |
| 1/2/2008 | TW-02 | — | — | NG | — | — | — | — | — | — |
| 3/5/2008 | TW-02 | — | — | NG | — | — | — | — | — | — |
| 4/23/2008 | TW-02 | — | — | NG | — | — | — | — | — | — |
| 5/12/2008 | TW-02 | — | — | 3.34 | — | — | — | — | — | — |
| 6/27/2008 | TW-02 | — | 3.68 | 4.10 | 0.42 | — | — | — | — | — |
| 8/5/2008 | TW-02 | — | — | NG | — | — | — | — | — | — |
| 9/10/2008 | TW-02 | — | — | NG | — | — | — | — | — | — |
| 10/27/2008 | TW-02 | — | — | NG | — | — | — | — | — | — |
| 11/4/2008 | TW-02 | — | — | 4.29 | — | — | — | — | — | — |
| 1/5/2009 | TW-02 | — | — | 4.25 | — | — | — | — | — | — |
| 2/27/2009 | TW-02 | — | — | 4.79 | — | — | — | — | — | — |
| 3/9/2009 | TW-02 | — | — | 4.45 | — | — | — | — | — | — |
| 4/20/2009 | TW-02 | — | — | 4.20 | — | — | — | — | — | — |
| 4/29/2009 | TW-02 | — | — | 4.30 | — | — | — | — | — | — |
| 5/6/2009 | TW-02 | — | — | 3.79 | — | — | — | — | — | — |
| 6/2/2009 | TW-02 | — | — | 4.11 | — | — | — | — | — | — |
| 7/6/2009 | TW-02 | — | — | NG | — | — | — | — | — | — |
| 8/14/2009 | TW-02 | — | — | NG | — | — | — | — | — | — |
| 9/28/2009 | TW-02 | — | — | 3.93 | — | — | — | — | — | — |
| 10/13/2009 | TW-02 | — | — | 4.18 | — | — | — | — | — | — |
| 11/23/2009 | TW-02 | — | — | 3.89 | — | — | — | — | — | — |
| 12/2/2009 | TW-02 | — | — | 4.30 | — | — | — | — | — | — |
| 1/12/2010 | TW-02 | — | — | 4.17 | — | — | — | — | — | — |
| 2/2/2010 | TW-02 | — | — | 4.31 | — | — | — | — | — | — |
| 3/2/2010 | TW-02 | — | — | 2.79 | — | — | — | — | — | — |
| 3/15/2010 | TW-02 | — | — | 2.04 | — | — | — | — | — | — |
| 4/15/2010 | TW-02 | — | — | 3.76 | — | — | — | — | — | — |
| 4/22/2010 | TW-02 | — | — | 3.61 | — | — | — | — | — | — |
| 5/3/2010 | TW-02 | — | — | 3.35 | — | — | — | — | — | — |
| 6/21/2010 | TW-02 | — | — | 3.88 | — | — | — | — | — | — |
| 7/2/2010 | TW-02 | — | — | 4.13 | — | — | — | — | — | — |
| 8/13/2010 | TW-02 | — | — | 4.03 | — | — | — | — | — | — |
| 9/1/2010 | TW-02 | — | — | 3.80 | — | — | — | — | — | — |
| 10/8/2010 | TW-02 | — | — | 3.55 | — | — | — | — | — | — |
| 11/23/2010 | TW-02 | — | — | 4.26 | — | — | — | — | — | — |
| 1/3/2011 | TW-02 | — | — | 4.03 | — | — | — | — | — | — |
| 1/25/2011 | TW-02 | — | — | 3.96 | — | — | — | — | — | — |
| 2/4/2011 | TW-02 | — | — | 3.75 | — | — | — | — | — | — |
| 3/26/2011 | TW-02 | — | — | 2.36 | — | — | — | — | — | — |
| 4/27/2011 | TW-02 | — | — | 3.45 | — | — | — | — | — | — |
| 5/9/2011 | TW-02 | — | — | 3.72 | — | — | — | — | — | — |
| 6/6/2011 | TW-02 | — | — | 3.81 | — | — | — | — | — | — |



Shell/Motiva 0007382

# Table 3
## Groundwater Elevation Summary
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| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 2/21/2006 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 3/7/2006 | TW-03 | — | 3.74 | 3.76 | 0.02 | — | — | — | 0.10 | — |
| 5/18/2006 | TW-03 | — | — | 3.19 | — | — | — | — | — | — |
| 6/28/2006 | TW-03 | — | — | 3.02 | — | — | — | — | — | — |
| 8/16/2006 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 9/29/2006 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 10/20/2006 | TW-03 | — | 3.94 | 3.96 | 0.02 | — | — | — | — | — |
| 12/15/2006 | TW-03 | — | 3.62 | 3.71 | 0.09 | — | — | — | — | — |
| 1/23/2007 | TW-03 | — | 4.01 | 4.09 | 0.08 | — | — | — | — | — |
| 2/2/2007 | TW-03 | — | 4.06 | 4.11 | 0.05 | — | — | — | — | — |
| 3/5/2007 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 5/1/2007 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 6/22/2007 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 7/6/2007 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 8/1/2007 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 8/7/2007 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 9/14/2007 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 10/8/2007 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 11/20/2007 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 12/26/2007 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 1/2/2008 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 3/5/2008 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 4/23/2008 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 5/12/2008 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 6/27/2008 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 8/5/2008 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 9/10/2008 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 10/27/2008 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 11/4/2008 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 1/5/2009 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 2/27/2009 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 3/9/2009 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 4/20/2009 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 4/29/2009 | TW-03 | — | — | NG | — | — | — | — | — | Under water |
| 5/6/2009 | TW-03 | — | — | NG | — | — | — | — | — | Under water |
| 6/2/2009 | TW-03 | — | — | NG | — | — | — | — | — | Under Water |
| 7/6/2009 | TW-03 | — | — | NG | — | — | — | — | — | Under Water |
| 8/14/2009 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 9/28/2009 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 10/13/2009 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 11/23/2009 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 12/2/2009 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 1/12/2010 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 2/2/2010 | TW-03 | — | — | NG | — | — | — | — | — | Under Water |
| 3/2/2010 | TW-03 | — | — | NG | — | — | — | — | — | Under Water |
| 3/15/2010 | TW-03 | — | — | NG | — | — | — | — | — | Flooded |
| 4/15/2010 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 4/22/2010 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 5/3/2010 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 6/21/2010 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 7/2/2010 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 8/13/2010 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 9/1/2010 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 10/8/2010 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 11/23/2010 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 1/3/2011 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 1/25/2011 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 2/4/2011 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 3/26/2011 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 4/27/2011 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 5/9/2011 | TW-03 | — | — | NG | — | — | — | — | — | — |
| 6/6/2011 | TW-03 | — | — | NG | — | — | — | — | — | — |



Shell/Motiva 0007383

# Table 3
## Groundwater Elevation Summary
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 2/21/2006 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 3/7/2006 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 5/18/2006 | TW-04 | — | — | 2.66 | — | — | — | — | — | — |
| 6/28/2006 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 8/16/2006 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 9/29/2006 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 10/20/2006 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 12/15/2006 | TW-04 | — | — | 3.05 | — | — | — | — | — | — |
| 1/23/2007 | TW-04 | — | — | 3.15 | — | — | — | — | — | — |
| 2/2/2007 | TW-04 | — | — | 3.36 | — | — | — | — | — | — |
| 3/5/2007 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 5/1/2007 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 6/22/2007 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 6/26/2007 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 7/6/2007 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 8/1/2007 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 8/7/2007 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 9/14/2007 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 10/8/2007 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 11/20/2007 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 12/26/2007 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 1/2/2008 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 3/5/2008 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 4/23/2008 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 5/12/2008 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 6/27/2008 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 8/5/2008 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 9/10/2008 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 10/27/2008 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 11/4/2008 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 1/5/2009 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 2/27/2009 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 3/9/2009 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 4/20/2009 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 4/29/2009 | TW-04 | — | — | NG | — | — | — | — | — | Under water |
| 5/6/2009 | TW-04 | — | — | NG | — | — | — | — | — | Under water |
| 6/2/2009 | TW-04 | — | — | NG | — | — | — | — | — | Under Water |
| 7/6/2009 | TW-04 | — | — | NG | — | — | — | — | — | Under Water |
| 8/14/2009 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 9/28/2009 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 10/13/2009 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 11/23/2009 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 12/2/2009 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 1/12/2010 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 2/2/2010 | TW-04 | — | — | NG | — | — | — | — | — | Under Water |
| 3/2/2010 | TW-04 | — | — | NG | — | — | — | — | — | Under Water |
| 3/15/2010 | TW-04 | — | — | NG | — | — | — | — | — | Flooded |
| 4/15/2010 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 4/22/2010 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 5/3/2010 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 6/21/2010 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 7/2/2010 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 8/13/2010 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 9/1/2010 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 10/8/2010 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 11/23/2010 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 1/3/2011 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 1/25/2011 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 2/4/2011 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 3/26/2011 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 4/27/2011 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 5/9/2011 | TW-04 | — | — | NG | — | — | — | — | — | — |
| 6/6/2011 | TW-04 | — | — | NG | — | — | — | — | — | — |



Shell/Motiva 0007384

## Table 3
## Groundwater Elevation Summary
(Sorted by Well)
**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 2/21/2006 | TW-05 | — | — | NG | — | — | — | — | — | — |
| 3/7/2006 | TW-05 | — | 3.54 | 3.75 | 0.21 | — | — | — | 0.50 | — |
| 5/18/2006 | TW-05 | — | 2.75 | 2.90 | 0.15 | — | — | — | 0.25 | — |
| 6/28/2006 | TW-05 | — | 2.72 | 2.91 | 0.19 | — | — | — | — | — |
| 9/29/2006 | TW-05 | — | 3.05 | 3.20 | 0.15 | — | — | — | — | — |
| 10/20/2006 | TW-05 | — | — | NG | — | — | — | — | — | — |
| 12/15/2006 | TW-05 | — | 3.42 | 3.71 | 0.29 | — | — | — | 0.25 | — |
| 1/23/2007 | TW-05 | — | 3.80 | 4.17 | 0.37 | — | — | — | 0.25 | — |
| 2/2/2007 | TW-05 | — | 3.75 | 4.14 | 0.39 | — | — | — | 0.25 | — |
| 3/5/2007 | TW-05 | — | 3.56 | 3.67 | 0.11 | — | — | — | 0.25 | — |
| 5/1/2007 | TW-05 | — | 2.56 | 2.65 | 0.09 | — | — | — | 0.25 | — |
| 6/22/2007 | TW-05 | — | — | NG | — | — | — | — | — | — |
| 6/26/2007 | TW-05 | — | 4.33 | 4.54 | 0.21 | — | — | — | — | — |
| 7/6/2007 | TW-05 | — | 3.25 | 3.33 | 0.08 | — | — | — | — | — |
| 8/1/2007 | TW-05 | — | — | NG | — | — | — | — | — | — |
| 8/7/2007 | TW-05 | — | — | NG | — | — | — | — | — | — |
| 9/14/2007 | TW-05 | — | — | NG | — | — | — | — | — | — |
| 10/8/2007 | TW-05 | — | — | NG | — | — | — | — | — | — |
| 11/20/2007 | TW-05 | — | — | NG | — | — | — | — | — | — |
| 12/26/2007 | TW-05 | — | — | NG | — | — | — | — | — | — |
| 1/2/2008 | TW-05 | — | — | NG | — | — | — | — | — | — |
| 3/5/2008 | TW-05 | — | — | NG | — | — | — | — | — | — |
| 4/23/2008 | TW-05 | — | — | NG | — | — | — | — | — | — |
| 5/12/2008 | TW-05 | — | — | NG | — | — | — | — | — | — |
| 6/27/2008 | TW-05 | — | — | NG | — | — | — | — | — | — |
| 8/5/2008 | TW-05 | — | — | NG | — | — | — | — | — | — |
| 9/10/2008 | TW-05 | — | — | NG | — | — | — | — | — | — |
| 10/27/2008 | TW-05 | — | — | NG | — | — | — | — | — | — |
| 11/4/2008 | TW-05 | — | — | NG | — | — | — | — | — | — |
| 1/5/2009 | TW-05 | — | — | NG | — | — | — | — | — | — |
| 4/20/2009 | TW-05 | — | 3.44 | 3.62 | 0.18 | — | — | — | — | — |
| 4/29/2009 | TW-05 | — | 3.79 | 4.00 | 0.21 | — | — | — | — | — |
| 5/6/2009 | TW-05 | — | — | NG | — | — | — | — | — | Under water |
| 6/2/2009 | TW-05 | — | — | NG | — | — | — | — | — | Under Water |
| 7/6/2009 | TW-05 | — | — | NG | — | — | — | — | — | Under Water |
| 8/14/2009 | TW-05 | — | — | NG | — | — | — | — | — | — |
| 9/28/2009 | TW-05 | — | 3.19 | 3.26 | 0.07 | — | — | — | 0.25 | — |
| 10/13/2009 | TW-05 | — | 3.35 | 3.68 | 0.33 | — | — | — | 0.50 | — |
| 11/23/2009 | TW-05 | — | — | NG | — | — | — | — | — | — |
| 12/2/2009 | TW-05 | — | — | NG | — | — | — | — | — | — |
| 1/12/2010 | TW-05 | — | — | NG | — | — | — | — | — | — |
| 2/2/2010 | TW-05 | — | — | NG | — | — | — | — | — | Under Water |
| 3/2/2010 | TW-05 | — | — | NG | — | — | — | — | — | Under Water |
| 3/15/2010 | TW-05 | — | — | NG | — | — | — | — | — | Flooded |
| 4/15/2010 | TW-05 | — | — | NG | — | — | — | — | — | — |
| 4/22/2010 | TW-05 | — | — | NG | — | — | — | — | — | — |
| 5/3/2010 | TW-05 | — | — | NG | — | — | — | — | — | — |
| 6/21/2010 | TW-05 | — | 3.06 | 3.12 | 0.06 | — | — | — | — | — |
| 7/2/2010 | TW-05 | — | 3.54 | 3.68 | 0.14 | — | — | — | 0.25 | — |
| 8/13/2010 | TW-05 | — | 3.39 | 3.47 | 0.08 | — | — | — | — | — |
| 9/1/2010 | TW-05 | — | 3.25 | 3.27 | 0.02 | — | — | — | — | — |
| 10/8/2010 | TW-05 | — | 2.92 | 2.98 | 0.06 | — | — | — | — | — |
| 11/23/2010 | TW-05 | — | 3.51 | 3.58 | 0.07 | — | — | — | — | — |
| 1/3/2011 | TW-05 | — | — | NG | — | — | — | — | — | — |
| 1/25/2011 | TW-05 | — | — | NG | — | — | — | — | — | — |
| 2/4/2011 | TW-05 | — | — | NG | — | — | — | — | — | — |
| 3/26/2011 | TW-05 | — | 2.48 | 2.51 | 0.03 | — | — | — | — | — |
| 4/27/2011 | TW-05 | — | 2.69 | 2.76 | 0.07 | — | — | — | — | — |
| 5/9/2011 | TW-05 | — | 3.02 | 3.08 | 0.06 | — | — | — | — | — |
| 6/6/2011 | TW-05 | — | | 3.13 | | — | — | — | — | — |



Shell/Motiva 0007385

# Table 3
## Groundwater Elevation Summary
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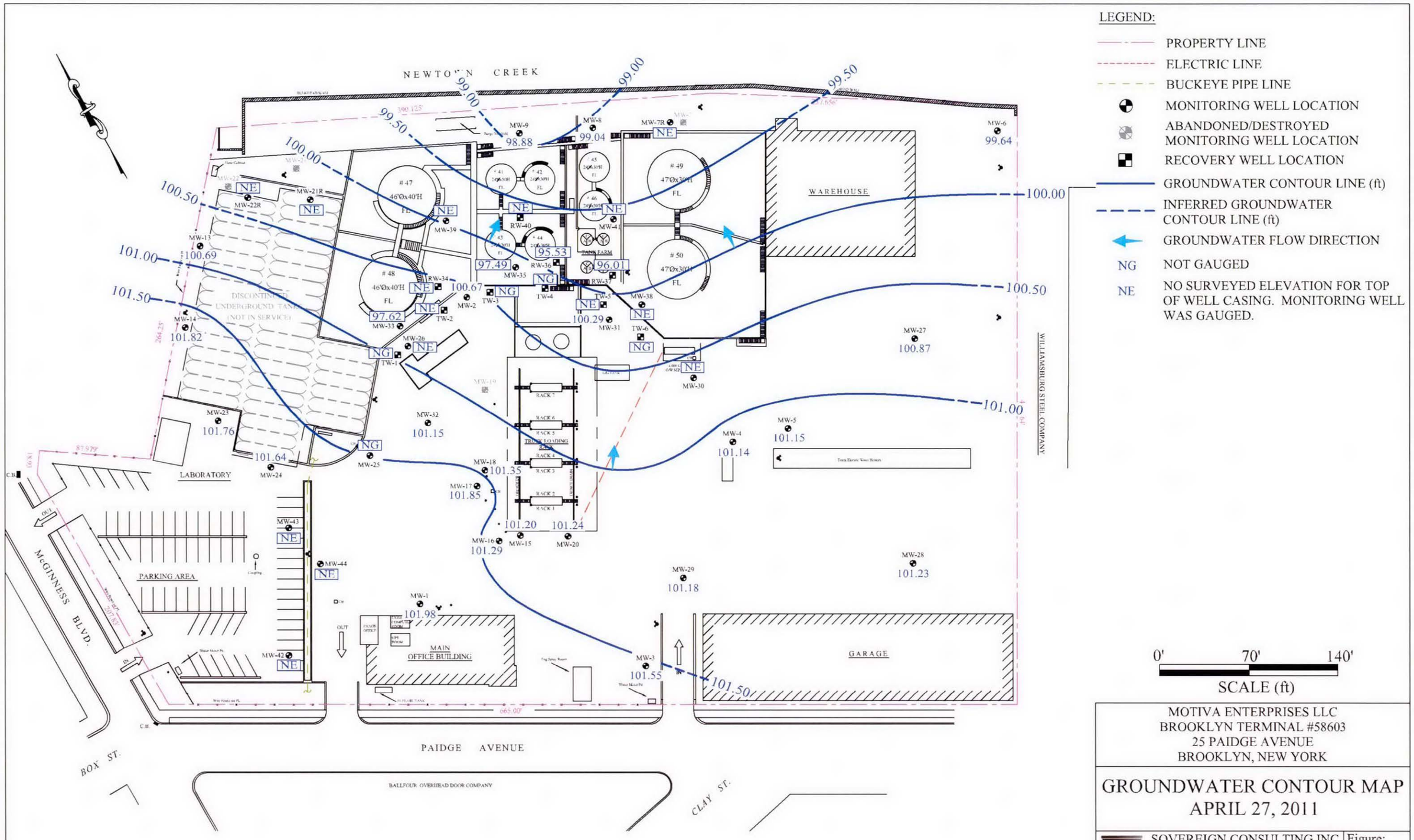
| Date | Well # | Top of Casing Elevation (ft) | Depth to Product (ft.) | Depth to Water (ft.) | Product Thickness (ft.) | Product Elevation (ft.) | Water-Table Elevation (ft.) | Corrected Water-Table Elevation (ft.) | Product Rec. (gal.) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 2/21/2006 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 3/7/2006 | TW-06 | — | 3.05 | 3.19 | 0.14 | — | — | — | 0.10 | — |
| 5/18/2006 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 6/28/2006 | TW-06 | — | 2.52 | 2.68 | 0.16 | — | — | — | — | — |
| 9/29/2006 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 10/20/2006 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 12/15/2006 | TW-06 | — | 2.98 | 3.24 | 0.26 | — | — | — | — | — |
| 1/23/2007 | TW-06 | — | 3.35 | 3.59 | 0.24 | — | — | — | — | — |
| 2/2/2007 | TW-06 | — | 3.28 | 3.48 | 0.20 | — | — | — | 0.25 | — |
| 3/5/2007 | TW-06 | — | 3.10 | 3.14 | 0.04 | — | — | — | — | — |
| 5/1/2007 | TW-06 | — | 2.32 | 2.34 | 0.02 | — | — | — | — | — |
| 6/22/2007 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 6/26/2007 | TW-06 | — | 3.08 | 3.13 | 0.05 | — | — | — | — | — |
| 7/6/2007 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 8/1/2007 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 8/7/2007 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 9/14/2007 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 10/8/2007 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 11/20/2007 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 12/26/2007 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 1/2/2008 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 3/5/2008 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 4/23/2008 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 5/12/2008 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 6/27/2008 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 8/5/2008 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 9/10/2008 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 10/27/2008 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 11/4/2008 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 1/5/2009 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 2/27/2009 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 3/9/2009 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 4/20/2009 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 4/29/2009 | TW-06 | — | — | NG | — | — | — | — | — | Under water |
| 5/6/2009 | TW-06 | — | — | NG | — | — | — | — | — | Under water |
| 6/2/2009 | TW-06 | — | — | NG | — | — | — | — | — | Under Water |
| 7/6/2009 | TW-06 | — | — | NG | — | — | — | — | — | Under Water |
| 8/14/2009 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 9/28/2009 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 10/13/2009 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 11/23/2009 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 12/2/2009 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 1/12/2010 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 2/2/2010 | TW-06 | — | — | NG | — | — | — | — | — | Under Water |
| 3/2/2010 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 3/15/2010 | TW-06 | — | — | NG | — | — | — | — | — | Flooded |
| 4/15/2010 | TW-06 | — | 2.82 | 2.85 | 0.03 | — | — | — | — | — |
| 4/22/2010 | TW-06 | — | 2.82 | 2.85 | 0.03 | — | — | — | — | — |
| 5/3/2010 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 6/21/2010 | TW-06 | — | 2.83 | 3.01 | 0.18 | — | — | — | — | — |
| 7/2/2010 | TW-06 | — | 3.10 | 3.34 | 0.24 | — | — | — | 0.25 | — |
| 8/13/2010 | TW-06 | — | 2.90 | 2.96 | 0.06 | — | — | — | — | — |
| 9/1/2010 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 10/8/2010 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 11/23/2010 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 1/3/2011 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 1/25/2011 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 2/4/2011 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 3/26/2011 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 4/27/2011 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 5/9/2011 | TW-06 | — | — | NG | — | — | — | — | — | — |
| 6/6/2011 | TW-06 | — | — | NG | — | — | — | — | — | — |

**Note:**
NG = Not Gauged



Shell/Motiva 0007386

# FIGURES




LEGEND:

- PROPERTY LINE
- ELECTRIC LINE
- BUCKEYE PIPE LINE
- MONITORING WELL LOCATION
- ABANDONED/DESTROYED MONITORING WELL LOCATION
- RECOVERY WELL LOCATION
- GROUNDWATER CONTOUR LINE (ft)
- INFERRED GROUNDWATER CONTOUR LINE (ft)
- GROUNDWATER FLOW DIRECTION
- NG — NOT GAUGED
- NE — NO SURVEYED ELEVATION FOR TOP OF WELL CASING. MONITORING WELL WAS GAUGED.

0' 70' 140'

SCALE (ft)

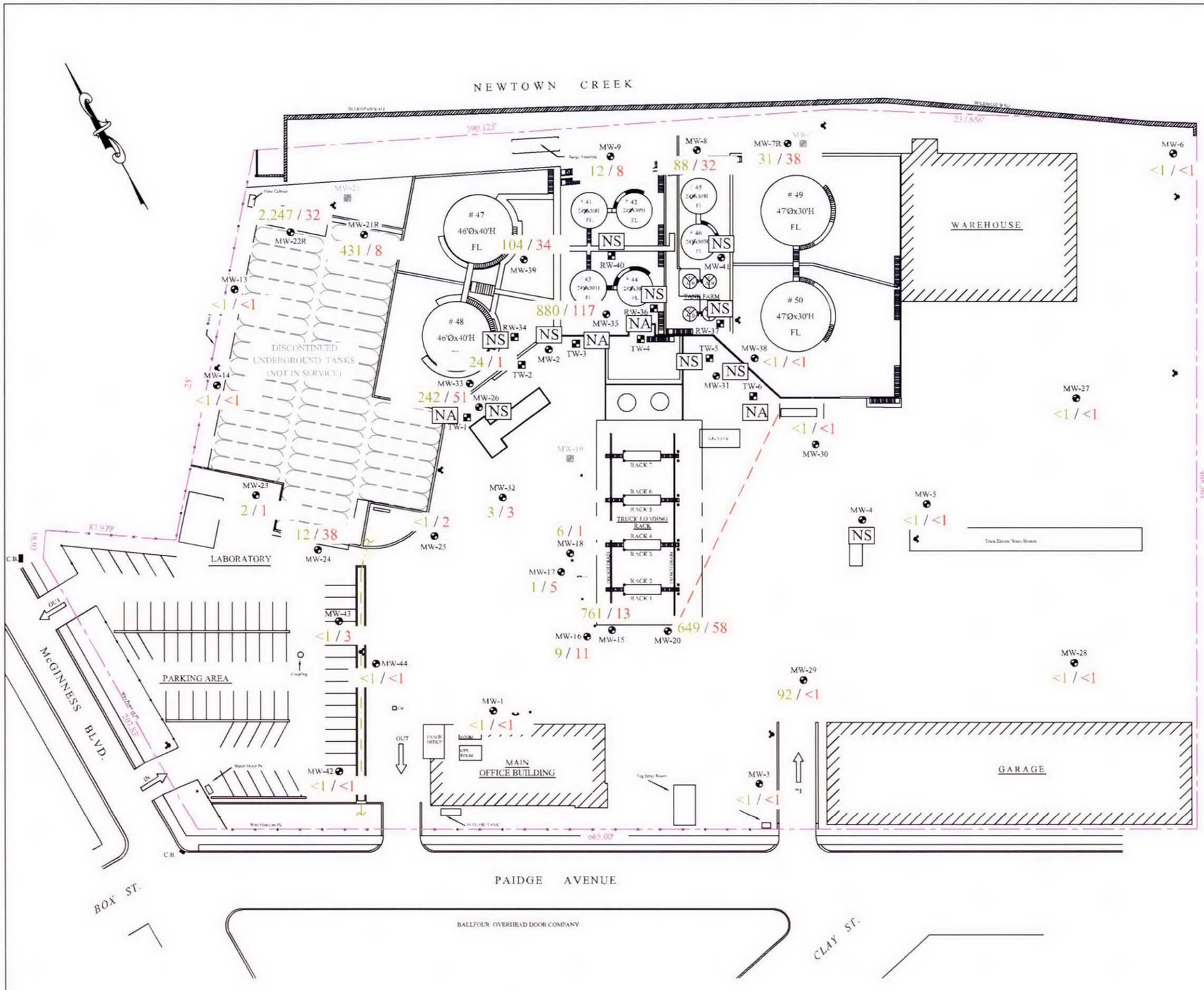
MOTIVA ENTERPRISES LLC
BROOKLYN TERMINAL #58603
25 PAIDGE AVENUE
BROOKLYN, NEW YORK

# GROUNDWATER CONTOUR MAP
# APRIL 27, 2011

SOVEREIGN CONSULTING INC.
290 Executive Drive, Suite 300
Cranberry Twp., Pennsylvania 16066
Phone:(724)553-5084 Fax:(724)553-5089
www.sovcon.com

Figure: 1

DRAWN: 06/23/2011 REVISED: 06/23/2011




LEGEND:

- PROPERTY LINE
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- MONITORING WELL LOCATION
- ABANDONED/DESTROYED MONITORING WELL LOCATION
- RECOVERY WELL LOCATION
- <1 BTEX CONCENTRATIONS (µg/L)
- <1 MTBE CONCENTRATIONS (µg/L)
- NA NOT ACCESSIBLE
- NS NOT SAMPLED DUE TO THE PRESENCE OF PRODUCT

0' 70' 140'

SCALE (ft)

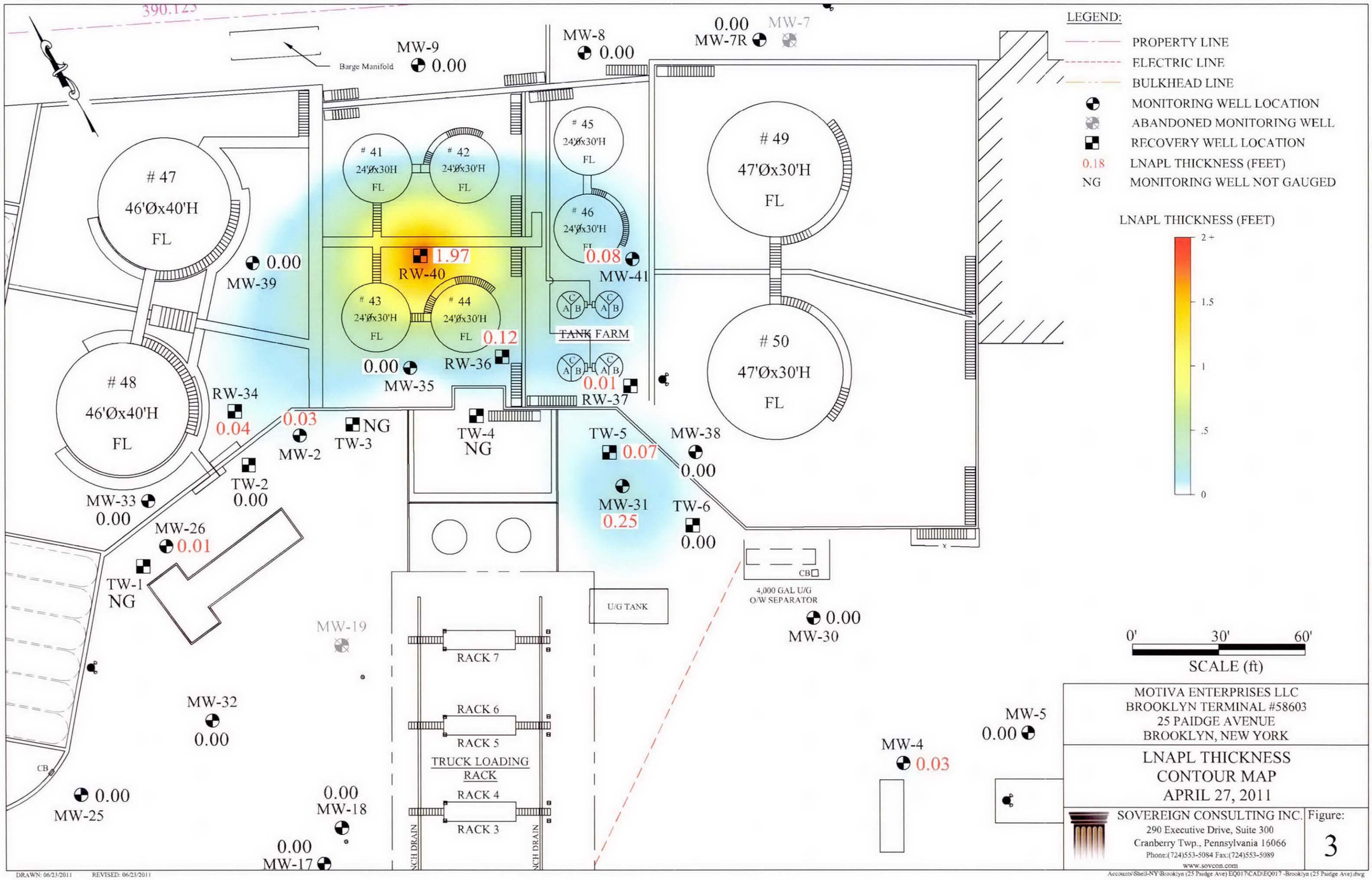
MOTIVA ENTERPRISES LLC
BROOKLYN TERMINAL #58603
25 PAIDGE AVENUE
BROOKLYN, NEW YORK

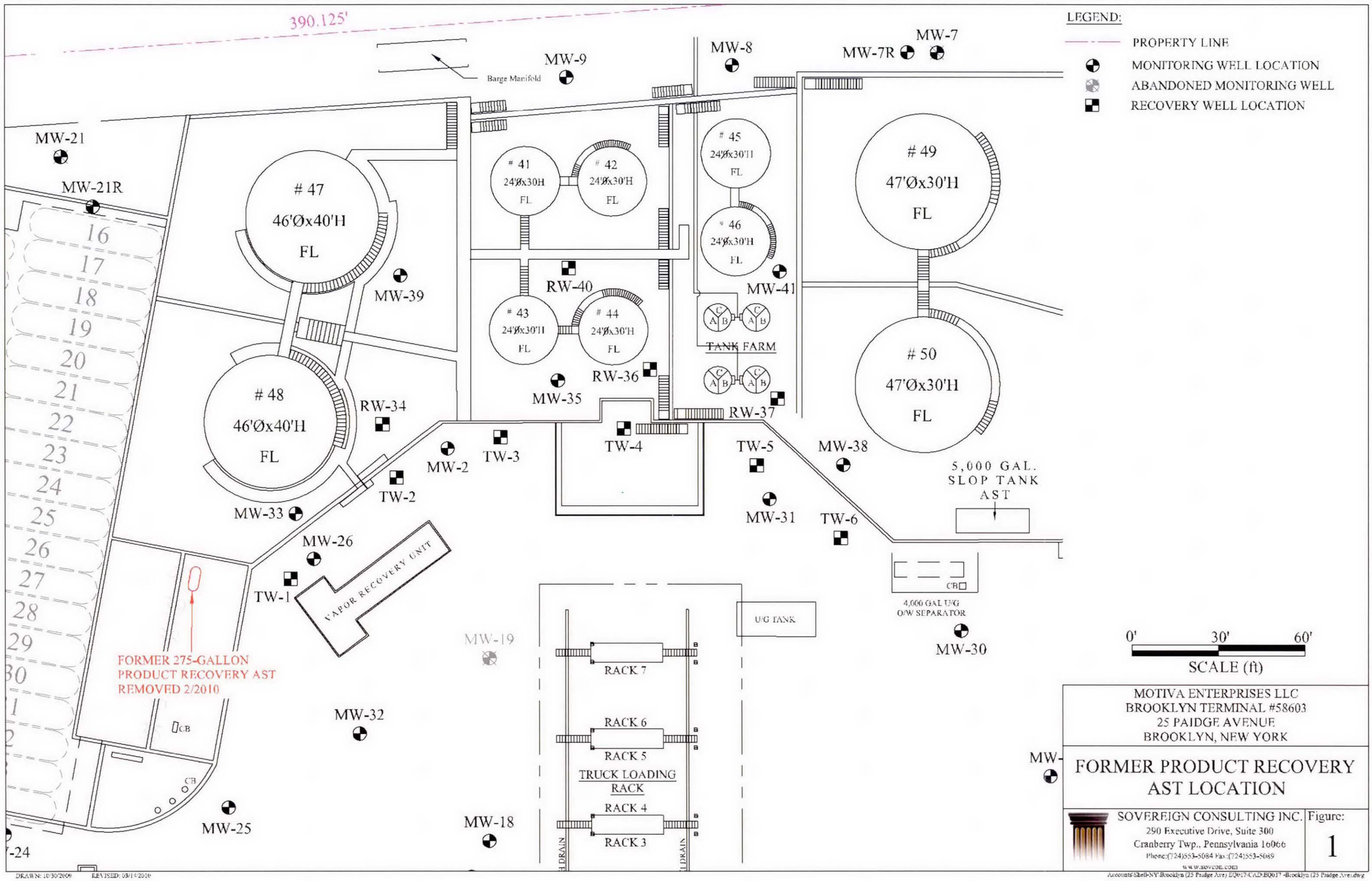
# BTEX / MTBE CONCENTRATIONS IN GROUNDWATER APRIL 28 & 29, 2011

SOVEREIGN CONSULTING INC.
290 Executive Drive, Suite 300
Cranberry Twp., Pennsylvania 16066
Phone:(724)553-5084 Fax:(724)553-5089
www.sovcon.com

Figure: 2

DRAWN: 06/23/2010 REVISED: 06/23/2010


390.123
MW-9
0.00
Barge Manifold
MW-8
0.00
0.00
MW-7
MW-7R
# 47
46'Øx40'H
FL
# 41
24'Øx30H
FL
# 42
24'Øx30'H
FL
# 45
24'Øx30'H
FL
# 46
24'Øx30'H
FL
# 49
47'Øx30'H
FL
0.00
MW-39
1.97
RW-40
0.08
MW-41
# 43
24'Øx30'H
FL
# 44
24'Øx30'H
FL
0.12
RW-36
TANK FARM
# 50
47'Øx30'H
FL
0.00
MW-35
0.01
RW-37
# 48
46'Øx40'H
FL
RW-34
0.04
0.03
MW-2
NG
TW-3
TW-4
NG
TW-5
0.07
MW-38
0.00
TW-2
0.00
MW-33
0.00
MW-31
0.25
TW-6
0.00
MW-26
0.01
TW-1
NG
CB
4,000 GAL U/G
O/W SEPARATOR
U/G TANK
0.00
MW-30
MW-19
RACK 7
RACK 6
RACK 5
TRUCK LOADING
RACK
RACK 4
RACK 3
MW-32
0.00
MW-5
0.00
MW-4
0.03
CB
0.00
MW-25
0.00
MW-18
0.00
MW-17
LEGEND:
PROPERTY LINE
ELECTRIC LINE
BULKHEAD LINE
MONITORING WELL LOCATION
ABANDONED MONITORING WELL
RECOVERY WELL LOCATION
0.18 LNAPL THICKNESS (FEET)
NG MONITORING WELL NOT GAUGED
LNAPL THICKNESS (FEET)
2 +
1.5
1
.5
0
0'
30'
60'
SCALE (ft)
MOTIVA ENTERPRISES LLC
BROOKLYN TERMINAL #58603
25 PAIDGE AVENUE
BROOKLYN, NEW YORK
LNAPL THICKNESS
CONTOUR MAP
APRIL 27, 2011
SOVEREIGN CONSULTING INC.
290 Executive Drive, Suite 300
Cranberry Twp., Pennsylvania 16066
Phone:(724)553-5084 Fax:(724)553-5089
www.sovcon.com
Figure:
3
DRAWN: 06/23/2011
REVISED: 06/23/2011
Accounts\Shell-NY\Brooklyn (25 Paidge Ave) EQ017\CAD\EQ017 -Brooklyn (25 Paidge Ave).dwg

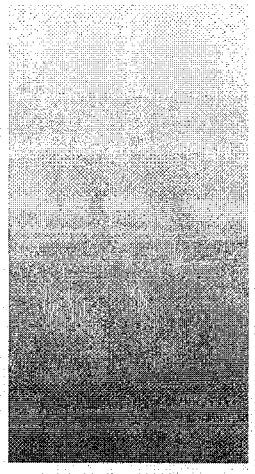

390.125'
LEGEND:
PROPERTY LINE
MONITORING WELL LOCATION
ABANDONED MONITORING WELL
RECOVERY WELL LOCATION
MW-21
MW-21R
MW-9
Barge Manifold
MW-8
MW-7R
MW-7
# 47
46'Øx40'H
FL
# 48
46'Øx40'H
FL
# 41
24'Øx30H
FL
# 42
24'Øx30'H
FL
# 45
24'Øx30'H
FL
# 46
24'Øx30'H
FL
# 49
47'Øx30'H
FL
# 50
47'Øx30'H
FL
# 43
24'Øx30'H
FL
# 44
24'Øx30'H
FL
MW-39
RW-40
MW-41
RW-36
MW-35
TANK FARM
RW-37
RW-34
TW-4
TW-5
MW-38
MW-2
TW-3
TW-2
MW-33
MW-31
TW-6
5,000 GAL.
SLOP TANK
AST
MW-26
TW-1
VAPOR RECOVERY UNIT
CB
4,000 GAL U/G
O/W SEPARATOR
MW-30
U/G TANK
MW-19
RACK 7
RACK 6
RACK 5
TRUCK LOADING
RACK
RACK 4
RACK 3
FORMER 275-GALLON
PRODUCT RECOVERY AST
REMOVED 2/2010
MW-32
MW-25
MW-18
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
0'
30'
60'
SCALE (ft)
MOTIVA ENTERPRISES LLC
BROOKLYN TERMINAL #58603
25 PAIDGE AVENUE
BROOKLYN, NEW YORK
FORMER PRODUCT RECOVERY
AST LOCATION
SOVEREIGN CONSULTING INC.
290 Executive Drive, Suite 300
Cranberry Twp., Pennsylvania 16066
Phone:(724)553-5084 Fax:(724)553-5089
Figure:
1
DRAWN: 10/30/2009
REVISED: 03/14/2010

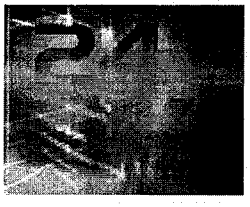
# APPENDIX A

## April 2011 Groundwater Analysis Laboratory Report

New Jersey
ACCUTEST
LABORATORIES

05/18/11





## Technical Report for

**Shell Oil Products US**

SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY

SAP#100623 5E017.140

Accutest Job Number: JA74495

Sampling Date: 04/28/11

Report to:

Sovereign Consulting
290 Executive Drive Suite 300
Cranberry Township, PA 16066
DStatzer@sovcon.com; jmccollums@sovcon.com;
djakim@sovcon.com; bbecker@sovcon.com
ATTN: Douglas Jakim

Total number of pages in report: 47

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

David N. Speis
VP, Laboratory Director

Client Service contact: Kristin Beebe 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, PA, RI, SC, TN, VA, WV

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Test results relate only to samples analyzed.



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Shell/Motiva 0007393

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Shell/Motiva 0007394

# Sample Summary

Shell Oil Products US

Job No: JA74495

SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY
Project No: SAP#100623 5E017.140

| Sample Number | Collected Date | Time | By | Received | Matrix Code | Matrix Type | Client Sample ID |
|---|---|---|---|---|---|---|---|
| JA74495-1 | 04/28/11 | 08:15 | JK | 04/29/11 | AQ | Ground Water | MW-3 |
| JA74495-2 | 04/28/11 | 08:33 | JK | 04/29/11 | AQ | Ground Water | MW-29 |
| JA74495-3 | 04/28/11 | 08:48 | JK | 04/29/11 | AQ | Ground Water | MW-30 |
| JA74495-4 | 04/28/11 | 09:02 | JK | 04/29/11 | AQ | Ground Water | MW-5 |
| JA74495-5 | 04/28/11 | 09:17 | JK | 04/29/11 | AQ | Ground Water | MW-28 |
| JA74495-6 | 04/28/11 | 09:40 | JK | 04/29/11 | AQ | Ground Water | MW-27 |
| JA74495-7 | 04/28/11 | 09:55 | JK | 04/29/11 | AQ | Ground Water | MW-6 |
| JA74495-8 | 04/28/11 | 10:30 | JK | 04/29/11 | AQ | Ground Water | MW-7R |
| JA74495-9 | 04/28/11 | 10:57 | JK | 04/29/11 | AQ | Ground Water | MW-8 |
| JA74495-10 | 04/28/11 | 11:24 | JK | 04/29/11 | AQ | Ground Water | MW-9 |
| JA74495-11 | 04/28/11 | 11:45 | JK | 04/29/11 | AQ | Ground Water | MW-21R |
| JA74495-12 | 04/28/11 | 12:08 | JK | 04/29/11 | AQ | Ground Water | MW-22R |
| JA74495-13 | 04/28/11 | 12:26 | JK | 04/29/11 | AQ | Ground Water | MW-13 |



Shell/Motiva 0007395

# Sample Summary
(continued)

Shell Oil Products US

Job No: JA74495

SCPAC: 97094981, 25 Paidge Avenue, Brooklyn, NY
Project No: SAP#100623 5E017.140

| Sample Number | Collected Date | Time | By | Received | Matrix Code | Matrix Type | Client Sample ID |
|---|---|---|---|---|---|---|---|
| JA74495-14 | 04/28/11 | 12:40 | JK | 04/29/11 | AQ | Ground Water | MW-14 |
| JA74495-15 | 04/28/11 | 12:55 | JK | 04/29/11 | AQ | Ground Water | MW-23 |
| JA74495-16 | 04/28/11 | 13:16 | JK | 04/29/11 | AQ | Ground Water | MW-24 |
| JA74495-17 | 04/28/11 | 13:30 | JK | 04/29/11 | AQ | Ground Water | MW-43 |
| JA74495-18 | 04/28/11 | 13:45 | JK | 04/29/11 | AQ | Ground Water | MW-42 |
| JA74495-19 | 04/28/11 | 10:45 | JK | 04/29/11 | AQ | Field Blank Water | FIELD BLANK |
| JA74495-20 | 04/28/11 | 13:45 | JK | 04/29/11 | AQ | Trip Blank Water | TRIP BLANK |



Shell/Motiva 0007396

Sample Results

Report of Analysis



Shell/Motiva 0007397

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-3 | | |
| **Lab Sample ID:** | JA74495-1 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 4D10342.D | 1 | 05/11/11 | TYG | n/a | n/a | V4D461 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007398

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-3 | | |
| **Lab Sample ID:** | JA74495-1 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 105% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 107% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 103% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 100% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007399

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-29 | | |
| **Lab Sample ID:** | JA74495-2 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 4D10347.D | 1 | 05/12/11 | TYG | n/a | n/a | V4D461 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 83.0 | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | 12.5 | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | 10.7 | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007400

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-29 | | |
| **Lab Sample ID:** | JA74495-2 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | 2.7 | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | 61.9 | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | 109 | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | 1.2 | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | 3.6 | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | 1.4 | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 4.9 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 106% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 108% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 102% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 98% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007401

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-30 | | |
| **Lab Sample ID:** | JA74495-3 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 4D10343.D | 1 | 05/12/11 | TYG | n/a | n/a | V4D461 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007402

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-30 | | |
| **Lab Sample ID:** | JA74495-3 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 104% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 107% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 101% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 102% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007403

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-5 | | |
| **Lab Sample ID:** | JA74495-4 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 4D10344.D | 1 | 05/12/11 | TYG | n/a | n/a | V4D461 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007404

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-5 | | |
| **Lab Sample ID:** | JA74495-4 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | 3.8 | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 106% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 108% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 103% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 100% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007405

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-28 | | |
| **Lab Sample ID:** | JA74495-5 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 4D10348.D | 1 | 05/12/11 | TYG | n/a | n/a | V4D461 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007406

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-28 | | |
| **Lab Sample ID:** | JA74495-5 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | 2.2 | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 2.1 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 105% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 105% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 103% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 100% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007407

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-27 | | |
| **Lab Sample ID:** | JA74495-6 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 4D10345.D | 1 | 05/12/11 | TYG | n/a | n/a | V4D461 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007408

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-27 | | |
| **Lab Sample ID:** | JA74495-6 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 105% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 108% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 102% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 99% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007409

Accutest Laboratories

# Report of Analysis



**Client Sample ID:** MW-6
**Lab Sample ID:** JA74495-7 **Date Sampled:** 04/28/11
**Matrix:** AQ - Ground Water **Date Received:** 04/29/11
**Method:** SW846 8260B **Percent Solids:** n/a
**Project:** SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 4D10346.D | 1 | 05/12/11 | TYG | n/a | n/a | V4D461 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007410

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-6 | | |
| **Lab Sample ID:** | JA74495-7 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 105% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 109% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 103% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 99% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007411

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-7R | | |
| **Lab Sample ID:** | JA74495-8 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 4D10349.D | 1 | 05/12/11 | TYG | n/a | n/a | V4D461 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 31.3 | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007412

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-7R | | |
| **Lab Sample ID:** | JA74495-8 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | 2.0 | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 38.0 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 104% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 104% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 103% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 102% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007413

Accutest Laboratories

# Report of Analysis



**Client Sample ID:** MW-8
**Lab Sample ID:** JA74495-9 **Date Sampled:** 04/28/11
**Matrix:** AQ - Ground Water **Date Received:** 04/29/11
**Method:** SW846 8260B **Percent Solids:** n/a
**Project:** SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D59375.D | 1 | 05/11/11 | NT | n/a | n/a | V3D2569 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 87.6 | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007414

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-8 | | |
| **Lab Sample ID:** | JA74495-9 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 31.6 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 107% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 94% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 109% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 99% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007415

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-9 | | |
| **Lab Sample ID:** | JA74495-10 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D59377.D | 1 | 05/11/11 | NT | n/a | n/a | V3D2569 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 11.5 | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007416

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-9 | | |
| **Lab Sample ID:** | JA74495-10 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 7.6 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 106% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 95% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 110% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 98% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007417

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-21R | | |
| **Lab Sample ID:** | JA74495-11 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D59400.D | 2 | 05/11/11 | NT | n/a | n/a | V3D2570 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 100 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 100 | ug/l | |
| 71-43-2 | Benzene | 217 | 2.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 10 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 10 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 2.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 8.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 4.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | 10.2 | 10 | ug/l | |
| 135-98-8 | sec-Butylbenzene | 28.1 | 10 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 10 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 2.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 2.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 2.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 20 | ug/l | |
| 67-66-3 | Chloroform | ND | 2.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 2.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 10 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 10 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 20 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 2.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 4.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 2.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 2.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 2.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 10 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 2.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 2.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 2.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 2.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 2.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 2.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007418

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-21R | | |
| **Lab Sample ID:** | JA74495-11 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 10 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 10 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 10 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 2.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 2.0 | ug/l | |
| 100-41-4 | Ethylbenzene | 97.0 | 2.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 10 | ug/l | |
| 98-82-8 | Isopropylbenzene | 112 | 4.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 10 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 7.7 | 2.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 10 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 4.0 | ug/l | |
| 91-20-3 | Naphthalene | 60.6 | 10 | ug/l | |
| 103-65-1 | n-Propylbenzene | 59.6 | 10 | ug/l | |
| 100-42-5 | Styrene | ND | 10 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 10 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 2.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 2.0 | ug/l | |
| 108-88-3 | Toluene | 29.9 | 2.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 10 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 10 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 2.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 2.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 2.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 10 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 10 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | 258 | 10 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 10 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 2.0 | ug/l | |
| | m,p-Xylene | 65.6 | 2.0 | ug/l | |
| 95-47-6 | o-Xylene | 22.3 | 2.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 87.9 | 2.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 108% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 98% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 107% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 96% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007419

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-22R | | |
| **Lab Sample ID:** | JA74495-12 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D59371.D | 10 | 05/11/11 | NT | n/a | n/a | V3D2569 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 500 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 500 | ug/l | |
| 71-43-2 | Benzene | 792 | 10 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 50 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 50 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 10 | ug/l | |
| 75-25-2 | Bromoform | ND | 40 | ug/l | |
| 74-83-9 | Bromomethane | ND | 20 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 50 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 50 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 50 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 10 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 10 | ug/l | |
| 75-00-3 | Chloroethane | ND | 10 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 100 | ug/l | |
| 67-66-3 | Chloroform | ND | 10 | ug/l | |
| 74-87-3 | Chloromethane | ND | 10 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 50 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 50 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 100 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 10 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 20 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 10 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 10 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 10 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 50 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 10 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 10 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 10 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 10 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 10 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 10 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007420

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-22R | | |
| **Lab Sample ID:** | JA74495-12 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 50 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 50 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 50 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 10 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 10 | ug/l | |
| 100-41-4 | Ethylbenzene | 1330 | 10 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 50 | ug/l | |
| 98-82-8 | Isopropylbenzene | 207 | 20 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 50 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 32.2 | 10 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 50 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 20 | ug/l | |
| 91-20-3 | Naphthalene | 398 | 50 | ug/l | |
| 103-65-1 | n-Propylbenzene | 430 | 50 | ug/l | |
| 100-42-5 | Styrene | ND | 50 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 50 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 10 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 10 | ug/l | |
| 108-88-3 | Toluene | 57.6 | 10 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 50 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 50 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 10 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 10 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 10 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 50 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 50 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 50 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | 63.3 | 50 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 10 | ug/l | |
| | m,p-Xylene | 48.4 | 10 | ug/l | |
| 95-47-6 | o-Xylene | 19.0 | 10 | ug/l | |
| 1330-20-7 | Xylene (total) | 67.4 | 10 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 105% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 95% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 108% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 99% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007421

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-13 | | |
| **Lab Sample ID:** | JA74495-13 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D59378.D | 1 | 05/11/11 | NT | n/a | n/a | V3D2569 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007422

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-13 | | |
| **Lab Sample ID:** | JA74495-13 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 106% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 93% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 111% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 97% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007423

Accutest Laboratories

# Report of Analysis



**Client Sample ID:** MW-14
**Lab Sample ID:** JA74495-14 **Date Sampled:** 04/28/11
**Matrix:** AQ - Ground Water **Date Received:** 04/29/11
**Method:** SW846 8260B **Percent Solids:** n/a
**Project:** SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D59379.D | 1 | 05/11/11 | NT | n/a | n/a | V3D2569 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007424

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-14 | | |
| **Lab Sample ID:** | JA74495-14 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 108% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 93% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 108% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 98% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007425

Accutest Laboratories

# Report of Analysis



**Client Sample ID:** MW-23
**Lab Sample ID:** JA74495-15 **Date Sampled:** 04/28/11
**Matrix:** AQ - Ground Water **Date Received:** 04/29/11
**Method:** SW846 8260B **Percent Solids:** n/a
**Project:** SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D59396.D | 1 | 05/11/11 | NT | n/a | n/a | V3D2570 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007426

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-23 | | |
| **Lab Sample ID:** | JA74495-15 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | 6.8 | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 1.1 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | 1.9 | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 2.3 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 108% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 97% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 108% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 97% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007427

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-24 | | |
| **Lab Sample ID:** | JA74495-16 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D59376.D | 1 | 05/11/11 | NT | n/a | n/a | V3D2569 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 9.5 | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007428

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-24 | | |
| **Lab Sample ID:** | JA74495-16 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | 4.0 | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 37.5 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | 2.1 | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 2.7 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 106% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 94% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 108% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 100% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007429

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-43 | | |
| **Lab Sample ID:** | JA74495-17 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D59380.D | 1 | 05/11/11 | NT | n/a | n/a | V3D2569 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007430

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-43 | | |
| **Lab Sample ID:** | JA74495-17 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 3.0 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 109% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 96% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 108% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 97% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007431

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-42 | | |
| **Lab Sample ID:** | JA74495-18 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D59381.D | 1 | 05/11/11 | NT | n/a | n/a | V3D2569 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007432

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-42 | | |
| **Lab Sample ID:** | JA74495-18 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 109% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 95% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 108% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 97% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007433

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | FIELD BLANK | | |
| **Lab Sample ID:** | JA74495-19 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Field Blank Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D59397.D | 1 | 05/11/11 | NT | n/a | n/a | V3D2570 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**Purgeable Aromatics, MTBE**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 110% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 97% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 108% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 95% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007434

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | TRIP BLANK | | |
| **Lab Sample ID:** | JA74495-20 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Trip Blank Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | S144687.D | 1 | 05/10/11 | NT | n/a | n/a | VS5954 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**Purgeable Aromatics, MTBE**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 95% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 82% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 103% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 93% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007435

## Misc. Forms

### Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

LAB (LOCATION)

☑ ACCUTEST (JA74495)
☐ CALSCIENCE (_____)
☐ TESTAMERICA (_____)
☐ Other (_____)

Lab Vendor # 1813640 (Accutest)

# Shell Oil Products Chain Of Custody Record

Please Check Appropriate Box:

| | | |
|---|---|---|
| ☐ ENV. SERVICES | ☐ MOTIVA RETAIL | ☐ SHELL RETAIL |
| ☐ MOTIVA SD&CM | ☑ CONSULTANT | ☐ LUBES |
| ☐ SHELL PIPELINE | ☐ OTHER _____ | |

Print Bill To Contact Name: Douglas Jakim

PO #:

INCIDENT # (ENV SERVICES): 9 7 0 9 4 9 8 1

SAP #: 1 0 0 6 2 3

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 4/28/2011

PAGE: 1 of 2

| | |
|---|---|
| SAMPLING COMPANY: Sovereign Consulting Inc. | LOG CODE: |
| ADDRESS: 290 Executive Drive, Suite 300, Cranberry Township, PA 16066 | |
| PROJECT CONTACT (Hardcopy or PDF Report to): John McCollums / Douglas Jakim | |
| TELEPHONE: (724) 553-5084 | FAX: (724) 553-5089 |
| Bill to Contact E-MAIL: djakim@sovcon.com | |

SITE ADDRESS: Street and City: 25 Paidge Avenue, Brooklyn — State: NY — GLOBAL ID NO.:

EDF DELIVERABLE TO (Name, Company, Office Location): — PHONE NO.: — E-MAIL: — CONSULTANT PROJECT NO.: SE017.140

SAMPLER NAME(S) (Print): Justin King and Nick Zarcone

LAB USE ONLY: JA74495

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

DELIVERABLES: ☑ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY) _____

TEMPERATURE ON RECEIPT C°: Cooler #1 2.1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
Report to WPA email list.

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☐ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

UNIT COST / NON-UNIT COST

EPA 8260 (See attached list)

FIELD NOTES:

TEMPERATURE ON RECEIPT 2.1 C°
client sub stated

Container PID Readings or Laboratory Notes

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | EPA 8260 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| -1 | MW-3 | 4/28/11 | 8:15 | GW | 3 | | | | | 3 | x |
| -2 | MW-29 | 4/28/11 | 8:33 | GW | 3 | | | | | 3 | x |
| -3 | MW-30 | 4/28/11 | 8:48 | GW | 3 | | | | | 3 | x |
| -4 | MW-5 | 4/28/11 | 9:02 | GW | 3 | | | | | 3 | x |
| -5 | MW-28 | 4/28/11 | 9:17 | GW | 3 | | | | | 3 | x |
| -6 | MW-27 | 4/28/11 | 9:40 | GW | 3 | | | | | 3 | x |
| -7 | MW-6 | 4/28/11 | 9:55 | GW | 3 | | | | | 3 | x |
| -8 | MW-7R | 4/28/11 | 10:30 | GW | 3 | | | | | 3 | x |
| -9 | MW-8 | 4/28/11 | 10:57 | GW | 3 | | | | | 3 | x |
| -10 | MW-9 | 4/28/11 | 11:24 | GW | 3 | | | | | 3 | x |

806

| | | | |
|---|---|---|---|
| Relinquished by: (Signature) | Received by: (Signature) FED EX 8708 8445 7507 | Date: 4/28/11 | Time: 3:30pm |
| Relinquished by: (Signature) FED EX | Received by: (Signature) | Date: 4-29-11 | Time: 930 |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |

03/2006 Revision

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**JA74495: Chain of Custody**
**Page 1 of 3**

# Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
☑ ACCUTEST (_____)
☐ CALSCIENCE (_____)
☐ TESTAMERICA (_____)
☐ Other (_____)
Lab Vendor # 1813640 (Accutest)

Please Check Appropriate Box:
☐ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA SD&CM ☑ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER

Print Bill To Contact Name: Douglas Jakim
INCIDENT # (ENV SERVICES): 9 7 6 9 4 9 8 1
☐ CHECK IF NO INCIDENT # APPLIES
DATE: 4/28/2011
PAGE: 2 of 2
PO #
SAP #: 1 0 0 6 2 3

SUBCONTRACT COMPANY: Sovereign Consulting Inc.
LOG CODE:
SITE ADDRESS: Street and City: 25 Paidge Avenue, Brooklyn
State: NY
GLOBAL ID NO.:
ADDRESS: 290 Executive Drive, Suite 300, Cranberry Township, PA 16066
EDF DELIVERABLE TO (Name, Company, Office Location): PHONE NO.: E-MAIL:
CONSULTANT PROJECT NO.: 5E017.140
PROJECT CONTACT (Hardcopy or PDF Report to): John McCollums / Douglas Jakim
TELEPHONE: (724) 553-5084
FAX: (724) 553-5089
Bill To Contact E-MAIL: djakim@sovcon.com
SAMPLER NAME(S) (Print): Justin King and Nick Zarcone
LAB USE ONLY: JA74495

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND
☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:
DELIVERABLES: ☑ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY) _____
TEMPERATURE ON RECEIPT C° Cooler #1 Cooler #2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
Report to WPA email list.
☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☐ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS
UNIT COST | NON-UNIT COST

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | EPA 8260 (See attached list) | 8260B - BTEX/MTBE | FIELD NOTES: Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -11 | MW-21R | 4/28/11 | 11:45 | GW | 3 | | | | | 3 | X | | |
| -12 | MW-22R | 4/28/11 | 12:08 | GW | 3 | | | | | 3 | X | | |
| -13 | MW-13 | 4/28/11 | 12:28 | GW | 3 | | | | | 3 | X | | |
| -14 | MW-14 | 4/28/11 | 12:40 | GW | 3 | | | | | 3 | X | | |
| -15 | MW-23 | 4/28/11 | 12:55 | GW | 3 | | | | | 3 | X | | |
| -16 | MW-24 | 4/28/11 | 1:16 | GW | 3 | | | | | 3 | X | | |
| -17 | MW-43 | 4/28/11 | 1:30 | GW | 3 | | | | | 3 | X | | |
| -18 | MW-42 | 4/28/11 | 1:45 | GW | 3 | | | | | 3 | X | | |
| -19 | FIELD BLANK | 4/28/11 | 10:45 | GW | 3 | | | | | 3 | | X | |
| -20 | TRIP BLANK | 4/25/11 | 5:00 | TB | 2 | | | | | 2 | | X | |

TEMPERATURE ON RECEIPT C°

| Relinquished by: (Signature) | Received by: (Signature) | Date | Time |
|---|---|---|---|
| | FED EX | 4/28/11 | 3:30 PM |
| FED EX | | 4-29-11 | 930 |
| | | | |

05/2/06 Revision

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**JA74495: Chain of Custody**
**Page 2 of 3**



Shell/Motiva 0007438

ACCUTEST LABORATORIES

# Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA74495 Client: Immediate Client Services Action Required: No

Date / Time Received: 4/29/2011 Delivery Method: Client Service Action Required at Login: No

Project: No. Coolers: 1 Airbill #'s:

| Cooler Security | Y | or | N | | Y | or | N |
|---|---|---|---|---|---|---|---|
| 1. Custody Seals Present: | ☑ | | ☐ | 3. COC Present: | ☑ | | ☐ |
| 2. Custody Seals Intact: | ☑ | | ☐ | 4. Smpl Dates/Time OK | ☑ | | ☐ |

| Cooler Temperature | Y | or | N |
|---|---|---|---|
| 1. Temp criteria achieved: | ☑ | | ☐ |
| 2. Cooler temp verification: | Infared gun | | |
| 3. Cooler media: | Ice (bag) | | |

| Quality Control Preservatio | Y | or | N | N/A |
|---|---|---|---|---|
| 1. Trip Blank present / cooler: | ☑ | | ☐ | ☐ |
| 2. Trip Blank listed on COC: | ☑ | | ☐ | ☐ |
| 3. Samples preserved properly: | ☑ | | ☐ | |
| 4. VOCs headspace free: | ☑ | | ☐ | ☐ |

| Sample Integrity - Documentation | Y | or | N |
|---|---|---|---|
| 1. Sample labels present on bottles: | ☑ | | ☐ |
| 2. Container labeling complete: | ☑ | | ☐ |
| 3. Sample container label / COC agree: | ☑ | | ☐ |

| Sample Integrity - Condition | Y | or | N |
|---|---|---|---|
| 1. Sample recvd within HT: | ☑ | | ☐ |
| 2. All containers accounted for: | ☑ | | ☐ |
| 3. Condition of sample: | Intact | | |

| Sample Integrity - Instructions | Y | or | N | N/A |
|---|---|---|---|---|
| 1. Analysis requested is clear: | ☑ | | ☐ | |
| 2. Bottles received for unspecified tests | ☐ | | ☑ | |
| 3. Sufficient volume recvd for analysis: | ☑ | | ☐ | |
| 4. Compositing instructions clear: | ☐ | | ☐ | ☑ |
| 5. Filtering instructions clear: | ☐ | | ☐ | ☑ |

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

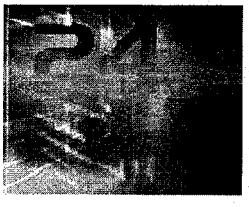
**JA74495: Chain of Custody**
**Page 3 of 3**



Shell/Motiva 0007439

New Jersey
ACCUTEST
LABORATORIES

05/18/11



Technical Report for

Shell Oil Products US

SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY

SAP#100623 5E017.140

Accutest Job Number: JA74647

Sampling Date: 04/29/11

Report to:

Sovereign Consulting
290 Executive Drive Suite 300
Cranberry Township, PA 16066
DStatzer@sovcon.com; jmccollums@sovcon.com;
djakim@sovcon.com; bbecker@sovcon.com
ATTN: Douglas Jakim

Total number of pages in report: **43**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

David N. Speis
VP, Laboratory Director

Client Service contact: Kristin Beebe 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, PA, RI, SC, TN, VA, WV

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Test results relate only to samples analyzed.



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Shell/Motiva 0007440

Sections: 1 2 3

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Shell/Motiva 0007441

# Sample Summary

Shell Oil Products US

**Job No:** JA74647

SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY
Project No: SAP#100623 5E017.140

| Sample Number | Collected Date | Time | By | Received | Matrix Code | Matrix Type | Client Sample ID |
|---|---|---|---|---|---|---|---|
| JA74647-1 | 04/29/11 | 08:30 | JK | 04/30/11 | AQ | Ground Water | MW-1 |
| JA74647-2 | 04/29/11 | 08:45 | JK | 04/30/11 | AQ | Ground Water | MW-44 |
| JA74647-3 | 04/29/11 | 10:15 | JK | 04/30/11 | AQ | Ground Water | MW-25 |
| JA74647-4 | 04/29/11 | 10:45 | JK | 04/30/11 | AQ | Ground Water | TW-2 |
| JA74647-5 | 04/29/11 | 09:00 | JK | 04/30/11 | AQ | Ground Water | MW-20 |
| JA74647-6 | 04/29/11 | 09:15 | JK | 04/30/11 | AQ | Ground Water | MW-15 |
| JA74647-7 | 04/29/11 | 09:30 | JK | 04/30/11 | AQ | Ground Water | MW-16 |
| JA74647-8 | 04/29/11 | 09:45 | JK | 04/30/11 | AQ | Ground Water | MW-17 |
| JA74647-9 | 04/29/11 | 10:00 | JK | 04/30/11 | AQ | Ground Water | MW-18 |
| JA74647-10 | 04/29/11 | 10:30 | JK | 04/30/11 | AQ | Ground Water | MW-32 |
| JA74647-11 | 04/29/11 | 11:15 | JK | 04/30/11 | AQ | Ground Water | MW-33 |
| JA74647-12 | 04/29/11 | 11:30 | JK | 04/30/11 | AQ | Ground Water | MW-39 |
| JA74647-13 | 04/29/11 | 11:45 | JK | 04/30/11 | AQ | Ground Water | MW-35 |



Shell/Motiva 0007442

# Sample Summary
(continued)

Shell Oil Products US

**Job No:** JA74647

SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY
Project No: SAP#100623 5E017.140

| Sample Number | Collected Date | Time | By | Received | Matrix Code | Matrix Type | Client Sample ID |
|---|---|---|---|---|---|---|---|
| JA74647-14 | 04/29/11 | 12:00 | JK | 04/30/11 | AQ | Ground Water | MW-38 |
| JA74647-15 | 04/29/11 | 09:38 | JK | 04/30/11 | AQ | Field Blank Water | FIELD BLANK |
| JA74647-16 | 04/29/11 | 12:00 | JK | 04/30/11 | AQ | Trip Blank Water | TRIP BLANK |



Shell/Motiva 0007443

Sample Results

Report of Analysis



Shell/Motiva 0007444

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-1 | | |
| **Lab Sample ID:** | JA74647-1 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1C90327.D | 1 | 05/04/11 | NT | n/a | n/a | V1C3982 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007445

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-1 | | |
| **Lab Sample ID:** | JA74647-1 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 95% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 90% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 92% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 89% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007446

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-44 | | |
| **Lab Sample ID:** | JA74647-2 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1C90328.D | 1 | 05/04/11 | NT | n/a | n/a | V1C3982 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007447

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-44 | | |
| **Lab Sample ID:** | JA74647-2 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 95% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 89% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 90% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 89% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007448

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-25 | | |
| **Lab Sample ID:** | JA74647-3 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1C90339.D | 1 | 05/04/11 | NT | n/a | n/a | V1C3983 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007449

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-25 | | |
| **Lab Sample ID:** | JA74647-3 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 1.5 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 93% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 87% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 90% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 87% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007450

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | TW-2 | | |
| **Lab Sample ID:** | JA74647-4 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1C90458.D | 1 | 05/07/11 | NT | n/a | n/a | V1C3988 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 19.2 | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | 5.7 | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007451

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | TW-2 | | |
| **Lab Sample ID:** | JA74647-4 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | 23.3 | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 1.3 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | 31.3 | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | 1.5 | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | 2.9 | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 3.6 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 88% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 91% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 89% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 87% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007452

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-20 | | |
| **Lab Sample ID:** | JA74647-5 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1C90512.D | 1 | 05/09/11 | NT | n/a | n/a | V1C3990 |
| Run #2 | 1C90336.D | 5 | 05/04/11 | NT | n/a | n/a | V1C3983 |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | 5.0 ml |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 205 [a] | 5.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | 8.1 | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007453

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-20 | | |
| **Lab Sample ID:** | JA74647-5 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | 8.6 | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | 11.6 | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 57.7 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | 11.8 | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | 15.4 | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | 102 | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | 34.8 | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | 26.2 | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | 182 | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | 180 [a] | 5.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 333 [a] | 5.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 89% | 93% | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 94% | 87% | 70-127% |
| 2037-26-5 | Toluene-D8 | 91% | 90% | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 86% | 87% | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007454

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-20 | | |
| **Lab Sample ID:** | JA74647-5 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis



**Client Sample ID:** MW-15
**Lab Sample ID:** JA74647-6 **Date Sampled:** 04/29/11
**Matrix:** AQ - Ground Water **Date Received:** 04/30/11
**Method:** SW846 8260B **Percent Solids:** n/a
**Project:** SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1C90514.D | 1 | 05/09/11 | NT | n/a | n/a | V1C3990 |
| Run #2 | 1C90337.D | 10 | 05/04/11 | NT | n/a | n/a | V1C3983 |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | 5.0 ml |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 183 [a] | 10 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | 28.0 | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | 16.4 | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007456

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-15 | | |
| **Lab Sample ID:** | JA74647-6 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | 33.4 | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | 95.6 | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 13.4 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | 27.1 | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | 122 | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | 8.3 | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | 223 [a] | 50 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | 54.6 | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | 379 | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | 157 | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 536 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 88% | 92% | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 95% | 87% | 70-127% |
| 2037-26-5 | Toluene-D8 | 91% | 92% | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 84% | 87% | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007457

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-15 | | |
| **Lab Sample ID:** | JA74647-6 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-16 | | |
| **Lab Sample ID:** | JA74647-7 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1C90329.D | 1 | 05/04/11 | NT | n/a | n/a | V1C3982 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 7.2 | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007459

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-16 | | |
| **Lab Sample ID:** | JA74647-7 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | 23.2 | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 11.4 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | 22.3 | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 1.4 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 95% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 92% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 91% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 85% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007460

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-17 | | |
| **Lab Sample ID:** | JA74647-8 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1C90330.D | 1 | 05/04/11 | NT | n/a | n/a | V1C3982 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 1.1 | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007461

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-17 | | |
| **Lab Sample ID:** | JA74647-8 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 5.0 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 95% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 90% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 91% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 88% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007462

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-18 | | |
| **Lab Sample ID:** | JA74647-9 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1C90331.D | 1 | 05/04/11 | NT | n/a | n/a | V1C3982 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 2.6 | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007463

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-18 | | |
| **Lab Sample ID:** | JA74647-9 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 1.3 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | 2.1 | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | 1.6 | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 3.7 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 95% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 89% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 90% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 88% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007464

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-32 | | |
| **Lab Sample ID:** | JA74647-10 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1C90513.D | 1 | 05/09/11 | NT | n/a | n/a | V1C3990 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | 5.1 | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007465

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-32 | | |
| **Lab Sample ID:** | JA74647-10 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | 5.2 | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 2.6 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | 2.0 | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 2.8 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 88% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 92% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 88% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 89% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007466

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-33 | | |
| **Lab Sample ID:** | JA74647-11 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1C90462.D | 1 | 05/07/11 | NT | n/a | n/a | V1C3988 |
| Run #2 | 1C90319.D | 5 | 05/04/11 | NT | n/a | n/a | V1C3982 |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | 5.0 ml |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 227 [a] | 5.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | 9.6 | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007467

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-33 | | |
| **Lab Sample ID:** | JA74647-11 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | 2.9 | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | 14.6 | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 51.4 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | 12.9 | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | 3.4 | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | 4.5 | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | 3.9 | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 8.4 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 89% | 94% | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 92% | 88% | 70-127% |
| 2037-26-5 | Toluene-D8 | 92% | 90% | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 85% | 86% | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007468

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-33 | | |
| **Lab Sample ID:** | JA74647-11 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-39 | | |
| **Lab Sample ID:** | JA74647-12 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1C90515.D | 1 | 05/09/11 | NT | n/a | n/a | V1C3990 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 90.3 | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | 17.2 | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | 6.8 | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007470

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-39 | | |
| **Lab Sample ID:** | JA74647-12 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | 2.2 | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | 18.7 | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 33.8 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | 35.5 | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | 2.9 | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | 5.8 | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | 2.2 | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 8.1 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 88% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 95% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 90% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 85% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007471

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-35 | | |
| **Lab Sample ID:** | JA74647-13 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1C90454.D | 1 | 05/07/11 | NT | n/a | n/a | V1C3988 |
| Run #2 | 1C90338.D | 10 | 05/04/11 | NT | n/a | n/a | V1C3983 |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | 5.0 ml |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 857 [a] | 10 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007472

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-35 | | |
| **Lab Sample ID:** | JA74647-13 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | 2.1 | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | 4.9 | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 117 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | 6.9 | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | 12.1 | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | 5.5 | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | 3.4 | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 8.9 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 89% | 93% | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 95% | 87% | 70-127% |
| 2037-26-5 | Toluene-D8 | 90% | 90% | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 85% | 84% | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007473

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-35 | | |
| **Lab Sample ID:** | JA74647-13 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis



**Client Sample ID:** MW-38
**Lab Sample ID:** JA74647-14 **Date Sampled:** 04/29/11
**Matrix:** AQ - Ground Water **Date Received:** 04/30/11
**Method:** SW846 8260B **Percent Solids:** n/a
**Project:** SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1C90340.D | 1 | 05/04/11 | NT | n/a | n/a | V1C3983 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007475

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-38 | | |
| **Lab Sample ID:** | JA74647-14 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 94% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 88% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 91% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 86% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007476

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | FIELD BLANK | | |
| **Lab Sample ID:** | JA74647-15 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Field Blank Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1C90317.D | 1 | 05/03/11 | NT | n/a | n/a | V1C3982 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**Purgeable Aromatics, MTBE**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 94% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 87% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 91% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 89% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007477

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | TRIP BLANK | | |
| **Lab Sample ID:** | JA74647-16 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Trip Blank Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1C90318.D | 1 | 05/04/11 | NT | n/a | n/a | V1C3982 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**Purgeable Aromatics, MTBE**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 94% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 88% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 92% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 89% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007478

## Misc. Forms

### Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

FEDEX # 8708 8445 7540

LAB (LOCATION)
☑ ACCUTEST (_____)
☐ CALSCIENCE (_____)
☐ TESTAMERICA (_____)
☐ Other (_____)
Lab Vendor # 1813640 (Accutest)

# Shell Oil Products Chain Of Custody Record

Please Check Appropriate Box:
☐ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA SD&OM ☑ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER _____

Print Bill To Contact Name: Douglas Jakim
PO #
INCIDENT # (ENV SERVICES): 9 7 0 9 4 9 8 1
SAP #: 1 0 0 6 2 3
☐ CHECK IF NO INCIDENT # APPLIES
DATE: 4/29/2011
PAGE: 1 of 2

SAMPLING COMPANY: Sovereign Consulting Inc.
LOG CODE:
ADDRESS: 290 Executive Drive, Suite 300, Cranberry Township, PA 16066
PROJECT CONTACT (Hardcopy or PDF Report to): John McCollums / Douglas Jakim
TELEPHONE: (724) 553-5084
FAX: (724) 553-5089
Bill To Contact E-MAIL: djakim@sovcon.com

SITE ADDRESS: Street and City: 25 Paidge Avenue, Brooklyn
State: NY
GLOBAL ID NO.:
EDF DELIVERABLE TO (Name, Company, Office Location):
PHONE NO.:
E-MAIL:
CONSULTANT PROJECT NO.: SE017.140
SAMPLER NAME(S) (Print): Justin King and Nick Zarcone
LAB USE ONLY: JA74647

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND
☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:
DELIVERABLES: ☑ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY) _____
TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
Report to WPA email list.
☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☐ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS
UNIT COST | NON-UNIT COST
EPA 8260 (See attached list)

FIELD NOTES:
TEMPERATURE ON RECEIPT C°: 2.3 °C
Container PID Readings or Laboratory Notes: 843

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | EPA 8260 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| -1 | MW-1 | 4/29/11 | 8:30 | GW | 3 | | | | | 3 | X |
| -2 | MW-44 | 4/29/11 | 8:45 | GW | 3 | | | | | 3 | X |
| -3 | MW-25 | 4/29/11 | 10:15 | GW | 3 | | | | | 3 | X |
| -4 | TW-2 | 4/29/11 | 10:45 | GW | 3 | | | | | 3 | X |
| -5 | MW-20 | 4/29/11 | 9:00 | GW | 3 | | | | | 3 | X |
| -6 | MW-15 | 4/29/11 | 9:15 | GW | 3 | | | | | 3 | X |
| -7 | MW-16 | 4/29/11 | 9:30 | GW | 3 | | | | | 3 | X |
| -8 | MW-17 | 4/29/11 | 9:45 | GW | 3 | | | | | 3 | X |
| -9 | MW-18 | 4/29/11 | 10:00 | GW | 3 | | | | | 3 | X |
| -10 | MW-32 | 4/29/11 | 10:30 | GW | 3 | | | | | 3 | X |

| Relinquished by: (Signature) | Received by: (Signature) | Date | Time |
|---|---|---|---|
| | FED EX | 4/29/11 | 2:00 pm |
| FEDEX 4/30/11 1130 | | | |
| Relinquished by: (Signature) | Received by: (Signature) | Date: 4/30/11 | Time: 1130 |
| Relinquished by: (Signature) | Received by: (Signature) | Date | Time |

05/2008 Revision

IB

BS

3.1 3

**JA74647: Chain of Custody**
**Page 1 of 3**

FEDEX # 8708 8445 7540

SW
FB
WTB

LAB (LOCATION)
☑ ACCUTEST (_____)
☐ CALSCIENCE (_____)
☐ TESTAMERICA (_____)
☐ Other (_____)
Lab Vendor # 1813640 (Accutest)

# Shell Oil Products Chain Of Custody Record

Please Check Appropriate Box:
☐ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA SD&OM ☑ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER _____

Print Bill To Contact Name: Douglas Jakim
PO #
INCIDENT # (ENV SERVICES): 9 7 0 9 4 9 8 1
SAP #: 1 0 0 6 2 3
☐ CHECK IF NO INCIDENT # APPLIES
DATE: 4/29/2011
PAGE: 2 of 2

SAMPLING COMPANY: Sovereign Consulting Inc.
LOG CODE:
SITE ADDRESS: Street and City: 25 Paidge Avenue, Brooklyn
State: NY
GLOBAL ID NO.:
ADDRESS: 290 Executive Drive, Suite 300, Cranberry Township, PA 16066
EDF DELIVERABLE TO (Name, Company, Office Location):
PHONE NO.:
E-MAIL:
CONSULTANT PROJECT NO.: 5E017.140
PROJECT CONTACT (Hardcopy or PDF Report to): John McCollums / Douglas Jakim
TELEPHONE: (724) 553-5084
FAX: (724) 553-5089
Bill To Contact E-MAIL: djakim@sovcon.com
SAMPLER NAME(S) (Print): Justin King and Nick Zarcone
LAB USE ONLY: JA74647

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

DELIVERABLES: ☑ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY) _____

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
Report to WPA email list.

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☐ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | UNIT COST: EPA 8260 (See attached list) | UNIT COST: 8260B + BTEX/MTBE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | MW-33 | 4/29/11 | 11:15 | GW | 3 | | | | | 3 | X | |
| 12 | MW-39 | 4/29/11 | 11:30 | GW | 3 | | | | | 3 | X | |
| 13 | MW-35 | 4/29/11 | 11:45 | GW | 3 | | | | | 3 | X | |
| 14 | MW-38 | 4/29/11 | 12:00 | GW | 3 | | | | | 3 | X | |
| 15 | FIELD BLANK | 4/29/11 | 9:38 | GW | 3 | | | | | 3 | | X |
| 16 | TRIP BLANK O | 4/25/11 | 5:00 | TB | 2 | | | | | 2 | | X |

FIELD NOTES:
TEMPERATURE ON RECEIPT C°: 2 3.2
Container PID Readings or Laboratory Notes

| Relinquished by: (Signature) | Received by: (Signature) | Date | Time |
|---|---|---|---|
| | FEDEX | 4/29/11 | 2:00 PM |
| FEDEX 4/30/11 1130 | | 4/30/11 | 1130 |
| | | Date | Time |

05/2006 Revision

WTB FILED 4/25/11 @ 0800 (AS) 4/30/11

(AS)

**JA74647: Chain of Custody**
**Page 2 of 3**



Shell/Motiva 0007481

3.1
3

ACCUTEST LABORATORIES

# Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA74647 Client: Immediate Client Services Action Required: No

Date / Time Received: 4/30/2011 Delivery Method: Client Service Action Required at Login: No

Project: No. Coolers: 1 Airbill #'s:

| Cooler Security | Y | or | N | | Y | or | N |
|---|---|---|---|---|---|---|---|
| 1. Custody Seals Present: | ☑ | | ☐ | 3. COC Present: | ☑ | | ☐ |
| 2. Custody Seals Intact: | ☑ | | ☐ | 4. Smpl Dates/Time OK | ☑ | | ☐ |

| Cooler Temperature | Y | or | N |
|---|---|---|---|
| 1. Temp criteria achieved: | ☑ | | ☐ |
| 2. Cooler temp verification: | Infared gun | | |
| 3. Cooler media: | Ice (bag) | | |

| Quality Control Preservatio | Y | or | N | N/A |
|---|---|---|---|---|
| 1. Trip Blank present / cooler: | ☑ | | ☐ | ☐ |
| 2. Trip Blank listed on COC: | ☑ | | ☐ | ☐ |
| 3. Samples preserved properly: | ☑ | | ☐ | |
| 4. VOCs headspace free: | ☑ | | ☐ | ☐ |

| Sample Integrity - Documentation | Y | or | N |
|---|---|---|---|
| 1. Sample labels present on bottles: | ☑ | | ☐ |
| 2. Container labeling complete: | ☑ | | ☐ |
| 3. Sample container label / COC agree: | ☑ | | ☐ |

| Sample Integrity - Condition | Y | or | N |
|---|---|---|---|
| 1. Sample recvd within HT: | ☑ | | ☐ |
| 2. All containers accounted for: | ☑ | | ☐ |
| 3. Condition of sample: | Intact | | |

| Sample Integrity - Instructions | Y | or | N | N/A |
|---|---|---|---|---|
| 1. Analysis requested is clear: | ☑ | | ☐ | |
| 2. Bottles received for unspecified tests | ☐ | | ☑ | |
| 3. Sufficient volume recvd for analysis: | ☑ | | ☐ | |
| 4. Compositing instructions clear: | ☐ | | ☐ | ☑ |
| 5. Filtering instructions clear: | ☐ | | ☐ | ☑ |

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com



**JA74647: Chain of Custody**
**Page 3 of 3**



Shell/Motiva 0007482

# DOCUMENT INFO

15

DocID: 00000441

Filename: 58603-2011-06-30-OTH-01 (Quarterly Site Summary - Shell).pdf

# SHELL OIL PRODUCTS US
# QUARTERLY ENVIRONMENTAL SITE SUMMARY FOR MOTIVA ENTERPRISES LLC HSE STANDARD 325
# BROOKLYN TERMINAL
# 2nd QUARTER 2011

**EXPENSE BUDGET INFORMATION**

Current Year Budget: $34,000
Expenses Incurred: $10,528
5-Year Forecast: 2011 - $34,000 2012- $15,000
Monthly well gauging / product recovery via hand bailing.
Annual groundwater monitoring of all wells.

| Question | Response (Y, N) | Explanation |
|---|---|---|
| **Does our plume migrate off-site?** | **Y** | **Low levels of MTBE and Benzene are detected above the standard at site perimeter wells. Updated groundwater elevation contours indicate groundwater is migrating off-site.** |
| **Are there down gradient receptors?** | **Y** | **Surface water (Newtown Creek) immediately adjacent to terminal.** |
| **Does a Third Party plume encroach on our property?** | **N** | |
| **Is our Plume commingled with one or more other plumes?** | **N** | |
| **Plume delineated to regulatory standards on-site?** | **Y** | **Results above standards for Benzene and MTBE near property line. However, regulators have not required any additional delineation.** |
| **Plume delineated to regulatory standards off-site?** | **NA** | **No off-site wells** |

**SITE DRIVERS:**
Liquid Phase Hydrocarbons (LPH or product) was detected in interior site monitoring wells during this period.

**CURRENT ACTIVITIES:**
1. Monthly well gauging / product recovery via hand bailing.
2. Annual groundwater monitoring of wells.
3. Quarterly groundwater sampling on northern perimeter monitoring wells.

**PROJECTED WORK:**
1. Perform monthly well gauging and product recovery.
2. Evaluate LNAPL plume behavior through the LNAPL Source Zone Depletion model

**OTHER RECOMMENDATIONS/COMMENTS:**
Repair monitoring wells as needed to maintain them as valid data points.

**PATH TO CLOSURE:**
Continue product recovery via hand bailing. Remove LPH to maximum extent practical. Following mitigation of LPH, conduct a risk assessment and evaluate recoverability of LPH.



Confidential Business Information 

**SITE LOCATION INFORMATION**
Incident No.: 97094981
Address: 25 Paidge Ave. Brooklyn, NY

**RECENT ONSITE GROUNDWATER CONCENTRATIONS (Include last four sampling events. List each perimeter well and a representative sample of source wells)**

| Well Number | Perimeter or Source | Date | Benzene (ppb) | BTEX (ppb) | MTBE (ppb) |
|---|---|---|---|---|---|
| 1 | Perimeter | 05/12/08 | <1.0 | <4.0 | <1.0 |
| | | 04/29/09 | <1.0 | <4.0 | <1.0 |
| | | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | 4/29/11 | <1.0 | <1.0 | <1.0 |
| | | | | | |
| 3 | Perimeter | 05/12/08 | <1.0 | <4.0 | <1.0 |
| | | 04/29/09 | <1.0 | <4.0 | <1.0 |
| | | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | 04/28/11 | <1.0 | <1.0 | <1.0 |
| | | | | | |
| 6 | Perimeter | 05/12/08 | <1.0 | <4.0 | <1.0 |
| | | 04/29/09 | <1.0 | <4.0 | <1.0 |
| | | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | 04/28/11 | <1.0 | <1.0 | <1.0 |
| | | | | | |
| 7 | Perimeter | | Well Abandoned during bulkhead construction | | |
| | | | | | |
| 7R | Perimeter | 07/27/10 | <5.0 | <5.0 | **25.6** |
| | | 10/08/10 | <5.0 | <5.0 | **36.9** |
| | | 01/25/11 | **2.4** | 2.4 | **39.2** |
| | | 04/28/11 | **31.3** | 31.3 | **38.0** |
| | | | | | |
| 8 | Perimeter | 07/27/10 | **24.3** | 24.3 | **39.5** |
| | | 10/08/10 | <5.0 | <5.0 | **21.8** |
| | | 01/25/11 | <1.0 | <1.0 | **22.5** |
| | | 04/28/11 | **87.6** | 87.6 | **31.6** |
| | | | | | |
| 9 | Perimeter | 07/27/10 | <5.0 | <5.0 | <5.0 |
| | | 10/08/10 | <5.0 | <5.0 | 7.3 |
| | | 01/25/11 | <1.0 | <1.0 | 1.6 |
| | | 04/28/11 | **11.5** | 11.5 | 7.6 |
| | | | | | |
| 13 | Perimeter | 05/12/08 | <1.0 | <4.0 | <1.0 |
| | | 04/29/09 | <1.0 | <4.0 | <1.0 |
| | | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | 04/28/11 | <1.0 | <1.0 | <1.0 |
| | | | | | |
| 14 | Perimeter | 05/12/08 | <1.0 | <4.0 | <1.0 |
| | | 04/29/09 | <1.0 | <4.0 | <1.0 |
| | | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | 04/28/11 | <1.0 | <1.0 | <1.0 |
| | | | | | |
| 21 | Perimeter | 05/12/08 | Well Abandoned during bulkhead construction | | |
| | | | | | |
| 21R | Perimeter | 07/27/10 | **160** | 304 | **14.2** |
| | | 10/08/10 | **239** | 455 | **28.4** |
| | | 01/25/11 | **292** | 551 | **24.6** |
| | | 04/28/11 | **217** | 431.1 | 7.7 |
| | | | | | |
| 22 | Perimeter | 05/12/08 | Well Abandoned during bulkhead construction | | |
| | | | | | |



Confidential Business Information Shell/Motiva 0007485

**SITE LOCATION INFORMATION**
Incident No.: 97094981
Address: 25 Paidge Ave. Brooklyn, NY

| Well Number | Perimeter or Source | Date | Benzene (ppb) | BTEX (ppb) | MTBE (ppb) |
|---|---|---|---|---|---|
| **22R** | **Perimeter** | 07/27/10 | **337** | 2,525 | **31.4** |
| | | 10/08/10 | **193** | 935 | **25.2** |
| | | 01/25/11 | **483** | 2,045 | **57.2** |
| | | 04/28/11 | **792** | 2,247 | **32.2** |
| | | | | | |
| **23** | **Perimeter** | 05/12/08 | <1.0 | <4.0 | 2.70 |
| | | 04/29/09 | <1.0 | <4.0 | 2.80 |
| | | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | 04/28/11 | <1.0 | 2.3 | 1.1 |
| | | | | | |
| **24** | **Perimeter** | 05/12/08 | **144** | 265 | **621** |
| | | 04/29/09 | **11.3** | 17.3 | **37.1** |
| | | 04/15/10 | <5.0 | <5.0 | 6.63 |
| | | 04/28/11 | **9.5** | 12.2 | **37.5** |
| | | | | | |
| **27** | **Perimeter** | 05/12/08 | <1.0 | <4.0 | <1.0 |
| | | 04/29/09 | <1.0 | <4.0 | <1.0 |
| | | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | 04/28/11 | <1.0 | <1.0 | <1.0 |
| | | | | | |
| **28** | **Perimeter** | 05/12/08 | <1.0 | 2.40 | 6.40 |
| | | 04/29/09 | <1.0 | <4.0 | 3.90 |
| | | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | 04/28/11 | <1.0 | <1.0 | 2.1 |
| | | | | | |
| **42** | **Perimeter** | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | 04/28/11 | <1.0 | <1.0 | <1.0 |
| | | | | | |
| **43** | **Perimeter** | 04/15/10 | <5.0 | <5.0 | **17.5** |
| | | 04/28/11 | <1.0 | <1.0 | 3.0 |
| | | | | | |
| **44** | **Perimeter** | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | 04/28/11 | <1.0 | <1.0 | <1.0 |
| | | | | | |
| **19** | **Source** | 05/12/08 | **11.4** | 13 | 4.20 |
| | | 04/29/09 | **7.5** | 11.9 | 7.70 |
| | | 04/15/10 | **11.2** | 62.4 | 5.59 |
| | | 04/28/11 | Well destroyed during canopy reconstruction | | |
| | | | | | |
| **18** | **Source** | 05/12/08 | **49.8** | 83.2 | 3.7 |
| | | 04/29/09 | **76.9** | 123 | 6.6 |
| | | 04/15/10 | **36.6** | 71.8 | <5.0 |
| | | 04/29/11 | **2.6** | 6.3 | 1.3 |
| | | | | | |
| **15** | **Source** | 05/12/08 | **264** | 381 | **40.9** |
| | | 04/29/09 | **165** | 320 | **45.9** |
| | | 04/15/10 | **839** | 9,266 | **38.8** |
| | | 04/28/11 | **183** | 760.7 | **13.4** |
| **Regulatory Standards** | | | **0.7** | **NA** | **10** |



Confidential Business Information Shell/Motiva 0007486

SITE LOCATION INFORMATION
Incident No.: 97094981
Address: 25 Paidge Ave. Brooklyn, NY

**RECENT OFFSITE GROUNDWATER CONCENTRATIONS (Include last four sampling events. List representative sample of wells)**

| Well Number | Date | Benzene (ppb) | BTEX (ppb) | MTBE (ppb) |
|---|---|---|---|---|
| Not Applicable | | | | |

**FREE PRODUCT (List the last four gauging events)**

| Well | Offsite or Onsite | Thickness | Date |
|---|---|---|---|
| MW-2 | Onsite | 0.08 | 03/26/11 |
| | | 0.03 | 04/27/11 |
| | | 0.06 | 05/09/11 |
| | | 0.00 | 06/06/11 |
| | | | |
| MW-4 | Onsite | 0.03 | 03/26/11 |
| | | 0.03 | 04/27/11 |
| | | 0.07 | 05/09/11 |
| | | 0.15 | 06/06/11 |
| | | | |
| MW-26 | Onsite | NM | 03/26/11 |
| | | 0.01 | 04/27/11 |
| | | 0.04 | 05/09/11 |
| | | 0.02 | 06/06/11 |
| | | | |
| MW-31 | Onsite | 0.33 | 03/26/11 |
| | | 0.25 | 04/27/11 |
| | | 0.24 | 05/09/11 |
| | | 0.11 | 06/06/11 |
| | | | |
| RW-34 | Onsite | 0.02 | 03/26/11 |
| | | 0.04 | 04/27/11 |
| | | 0.05 | 05/09/11 |
| | | 0.04 | 06/06/11 |
| | | | |
| RW-36 | Onsite | 0.09 | 03/26/11 |
| | | 0.12 | 04/27/11 |
| | | 0.18 | 05/09/11 |
| | | 0.26 | 06/06/11 |
| | | | |
| RW-37 | Onsite | 0.02 | 03/26/11 |
| | | 0.01 | 04/27/11 |
| | | 0.01 | 05/09/11 |
| | | 0.00 | 06/06/11 |
| | | | |
| RW-40 | Onsite | 0.97 | 03/26/11 |
| | | 1.97 | 04/27/11 |
| | | 1.05 | 05/09/11 |
| | | 2.30 | 06/06/11 |



Confidential Business Information Shell/Motiva 0007487

**SITE LOCATION INFORMATION**
Incident No.: 97094981
Address: 25 Paidge Ave. Brooklyn, NY

| Well | Offsite or Onsite | Thickness | Date |
|---|---|---|---|
| **MW-41** | **Onsite** | 0.04 | 03/26/11 |
| | | 0.08 | 04/27/11 |
| | | 0.06 | 05/09/11 |
| | | 0.06 | 06/06/11 |
| | | | |
| **TW-01** | **Onsite** | NM | 03/26/11 |
| | | NM | 04/27/11 |
| | | NM | 05/09/11 |
| | | NM | 06/06/11 |
| | | | |
| **TW-05** | **Onsite** | 0.03 | 03/26/11 |
| | | 0.07 | 04/27/11 |
| | | 0.06 | 05/09/11 |
| | | 0.00 | 06/06/11 |
| | | | |

Notes: NM: Not measured
NS: Not sampled
ND: Not detected

**CHEMICALS OF CONCERN**: Benzene and MTBE

**SITE HISTORY**
Chronological List of the Major Events
(date-event)

1. 1999 began operation of LNAPL recovery system.
2. Annual groundwater monitoring performed yearly between June 2003 and June 2009.
3. Wells MW-21 and MW-22 were abandoned in October 2008 as part of the bulkhead construction project. During the construction, MW-7 has been buried and is not accessible.
4. MW-7, MW-21, and MW-22 replaced by MW-7R, MW-21R and MW-22R in February 2010.
5. Monitoring wells MW-42, MW-43, and MW-44 were installed in February 2010.
6. 550-gallon AST was removed in February 2010.
7. Annual groundwater sampling last conducted in April 2011.
8. Perimeter well quarterly groundwater sampling conducted in October 2010, January 2011 and April 2011.

**REGULATORY COMPLIANCE**

1. Major Onshore Storage Facility License -Annual groundwater sampling.
2. UST closure and land farming soil remediation 1990.
3. Investigative soil boring program November 1995.
4. SVE/Pump/SPG feasibility testing June 1996.
5. Product recovery system installation October 1999.
6. Product recovery system operation from 1999 through 2007.
7. NYDEC letter dated January 3, 2008 approved deactivation of the LPH recovery system and the implementation of monthly hand-bailing as the method of product recovery.



Confidential Business Information Shell/Motiva 0007488

Confidential Business Information

Shell/Motiva 0007489

**Perimeter Well Groundwater Monitoring Summary**
**Motiva Enterprises, LLC- Brooklyn, NY Terminal**
**Updated Through 2nd Quarter 2011**

| Perimeter MW ID | Date | Depth of Well (ft) | Depth to Product (ft) | Depth to Water | Product Thickness | New Product* | Product Increase >50% | Benzene (ppb) | | | MTBE (ppb) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Background or Action Level | Actual | Action Level Triggered | Background or Action Level | Actual | Action Level Triggered |
| 1 | 7/2/10 | 13.75 | | 2.49 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 1 | 8/13/10 | 13.75 | | 3.70 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 1 | 9/1/10 | 13.75 | | 3.32 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 1 | 10/8/10 | 13.75 | | 3.26 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 1 | 11/23/10 | 13.75 | | 3.53 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 1 | 1/3/11 | 13.75 | | 3.38 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 1 | 1/25/11 | 13.75 | | 3.34 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 1 | 2/4/11 | 13.75 | | NG | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 1 | 3/26/11 | 13.75 | | 2.82 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 1 | 4/27/11 | 13.75 | | 3.01 | | | | 0.70 | <1.00 | no | 10.00 | <1.00 | no |
| 1 | 5/9/11 | 13.75 | | 3.25 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 1 | 6/6/11 | 13.75 | | 3.25 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| | | | | | | | | | | | | | |
| 3 | 7/2/10 | 13.75 | | 3.08 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 3 | 8/13/10 | 13.75 | | 3.36 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 3 | 9/1/10 | 13.75 | | 3.01 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 3 | 10/8/10 | 13.75 | | 2.78 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 3 | 11/23/10 | 13.75 | | 3.16 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 3 | 1/3/11 | 13.75 | | NG | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 3 | 1/25/11 | 13.75 | | NG | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 3 | 2/4/11 | 13.75 | | NG | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 3 | 3/26/11 | 13.75 | | 2.22 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 3 | 4/27/11 | 13.75 | | 2.39 | | | | 0.70 | <1.00 | no | 10.00 | <1.00 | no |
| 3 | 5/9/11 | 13.75 | | 2.72 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 3 | 6/6/11 | 13.75 | | 2.79 | | | | 0.70 | NS | NS | 10.00 | NS | NS |

Confidential Business Information

**SITE LOCATION INFORMATION**
Incident No.: 97094981
Address: 25 Paidge Ave. Brooklyn, NY

| Perimeter MW ID | Date | Depth of Well (ft) | Depth to Product (ft) | Depth to Water | Product Thickness | New Product* | Product Increase >50% | Benzene (ppb) | | | MTBE(ppb) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Background or Action Level | Actual | Action Level Triggered | Background or Action Level | Actual | Action Level Triggered |
| 6 | 8/13/10 | 12.75 | | 3.87 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 6 | 9/1/10 | 12.75 | | 5.28 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 6 | 10/8/10 | 12.75 | | 3.30 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 6 | 11/23/10 | 12.75 | | 3.33 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 6 | 1/3/11 | 12.75 | | 3.25 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 6 | 1/25/11 | 12.75 | | 6.21 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 6 | 2/4/11 | 12.75 | | NG | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 6 | 3/26/11 | 12.75 | | 4.25 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 6 | 4/27/11 | 12.75 | | 3.78 | | | | 0.70 | <1.00 | no | 10.00 | <1.00 | no |
| 6 | 5/9/11 | 12.75 | | 5.04 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 6 | 6/6/11 | 12.75 | | 5.25 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| | | | | | | | | | | | | | |
| 7R | 7/27/10 | 12.34 | | 5.97 | | | | 16.90 | <5.0 | no | 31.50 | 25.6 | no |
| 7R | 8/13/10 | 12.34 | | 4.04 | | | | 8.45 | NS | NS | 28.55 | NS | NS |
| 7R | 9/1/10 | 12.34 | | 5.78 | | | | 8.45 | NS | NS | 28.55 | NS | NS |
| 7R | 10/8/10 | 12.34 | | 2.35 | | | | 8.45 | <5.0 | no | 28.55 | 36.9 | no |
| 7R | 11/23/10 | 12.34 | | 3.94 | | | | 5.63 | NS | NS | 31.33 | NS | NS |
| 7R | 1/3/11 | 12.34 | | 4.02 | | | | 5.63 | NS | NS | 31.33 | NS | NS |
| 7R | 1/25/11 | 12.34 | | 6.62 | | | | 5.63 | 2.4 | no | 31.33 | 39.2 | no |
| 7R | 2/4/11 | 12.34 | | NG | | | | 4.83 | NS | NS | 33.30 | NS | NS |
| 7R | 3/26/11 | 12.34 | | 5.38 | | | | 4.83 | NS | NS | 33.30 | NS | NS |
| 7R | 4/27/11 | 12.34 | | 4.48 | | | | 4.83 | 31.30 | yes | 33.30 | 38.00 | no |
| 7R | 5/9/11 | 12.34 | | 5.77 | | | | 10.12 | NS | NS | 34.24 | NS | NS |
| 7R | 6/6/11 | 12.34 | | 5.99 | | | | 10.12 | NS | NS | 34.24 | NS | NS |



Shell/Motiva 0007490

Confidential Business Information

**SITE LOCATION INFORMATION**
Incident No.: 97094981
Address: 25 Paidge Ave. Brooklyn, NY

| Perimeter MW ID | Date | Depth of Well (ft) | Depth to Product (ft) | Depth to Water | Product Thickness | New Product* | Product Increase >50% | Benzene (ppb) | | | MTBE(ppb) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Background or Action Level | Actual | Action Level Triggered | Background or Action Level | Actual | Action Level Triggered |
| 8 | 8/13/10 | 8.11 | | 4.82 | | | | 17.90 | NS | NS | 22.48 | NS | NS |
| 8 | 9/1/10 | 8.11 | | 6.44 | | | | 17.90 | NS | NS | 22.48 | NS | NS |
| 8 | 10/8/10 | 8.11 | | 3.03 | | | | 17.90 | <5.0 | no | 22.48 | 21.8 | no |
| 8 | 11/23/10 | 8.11 | | 4.75 | | | | 14.32 | NS | NS | 22.34 | NS | NS |
| 8 | 1/3/11 | 8.11 | | 4.89 | | | | 14.32 | NS | NS | 22.34 | NS | NS |
| 8 | 1/25/11 | 8.11 | | 6.73 | | | | 14.32 | <1.0 | no | 22.34 | 22.50 | no |
| 8 | 2/4/11 | 8.11 | | NG | | | | 11.93 | NS | NS | 22.37 | NS | NS |
| 8 | 3/26/11 | 8.11 | | 5.81 | | | | 11.93 | NS | NS | 22.37 | NS | NS |
| 8 | 4/27/11 | 8.11 | | 5.01 | | | | 11.93 | 87.60 | yes | 22.37 | 31.60 | no |
| 8 | 5/9/11 | 8.11 | | 6.32 | | | | 22.74 | NS | NS | 23.69 | NS | NS |
| 8 | 6/6/11 | 8.11 | | 6.56 | | | | 22.74 | NS | NS | 23.69 | NS | NS |
| | | | | | | | | | | | | | |
| 9 | 7/27/10 | 7.83 | | 6.59 | | | | 3.13 | <5.0 | no | 10.00 | <5.0 | no |
| 9 | 8/13/10 | 7.83 | | 4.79 | | | | 3.13 | NS | NS | 10.00 | NS | NS |
| 9 | 9/1/10 | 7.83 | | 6.41 | | | | 3.13 | NS | NS | 10.00 | NS | NS |
| 9 | 10/8/10 | 7.83 | | 2.94 | | | | 3.13 | <5.0 | no | 10.00 | 7.30 | no |
| 9 | 11/23/10 | 7.83 | | 4.72 | | | | 2.50 | NS | NS | 10.00 | NS | NS |
| 9 | 1/3/11 | 7.83 | | 4.83 | | | | 2.50 | NS | NS | 10.00 | NS | NS |
| 9 | 1/25/11 | 7.83 | | 6.68 | | | | 2.50 | <1.0 | no | 10.00 | 1.60 | no |
| 9 | 2/4/11 | 7.83 | | NG | | | | 2.08 | NS | NS | 10.00 | NS | NS |
| 9 | 3/26/11 | 7.83 | | 5.78 | | | | 2.08 | NS | NS | 10.00 | NS | NS |
| 9 | 4/27/11 | 7.83 | | 4.95 | | | | 2.08 | 11.50 | yes | 10.00 | 7.60 | no |
| 9 | 5/9/11 | 7.83 | | 6.26 | | | | 3.43 | NS | NS | 10.00 | NS | NS |
| 9 | 6/6/11 | 7.83 | | 6.46 | | | | 3.43 | NS | NS | 10.00 | NS | NS |



Shell/Motiva 0007491

Confidential Business Information

**SITE LOCATION INFORMATION**
Incident No.: 97094981
Address: 25 Paidge Ave. Brooklyn, NY

| Perimeter MW ID | Date | Depth of Well (ft) | Depth to Product (ft) | Depth to Water | Product Thickness | New Product* | Product Increase >50% | Benzene (ppb) | | | MTBE(ppb) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Background or Action Level | Actual | Action Level Triggered | Background or Action Level | Actual | Action Level Triggered |
| 13 | 8/13/10 | 14.12 | | 7.17 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 13 | 9/1/10 | 14.12 | | 7.28 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 13 | 10/8/10 | 14.12 | | 7.21 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 13 | 11/23/10 | 14.12 | | 7.38 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 13 | 1/3/11 | 14.12 | | 7.09 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 13 | 1/25/11 | 14.12 | | 7.23 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 13 | 2/4/11 | 14.12 | | 7.14 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 13 | 3/26/11 | 14.12 | | 7.04 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 13 | 4/27/11 | 14.12 | | 7.09 | | | | 0.70 | <1.00 | no | 10.00 | <1.00 | no |
| 13 | 5/9/11 | 14.12 | | 7.28 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 13 | 6/6/11 | 14.12 | | 7.32 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| | | | | | | | | | | | | | |
| 14 | 7/2/10 | 14.13 | | 6.82 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 14 | 8/13/10 | 14.13 | | 6.86 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 14 | 9/1/10 | 14.13 | | 6.22 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 14 | 10/8/10 | 14.13 | | 6.05 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 14 | 11/23/10 | 14.13 | | 6.63 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 14 | 1/3/11 | 14.13 | | 6.06 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 14 | 1/25/11 | 14.13 | | 6.24 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 14 | 2/4/11 | 14.13 | | 6.03 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 14 | 3/26/11 | 14.13 | | 5.86 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 14 | 4/27/11 | 14.13 | | 5.92 | | | | 0.70 | <1.00 | no | 10.00 | <1.00 | no |
| 14 | 5/9/11 | 14.13 | | 6.49 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 14 | 6/6/11 | 14.13 | | 6.71 | | | | 0.70 | NS | NS | 10.00 | NS | NS |



Shell/Motiva 0007492

Confidential Business Information

**SITE LOCATION INFORMATION**
Incident No.: 97094981
Address: 25 Paidge Ave. Brooklyn, NY

| Perimeter MW ID | Date | Depth of Well (ft) | Depth to Product (ft) | Depth to Water | Product Thickness | New Product* | Product Increase >50% | Benzene (ppb) | | | MTBE(ppb) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Background or Action Level | Actual | Action Level Triggered | Background or Action Level | Actual | Action Level Triggered |
| 21R | 8/13/10 | 12.13 | | 3.70 | | | | 149.50 | NS | NS | 10.00 | NS | NS |
| 21R | 9/1/10 | 12.13 | | 3.93 | | | | 149.50 | NS | NS | 10.00 | NS | NS |
| 21R | 10/8/10 | 12.13 | | 3.54 | | | | 149.50 | 239 | yes | 10.00 | 28.4 | yes |
| 21R | 11/23/10 | 12.13 | | 4.02 | | | | 179.33 | NS | NS | 14.20 | NS | NS |
| 21R | 1/3/11 | 12.13 | | 3.57 | | | | 179.33 | NS | NS | 14.20 | NS | NS |
| 21R | 1/25/11 | 12.13 | | 3.97 | | | | 179.33 | 292 | yes | 14.20 | 24.6 | yes |
| 21R | 2/4/11 | 12.13 | | 3.73 | | | | 208.00 | NS | NS | 16.80 | NS | NS |
| 21R | 3/26/11 | 12.13 | | 3.66 | | | | 208.00 | NS | NS | 16.80 | NS | NS |
| 21R | 4/27/11 | 12.13 | | 3.81 | | | | 208.00 | 217 | no | 16.80 | 7.70 | no |
| 21R | 5/9/11 | 12.13 | | 3.97 | | | | 209.40 | NS | NS | 14.98 | NS | NS |
| 21R | 6/6/11 | 12.13 | | 4.00 | | | | 209.40 | NS | NS | 14.98 | NS | NS |
| | | | | | | | | | | | | | |
| 22R | 7/27/10 | 8.55 | | 3.94 | | | | 386.00 | 337 | no | 42.80 | 31.4 | no |
| 22R | 8/13/10 | 8.55 | | 3.50 | | | | 361.50 | NS | NS | 37.10 | NS | NS |
| 22R | 9/1/10 | 8.55 | | 3.98 | | | | 361.50 | NS | NS | 37.10 | NS | NS |
| 22R | 10/8/10 | 8.55 | | 3.11 | | | | 361.50 | 193 | no | 37.10 | 25.2 | no |
| 22R | 11/23/10 | 8.55 | | 3.88 | | | | 305.33 | NS | NS | 33.13 | NS | NS |
| 22R | 1/3/11 | 8.55 | | 3.44 | | | | 305.33 | NS | NS | 33.13 | NS | NS |
| 22R | 1/25/11 | 8.55 | | 4.00 | | | | 305.33 | 483 | yes | 33.13 | 57.2 | yes |
| 22R | 2/4/11 | 8.55 | | 3.69 | | | | 349.75 | NS | NS | 39.15 | NS | NS |
| 22R | 3/26/11 | 8.55 | | 3.72 | | | | 349.75 | NS | NS | 39.15 | NS | NS |
| 22R | 4/27/11 | 8.55 | | 3.82 | | | | 349.75 | 792 | yes | 39.15 | 32.20 | no |
| 22R | 5/9/11 | 8.55 | | 3.96 | | | | 438.20 | NS | NS | 37.76 | NS | NS |
| 22R | 6/6/11 | 8.55 | | 3.98 | | | | 438.20 | NS | NS | 37.76 | NS | NS |



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Confidential Business Information

**SITE LOCATION INFORMATION**
Incident No.: 97094981
Address: 25 Paidge Ave. Brooklyn, NY

| Perimeter MW ID | Date | Depth of Well (ft) | Depth to Product (ft) | Depth to Water | Product Thickness | New Product* | Product Increase >50% | Benzene (ppb) | | | MTBE(ppb) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Background or Action Level | Actual | Action Level Triggered | Background or Action Level | Actual | Action Level Triggered |
| 23 | 8/13/10 | 14.75 | | 4.50 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 23 | 9/1/10 | 14.75 | | 3.84 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 23 | 10/8/10 | 14.75 | | 3.69 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 23 | 11/23/10 | 14.75 | | 4.27 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 23 | 1/3/11 | 14.75 | | 3.91 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 23 | 1/25/11 | 14.75 | | 3.82 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 23 | 2/4/11 | 14.75 | | 3.59 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 23 | 3/26/11 | 14.75 | | 3.46 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 23 | 4/27/11 | 14.75 | | 3.57 | | | | 0.70 | <1.00 | no | 10.00 | 1.10 | no |
| 23 | 5/9/11 | 14.75 | | 4.01 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 23 | 6/6/11 | 14.75 | | 4.16 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| | | | | | | | | | | | | | |
| 24 | 7/2/10 | 14.75 | | 4.18 | | | | 51.77 | NS | NS | 221.58 | NS | NS |
| 24 | 8/13/10 | 14.75 | | 4.38 | | | | 51.77 | NS | NS | 221.58 | NS | NS |
| 24 | 9/1/10 | 14.75 | | 3.82 | | | | 51.77 | NS | NS | 221.58 | NS | NS |
| 24 | 10/8/10 | 14.75 | | 3.65 | | | | 51.77 | NS | NS | 221.58 | NS | NS |
| 24 | 11/23/10 | 14.75 | | 4.19 | | | | 51.77 | NS | NS | 221.58 | NS | NS |
| 24 | 1/3/11 | 14.75 | | 3.86 | | | | 51.77 | NS | NS | 221.58 | NS | NS |
| 24 | 1/25/11 | 14.75 | | 3.75 | | | | 51.77 | NS | NS | 221.58 | NS | NS |
| 24 | 2/4/11 | 14.75 | | 3.54 | | | | 51.77 | NS | NS | 221.58 | NS | NS |
| 24 | 3/26/11 | 14.75 | | 3.36 | | | | 51.77 | NS | NS | 221.58 | NS | NS |
| 24 | 4/27/11 | 14.75 | | 3.45 | | | | 51.77 | 9.50 | no | 221.58 | 37.50 | no |
| 24 | 5/9/11 | 14.75 | | 3.86 | | | | 41.20 | NS | NS | 175.56 | NS | NS |
| 24 | 6/6/11 | 14.75 | | 4.00 | | | | 41.20 | NS | NS | 175.56 | NS | NS |



Shell/Motiva 0007494

Confidential Business Information

**SITE LOCATION INFORMATION**
Incident No.: 97094981
Address: 25 Paidge Ave. Brooklyn, NY

| Perimeter MW ID | Date | Depth of Well (ft) | Depth to Product (ft) | Depth to Water | Product Thickness | New Product* | Product Increase >50% | Benzene (ppb) | | | MTBE(ppb) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Background or Action Level | Actual | Action Level Triggered | Background or Action Level | Actual | Action Level Triggered |
| 28 | 8/13/10 | 10.93 | | 2.11 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 28 | 9/1/10 | 10.93 | | 1.79 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 28 | 10/8/10 | 10.93 | | 1.67 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 28 | 11/23/10 | 10.93 | | 1.95 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 28 | 1/3/11 | 10.93 | | 1.93 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 28 | 1/25/11 | 10.93 | | 1.89 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 28 | 2/4/11 | 10.93 | | NG | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 28 | 3/26/11 | 10.93 | | 1.14 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 28 | 4/27/11 | 10.93 | | 1.34 | | | | 0.70 | <1.00 | no | 10.00 | 2.10 | no |
| 28 | 5/9/11 | 10.93 | | 1.57 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 28 | 6/6/11 | 10.93 | | 1.66 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| | | | | | | | | | | | | | |
| 42 | 7/2/10 | 12.53 | | 4.03 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 42 | 8/13/10 | 12.53 | | 4.23 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 42 | 9/1/10 | 12.53 | | 3.69 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 42 | 10/8/10 | 12.53 | | 3.45 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 42 | 11/23/10 | 12.53 | | 4.03 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 42 | 1/3/11 | 12.53 | | 3.71 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 42 | 1/25/11 | 12.53 | | 3.54 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 42 | 2/4/11 | 12.53 | | NG | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 42 | 3/26/11 | 12.53 | | 3.07 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 42 | 4/27/11 | 12.53 | | 3.19 | | | | 0.70 | <1.00 | no | 10.00 | <1.00 | no |
| 42 | 5/9/11 | 12.53 | | 3.67 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 42 | 6/6/11 | 12.53 | | 3.85 | | | | 0.70 | NS | NS | 10.00 | NS | NS |



Shell/Motiva 0007495

Confidential Business Information

**SITE LOCATION INFORMATION**
Incident No.: 97094981
Address: 25 Paidge Ave. Brooklyn, NY

| Perimeter MW ID | Date | Depth of Well (ft) | Depth to Product (ft) | Depth to Water | Product Thickness | New Product* | Product Increase >50% | Benzene (ppb) | | | MTBE(ppb) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Background or Action Level | Actual | Action Level Triggered | Background or Action Level | Actual | Action Level Triggered |
| 43 | 8/13/10 | 12.61 | | 4.11 | | | | 0.70 | NS | NS | 17.50 | NS | NS |
| 43 | 9/1/10 | 12.61 | | 3.56 | | | | 0.70 | NS | NS | 17.50 | NS | NS |
| 43 | 10/8/10 | 12.61 | | 3.38 | | | | 0.70 | NS | NS | 17.50 | NS | NS |
| 43 | 11/23/10 | 12.61 | | 3.94 | | | | 0.70 | NS | NS | 17.50 | NS | NS |
| 43 | 1/3/11 | 12.61 | | 3.63 | | | | 0.70 | NS | NS | 17.50 | NS | NS |
| 43 | 1/25/11 | 12.61 | | 3.48 | | | | 0.70 | NS | NS | 17.50 | NS | NS |
| 43 | 2/4/11 | 12.61 | | 3.28 | | | | 0.70 | NS | NS | 17.50 | NS | NS |
| 43 | 3/26/11 | 12.61 | | 3.10 | | | | 0.70 | NS | NS | 17.50 | NS | NS |
| 43 | 4/27/11 | 12.61 | | 3.22 | | | | 0.70 | <1.00 | no | 17.50 | 3.00 | no |
| 43 | 5/9/11 | 12.61 | | 3.59 | | | | 0.70 | NS | NS | 10.25 | NS | NS |
| 43 | 6/6/11 | 12.61 | | 3.73 | | | | 0.70 | NS | NS | 10.25 | NS | NS |
| | | | | | | | | | | | | | |
| 44 | 7/2/10 | 12.44 | | 3.85 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 44 | 8/13/10 | 12.44 | | 4.04 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 44 | 9/1/10 | 12.44 | | 3.50 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 44 | 10/8/10 | 12.44 | | 3.32 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 44 | 11/23/10 | 12.44 | | 3.89 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 44 | 1/3/11 | 12.44 | | 3.60 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 44 | 1/25/11 | 12.44 | | 3.43 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 44 | 2/4/11 | 12.44 | | NG | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 44 | 3/26/11 | 12.44 | | 3.04 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 44 | 4/27/11 | 12.44 | | 3.16 | | | | 0.70 | <1.00 | no | 10.00 | <1.00 | no |
| 44 | 5/9/11 | 12.44 | | 3.53 | | | | 0.70 | NS | NS | 10.00 | NS | NS |
| 44 | 6/6/11 | 12.44 | | 3.69 | | | | 0.70 | NS | NS | 10.00 | NS | NS |

**NB1: All measurements in feet**
**NB2: Immediate notification is to be made to the terminal manager, EE, and Motiva Compliance Coordinator in the event new product is detected, a 50% increase in product is noted, or dissolved concentration levels are greater than 50% of established background levels.**
***New product in a well where product has not been observed before OR new product indicated by a major change in color, viscosity, etc.**



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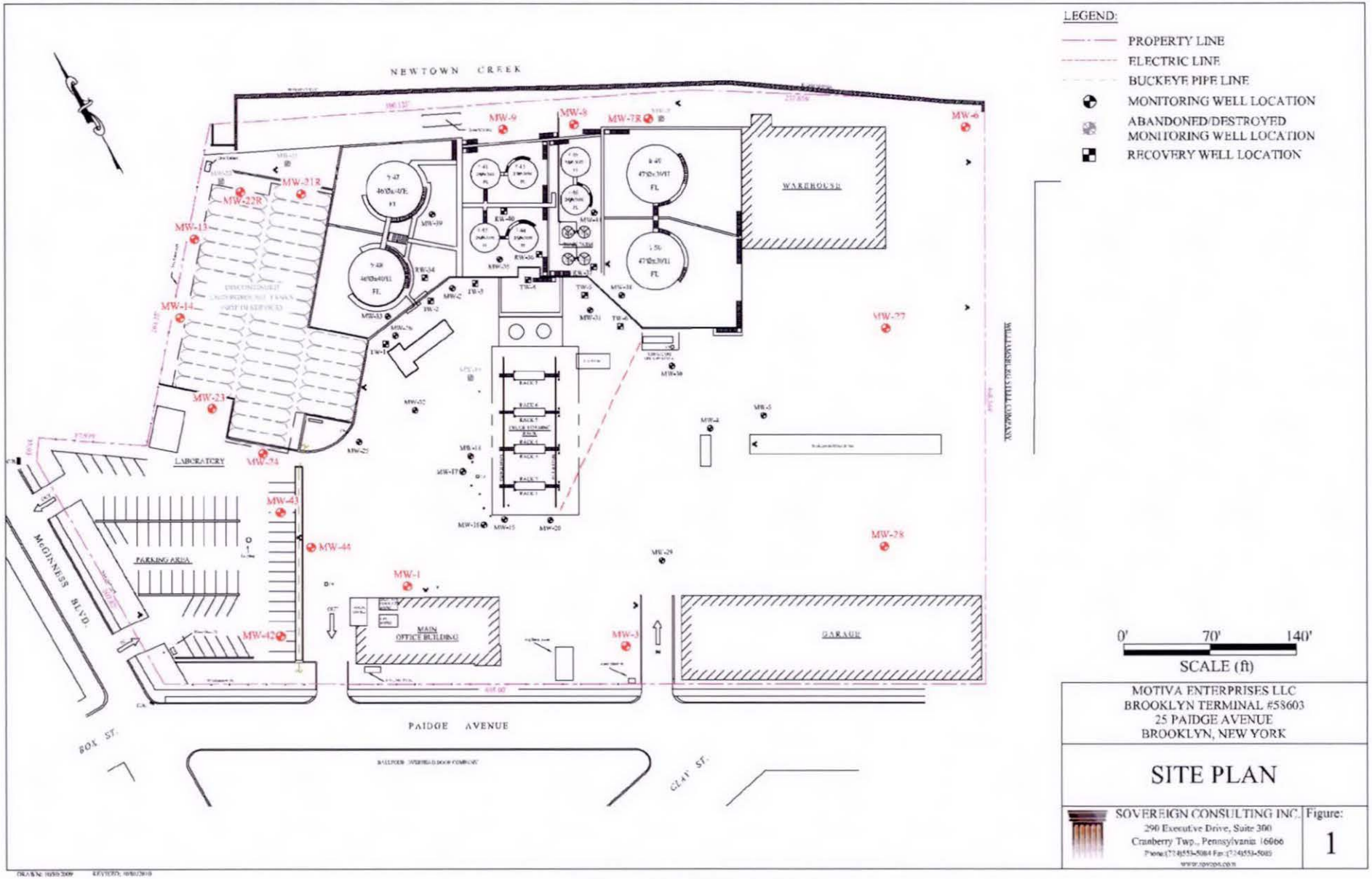


Shell/Motiva 0007497

# HSE Standard 325
# Guidance for Groundwater Monitoring Plans
# For Release Detection At Distribution Terminals

**Objective**

Control measures are needed for early detection of potential new releases and preventing offsite migration of contamination consistent with Shell OP US (SOP US) and Motiva Enterprises LLC HSE Standard 325 Revised 12/02 (Standard 325). Control measures may include:

- Groundwater monitoring wells along downgradient property boundary with routine sampling
- Groundwater monitoring wells along upgradient and sidegradient property boundaries (where potential exists for offsite sources) with routine sampling
- Routine visual inspections of aboveground pipelines and connections
- Routine monitoring of interstitial area with double bottom aboveground tanks

This document provides information regarding a specific plan to comply with Standard 325 including roles and responsibilities for terminal personnel and SOP US Environmental Engineers (EEs). The SOP US EE and the appropriate terminal personnel should identify and note which of the following mechanisms will be utilized to comply with Standard 325. A copy of the plan will be maintained at the terminal in a binder referred to as the "Perimeter Monitoring binder".

## I Groundwater Gauging and Analytical Sampling

a) Identify Designated Monitoring Wells

- Designated monitoring wells – the first step is to select monitoring wells that will be included in the sampling plan and list them. The selection will be based on proximity to downgradient property boundary or offsite sources of contamination.
- Note any new monitoring wells that have to be installed.
- Establish Perimeter Monitoring binder with well completion reports and well construction diagrams, if available.

b) Groundwater Gauging and Analytical Sampling Frequency

- Document groundwater gauging frequency of designated monitoring wells. Gauging activities should be conducted on a quarterly basis, unless an alternate schedule is selected based on site-specific conditions. If an alternate schedule is selected, the rationale should be documented in the terminal files and noted in the sampling plan. The basis for an alternate schedule might include regulatory requirements, geologic conditions, facility design, or operational practices. Groundwater gauging should be coordinated by the EE if there is an open environmental incident. Groundwater gauging should be



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conducted by terminal personnel if there is not an open environmental incident. Note who will perform the gauging.

- Document groundwater analytical sampling frequency of designated monitoring wells. Sampling activities should be conducted on an annual basis unless an alternate schedule is selected based on site specific conditions. If an alternate schedule is selected, then the rationale should be documented in the terminal files and noted in the sampling plan. The basis for an alternate schedule might include regulatory requirements, geologic conditions, facility design, or operational practices. Groundwater analytical sampling should be coordinated by the EE if there is an open environmental incident. If there isn't an open environmental incident, groundwater analytical sampling should be coordinated by the EE or by terminal personnel. Note who will perform the groundwater analytical sampling.

c) Groundwater Gauging Methods

- Proposed method is clear plastic disposable bailer. The disposable bailer will be used to extract a sample of water from each well. Visually observe whether product is present in the bailer and record observation. Enter results on the attached excel spreadsheet entitled Groundwater Gauging Data. Water sample should be released back down the well and the bailer re-used if free product is not detected. Bailer should be rinsed off in a bucket with Alconox (or similar) soap and water after gauging each well.

d) Groundwater Analytical Sampling Methods

- Document sampling protocol to be used, i.e., purge or no-purge, specific or non-specific sample collection protocol. No-purge sampling will be used to collect groundwater samples for lab analysis unless regulatory requirements dictate sampling procedures. Additionally, it will not be necessary to follow any particular sample collection protocol if terminal personnel are collecting samples solely for the purpose of compliance with Standard 325. In this case, the bailer will be lowered into the well, the bailer will be allowed to fill with water, the bailer will be removed from well and water from the bailer will be used to fill VOA jars. Filled VOA jars should be completely filled with water. Ensure that VOA jars do not have air bubbles by gently turning jar upside down and looking for bubbles.

  Chemicals to be analyzed include BTEX and MTBE. Ethanol should be included if ethanol is stored at the terminal. If an alternate set of parameters is selected, then the rationale should be documented in the terminal files and noted in the sampling plan. The basis for an alternate schedule might include regulatory requirements, geologic conditions, facility design, or operational practices.

  - If groundwater analytical sampling is being coordinated by the EE and there is an active incident number, results should be entered into the Groundwater Analytical and Gauging Data spreadsheet included within the terminal site summary documents. The site summary documents are sent to the terminal personnel on a regular basis. Terminal personnel should



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save these files electronically as well as print out a hard copy and insert into the Perimeter Monitoring binder.

- If terminal personnel are conducting groundwater gauging, results should be entered into the Groundwater Gauging Data spreadsheet and filed electronically as well as hard copy into the Perimeter Monitoring binder. See attached excel spreadsheets.
- If terminal personnel are conducting groundwater analytical sampling, results should be sent to the EE. The EE will then be responsible for entering the data in the Groundwater Analytical and Gauging Data spreadsheet and reviewing for comparison to background and action levels.
- Occasionally a well is sampled and it is observed to be dry. If this condition is encountered, please follow these steps:

  1) Measure the total depth of the well and compare this depth to the construction depth. If the measured depth is shallower than the constructed depth, there may be an obstacle in the well that is preventing measurement of the water table. The obstacle may be a tool, pump, silt or mechanical failure of the well. Call the EE.
  2) If the measured depth and well construction depth is the same, then the water table has probably fallen below the bottom of the well screen. Call the EE.

## II Monitoring of Double Bottom Tanks

a) Monitoring Frequency

- Document inspection frequency of the double bottom tank area and/or interstitial monitoring devices.
- Monitoring frequency should be conducted in accordance with the inspection requirements listed in the operational plan for the terminal. If an alternate schedule is selected the rationale should be documented in the terminal files and noted in the sampling plan for the terminal. The basis for an alternate schedule might include regulatory requirements, geologic conditions, facility design, or operational practices.

b) Monitoring Method

- The inspection should be done by terminal personnel and should check for the presence of product or staining. If the double bottom tanks are equipped with interstitial monitoring devices, these should be checked for the presence of liquid (water or product).

## III Monitoring of Product Piping

a) Monitoring Frequency

- Document inspection frequency of the product piping.



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- Frequency should be conducted in accordance with the inspection requirements listed in the operational plan for the terminal. If an alternate schedule is selected, the rationale should be documented in the terminal files and noted in the sampling plan for the terminal. The basis for an alternate schedule might include regulatory requirements, geologic conditions, facility design, or operational practices. No additional inspection or testing is required for buried lines if downgradient groundwater monitoring wells are strategically located to detect potential releases from the system.

b) Monitoring Method

- Terminal personnel should conduct the inspection and check for the presence of product or staining.

**IV Database**

A database should be established for each facility. The database should be in Excel format. A spreadsheet template is attached.

a) Well gauging and sampling will be documented in the spreadsheet to record data measured in the field from each designated well. If there is an active environmental incident, the EE will provide the terminal manager with analytical and gauging data through submittal of the terminal site summary document. The site summary document contains an excel spreadsheet dedicated to perimeter monitoring analytical and gauging data entitled Groundwater Analytical and Gauging Data. If there is not an active incident, and terminal personnel are available to help conduct gauging events, the data should be documented in the Perimeter Monitoring Gauging data spreadsheet included as an attachment.

b) Monitoring activities for double bottoms will be documented in the terminal operating records as described in their procedures. If records are maintained in an alternate location, then the sampling plan should indicate location for the records.

c) Monitoring activities for product pipelines will be documented in the terminal operating records as described in their procedures. If records are maintained in an alternate location, then the sampling plan should indicate location for the records.

**V Action (Trigger) Levels**

Action levels need to be established in order for the terminal personnel to know when to make notification that a potential release may have occurred. Background levels have to be established for each well and documented in the database. Adequate historical data may already exist so background levels can be established. If this data does not exist, then four quarters of gauging and a groundwater analytical



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sampling event should be conducted in order to establish background levels. The EE will assist in establishing background concentrations and the action level for each well.

a) For groundwater analytical sampling events, the following gauging and analytical results will require action:

1. Presence of free product in wells that have not had product before.
2. Increase (such as 50% increase to allow for slight changes due to groundwater fluctuations) in product thickness in wells that product has been present historically. A significant change in color, viscosity, etc should also be considered an actionable item.
3. Increase in groundwater dissolved concentrations above either the action levels established in the sampling plan and soil and groundwater risk assessment or more than 50% increase of the background average for that well.

b) For Groundwater gauging events, the following results will require action:

1. Presence of free product in wells that have not had product before.
2. Change in appearance (color, viscosity, etc.) of free product in wells that have had product historically. If there is any question as to whether a change has occurred, notify per section d) below.

c) For Monitoring of Double Bottom Tanks and Monitoring of Piping, the following will require action:

1. Presence of liquid (water or product) in the interstitial pipe.
2. Presence of product or staining in or around piping, tanks, or loading rack area.

d) Notification

1. If any of the conditions in (V(a), (b) and (c)) above, are encountered, the terminal manager, EE, and Motiva Compliance Coordinator should be notified immediately for further evaluation.

## VI Equipment Requirements

The EE and terminal manager should evaluate the need for any equipment to be secured. Some potential items that may be required are as follows:

Interface Probe for Well Depth monitoring
Organic Vapor Analyzer (OVA) for headspace monitoring
36-inch clear plastic bailer
Decontamination fluid and bucket
Tape measure with weighted end



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## VII Expense Handling

- If there is an active environmental incident and the requirements to comply with the monitoring program are already being met or the additional work is minimal, then the expense will be charged to the environmental incident.
- If there is not an active environmental incident or the requirements to comply with the monitoring program is significantly[1] greater than what was required for management of the environmental incident, then the increased expense will be charged to terminal expense.

Terminal Manager and EE should sign and date this document and maintain at the terminal facility for periodic review.

[1] By way of example, if the terminal monitoring program requires the installation of additional wells for compliance they will be charged to expense.



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## SOP US/Motiva CM&D – Brooklyn Terminal
## Groundwater Monitoring Plan

This plan provides for early detection of potential new releases and preventing offsite migration of constituents consistent with Shell OP US (SOP US) and Motiva Enterprises LLC HSE Standard 325 Revised 12/02 (Standard 325).

Control measures may include:

**Groundwater Monitoring**

| Method | List Wells# | Frequency | Parameters | Action Level | Methods | Recordkeeping |
|---|---|---|---|---|---|---|
| Visual Monitoring | MW-3, 27, 7, 8, 9, 21, 22, 13, 24 | Quarterly | Product or Sheen on water | - Product or Sheen in Well<br>- Increase in thickness overtime | Electronic interface probe | Spreadsheet |
| Analytical Monitoring | MW-3, 27, 7, 8, 9, 21, 22, 13, 24 | Annual | - BTEX<br>- MTBE<br>- Ethanol<br>- TPH | - BTEX at MCL<br>*<br>- MTBE at MCL | No purge | Spreadsheet |

\# Attach plat plan/map with location of monitoring wells selected for release detection monitoring.
* Note: Action levels are consistent with values listed in the Site Risk Assessment.

Observations and analytical Results go to the terminal manager who gets the data entered into the terminal spreadsheet (Excel format). The terminal will maintain the master spreadsheet with a copy being kept by the SOP US EE who supports the terminal.

**Monitoring of Double Bottom Tanks**

| List Tanks | Responsibility | Frequency | Method | Action Level | Recordkeeping |
|---|---|---|---|---|---|
| None | | | | | |

**Monitoring of Product Piping**

| Piping | Responsibility | Frequency | Method | Action level | Recordkeeping |
|---|---|---|---|---|---|
| Above ground | Terminal personnel | Each Shift | Visual | - Product or staining in or around piping, tanks, or loading rack area. | Operating Records |
| Below ground | None | | | | |

If any of the conditions above action levels, the terminal manager, SOP US EE, and the Motiva Compliance Coordinator should be notified immediately for further evaluation.

Terminal Manager — Date: 5/2/05

SOP US Environmental Engineer — Date: 5/2/05

# DOCUMENT INFO

15

DocID: 00000442

Filename: 58603-2011-07-07-FIG-01 (Field Activity Reports - SCI).pdf

# Sovereign Consulting Inc.
## Tailgate Safety Meeting Form
(To be submitted with field notes to Project Manager each day)

| | |
|---|---|
| **Project Name:** Brooklyn Terminal Motiva | **Date:** 11/3/11 |
| **Location:** 25 Paidge Ave Brooklyn | **Weather:** Clear Sky |
| **Project Manager [Print]:** Greg. B | **Temp:** ~30° F |

**Contractors/Subcontractors:**

Nick & Justin King

**Scope of Work:** Well gauging & Product recovery

| **Task Hazards:** (check all that apply) *requires Permit to Work | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☑ | Excavations* | ☐ | Haz. Substances | ☑ | Sanitation | ☐ |
| Confined Spaces* | ☐ | Explosion | ☐ | Heavy Equipment | ☐ | Sharp Objects | ☑ |
| Cutting/Welding* | ☐ | Falling Objects | ☐ | Ladders* | ☐ | Tools | ☑ |
| Electrical | ☐ | Fire | ☐ | Noise | ☑ | Traffic | ☑ |
| Environmental Hazard | ☐ | Insects/Biological | ☐ | Slip/Trip Hazards | ☑ | Weather | ☑ |
| Elevated Work* | ☐ | Ticks - Biohazard | ☐ | Overhead | ☐ | Flying Debris | ☐ |
| Other (describe below) ☐ | | | | | | | |

**Engineering Controls / Work Practices:**

| **Levels of Protection / Personal Protective Equipment:** | | | |
|---|---|---|---|
| Level A ☐ | Eye & Face Protection | ☑ | Safety Glasses ☑ Face Shield ☐ |
| Level B ☐ | Foot Protection | ☑ | Steel Toes ☑ Hip Boots/Waders ☐ |
| Level C ☐ | Hand Protection | ☑ | Nitrile Gloves ☑ Leather Gloves ☑ Full Arm Chemical ☐ |
| Level D ☑ | Head Protection | ☑ | Hard Hat ☑ |
| | Hearing Protection | ☑ | Ear Muffs/Plugs ☑ |
| | Other | ☐ | Barricades ☐ High Visibility Safety Vests ☑ Cones/Flags ☑ |
| | | | Amber Light/Vehicle Hazards ☐ Crash Truck ☑ Tyvek/Coveralls ☐ |

| **Air Monitoring/Sampling** | | **Emergency Response** | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☐ | Emergency Alarms | ☑ | First Aid Kit | ☑ | ~~Cell Phone~~ nine | ☐ |
| FID/PID | ☐ | Emergency Contacts | ☑ | Spill Kit | ☑ | Fire Extinguisher | ☑ |
| Detector Tubes | ☐ | Evacuation Routes | ☑ | Hospital Route | ☑ | Pedestrian Safety | ☐ |
| Dust Monitor | ☐ | Explosion/Fire | ☑ | Work Area | ☑ | Vapor/Dust Suppression | ☐ |
| Personal Air | ☐ | Medical Emergency | ☑ | Smoking/Break Area | ☐ | | |

**Are site workers Fit To Work?** Yes ☑ No ☐

**Do all site workers understand injury/intervention reporting requirements?** Yes ☑ No ☐

**Comments:**

**Name & Title of Person Conducting Tailgate Safety Meeting:**

Nick Zarcone

**Signature:** | **Date:** 11/3/11



Shell/Motiva 0007506

**SHELL**
**Life-Saving Rules**

Work with a valid Work Permit when required

Verify isolation before work begins and use the specified life protecting equipment

Obtain authorisation before overriding or disabling safety critical equipment

Conduct gas tests when required

Obtain authorisation before entering a confined space

Protect yourself against a fall when working at height

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth within this project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

**SIGN IN**

MEETING ATTENDEES

| Name [Print] | Company | Signature |
|---|---|---|
| Nick Zarina | Sovereign | |
| Justin King | Sovereign | |
| | | |
| | | |
| | | |

| | | | |
|---|---|---|---|
| Have all personnel been informed of work to be completed? | (YES) | NO | NA |
| Has fuel delivery service been informed? | YES | NO | (NA) |
| Is fuel delivery due today? | YES | NO | (NA) |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | (NA) |
| Are work areas controlled to protect workers, site staff, and the public? | (YES) | NO | NA |
| Do all workers have their API Safety Key card? | (YES) | NO | NA |
| Have all reviewed and understand the Shell 12 Life-Saving Rules | (YES) | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Nick Zarina | | 1/3/11 0700 | Yeong Lee | |

**SIGN OUT**

| | | | |
|---|---|---|---|
| Has the work area been left tidy and safe? | (YES) | NO | NA |
| Are site personnel aware of status of work? | (YES) | NO | NA |
| Are changes to equipment documented and communicated? | YES | NO | (NA) |
| All incidents, near misses, unsafe situations reported? | YES | NO | (NA) |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Nick Zarina | | 1/3/11 1130 | | |

**SHELL**
**Life-Saving Rules**

Do not walk under a suspended load

No alcohol or drugs while working or driving

Wear your seat belt

Do not smoke outside designated smoking area

While driving, do not use your phone and do not exceed speed limits

Follow prescribed Journey Management Plan



Shell/Motiva 0007507

SAFETRAIN CONSULTING INC.

**Behavior Based Safety Checklist - FIELD WORK**
**WILL YOUR NEXT CHOICE BE THE SAFE CHOICE?**

Observer: King
Date: 1/3/11
Office: Farmingdale

Tasks Observed: GW gauging EQ024.111
Job Site: Motiva Terminal

Total Safe Behaviors Observed: _____
Total At Risk Behaviors Observed: _____
% Safe Behaviors: _____

| Critical Behavior List | Safe | At Risk | Critical Behavior List | Safe | At Risk |
|---|---|---|---|---|---|
| Clear of pinch points | III | | Traffic awareness | I | |
| Use of traffic control devices | III | | Review of JSAs | III | |
| Use of tools | IIII | | Lifting / moving of equipment | I | |
| Precautions for weather | I | | Emergency equipment | II | |
| PPE - safety vest and safety glasses | II | | Electrical safety | — | |
| PPE- hard hat | I | | Heavy equipment hazards | — | |
| PPE - hearing protection | I | | Biological hazards addressed | I | |
| PPE - task appropriate gloves | II | | Physical hazards addressed | I | |
| PPE - other | I | | Work Permits | I | |
| Use of air monitoring equipment | — | | | | |
| Clear of moving / rotating equipment | — | | | | |

| OBSERVED SAFE BEHAVIORS / GOOD PRACTICES |
|---|
| Wore all PPE |
| |
| |
| |

| OBSERVED AT RISK BEHAVIORS | |
|---|---|
| What was observed to be at-risk? | Why was it at risk? |
| No observed risk behaviors | |
| | |
| | |
| | |

| Comments: |
|---|
| |
| |

**Definitions for Critical Behaviors:**

**Clear of pinch points:** body parts are kept out of pinch points -such as under gratings, manhole covers, etc.
**Use of traffic control devices:** Work zone delineators / traffic control devices used per the HASP/Scorecard
**Use of tools:** proper tool for the job utilized, tool is used appropriately (no hammering with a screwdriver, etc.), tool is in good condition
**Precautions for weather:** applies sunscreen, drinks plenty of fluids in hot weather; dresses appropriately for cold weather
**PPE - safety vest, safety glasses:** worn on site at all times
**PPE - hard hat:** worn when there are overhead hazards, construction activities, drilling, excavation, or as required by HASP
**PPE- hearing protection:** worn during times where noise is >85 dBa; drilling, vac truck, bobcat, geoprobe, etc.
**PPE - task appropriate gloves:** leather or protective gloves for manhole handling, equipment handling; nitrile gloves for gw sampling, and minimal chemical exposures
**PPE- other:** Other PPE as required by site HASP
**Use of air monitoring equipment:** per the site HASP
**Clear of moving/rotating equipment:** long hair should be tied back, long sleeves buttoned or rolled up to elbows, stay out of point of operation
**Traffic awareness:** faces traffic, remains alert to oncoming vehicles, blocks off parking spots where encroachment may be a problem
**Review of JSAs:** Prior to task, JSA should be reviewed
**Lifting/moving equipment:** proper body positioning during lifting, lift with legs, load close to body, etc.
**Emergency equipment:** should have fire extinguisher, first aid kit, BBP kit available at site
**Electrical safety:** LOTO utilized, GFCI utilized
**Heavy equipment hazards:** aware of backup signals, only approaches heavy equipment after eye contact/hand signal from operator, and operator stops equipment, stays out of heavy equipment blind spots
**Biological hazards addressed:** preventative measures for ticks, mosquitos, chiggers, bees, snakes when needed
**Physical hazards addressed:** fall protection, slip, trip, fall, overhead hazards, compressed gases, pressure relief, etc.
**Work Permits:** obtained for working at heights, confined space entry, hot work, excavation, LOTO, etc.

SOVEREIGN CONSULTING INC.

**Behavior Based Safety Checklist - DRIVING**
**WILL YOUR NEXT CHOICE BE THE SAFE CHOICE?**

Observer: King
Date: 1/3/19
Office: Farmingdale

Job Site: EQ024.711 Shell Terminal

Total Safe Behaviors Observed: _____
Total At Risk Behaviors Observed: _____
% Safe Behaviors: _____

| Critical Behavior List | Safe | At Risk | Critical Behavior List | Safe | At Risk |
|---|---|---|---|---|---|
| Seat belts | / | | Following distance | //// | |
| Seat adjustment | / | | Traffic lights/signs | /// | |
| Mirror adjustment | / | | Travel surface / speed | /// | |
| Hands on wheel | / | | Distractions | / | |
| Personal health / task alignment | / | | Signaling / Changing lanes | //// | |
| Walk around | / | | Parking | / | |
| Headrest adjusted | / | | Refueling | — | |
| Headlights | / | | Securing vehicle | / | |
| Eyes on path | / | | | | |
| | | | | | |

| OBSERVED SAFE BEHAVIORS / GOOD PRACTICES |
|---|
| Followed all speed limits |
| |
| |
| |

| OBSERVED AT RISK BEHAVIORS | |
|---|---|
| What was observed to be at-risk? | Why was it at risk? |
| No observed risk behaviors | |
| | |
| | |
| | |

| Comments: |
|---|
| |
| |

## Definitions for Critical Behaviors:

**Seat belts:** All seat belts should be fastened for driver and occupants.
**Seat and mirror adjustment:** Seat properly adjusted for driver; mirrors are aligned for optimum coverage of side and rear views.
**Hands on wheel:** Driver has both hands on steering wheel
**Personal health / task alignment:** Driver is rested, physically capable of driving, and not emotionally distracted
**Walk around:** performs walk around vehicle to check for unforeseen obstructions prior to entering
**Headrest adjusted:** Headrest is properly adjusted for current driver to prevent potential whip-lash from rear-end impact
**Headlights:** Turns on headlights during rainy, foggy, snowy weather, etc.
**Eyes on path:** Eyes are on the road ahead, not focused on reading a map or other
**Following distance:** Maintains a safe following distance of 3 seconds for cars & vans with dry conditions, 4 seconds for trucks
**Obeying traffic lights/signs:** This includes coming to a complete stop and/or yeilding at appropriate road signs and signals
**Travel surface / speed:** Travel within speed limits, and adjusts speed for poor road conditions
**Distractions:** Driver is not distracted by radios, maps, telephones or conversations within the car while moving.
**Signaling / changing lanes:** Driver checks mirrors and signals for turns and lane changes
**Parking:** Driver enters parking space slowly, allows room on each side of vehicle
**Refueling:** shuts off engine during refueling
**Securing vehicle:** all loads are secured properly both inside vehicle and outside vehicle

# TIME & MATERIAL FIELDSHEET

**Date: Monday, January 03, 2011**
**Page: 1 of 1**

**Project #: EQ024**
**Project Address: 74 East Avenue, Lawrence, New York**
**Client: Shell Oil Products, U.S.**

## Employee Time

| Employee Name | Appr. # | Task ID | Prep Time | Travel Time | On-Site Time | Total Time |
|---|---|---|---|---|---|---|
| Nickolas Zarcone | 711 | 16 | 1.5 | 3 | 4.5 | 9 |
| Justin King | 711 | 16 | 0.5 | 3 | 4.5 | 8 |
| | | | | | | |
| | | | | | | |
| | | | | | | |

**SOVEREIGN CONSULTING, INC.**

290 Executive Drive, Suite 300
Cranberry Twp., PA 16066

www.sovcon.com


## SOVEREIGN OWNED OR LEASED EQUIPMENT AND MATERIALS LIST

| Item # | Item | Qty | Units |
|---|---|---|---|
| OE104 | Chevy Van | | hrs |
| OE124 | Ford F-150 | | hrs |
| OE115 | Interface Probe | | day |
| OE143 | Multi-Gas PID | | day |
| SR620 | Mobile Phone | | day |
| SR800 | 4" Bailer | | each |
| SR800 | 2" Bailer | | each |
| SR800 | 1" Bailer | | each |
| SR812 | QED Filters | | each |
| SR816 | LDPE Tubing | | ft |
| SR817 | Silicon Flex Hose | | ft |
| SR820 | Gloves (box) (100) | | each |

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR835 | Sorbent Sock | | each |
| SR836 | Sorbent Pads | 4 | each |
| SR837 | Sorbent Boom | | each |
| SR935 | 55 Gallon Drum | | each |
| SR980 | Gripper Plug - 1" | | each |
| SR981 | Gripper Plug - 2" | | each |
| SR982 | Gripper Plug - 4" | | each |
| SR983 | Brass Padlock | | each |
| SR205 | Hand Auger | | day |
| SR300 | Air Sampling Pump | | day |
| | | | |
| | | | |

## FET Rental Equipment (Need PO)

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR105 | Interface Probe | 1 | day |
| SR110 | DO Meter | | day |
| SR130 | Sub Pump 2" | | day |
| SR300 | Air Sampling Pump | | day |
| SR310 | PID | | day |
| SR335 | 4-Gas Meter | | day |
| SR420 | Level Logger | | day |
| SR635 | Survey Equipment | | day |
| SR645 | GW Multi-Meter | | day |
| SR655 | Peristaltic Pump | | day |
| | | | |
| | | | |

## RENTAL EQUIPMENT AND ADDITIONAL MATERIALS

List items rented or purchased to complete work

## Subcontractor Labor

Name & Description of Work

## WORK DESCRIPTION

NZ & JK on site @ 0700 off @ 1130
Performed monthly well gauging.
Bailed product from wells that exhibited recoverable product.
1.25 gallons of product were recovered by hand bailing.

**Project Manager / Supervisor Approval:** _____ **Date:** _____

SOVEREIGN CONSULTING - WELL GAUGING/HAND-BAILING DATA SUMMARY SHEET
PAGE 1 OF 1
DATE:

CLIENT: MOTIVA ENTERPRISES LLC
25 PAIDGE AVENUE, BROOKLYN NY
SCI JOB # EQ017

| WELL ID | TIME OF READING | WELL DIA. (IN) | TOTAL DEPTH (FT) | DEPTH TO PRODUCT (FT) | DEPTH TO WATER (FT) | PRODUCT THICKNESS (FT) | PRODUCT RECOVERED (GAL) | NOTES |
|---|---|---|---|---|---|---|---|---|
| MW-1 | 7:30 | 4 | 11.17 | | 3.38 | | | |
| MW-3 | 7:32 | 4 | | | | | | obstruction |
| MW-29 | 7:40 | 4 | 9.68 | | 2.35 | | | |
| MW-30 | 7:46 | 4 | 9.49 | | 0.00 | | | |
| MW-4 | 7:44 | 4 | 11.27 | 2.63 | 2.64 | 0.01 | | |
| MW-5 | 7:50 | 4 | 9.43 | | 0.82 | | | |
| MW-28 | 7:53 | 4 | 10.93 | | 1.93 | | | |
| MW-27 | 7:56 | 4 | 14.36 | | 2.51 | | | |
| MW-6 | 7:58 | 4 | 10.77 | | 3.25 | | | |
| MW-7R | 8:10 | 4 | 12.34 | | 4.02 | | | |
| MW-8 | 8:12 | 4 | 8.11 | | 4.89 | | | |
| MW-9 | 8:15 | 4 | 7.83 | | 4.83 | | | |
| MW-21R | 8:25 | 4 | 12.13 | | 3.57 | | | |
| MW-22R | 8:28 | 4 | 8.55 | | 3.44 | | | |
| MW-13 | 8:31 | 4 | 14.12 | | 7.09 | | | |
| MW-14 | 8:33 | 4 | 14.13 | | 6.06 | | | |
| MW-23 | 8:35 | 4 | 12.60 | | 3.91 | | | |
| MW-24 | 8:38 | 4 | 12.69 | | 3.86 | | | |
| MW-43 | 8:41 | 4 | 12.61 | | 3.63 | | | |
| MW-42 | 8:44 | 4 | 12.53 | | 3.71 | | | |
| MW-44 | 8:48 | 4 | 12.44 | | 3.60 | | | |
| MW-25 | 8:53 | 4 | | | | | | obstruction |
| TW-1 | 8:59 | 6 | | | | | | under water |
| MW-26 | 9:20 | 4 | 10.69 | 3.87 | 3.91 | 0.04 | | |
| TW-2 | 9:25 | 6 | 10.18 | | 4.03 | | | |
| MW-2 | 9:26 | 4 | | | | | | obstruction |
| TW-3 | 9:27 | 6 | | | | | | under water |
| TW-4 | 9:28 | 6 | | | | | | under water |
| TW-5 | 9:35 | 6 | | | | | | obstruction |
| MW-31 | 9:41 | 4 | | | | | | obstruction |
| TW-6 | 9:42 | 6 | | | | | | under water |
| MW-20 | 9:45 | 4 | 11.60 | | 3.49 | | | |
| MW-15 | 9:48 | 4 | 12.67 | | 3.54 | | | |
| MW-16 | 9:51 | 4 | 15.23 | | 3.52 | | | |
| MW-17 | 9:53 | 4 | 10.23 | | 3.13 | | | |
| MW-18 | 9:55 | 4 | 10.44 | | 3.64 | | | |
| MW-32 | 9:59 | 4 | 10.67 | | 4.51 | | | |
| RW-34 | 10:10 | 6 | 10.97 | 7.14 | 7.16 | 0.02 | | |
| MW-33 | 10:13 | 4 | 7.42 | | 5.65 | | | |
| MW-39 | 10:16 | 4 | 8.53 | | 6.22 | | | |
| RW-40 | 10:20 | 6 | 11.60 | 7.53 | 7.99 | 0.46 | 1.00 | |
| MW-35 | 10:22 | 4 | 7.83 | | 6.43 | | | |
| RW-36 | 10:25 | 6 | 10.71 | 8.25 | 8.36 | 0.11 | 0.25 | |
| MW-41 | 10:29 | 4 | 9.51 | 6.68 | 6.70 | 0.02 | | |
| RW-37 | 10:32 | 6 | 10.53 | | 7.54 | | | |
| MW-38 | 10:37 | 4 | 8.09 | | 7.21 | | | |
| | | | | | | | | |
| | | | | | | | | |

Location 25 Paidge Ave Brooklyn Date 1/3/11

Project / Client Brooklyn Terminal Motiva (Page 1)

well Gauging & Product recovery

Sovereign on site @ 0700 ft @ 1130
NL & SK 2010 F150 Pickup Truck ~ 30°F
went over H & S and scope of work with Terminal worker

| ID | Time | DTW | DTP | Total Depth | Product Thickness | Product Recovered |
|---|---|---|---|---|---|---|
| 1 | 0730 | 3.38 | | 11.17 | | |
| 3 | 0732 | | | | | obstruction |
| 29 | 0740 | 2.35 | | 9.68 | | |
| 4 | 0744 | 2.64 | 2.63 | 11.27 | .01 | |
| 30 | 0746 | 0.00 | | 9.49 | | |
| 5 | 0750 | 0.82 | | 9.43 | | |
| 28 | 0753 | 1.93 | | 10.93 | | |
| 27 | 0756 | 2.51 | | 14.36 | | |
| 6 | 0758 | 3.25 | | 10.77 | | |
| 7R | 0810 | 4.02 | | 12.34 | | |
| 8 | 0812 | 4.89 | | 8.11 | | |
| 9 | 0815 | 4.83 | | 7.83 | | |
| 21R | 0825 | 3.57 | | 12.13 | | |
| 22R | 0828 | 3.44 | | 8.55 | | |
| 13 | 0831 | 7.09 | | 14.12 | | |
| 14 | 0833 | 6.06 | | 14.13 | | |
| 23 | 0835 | 3.91 | | 12.60 | | |
| 24 | 0838 | 3.86 | | 12.69 | | |
| 43 | 0841 | 3.63 | | 12.61 | | |
| 42 | 0844 | 3.71 | | 12.53 | | |

28

Location 25 Paidge Ave Brooklyn Date 1/3/11

Project / Client Brooklyn Terminal Motiva

well gauging & product Recovery (Page 2)

| ID | Time | DTW | DTP | Total Depth | Product Thickness | Product Recovered |
|---|---|---|---|---|---|---|
| 44 | 8.48 | 3.60 | | 12.44 | | |
| 25 | 8:53 | | | | | obstruction |
| TW1 | 8:59 | | | | | underwater |
| 26 | 9:20 | 3.91 | 3.87 | 10.69 | .04 | |
| TW2 | 9:25 | 4.03 | | 10.18 | | |
| TW3 | 9:27 | | | | | underwater |
| TW4 | 9:28 | | | | | UnAerwater |
| TW5 | 9:35 | | | | | obstruction |
| 31 | 9:41 | | | | | Obstruction |
| TW6 | 9:42 | | | | | underwater |
| 20 | 9.45 | 3.49 | | 11.60 | | |
| 15 | 9:48 | 3.54 | | 12.67 | | |
| 16 | 9:51 | 3.52 | | 15.23 | | |
| 17 | 9:53 | 3.13 | | 10.23 | | |
| 18 | 9:55 | 3.64 | | 10.44 | | |
| 32 | 9:59 | 4.51 | | 10.67 | | |
| 34 | 10:10 | 7.16 | 7.14 | 10.97 | .02 | |
| 33 | 10:13 | 5.65 | | 7.42 | | |
| 39 | 10:16 | 6.22 | | 8.53 | | |
| 40 | 10:20 | 7.99 | 7.53 | 11.60 | .46 | 1.00 |
| 35 | 10.22 | 6.43 | | 7.83 | | |
| 36 | 10:25 | 8.36 | 8.25 | 10.71 | .11 | .25 |
| 41 | 10:29 | 6.70 | 6.68 | 9.51 | .02 | |
| 2 | 9:26 | | | | | Obstruction |

29

Location 25 Paidge Ave Brooklyn Date 1/3/11

Project / Client Brooklyn Terminal Motiva

well Gauging & Product Recovery (Page 3)

| ID | Time | DTW | DTP | Total Depth | Product Thickness | Product Recovered |
|---|---|---|---|---|---|---|
| 37 | 10:32 | 7.54 | | 10.53 | | |
| 38 | 10:37 | 7.21 | | 8.09 | | |

(Gal. Recovered 1.25)

Obstruction wells are big piles of snow

Shell/Motiva 0007513

# Sovereign Consulting Inc.
## Tailgate Safety Meeting Form

(To be submitted with field notes to Project Manager each day)

| | |
|---|---|
| **Project Name:** Terminal Brooklyn | **Date:** 1/25/11 |
| **Location:** 25 Paidge Ave | **Weather:** Cloudy |
| **Project Manager [Print]:** Doug Jakim | **Temp:** ~10°F |

**Contractors/Subcontractors:**

Nick Zarcone, Justin King, Doug Jakim

**Scope of Work:** Quarterly Well Gauging, Hand Bailing & GWS

**Task Hazards:** (check all that apply) *requires Permit to Work

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☑ | Excavations* | ☐ | Haz. Substances | ☑ | Sanitation | ☐ |
| Confined Spaces* | ☐ | Explosion | ☐ | Heavy Equipment | ☐ | Sharp Objects | ☑ |
| Cutting/Welding* | ☐ | Falling Objects | ☐ | Ladders* | ☐ | Tools | ☑ |
| Electrical | ☐ | Fire | ☐ | Noise | ☑ | Traffic | ☑ |
| Environmental Hazard | ☑ | Insects/Biological | ☐ | Slip/Trip Hazards | ☑ | Weather | ☑ |
| Elevated Work* | ☐ | Ticks - Biohazard | ☐ | Overhead | ☐ | Flying Debris | ☐ |
| Other (describe below) | ☐ | | | | | | |

**Engineering Controls / Work Practices:**

**Levels of Protection / Personal Protective Equipment:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Level A | ☐ | Eye & Face Protection | ☑ | Safety Glasses | ☑ | Face Shield | ☐ |
| Level B | ☐ | Foot Protection | ☑ | Steel Toes | ☑ | Hip Boots/Waders | ☐ |
| Level C | ☐ | Hand Protection | ☑ | Nitrile Gloves | ☑ | Leather Gloves | ☑ |
| Level D | ☑ | Head Protection | ☑ | Hard Hat | ☑ | Full Arm Chemical | ☐ |
| | | Hearing Protection | ☑ | Ear Muffs/Plugs | ☑ | | |
| | | Other | ☐ | Barricades | ☑ | High Visibility Safety Vests | ☑ |
| | | | | Cones/Flags | ☑ | Amber Light/Vehicle Hazards | ☐ |
| | | | | Crash Truck | ☑ | Tyvek/Coveralls | ☐ |

| **Air Monitoring/Sampling** | | **Emergency Response** | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☐ | Emergency Alarms | ☑ | First Aid Kit | ☑ | Cell Phone None | ☐ |
| FID/PID | ☐ | Emergency Contacts | ☑ | Spill Kit | ☑ | Fire Extinguisher | ☑ |
| Detector Tubes | ☐ | Evacuation Routes | ☑ | Hospital Route | ☑ | Pedestrian Safety | ☐ |
| Dust Monitor | ☐ | Explosion/Fire | ☐ | Work Area | ☑ | Vapor/Dust Suppression | ☐ |
| Personal Air | ☐ | Medical Emergency | ☑ | Smoking/Break Area | ☑ | | |

**Are site workers Fit To Work?** Yes ☑ No ☐

**Do all site workers understand injury/intervention reporting requirements?** Yes ☑ No ☐

**Comments:** Snowing out we will take our time.

**Name & Title of Person Conducting Tailgate Safety Meeting:**

Nick Zarcone

**Signature:** [signature] **Date:** 1/25/11

**SHELL**
**Life-Saving Rules**

Work with a valid Work Permit when required

Verify isolation before work begins and use the specified life protecting equipment

Obtain authorisation before overriding or disabling safety critical equipment

Conduct gas tests when required

Obtain authorisation before entering a confined space

Protect yourself against a fall when working at height

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth within this project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

**SIGN IN**

MEETING ATTENDEES

| Name [Print] | Company | Signature |
|---|---|---|
| Nick Zarone | Sovereign | |
| DOUGLAS JACOBI | SOVEREIGN | |
| Justin King | Sovereign | |
| | | |
| | | |

Have all personnel been informed of work to be completed? (YES) NO NA
Has fuel delivery service been informed? YES NO (NA)
Is fuel delivery due today? YES NO (NA)
Have isolation procedures been agreed – lock out/tag out? YES NO (NA)
Are work areas controlled to protect workers, site staff, and the public? (YES) NO NA
Do all workers have their API Safety Key card? (YES) NO NA
Have all reviewed and understand the Shell 12 Life-Saving Rules (YES) NO NA

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Nick Zarone | | 1/25/11 0730 | Julio Martinez | |

**SIGN OUT**

Has the work area been left tidy and safe? (YES) NO NA
Are site personnel aware of status of work? (YES) NO NA
Are changes to equipment documented and communicated? YES NO (NA)
All incidents, near misses, unsafe situations reported? YES NO (NA)

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Nick Zarone | | 1/25/11 1200 | Nick Soto | |

**SHELL**
**Life-Saving Rules**

Do not walk under a suspended load

No alcohol or drugs while working or driving

Wear your seat belt

Do not smoke outside designated smoking area

While driving, do not use your phone and do not exceed speed limits

Follow prescribed Journey Management Plan



Shell/Motiva 0007515

SOVEREIGN CONSULTING INC.

**Behavior Based Safety Checklist - DRIVING**
**WILL YOUR NEXT CHOICE BE THE SAFE CHOICE?**

Observer: JKing
Date: 1/25/11
Office: Farmingdale

Job Site: SE017.140 Motiva Terminal

Total Safe Behaviors Observed: _____
Total At Risk Behaviors Observed: _____
% Safe Behaviors: _____

| Critical Behavior List | Safe | At Risk | Critical Behavior List | Safe | At Risk |
|---|---|---|---|---|---|
| Seat belts | / | | Following distance | /// | |
| Seat adjustment | / | | Traffic lights/signs | //// | |
| Mirror adjustment | / | | Travel surface / speed | //// | |
| Hands on wheel | / | | Distractions | / | |
| Personal health / task alignment | / | | Signaling / Changing lanes | //// | |
| Walk around | / | | Parking | / | |
| Headrest adjusted | / | | Refueling | — | |
| Headlights | / | | Securing vehicle | / | |
| Eyes on path | / | | | | |
| | | | | | |

| OBSERVED SAFE BEHAVIORS / GOOD PRACTICES |
|---|
| Followed all traffic signs/signals |
| |
| |
| |

| OBSERVED AT RISK BEHAVIORS | |
|---|---|
| What was observed to be at-risk? | Why was it at risk? |
| No observed risk behaviors | |
| | |
| | |
| | |

| Comments: |
|---|
| |
| |

**Definitions for Critical Behaviors:**

**Seat belts:** All seat belts should be fastened for driver and occupants.
**Seat and mirror adjustment:** Seat properly adjusted for driver; mirrors are aligned for optimum coverage of side and rear views.
**Hands on wheel:** Driver has both hands on steering wheel
**Personal health / task alignment:** Driver is rested, physically capable of driving, and not emotionally distracted
**Walk around:** performs walk around vehicle to check for unforeseen obstructions prior to entering
**Headrest adjusted:** Headrest is properly adjusted for current driver to prevent potential whip-lash from rear-end impact
**Headlights:** Turns on headlights during rainy, foggy, snowy weather, etc.
**Eyes on path:** Eyes are on the road ahead, not focused on reading a map or other
**Following distance:** Maintains a safe following distance of 3 seconds for cars & vans with dry conditions, 4 seconds for trucks
**Obeying traffic lights/signs:** This includes coming to a complete stop and/or yeilding at appropriate road signs and signals
**Travel surface / speed:** Travel within speed limits, and adjusts speed for poor road conditions
**Distractions:** Driver is not distracted by radios, maps, telephones or conversations within the car while moving.
**Signaling / changing lanes:** Driver checks mirrors and signals for turns and lane changes
**Parking:** Driver enters parking space slowly, allows room on each side of vehicle
**Refueling:** shuts off engine during refueling
**Securing vehicle:** all loads are secured properly both inside vehicle and outside vehicle

SOVEREIGN CONSULTING INC.

## Behavior Based Safety Checklist - FIELD WORK
**WILL YOUR NEXT CHOICE BE THE SAFE CHOICE?**

Observer: JKing
Date: 1/25/11
Office: Farmingdale

Tasks Observed: GW Gauging
Job Site: SEQ17 Motiva Terminal

Total Safe Behaviors Observed: _____
Total At Risk Behaviors Observed: _____
% Safe Behaviors: _____

| Critical Behavior List | Safe | At Risk | Critical Behavior List | Safe | At Risk |
|---|---|---|---|---|---|
| Clear of pinch points | /// | | Traffic awareness | / | |
| Use of traffic control devices | //// | | Review of JSAs | // | |
| Use of tools | /// | | Lifting / moving of equipment | /// | |
| Precautions for weather | / | | Emergency equipment | / | |
| PPE - safety vest and safety glasses | // | | Electrical safety | — | |
| PPE- hard hat | / | | Heavy equipment hazards | — | |
| PPE - hearing protection | — | | Biological hazards addressed | /// | |
| PPE - task appropriate gloves | /// | | Physical hazards addressed | /// | |
| PPE - other | / | | Work Permits | // | |
| Use of air monitoring equipment | — | | | | |
| Clear of moving / rotating equipment | — | | | | |

| OBSERVED SAFE BEHAVIORS / GOOD PRACTICES |
|---|
| all PPE |
| |
| |
| |

| OBSERVED AT-RISK BEHAVIORS | |
|---|---|
| What was observed to be at-risk? | Why was it at risk? |
| None. | |
| | |
| | |
| | |

| Comments: |
|---|
| |
| |

### Definitions for Critical Behaviors:

**Clear of pinch points:** body parts are kept out of pinch points -such as under gratings, manhole covers, etc.
**Use of traffic control devices:** Work zone delineators / traffic control devices used per the HASP/Scorecard
**Use of tools:** proper tool for the job utilized, tool is used appropriately (no hammering with a screwdriver, etc.), tool is in good condition
**Precautions for weather:** applies sunscreen, drinks plenty of fluids in hot weather; dresses appropriately for cold weather
**PPE - safety vest, safety glasses:** worn on site at all times
**PPE - hard hat:** worn when there are overhead hazards, construction activities, drilling, excavation, or as required by HASP
**PPE- hearing protection:** worn during times where noise is >85 dBa; drilling, vac truck, bobcat, geoprobe, etc.
**PPE - task appropriate gloves:** leather or protective gloves for manhole handling, equipment handling; nitrile gloves for gw sampling, and minimal chemical exposures
**PPE- other:** Other PPE as required by site HASP
**Use of air monitoring equipment:** per the site HASP
**Clear of moving/rotating equipment:** long hair should be tied back, long sleeves buttoned or rolled up to elbows, stay out of point of operation
**Traffic awareness:** faces traffic, remains alert to oncoming vehicles, blocks off parking spots where encroachment may be a problem
**Review of JSAs:** Prior to task, JSA should be reviewed
**Lifting/moving equipment:** proper body positioning during lifting, lift with legs, load close to body, etc.
**Emergency equipment:** should have fire extinguisher, first aid kit, BBP kit available at site
**Electrical safety:** LOTO utilized, GFCI utilized
**Heavy equipment hazards:** aware of backup signals, only approaches heavy equipment after eye contact/hand signal from operator, and operator stops equipment, stays out of heavy equipment blind spots
**Biological hazards addressed:** preventative measures for ticks, mosquitos, chiggers, bees, snakes when needed
**Physical hazards addressed:** fall protection, slip, trip, fall, overhead hazards, compressed gases, pressure relief, etc.
**Work Permits:** obtained for working at heights, confined space entry, hot work, excavation, LOTO, etc.

# TIME & MATERIAL FIELDSHEET

**Date: Tuesday, January 25, 2011**
**Page: 1 of 1**

**Project #: ~~EQ017~~ (re) 5E017**
**Project Address: 25 Paidge Avenue, Brooklyn, New York**
**Client: Shell Oil Products, U.S.**

## Employee Time

| Employee Name | Appr. # | Task ID | Prep Time | Travel Time | On-Site Time | Total Time |
|---|---|---|---|---|---|---|
| Nickolas Zarcone | 711 | 16 | 0.5 | 3 | 6 | 9.5 |
| Justin King | 711 | 16 | 0.5 | 3 | 6 | 9.5 |
| | | | | | | |
| | | | | | | |
| | | | | | | |


**SOVEREIGN CONSULTING, INC.**

290 Executive Drive, Suite 300
Cranberry Twp., PA 16066
www.sovcon.com


## SOVEREIGN OWNED OR LEASED EQUIPMENT AND MATERIALS LIST

| Item # | Item | Qty | Units |
|---|---|---|---|
| OE104 | Chevy Van | | hrs |
| OE124 | Ford F-150 | | hrs |
| OE115 | Interface Probe | | day |
| OE143 | Multi-Gas PID | | day |
| SR620 | Mobile Phone | | day |
| SR800 | 4" Bailer | | each |
| SR800 | 2" Bailer | | each |
| SR800 | 1" Bailer | 5 | each |
| SR812 | QED Filters | | each |
| SR816 | LDPE Tubing | | ft |
| SR817 | Silicon Flex Hose | | ft |
| SR820 | Gloves (box) (100) | | each |

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR835 | Sorbent Sock | | each |
| SR836 | Sorbent Pads | 6 | each |
| SR837 | Sorbent Boom | | each |
| SR935 | 55 Gallon Drum | | each |
| SR980 | Gripper Plug - 1" | | each |
| SR981 | Gripper Plug - 2" | | each |
| SR982 | Gripper Plug - 4" | | each |
| SR983 | Brass Padlock | | each |
| SR205 | Hand Auger | | day |
| SR300 | Air Sampling Pump | | day |

## FEI Rental Equipment* (Need PO)

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR105 | Interface Probe | 1 | day |
| SR110 | DO Meter | | day |
| SR130 | Sub Pump 2" | | day |
| SR300 | Air Sampling Pump | | day |
| SR310 | PID | | day |
| SR335 | 4-Gas Meter | | day |
| SR420 | Level Logger | | day |
| SR635 | Survey Equipment | | day |
| SR645 | GW Multi-Meter | | day |
| SR655 | Peristaltic Pump | | day |

## RENTAL EQUIPMENT AND ADDITIONAL MATERIALS

List items rented or purchased to complete work

## Subcontractor Labor

Name & Description of Work

## WORK DESCRIPTION

NZ,JK & DJ on site @ 07:30 off @ 01:30
Went over H&S and scope of work with terminal worker.
Showed Doug Jakim around his first time @ Brooklyn terminal.
Performed quarterly well gauging.
Performed quarterly GWS.
Bailed product from wells that exhibited recoverable product
3.5 Gal of product were recovered by hand bailing
Remove snow and ice to find wells.

**Project Manager / Supervisor Approval:** _____ **Date:** _____

SOVEREIGN CONSULTING - WELL GAUGING/HAND-BAILING DATA SUMMARY SHEET
PAGE 1 OF 1

DATE: 1/25/11

CLIENT: MOTIVA ENTERPRISES LLC
25 PAIDGE AVENUE, BROOKLYN NY
SCI JOB # 5E017.140

| WELL ID | TIME OF READING | WELL DIA. (IN) | TOTAL DEPTH (FT) | DEPTH TO PRODUCT (FT) | DEPTH TO WATER (FT) | PRODUCT THICKNESS (FT) | PRODUCT RECOVERED (GAL) | NOTES |
|---|---|---|---|---|---|---|---|---|
| MW-1 | 7:51 | 4 | | | 3.34 | | | |
| MW-3 | obstruction | 4 | | | | | | |
| MW-29 | 7:53 | 4 | | | 2.70 | | | |
| MW-04 | 7:58 | 4 | | 2.53 | 2.58 | 0.05 | | |
| MW-30 | 8:02 | 4 | | | 2.47 | | | |
| MW-5 | 8:04 | 4 | | | 2.02 | | | |
| MW-28 | 8:06 | 4 | | | 1.89 | | | |
| MW-27 | 8:11 | 4 | | | 2.55 | | | |
| MW-6 | 8:14 | 4 | | | 6.21 | | | |
| MW-7R | 10:37 | 4 | | | 6.62 | | | |
| MW-8 | 10:35 | 4 | | | 6.73 | | | |
| MW-9 | 10:37 | 4 | | | 6.68 | | | |
| MW-21R | 5:02 | 4 | | | 3.97 | | | |
| MW-22R | 6:43 | 4 | | | 4.00 | | | |
| MW-13 | 8:21 | 4 | | | 7.23 | | | |
| MW-14 | 8:22 | 4 | | | 6.24 | | | |
| MW-23 | 8:25 | 4 | | | 3.82 | | | |
| MW-24 | 8:27 | 4 | | | 3.75 | | | |
| MW-43 | 8:33 | 4 | | | 3.48 | | | |
| MW-42 | 8:36 | 4 | | | 3.54 | | | |
| MW-44 | 8:42 | 4 | | | 3.43 | | | |
| MW-25 | obstruction | 4 | | | | | | |
| TW-1 | underwater | 6 | | | | | | |
| MW-26 | 8:51 | 4 | | 3.90 | 3.92 | 0.02 | | |
| TW-2 | 8:55 | 6 | | | 3.96 | | | |
| MW-2 | underwater | 4 | | | | | | |
| TW-3 | underwater | 6 | | | | | | |
| TW-4 | obstruction | 6 | | | | | | |
| TW-5 | obstruction | 6 | | | | | | |
| MW-31 | obstruction | 4 | | | | | | |
| TW-6 | obstruction | 6 | | | | | | |
| MW-20 | 8:59 | 4 | | | 3.19 | | | |
| MW-15 | 9:02 | 4 | | | 3.23 | | | |
| MW-16 | 9:04 | 4 | | | 3.16 | | | |
| MW-17 | 9:09 | 4 | | | 2.57 | | | |
| MW-18 | 9:07 | 4 | | | 3.06 | | | |
| MW-32 | 9:15 | 4 | | | 3.89 | | | |
| RW-34 | 9:55 | 6 | | 7.24 | 7.21 | 0.03 | | |
| MW-33 | 9:57 | 4 | | | 5.68 | | | |
| MW-39 | 10:00 | 4 | | | 7.49 | | | |
| RW-40 | 10:01 | 6 | | 8.85 | 8.17 | 1.16 | 2.50 | |
| MW-35 | 10:04 | 4 | | | 6.50 | | | |
| RW-36 | 10:06 | 6 | | 9.93 | 10.25 | 0.32 | 1.00 | |
| MW-41 | 10:10 | 4 | | | 9.03 | | | |
| RW-37 | 10:11 | 6 | | | 7.52 | | | |
| MW-38 | 10:13 | 4 | | | 7.09 | | | |
| | | | | | | | | |
| | | | | | | | | |

Location 25 Paidge Ave Brooklyn Date 1/25/11

Project / Client Brooklyn Terminal Motiva (Page 2)

Well Gauging & Product Recovery & GWS

| ID | Time | DTW | DTP | Total Depth | Product Thickness | Product Recovery |
|---|---|---|---|---|---|---|
| 44 | 8:42 | 3.43 | | | | |
| 25 | — | | | | | obstruction |
| TW1 | — | | | | | under water |
| 26 | 8:51 | 3.92 | 3.90 | | .02 | |
| TW2 | 8:55 | 3.96 | | | | |
| TW3 | — | | | | | underwater |
| TW4 | — | | | | | under water |
| TW5 | — | | | | | obstruction |
| 31 | — | | | | | obstruction |
| TW6 | — | ~~3.~~ NO | | | | obstruction |
| 20 | 8:59 | 3.19 | | | | |
| 15 | 9:02 | 3.23 | | | | |
| 16 | 9:04 | 3.16 | | | | |
| 17 | 9:09 | 2.57 | | | | |
| 18 | 9:07 | 3.06 | | | | |
| 32 | 9:15 | 3.89 | | | | |
| 34 | 9:55 | 7.24 | 7.21 | | .03 | |
| 33 | 9:57 | 5.68 | | | | |
| 39 | 10:00 | 7.49 | | | | |
| 40 | 10:01 | 8.85 | 8.17 | | 1.16 | 2.50 |
| 35 | 10:04 | 6.50 | | | | |
| 36 | 10:06 | 10.25 | 9.93 | | .32 | 1.00 |
| 41 | 10:10 | 9.03 | ~~9.03~~ NO | | | |
| 2 | — | | | | | obstruction |

Obstruction wells are big pits of [illegible]



Location 25 Paidge Ave Brooklyn Date 1/25/11

Project / Client Brooklyn Terminal Motiva (Page 3)

Well Gauging, Product Recovery & GWS

| ID | Time | DTW | DTP | Total Depth | Product Thickness | Product Recovery |
|---|---|---|---|---|---|---|
| 37 | 10:11 | 7.52 | | | | |
| 38 | 10:13 | 7.09 | | | | |

Product Recovered

3.5 Gal

Location 25 Paidge Ave Brooklyn Date 1/25/11

Project / Client Brooklyn Terminal Motiva

Well Gauging & Product recovery & GWS (Page 1)

Sunrise on site @ 0730 off @ 0130
NZ, JK, DJ Zero Fish pump ~ 10' F.
Went over H&S with Terminal worker
Showed Doug Jackin Around 1st Time there.
Remove Snow to find wells
~~Sent of~~

| ID | Time | DTW | DTP | Total Depth | Product Thickness | Product Recovery |
|---|---|---|---|---|---|---|
| 1 | 7.51 | 3.34 | | | | |
| 3 | — | | | | | |
| 29 | 7.53 | 2.70 | | | | |
| 4 | 7:58 | 2.58 | 2.53 | | .05 | |
| 30 | 8:02 | 2.47 | | | | |
| 5 | 8:04 | 2.02 | | | | |
| 28 | 8:06 | 1.89 | | | | |
| 27 | 8:11 | 2.55 | | | | |
| 6 | 8:14 | 6.21 | | | | |
| 7R | 10.37 | 6.62 | | | | |
| 8 | 10.35 | 6.73 | | | | |
| 9 | 10:37 | 6.68 | | | | |
| 21R | 11:21 | 3.97 | | | | |
| 22R | 11:28 | 4.00 | | | | |
| 13 | 8:21 | 7.23 | | | | |
| 14 | 8:22 | 6.24 | | | | |
| 23 | 8:25 | 3.82 | | | | |
| 24 | 8:27 | 3.75 | | | | |
| 43 | 8:33 | 3.48 | | | | |
| 42 | 8:36 | 3.54 | | | | |

GWS Time

10:40
10:50
11:00
11:15
11:30

FedEx Express **US Airbill**

FedEx Tracking Number **8708 8418 1801**

Sender's Copy

**1 From** Please print and press hard.

Date 1/25/11 Sender's FedEx Account Number SENDER'S FEDEX ACCOUNT NUMBER ONLY

Sender's Name Justin King Phone (631) 753-8350

Company Sovereign Consulting

Address 1855 New Highway Suite C

Dept./Floor/Suite/Room

City Farmingdale State NY ZIP 11735

**2 Your Internal Billing Reference** First 24 characters will appear on invoice. OPTIONAL

**3 To**

Recipient's Name Sample Receiving Phone (732) 329-0200

Company Accutest Labs

HOLD Weekday — Print FedEx location address below. NOT available for FedEx First Overnight.

HOLD Saturday — Print FedEx location address below. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Address 2235 Route 130

We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept./Floor/Suite/Room

Address

Print FedEx location address here if a HOLD option is selected.

City Dayton State NJ ZIP 08810

**4a Express Package Service** * To most locations. *Packages up to 150 lbs.*

- [x] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

**4b Express Freight Service** ** To most locations. *Packages over 150 lbs.*

- [ ] FedEx 1Day Freight — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 1Day Freight Booking No.

- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

**5 Packaging** * Declared value limit $500.

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [x] Other

**6 Special Handling and Delivery Signature Options**

- [ ] SATURDAY Delivery — NOT available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. *Fee applies.*

**Does this shipment contain dangerous goods?** One box must be checked.

- [x] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

- [ ] Cargo Aircraft Only

**7 Payment** *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below.

- [ ] Sender — Acct. No. in Section 1 will be billed.
- [x] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

FedEx Acct. No. / Credit Card No. 114759503 Exp. Date

Total Packages ____ Total Weight ____ lbs. Total Declared Value† $ ____ .00

†Our liability is limited to $100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability.

554

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Simplify your shipping. Manage your account. Access all the tools you need.

RETAIN THIS COPY FOR YOUR RECORDS.

Shell/Motiva 0007522

# Shell Oil Products Chain Of Custody Record

LAB (LOCATION)

- ☐ XENCO (__Houston, TX_____)
- ☐ CALSCIENCE (_____)
- ☐ TEST AMERICA (_____)
- ☐ SPL (_____)
- ☑ OTHER (__Accutest, NJ_____)

**Please Check Appropriate Box:**

| | | |
|---|---|---|
| ☐ ENV. SERVICES | ☐ MOTIVA RETAIL | ☐ SHELL RETAIL |
| ☐ MOTIVA SD&CM | ☑ CONSULTANT | ☐ LUBES |
| ☐ SHELL PIPELINE | ☐ OTHER _____ | |

**Print Bill To Contact Name:** Doug Jakim

**PO #:** 5E017.140

**INCIDENT # (ENV SERVICES):** 97605492

**SAP #:** 1711199

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 1/25/2011

PAGE: 1 of 1

CONSULTANT COMPANY: Sovereign Consulting Inc.

ADDRESS: 290 Executive Drive, Suite 300

CITY: Cranberry Twp., PA 16066

TELEPHONE: 724-553-5084 FAX: 724-553-5089 E-MAIL: djakim@sovcon.com

SITE ADDRESS (Street, City and State): 25 Paidge Ave., Brooklyn, NY

CONSULTANT PROJECT CONTACT (Report to): Doug Jakim

CONSULTANT PROJECT NO.: 5E017.140

SAMPLER NAME(S) (Print): Justin King and Nick Zarcone

LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

DELIVERABLES: ☑ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY) _____

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :

email copy to: jmccollums@sovcon.com

- ☑ SHELL CONTRACT RATE APPLIES
- ☑ STATE REIMBURSEMENT RATE APPLIES
- ☐ PROVIDE LEDD DISK

**REQUESTED ANALYSIS**

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | 8260 -VOCs | 8260 - MTBE | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-7R | 1/25/11 | 10:40 | GW | X | | | | | 3 | x | x | |
| | MW-8 | 1/25/11 | 10:50 | GW | X | | | | | 3 | x | x | |
| | MW-9 | 1/25/11 | 11:00 | GW | X | | | | | 3 | x | x | |
| | MW-21R | 1/25/11 | 11:15 | GW | X | | | | | 3 | x | x | |
| | MW-22R | 1/25/11 | 11:30 | GW | X | | | | | 3 | x | x | |
| | Field Blank | 1/25/11 | 10:30 | GW | X | | | | | 3 | x | x | |
| | Trip Blank | 1/4/11 | 8:00 | TB | X | | | | | 2 | x | x | |

| | | | |
|---|---|---|---|
| Relinquished by: (Signature) | Received by: (Signature) | Date: 1/25/11 | Time: 3:00 PM |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |

05/2/08 Revision

Shell/Motiva 0007523

**Sovereign Consulting Inc.**
**SHELL Tailgate Safety Meeting Form**
(To be submitted with field notes to Project Manager each day)

| | |
|---|---|
| **Project Name:** Brooklyn Terminal | **Date:** 2/4/11 |
| **Location:** 25 Paidge Ave | **Weather:** Clear Sky |
| **Project Manager [Print]:** Doug. Jimin | **Temp:** ~15° F |

**Contractors/Subcontractors:**

Nick Zarcone & Justin King

**Scope of Work:** Well Gauging & Hand Bailing

**Task Hazards:** (check all that apply) *requires Permit to Work

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☑ | Ladders* | ☐ | Haz. Substances | ☑ | Sharp Objects | ☑ |
| Confined Spaces* | ☐ | Explosion | ☐ | Heavy Equipment | ☐ | Tools | ☑ |
| Cutting/Welding* | ☐ | Falling Objects | ☐ | Flying Debris | ☐ | Traffic | ☑ |
| Electrical | ☐ | Fire | ☐ | Noise | ☑ | Weather | ☑ |
| Environmental Hazard | ☑ | Insects/Biological | ☐ | Slip/Trip, Hazards | ☑ | Other (describe below) | ☐ |
| Elevated Work* | ☐ | Ticks – Biohazard | ☐ | Overhead | ☑ | | |
| Excavations* | ☐ | Bees, Wasps, Hornets – Biohazard | ☐ | Sanitation | ☐ | | |

| Work Zone Delineation Level | Level 1 ☐ | Level 2 ☐ | Level 3 ☑ *Watchperson required | Level 4 ☐ *Temp. Traffic Control Plan required |
|---|---|---|---|---|

| | |
|---|---|
| **Title of JSAs reviewed today:** | GW gauging + LNAPL Recovery (5.3)<br>Manhole cover Removal (5.4)<br>Equipment decon (7.2)<br>General Site Activities (7.4) |

**Engineering Controls / Work Practices:** PPE & Traffic Control

**Levels of Protection / Personal Protective Equipment:**

| | | | |
|---|---|---|---|
| Level A ☐ | Eye & Face Protection ☑ | Safety Glasses ☑ | Face Shield ☐ |
| Level B ☐ | Foot Protection ☑ | Steel Toes ☑ | Hip Boots/Waders ☐ |
| Level C ☐ | Hand Protection ☑ | Nitrile Gloves ☑ | Leather Gloves ☑ Full Arm Chemical ☐ |
| Level D ☑ | Head Protection ☑ | Hard Hat ☑ | |
| | Hearing Protection ☑ | Ear Muffs/Plugs ☑ | |
| | Other ☐ | Barricades ☑ | High Visibility Safety Vests ☑ Cones/Flags ☑ |
| | | Amber Light/Vehicle Hazards ☐ | Crash Truck ☑ Tyvek/Coveralls ☐ |

| Air Monitoring/Sampling | | Emergency Response | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☐ | Emergency Alarms | ☑ | First Aid Kit Location | ☑ | Cell Phone Use None | ☐ |
| FID/PID | ☐ | Emergency Contacts | ☑ | Spill Kit Location | ☑ | Fire Ext. Location | ☑ |
| Detector Tubes | ☐ | Evacuation Routes | ☑ | Hospital Route | ☑ | Pedestrian Safety | ☑ |
| Dust Monitor | ☐ | Explosion/Fire | ☐ | Work Area | ☑ | Vapor/Dust Suppression | ☐ |
| Personal Air | ☐ | Medical Emergency | ☑ | Smoking/Break Area | ☑ | Muster Location | ☑ |



Shell/Motiva 0007524

**Are site workers Fit To Work?** Yes ☑ No ☐ _____

**Do all site workers understand injury/intervention reporting requirements?** Yes ☑ No ☐

**Comments:** _____

**Name & Title of Person Conducting Tailgate Safety Meeting:** Nick Zwiene

**Signature:** _____ **Date:** 2/4/11

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth during the tailgate safety meeting and within the project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are **FIT** for work prior to work, duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

**SIGN IN**

| MEETING ATTENDEES | | | |
|---|---|---|---|
| Name [Print] | Signature | Company | Time |
| Nick Zwiene | | Sovereign | 0730 |
| Justin King | | Sovereign | 7:30 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

| | | | |
|---|---|---|---|
| Are all personnel fit to work? | (YES) | NO | |
| Have all personnel been informed of work to be completed? | (YES) | NO | |
| Have all personnel been informed on **STOP WORK** procedures? | (YES) | NO | |
| Have all personnel reviewed all JSAs applicable to scope of work? | (YES) | NO | |
| Has fuel delivery service been informed? | YES | NO | (N/A) |
| Is fuel delivery due today? | YES | NO | (N/A) |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | (N/A) |
| Are work areas controlled to protect workers, site staff, and the public? | (YES) | NO | N/A |
| Do all contractors have their API Safety Key card? | YES | NO | (N/A) |
| Have all personnel reviewed and understand the Shell 12 Life-Saving Rules? | (YES) | NO | |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Nick Zwiene | | 2/4/11 0730 | | |



Shell/Motiva 0007525

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest that they were **FIT** for work upon completion of work.

**SIGN OUT**

| MEETING ATTENDEES | | | |
|---|---|---|---|
| Name [Print] | Signature | Company | Time |
| Nick Zercone | | Sovereign | 12:30 |
| Justin King | | Sovereign | 12:30 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

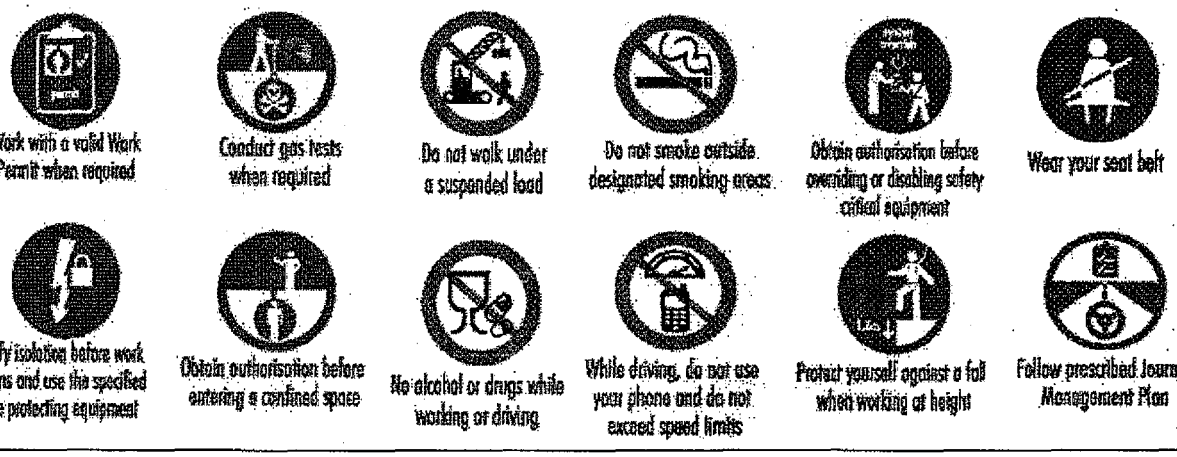
| | | | |
|---|---|---|---|
| Are all personnel fit to work (i.e., no injury or illness during workday)? | (YES) | NO | |
| Has the work area been left tidy and safe? | (YES) | NO | |
| Are site personnel aware of status of work? | (YES) | NO | |
| Are changes to equipment documented and communicated? | YES | NO | (N/A) |
| All incidents, near misses, unsafe situations reported? | YES | NO | (N/A) |
| All **STOP WORK** initiatives have been documented in comment section? | YES | NO | (N/A) |

Did the work activity require any Modifications/Changes not listed above? ☐ YES ☑ NO ☐ N/A Briefly Describe: _____

Note: If YES, was it authorized by management? ☐ YES ☐ NO ☑ N/A Authorized by: _____

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Nick Zercone | | 2/8/11 | Gustavo | |

## SHELL 12 Life-Saving Rules






Shell/Motiva 0007526

SOVEREIGN CONSULTING INC.

## Behavior Based Safety Checklist - FIELD WORK
### WILL YOUR NEXT CHOICE BE THE SAFE CHOICE?

Observer: JKing  Tasks Observed: GW gauging

Date: 2/4/11  Total Safe Behaviors Observed: _____

Office: Farmingdale  Job Site: Motiva Terminal  Total At Risk Behaviors Observed: _____

% Safe Behaviors: _____

| Critical Behavior List | Safe | At Risk | Critical Behavior List | Safe | At Risk |
|---|---|---|---|---|---|
| Clear of pinch points | III | | Traffic awareness | I | |
| Use of traffic control devices | III | | Review of JSAs | IIII | |
| Use of tools | IIII | | Lifting / moving of equipment | I | |
| Precautions for weather | I | | Emergency equipment | II | |
| PPE - safety vest and safety glasses | II | | Electrical safety | — | |
| PPE- hard hat | I | | Heavy equipment hazards | — | |
| PPE - hearing protection | I | | Biological hazards addressed | I | |
| PPE - task appropriate gloves | II | | Physical hazards addressed | I | |
| PPE - other | I | | Work Permits | I | |
| Use of air monitoring equipment | — | | | | |
| Clear of moving / rotating equipment | — | | | | |

| OBSERVED SAFE BEHAVIORS / GOOD PRACTICES |
|---|
| Reviewed all applicable JSAs |
| |
| |

| OBSERVED AT RISK BEHAVIORS | |
|---|---|
| What was observed to be at-risk? | Why was it at risk? |
| No observed risk behaviors | |
| | |
| | |

| Comments: |
|---|
| |
| |

### Definitions for Critical Behaviors:

**Clear of pinch points:** body parts are kept out of pinch points -such as under gratings, manhole covers, etc.
**Use of traffic control devices:** Work zone delineators / traffic control devices used per the HASP/Scorecard
**Use of tools:** proper tool for the job utilized, tool is used appropriately (no hammering with a screwdriver, etc.), tool is in good condition
**Precautions for weather:** applies sunscreen, drinks plenty of fluids in hot weather; dresses appropriately for cold weather
**PPE - safety vest, safety glasses:** worn on site at all times
**PPE - hard hat:** worn when there are overhead hazards, construction activities, drilling, excavation, or as required by HASP
**PPE- hearing protection:** worn during times where noise is >85 dBa; drilling, vac truck, bobcat, geoprobe, etc.
**PPE - task appropriate gloves:** leather or protective gloves for manhole handling, equipment handling; nitrile gloves for gw sampling, and minimal chemical exposures
**PPE- other:** Other PPE as required by site HASP
**Use of air monitoring equipment:** per the site HASP
**Clear of moving/rotating equipment:** long hair should be tied back, long sleeves buttoned or rolled up to elbows, stay out of point of operation
**Traffic awareness:** faces traffic, remains alert to oncoming vehicles, blocks off parking spots where encroachment may be a problem
**Review of JSAs:** Prior to task, JSA should be reviewed
**Lifting/moving equipment:** proper body positioning during lifting, lift with legs, load close to body, etc.
**Emergency equipment:** should have fire extinguisher, first aid kit, BBP kit available at site
**Electrical safety:** LOTO utilized, GFCI utilized
**Heavy equipment hazards:** aware of backup signals, only approaches heavy equipment after eye contact/hand signal from operator, and operator stops equipment, stays out of heavy equipment blind spots
**Biological hazards addressed:** preventative measures for ticks, mosquitos, chiggers, bees, snakes when needed
**Physical hazards addressed:** fall protection, slip, trip, fall, overhead hazards, compressed gases, pressure relief, etc.
**Work Permits:** obtained for working at heights, confined space entry, hot work, excavation, LOTO, etc.

SOVEREIGN CONSULTING INC.

**Behavior Based Safety Checklist - DRIVING**
**WILL YOUR NEXT CHOICE BE THE SAFE CHOICE?**

Observer: JKing
Date: 2/4/11
Office: Farmingdale, NY

Job Site: SE017 Motiva Terminal

Total Safe Behaviors Observed: ____
Total At Risk Behaviors Observed: ____
% Safe Behaviors: ____

| Critical Behavior List | Safe | At Risk | Critical Behavior List | Safe | At Risk |
|---|---|---|---|---|---|
| Seat belts | / | | Following distance | ///// | |
| Seat adjustment | / | | Traffic lights/signs | /// | |
| Mirror adjustment | / | | Travel surface / speed | //// | |
| Hands on wheel | / | | Distractions | / | |
| Personal health / task alignment | / | | Signaling / Changing lanes | //// | |
| Walk around | / | | Parking | / | |
| Headrest adjusted | / | | Refueling | / | |
| Headlights | / | | Securing vehicle | / | |
| Eyes on path | / | | | | |
| | | | | | |

| OBSERVED SAFE BEHAVIORS / GOOD PRACTICES |
|---|
| Made all adjustments |
| |
| |
| |

| OBSERVED AT RISK BEHAVIORS | |
|---|---|
| What was observed to be at-risk? | Why was it at risk? |
| No observed risk behaviors | |
| | |
| | |
| | |

| Comments: |
|---|
| |
| |

**Definitions for Critical Behaviors:**

**Seat belts:** All seat belts should be fastened for driver and occupants.
**Seat and mirror adjustment:** Seat properly adjusted for driver; mirrors are aligned for optimum coverage of side and rear views.
**Hands on wheel:** Driver has both hands on steering wheel
**Personal health / task alignment:** Driver is rested, physically capable of driving, and not emotionally distracted
**Walk around:** performs walk around vehicle to check for unforeseen obstructions prior to entering
**Headrest adjusted:** Headrest is properly adjusted for current driver to prevent potential whip-lash from rear-end impact
**Headlights:** Turns on headlights during rainy, foggy, snowy weather, etc.
**Eyes on path:** Eyes are on the road ahead, not focused on reading a map or other
**Following distance:** Maintains a safe following distance of 3 seconds for cars & vans with dry conditions, 4 seconds for trucks
**Obeying traffic lights/signs:** This includes coming to a complete stop and/or yeilding at appropriate road signs and signals
**Travel surface / speed:** Travel within speed limits, and adjusts speed for poor road conditions
**Distractions:** Driver is not distracted by radios, maps, telephones or conversations within the car while moving.
**Signaling / changing lanes:** Driver checks mirrors and signals for turns and lane changes
**Parking:** Driver enters parking space slowly, allows room on each side of vehicle
**Refueling:** shuts off engine during refueling
**Securing vehicle:** all loads are secured properly both inside vehicle and outside vehicle

# TIME & MATERIAL FIELDSHEET

**Date:** Friday, February 04, 2011
**Page:** 1 of 1

**Project #:** 5E017.140
**Project Address:** 25 Paidge Avenue, Brooklyn, New York
**Client:** Shell Oil Products, U.S.

## Employee Time

| Employee Name | Task # | Subtask # | Prep Time | Travel Time | On-Site Time | Total Time |
|---|---|---|---|---|---|---|
| Nickolas Zarcone | 3 | 96 | 1.5 | 3 | 5 | 9.5 |
| Justin King | 3 | 96 | 1 | 3 | 5 | 9 |
| | | | | | | |
| | | | | | | |
| | | | | | | |


**SOVEREIGN CONSULTING, INC.**

290 Executive Drive, Suite 300
Cranberry Twp., PA 16066
www.sovcon.com


## SOVEREIGN OWNED OR LEASED EQUIPMENT AND MATERIALS LIST

| Item # | Item | Qty | Units |
|---|---|---|---|
| OE104 | Chevy Van | | hrs |
| OE124 | Ford F-150 | | hrs |
| OE115 | Interface Probe | | day |
| OE143 | Multi-Gas PID | | day |
| SR820 | Mobile Phone | | day |
| SR800 | 4" Bailer | | each |
| SR800 | 2" Bailer | | each |
| SR800 | 1" Bailer | | each |
| SR812 | QED Filters | | each |
| SR816 | LDPE Tubing | | ft |
| SR817 | Silicon Flex Hose | | ft |
| SR820 | Gloves (box) (100) | | each |

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR835 | Sorbent Sock | | each |
| SR836 | Sorbent Pads | 6 | each |
| SR837 | Sorbent Boom | | each |
| SR935 | 55 Gallon Drum | | each |
| SR980 | Gripper Plug - 1" | | each |
| SR981 | Gripper Plug - 2" | | each |
| SR982 | Gripper Plug - 4" | | each |
| SR983 | Brass Padlock | | each |
| SR205 | Hand Auger | | day |
| SR300 | Air Sampling Pump | | day |

## FEI Rental Equipment (Need PO)

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR105 | Interface Probe | 1 | day |
| SR110 | DO Meter | | day |
| SR130 | Sub Pump 2" | | day |
| SR300 | Air Sampling Pump | | day |
| SR310 | PID | | day |
| SR335 | 4-Gas Meter | | day |
| SR420 | Level Logger | | day |
| SR635 | Survey Equipment | | day |
| SR645 | GW Multi-Meter | | day |
| SR655 | Peristaltic Pump | | day |

## RENTAL EQUIPMENT AND ADDITIONAL MATERIALS

List items rented or purchased to complete work

## Subcontractor Labor

Name & Description of Work

## WORK DESCRIPTION

NZ&JK on site @ 07:30 off @ 12:30.
Went over H&S and scope of work with terminal worker.
Performed monthly well gauging.
Bailed product from well that exhibited recoverable product.
1 gallon of product were recovered by hand bailing.

**Project Manager / Supervisor Approval:** _____ **Date:** _____

SOVEREIGN CONSULTING - WELL GAUGING/HAND-BAILING DATA SUMMARY SHEET
PAGE 1 OF 1

DATE: 2/4/11

CLIENT: MOTIVA ENTERPRISES LLC
25 PAIDGE AVENUE, BROOKLYN NY
SCI JOB # 5E017.140

| WELL ID | TIME OF READING | WELL DIA. (IN) | TOTAL DEPTH (FT) | DEPTH TO PRODUCT (FT) | DEPTH TO WATER (FT) | PRODUCT THICKNESS (FT) | PRODUCT RECOVERED (GAL) | NOTES |
|---|---|---|---|---|---|---|---|---|
| MW-1 | | 4 | | | | | | Obstruction |
| MW-3 | | 4 | | | | | | Obstruction |
| MW-29 | 8:10 | 4 | | | 1.93 | | | |
| MW-04 | 8:12 | 4 | | 2.29 | 2.32 | 0.03 | | |
| MW-30 | | 4 | | | | | | Obstruction |
| MW-5 | | 4 | | | | | | Obstruction |
| MW-28 | | 4 | | | | | | Obstruction |
| MW-27 | 8:30 | 4 | | | 2.23 | | | |
| MW-6 | | 4 | | | | | | Obstruction |
| MW-7R | | 4 | | | | | | |
| MW-8 | | 4 | | | | | | |
| MW-9 | | 4 | | | | | | |
| MW-21R | 8:40 | 4 | | | 3.73 | | | |
| MW-22R | 8:50 | 4 | | | 3.69 | | | |
| MW-13 | 8:54 | 4 | | | 7.14 | | | |
| MW-14 | 8:57 | 4 | | | 6.03 | | | |
| MW-23 | 9:02 | 4 | | | 3.59 | | | |
| MW-24 | 9:06 | 4 | | | 3.54 | | | |
| MW-43 | 9:10 | 4 | | | 3.28 | | | |
| MW-42 | | 4 | | | | | | Obstruction |
| MW-44 | | 4 | | | | | | Obstruction |
| MW-25 | | 4 | | | | | | Obstruction |
| TW-1 | | 6 | | | | | | undrewater |
| MW-26 | 9:55 | 4 | | 3.66 | 3.69 | 0.03 | | |
| TW-2 | 10:00 | 6 | | | 3.75 | | | |
| MW-2 | | 4 | | | | | | Obstruction |
| TW-3 | | 6 | | | | | | underwater |
| TW-4 | | 6 | | | | | | underwater |
| TW-5 | | 6 | | | | | | Obstruction |
| MW-31 | | 4 | | | | | | Obstruction |
| TW-6 | | 6 | | | | | | Obstruction |
| MW-20 | 10:10 | 4 | | | 3.03 | | | |
| MW-15 | 10:14 | 4 | | | 3.09 | | | |
| MW-16 | 10:20 | 4 | | | 2.92 | | | |
| MW-17 | 10:24 | 4 | | | 2.47 | | | |
| MW-18 | 10:27 | 4 | | | 2.93 | | | |
| MW-32 | 10:35 | 4 | | | 3.46 | | | |
| RW-34 | 11:05 | 6 | | 6.85 | 6.87 | 0.02 | | |
| MW-33 | 11:08 | 4 | | | 5.32 | | | |
| MW-39 | 11:15 | 4 | | | 6.21 | | | |
| RW-40 | 11:22 | 6 | | 7.26 | 7.85 | 0.59 | | |
| MW-35 | 11:25 | 4 | | | 6.06 | | | |
| RW-36 | 11:30 | 6 | | | 8.06 | | | |
| MW-41 | 11:38 | 4 | | | 6.75 | | | |
| RW-37 | 11:40 | 6 | | | 7.22 | | | |
| MW-38 | 11:51 | 4 | | | 6.91 | | | |
| | | | | | | | | |
| | | | | | | | | |

Location 25 Paidge Ave Date 2/4/11

Project / Client Brooklyn Terminal Motiva (Page 1)

Well Gauging & Product Recovery

Sovereign on Site @ 0730 off @ 1230
NZ & JK 2010 F150 pickup ~15°F
Went over H&S and scope of work with terminal worker
per Motiva, Donut gauge well along Dock side beside snow & ice (7R-8-9)
Obstruction due to piles of snow

| ID | Time | DTW | DTP | Product Thickness | Product Recovered | |
|---|---|---|---|---|---|---|
| 1 | | | | | obstruction | ATU |
| 3 | | | | | obstruction | ATU |
| 29 | 8:10 | 1.93 | | | | |
| 4 | 8:12 | 2.32 | 2.29 | | | |
| 30 | | | | | obstruction | ATU |
| 5 | | | | | obstruction | ATU |
| 28 | | | | | obstruction | ATU |
| 27 | 8:30 | 2.23 | | | ~~obst~~ NO | |
| 6 | | | | | obstruction | ATU |
| 7R | | | | | | |
| 8 | | | | | | |
| 9 | | | | | | |
| 21R | 8:40 | 3.73 | | | | |
| 22R | 8:50 | 3.69 | | | | |
| 13 | 8:54 | 7.14 | | | | |
| 14 | 8:58 | 6.03 | | | | |
| 23 | 9:02 | 3.59 | | | | |
| 24 | 9:06 | 3.54 | | | | |
| 43 | 9:10 | 3.28 | | | | |
| 42 | | | | | obstruction | Driver car |

Location 25 Pridge Ave Date 2/4/11

Project / Client Brooklyn Terminal Motiva (Page 2)

Well Gauging & Hand Bailing

| ID | Time | DTW | DTP | Product Thickness | Product Recovered |
|---|---|---|---|---|---|
| 47 | | | | | Obstruction, ATU |
| 25 | | | | | obstruction |
| TW1 | | | | | under water |
| MW 26 | 9:55 | 3.69 | 3.66 | .03 | |
| TW 2 | 10:00 | 3.75 | | | |
| MW 2 | | | | | obstruction |
| TW 3 | | | | | under water |
| TW 4 | | | | | under water |
| TW 5 | | | | | obstruction |
| 31 | | | | | obstruction |
| TW 6 | | | | | obstruction |
| 20 | 10:10 | 3.03 | | | |
| 15 | 10:14 | 3.09 | | | |
| 16 | 10:20 | 2.92 | | | |
| 17 | 10:24 | 2.47 | | | |
| 18 | 10:27 | 2.93 | | | |
| 32 | 10:35 | 3.46 | | | |
| 34 | 11:05 | 6.87 | 6.85 | .02 | need new 6" 3- Plug |
| 33 | 11:08 | 5.32 | | | |
| 39 | 11:15 | 6.21 | | | |
| 40 | 11:22 | 7.85 | 7.26 | .59 | 1 Gal |
| 35 | 11:25 | 6.06 | | | |
| 36 | 11:30 | 8.06 | | | need new 6" 3- Plug |



Location 25 Pridge Ave Date 2/4/11

Project / Client Brooklyn Terminal Motiva (Page 3)

Well Gauging & Hand Bailing

| ID | Time | DTW | DTP | Product Thickness | Product Recovered |
|---|---|---|---|---|---|
| 41 | 11:38 | 6.75 | | | |
| 37 | 11:46 | 7.23 | | | |
| 38 | 11:51 | 6.91 | | | |

ATU = Attempted To Uncover from Snow

Obstruction = Snow piles

(1 Gal. Recovered)

Shell/Motiva 0007532

## Sovereign Consulting Inc.
## SHELL Tailgate Safety Meeting Form

(M)

(To be submitted with field notes to Project Manager each day)

| | |
|---|---|
| **Project Name:** ~~[redacted]~~ Brooklyn Terminal | **Date:** 3/26/11 |
| **Location:** 25 Pidge Ave | **Weather:** Clear Sky |
| **Project Manager [Print]:** Doug. J | **Temp:** ~ 28°F |
| **Contractors/Subcontractors:** | |
| Nick Zarcone & Justin King | |
| **Scope of Work:** MW Gauging + LNAPL Recovery | |

| **Task Hazards:** (check all that apply) *requires Permit to Work | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☑ | Ladders* | ☐ | Haz. Substances | ☑ | Sharp Objects | ☑ |
| Confined Spaces* | ☐ | Explosion | ☐ | Heavy Equipment | ☐ | Tools | ☑ |
| Cutting/Welding* | ☐ | Falling Objects | ☐ | Flying Debris | ☐ | Traffic | ☑ |
| Electrical | ☐ | Fire | ☐ | Noise | ☑ | Weather | ☑ |
| Environmental Hazard | ☐ | Insects/Biological | ☐ | Slip/Trip, Hazards | ☑ | Other (describe below) | ☐ |
| Elevated Work* | ☐ | Ticks – Biohazard | ☐ | Overhead | ☑ | | |
| Excavations* | ☐ | Bees, Wasps, Hornets – Biohazard | ☐ | Sanitation | ☐ | | |

| Work Zone Delineation Level | Level 1 ☐ | Level 2 ☐ | Level 3 ☑ *Watchperson required | Level 4 ☐ *Temp. Traffic Control Plan required |
|---|---|---|---|---|

| **Title of JSAs reviewed today:** | General Site Activities<br>Decon Activities<br>Manhole Cover removal/replacement<br>GW Gauging activities |
|---|---|

**Engineering Controls / Work Practices:** PPE + Traffic Control

| **Levels of Protection / Personal Protective Equipment:** | | | |
|---|---|---|---|
| Level A ☐ | Eye & Face Protection | ☑ | Safety Glasses ☑ Face Shield ☐ |
| Level B ☐ | Foot Protection | ☑ | Steel Toes ☑ Hip Boots/Waders ☐ |
| Level C ☐ | Hand Protection | ☑ | Nitrile Gloves ☑ Leather Gloves ☑ Full Arm Chemical ☐ |
| Level D ☑ | Head Protection | ☑ | Hard Hat ☑ |
| | Hearing Protection | ☑ | Ear Muffs/Plugs ☑ |
| | Other | ☐ | Barricades ☑ High Visibility Safety Vests ☑ Cones/Flags ☑ |
| | | | Amber Light/Vehicle Hazards ☐ Crash Truck ☑ Tyvek/Coveralls ☐ |

| **Air Monitoring/Sampling** | | **Emergency Response** | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☐ | Emergency Alarms | ☑ | First Aid Kit Location | ☑ | Cell Phone Use none | ☐ |
| FID/PID | ☐ | Emergency Contacts | ☑ | Spill Kit Location | ☑ | Fire Ext. Location | ☑ |
| Detector Tubes | ☐ | Evacuation Routes | ☑ | Hospital Route | ☑ | Pedestrian Safety | ☑ |
| Dust Monitor | ☐ | Explosion/Fire | ☑ | Work Area | ☑ | Vapor/Dust Suppression | ☑ |
| Personal Air | ☐ | Medical Emergency | ☑ | Smoking/Break Area | ☑ | Muster Location | ☑ |



Shell/Motiva 0007533

**Are site workers Fit To Work?** Yes ☑ No ☐

**Do all site workers understand injury/intervention reporting requirements?** Yes ☑ No ☐

**Comments:**

**Name & Title of Person Conducting Tailgate Safety Meeting:** Nick Zarcone

**Signature:** | **Date:** 3/26/11

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth during the tailgate safety meeting and within the project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are **FIT** for work prior to work, duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

## SIGN IN

| MEETING ATTENDEES | | | |
|---|---|---|---|
| Name [Print] | Signature | Company | Time |
| Nick Zarcone | | Sovereign | 07:15 |
| Justin King | | SCI | 7:15 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

| | | | |
|---|---|---|---|
| Are all personnel fit to work? | (YES) | NO | |
| Have all personnel been informed of work to be completed? | (YES) | NO | |
| Have all personnel been informed on **STOP WORK** procedures? | (YES) | NO | |
| Have all personnel reviewed all JSAs applicable to scope of work? | (YES) | NO | |
| Has fuel delivery service been informed? | YES | NO | (N/A) |
| Is fuel delivery due today? | YES | NO | (N/A) |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | (N/A) |
| Are work areas controlled to protect workers, site staff, and the public? | (YES) | NO | N/A |
| Do all contractors have their API Safety Key card? | YES | NO | (N/A) |
| Have all personnel reviewed and understand the Shell 12 Life-Saving Rules? | (YES) | NO | |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Nick Zarcone | | 3/26/11 0715 | YEONG LEE | Yeong Lee |



Shell/Motiva 0007534

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest that they were **FIT** for work upon completion of work.

**SIGN OUT**

| MEETING ATTENDEES | | | |
|---|---|---|---|
| Name [Print] | Signature | Company | Time |
| Nick Zucca | | Sovereign | |
| Justin King | | SCI | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

| | | | |
|---|---|---|---|
| Are all personnel fit to work (i.e., no injury or illness during workday)? | YES | NO | |
| Has the work area been left tidy and safe? | YES | NO | |
| Are site personnel aware of status of work? | YES | NO | |
| Are changes to equipment documented and communicated? | YES | NO | N/A |
| All incidents, near misses, unsafe situations reported? | YES | NO | N/A |
| All **STOP WORK** initiatives have been documented in comment section? | YES | NO | N/A |

Did the work activity require any Modifications/Changes not listed above? ☐ YES ☐ NO ☐ N/A Briefly Describe: _____

Note: If YES, was it authorized by management? ☐ YES ☐ NO ☑ N/A Authorized by: _____

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Nick Zucca | | 3/24/11 | Gustavo Islas | |

## SHELL 12 Life-Saving Rules

Work with a valid Work Permit when required

Conduct gas tests when required

Do not walk under a suspended load

Do not smoke outside designated smoking areas

Obtain authorisation before overriding or disabling safety critical equipment

Wear your seat belt

Verify isolation before work begins and use the specified life protecting equipment

Obtain authorisation before entering a confined space

No alcohol or drugs while working or driving

While driving, do not use your phone and do not exceed speed limits

Protect yourself against a fall when working at height

Follow prescribed Journey Management Plan



Shell/Motiva 0007535

# TIME & MATERIAL FIELDSHEET

**Date: Saturday, March 26, 2011**
**Page: 1 of 1**

**Project #: 5E017.140**
**Project Address: 25 Paidge Avenue, Brooklyn, New York**
**Client: Shell Oil Products, U.S.**

## Employee Time

| Employee Name | Task # | Subtask # | Prep Time | Travel Time | On-Site Time | Total Time |
|---|---|---|---|---|---|---|
| Nickolas Zarcone | 3 | 96 | 1 | 2.5 | 5 | 8.5 |
| Justin King | 3 | 96 | 0.5 | 2.5 | 5 | 8 |
| | | | | | | |
| | | | | | | |
| | | | | | | |

**SOVEREIGN CONSULTING, INC.**

290 Executive Drive, Suite 300
Cranberry Twp., PA 16066
www.sovcon.com

## SOVEREIGN OWNED OR LEASED EQUIPMENT AND MATERIALS LIST

| Item # | Item | Qty | Units |
|---|---|---|---|
| OE104 | Chevy Van | | hrs |
| OE124 | Ford F-150 | | hrs |
| OE115 | Interface Probe | | day |
| OE143 | Multi-Gas PID | | day |
| SR620 | Mobile Phone | | day |
| SR800 | 4" Bailer | | each |
| SR800 | 2" Bailer | | each |
| SR800 | 1" Bailer | | each |
| SR812 | QED Filters | | each |
| SR816 | LDPE Tubing | | ft |
| SR817 | Silicon Flex Hose | | ft |
| SR820 | Gloves (box) (100) | | each |

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR835 | Sorbent Sock | | each |
| SR836 | Sorbent Pads | 6 | each |
| SR837 | Sorbent Boom | | each |
| SR935 | 55 Gallon Drum | | each |
| SR980 | Gripper Plug - 1" | | each |
| SR981 | Gripper Plug - 2" | | each |
| SR982 | Gripper Plug - 4" | | each |
| SR983 | Brass Padlock | | each |
| SR205 | Hand Auger | | day |
| SR300 | Air Sampling Pump | | day |
| | | | |

## FET Rental Equipment (Need PO)

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR105 | Interface Probe | 1 | day |
| SR110 | DO Meter | | day |
| SR130 | Sub Pump 2" | | day |
| SR300 | Air Sampling Pump | | day |
| SR310 | PID | | day |
| SR335 | 4-Gas Meter | | day |
| SR420 | Level Logger | | day |
| SR635 | Survey Equipment | | day |
| SR645 | GW Multi-Meter | | day |
| SR655 | Peristaltic Pump | | day |
| | | | |

## RENTAL EQUIPMENT AND ADDITIONAL MATERIALS
List items rented or purchased to complete work

## Subcontractor Labor
Name & Description of Work

## WORK DESCRIPTION

NZ & JK on site @ 0700 off @ 1200
Went over H&S and scope of work with terminal worker.
Performed monthly well gauging.
Bailed product from wells that exhibited recoverable product.
3 Gal. of product were recovered by hand bailing.

**Project Manager / Supervisor Approval:** _____ **Date:** _____

SOVEREIGN CONSULTING - WELL GAUGING/HAND-BAILING DATA SUMMARY SHEET
PAGE 1 OF 1

DATE: 3/26/2011

CLIENT: MOTIVA ENTERPRISES LLC
25 PAIDGE AVENUE, BROOKLYN NY
SCI JOB # 5E017.140

| WELL ID | TIME OF READING | WELL DIA. (IN) | TOTAL DEPTH (FT) | DEPTH TO PRODUCT (FT) | DEPTH TO WATER (FT) | PRODUCT THICKNESS (FT) | PRODUCT RECOVERED (GAL) | NOTES |
|---|---|---|---|---|---|---|---|---|
| MW-1 | 7:36 | 4 | | | 2.82 | | | |
| MW-3 | 7:40 | 4 | | | 2.22 | | | |
| MW-29 | 7:44 | 4 | | | 1.35 | | | |
| MW-04 | 7:47 | 4 | | 1.74 | 1.77 | 0.03 | | |
| MW-30 | 7:51 | 4 | | | 1.72 | | | |
| MW-5 | 7:56 | 4 | | | 1.30 | | | |
| MW-28 | 8:01 | 4 | | | 1.14 | | | |
| MW-27 | 8:05 | 4 | | | 1.71 | | | |
| MW-6 | 8:09 | 4 | | | 4.25 | | | |
| MW-7R | 8:14 | 4 | | | 5.38 | | | |
| MW-8 | 8:16 | 4 | | | 5.81 | | | |
| MW-9 | 8:18 | 4 | | | 5.78 | | | |
| MW-21R | 8:25 | 4 | | | 3.66 | | | |
| MW-22R | 8:26 | 4 | | | 3.72 | | | |
| MW-13 | 8:29 | 4 | | | 7.04 | | | |
| MW-14 | 8:32 | 4 | | | 5.86 | | | |
| MW-23 | 8:36 | 4 | | | 3.46 | | | |
| MW-24 | 8:40 | 4 | | | 3.36 | | | |
| MW-43 | 8:44 | 4 | | | 3.10 | | | |
| MW-42 | 8:49 | 4 | | | 3.07 | | | |
| MW-44 | 8:55 | 4 | | | 3.04 | | | |
| MW-25 | 9:00 | 4 | | | 2.47 | | | |
| TW-1 | underwater | 6 | | | | | | |
| MW-26 | underwater | 4 | | | | | | |
| TW-2 | 9:36 | 6 | | | 2.36 | | | |
| MW-2 | 9:42 | 4 | | 3.13 | 3.21 | 0.08 | | |
| TW-3 | underwater | 6 | | | | | | |
| TW-4 | underwater | 6 | | | | | | |
| TW-5 | 9:55 | 6 | | 2.48 | 2.51 | 0.03 | | |
| MW-31 | 9:59 | 4 | | 2.83 | 3.16 | 0.33 | 1.00 | |
| TW-6 | underwater | 6 | | | | | | |
| MW-20 | 10:09 | 4 | | | 2.46 | | | |
| MW-15 | 10:13 | 4 | | | 2.62 | | | |
| MW-16 | 10:16 | 4 | | | 2.61 | | | |
| MW-17 | 10:20 | 4 | | | 2.08 | | | |
| MW-18 | 10:24 | 4 | | | 2.54 | | | |
| MW-32 | 10:28 | 4 | | | 3.11 | | | |
| RW-34 | 10:38 | 6 | | 6.69 | 6.71 | 0.02 | | |
| MW-33 | 10:39 | 4 | | | 5.22 | | | |
| MW-39 | 10:45 | 4 | | | 5.99 | | | |
| RW-40 | 10:50 | 6 | | 7.45 | 8.42 | 1.03 | 2.00 | |
| MW-35 | 10:54 | 4 | | | 5.96 | | | |
| RW-36 | 10:58 | 6 | | 7.99 | 8.08 | 0.09 | | |
| MW-41 | 11:04 | 4 | | 7.61 | 7.65 | 0.04 | | |
| RW-37 | 11:07 | 6 | | 7.07 | 7.09 | 0.02 | | |
| MW-38 | 11:15 | 4 | | | 6.56 | | | |
| | | | | | | | | |
| | | | | | | | | |

SOLUTION CONSULTING INC.

**Behavior Based Safety Checklist - DRIVING**
**WILL YOUR NEXT CHOICE BE THE SAFE CHOICE?**

Observer: JKing
Date: 3/26/11
Office: Farmingdale, NY

Job Site: SEQ17 Motiva Terminal

Total Safe Behaviors Observed: _____
Total At Risk Behaviors Observed: _____
% Safe Behaviors: _____

| Critical Behavior List | Safe | At Risk | Critical Behavior List | Safe | At Risk |
|---|---|---|---|---|---|
| Seat belts | / | | Following distance | //// | |
| Seat adjustment | / | | Traffic lights/signs | /// | |
| Mirror adjustment | / | | Travel surface / speed | //// | |
| Hands on wheel | / | | Distractions | // | |
| Personal health / task alignment | / | | Signaling / Changing lanes | /// | |
| Walk around | / | | Parking | / | |
| Headrest adjusted | / | | Refueling | — | |
| Headlights | / | | Securing vehicle | / | |
| Eyes on path | / | | | | |
| | | | | | |

**OBSERVED SAFE BEHAVIORS / GOOD PRACTICES**

Signaled before changing lanes

**OBSERVED AT RISK BEHAVIORS**

| What was observed to be at-risk? | Why was it at risk? |
|---|---|
| No observed risk behaviors | |
| | |
| | |

Comments:

**Definitions for Critical Behaviors:**

**Seat belts:** All seat belts should be fastened for driver and occupants.
**Seat and mirror adjustment:** Seat properly adjusted for driver; mirrors are aligned for optimum coverage of side and rear views.
**Hands on wheel:** Driver has both hands on steering wheel
**Personal health / task alignment:** Driver is rested, physically capable of driving, and not emotionally distracted
**Walk around:** performs walk around vehicle to check for unforeseen obstructions prior to entering
**Headrest adjusted:** Headrest is properly adjusted for current driver to prevent potential whip-lash from rear-end impact
**Headlights:** Turns on headlights during rainy, foggy, snowy weather, etc.
**Eyes on path:** Eyes are on the road ahead, not focused on reading a map or other
**Following distance:** Maintains a safe following distance of 3 seconds for cars & vans with dry conditions, 4 seconds for trucks
**Obeying traffic lights/signs:** This includes coming to a complete stop and/or yeilding at appropriate road signs and signals
**Travel surface / speed:** Travel within speed limits, and adjusts speed for poor road conditions
**Distractions:** Driver is not distracted by radios, maps, telephones or conversations within the car while moving.
**Signaling / changing lanes:** Driver checks mirrors and signals for turns and lane changes
**Parking:** Driver enters parking space slowly, allows room on each side of vehicle
**Refueling:** shuts off engine during refueling
**Securing vehicle:** all loads are secured properly both inside vehicle and outside vehicle

SOVEREIGN CONSULTING INC.

**Behavior Based Safety Checklist - FIELD WORK**
**WILL YOUR NEXT CHOICE BE THE SAFE CHOICE?**

Observer: JKing
Tasks Observed: MW Gauging
Date: 3/26/11
Office: Farmingdale
Job Site: 55017 Motiva Terminal

Total Safe Behaviors Observed: _____
Total At Risk Behaviors Observed: _____
% Safe Behaviors: _____

| Critical Behavior List | Safe | At Risk | Critical Behavior List | Safe | At Risk |
|---|---|---|---|---|---|
| Clear of pinch points | III | | Traffic awareness | I | |
| Use of traffic control devices | II | | Review of JSAs | IIII | |
| Use of tools | IIII | | Lifting / moving of equipment | I | |
| Precautions for weather | I | | Emergency equipment | II | |
| PPE - safety vest and safety glasses | II | | Electrical safety | — | |
| PPE- hard hat | I | | Heavy equipment hazards | — | |
| PPE - hearing protection | I | | Biological hazards addressed | I | |
| PPE - task appropriate gloves | II | | Physical hazards addressed | I | |
| PPE - other | I | | Work Permits | I | |
| Use of air monitoring equipment | — | | | | |
| Clear of moving / rotating equipment | — | | | | |

| OBSERVED SAFE BEHAVIORS / GOOD PRACTICES |
|---|
| Used all Tools appropriately |
| |
| |
| |

| OBSERVED AT RISK BEHAVIORS | |
|---|---|
| What was observed to be at-risk? | Why was it at risk? |
| No observed risk behaviors | |
| | |
| | |
| | |

| Comments: |
|---|
| |
| |

**Definitions for Critical Behaviors:**

**Clear of pinch points:** body parts are kept out of pinch points -such as under gratings, manhole covers, etc.
**Use of traffic control devices:** Work zone delineators / traffic control devices used per the HASP/Scorecard
**Use of tools:** proper tool for the job utilized, tool is used appropriately (no hammering with a screwdriver, etc.), tool is in good condition
**Precautions for weather:** applies sunscreen, drinks plenty of fluids in hot weather; dresses appropriately for cold weather
**PPE - safety vest, safety glasses:** worn on site at all times
**PPE - hard hat:** worn when there are overhead hazards, construction activities, drilling, excavation, or as required by HASP
**PPE- hearing protection:** worn during times where noise is >85 dBa; drilling, vac truck, bobcat, geoprobe, etc.
**PPE - task appropriate gloves:** leather or protective gloves for manhole handling, equipment handling; nitrile gloves for gw sampling, and minimal chemical exposures
**PPE- other:** Other PPE as required by site HASP
**Use of air monitoring equipment:** per the site HASP
**Clear of moving/rotating equipment:** long hair should be tied back, long sleeves buttoned or rolled up to elbows, stay out of point of operation
**Traffic awareness:** faces traffic, remains alert to oncoming vehicles, blocks off parking spots where encroachment may be a problem
**Review of JSAs:** Prior to task, JSA should be reviewed
**Lifting/moving equipment:** proper body positioning during lifting, lift with legs, load close to body, etc.
**Emergency equipment:** should have fire extinguisher, first aid kit, BBP kit available at site
**Electrical safety:** LOTO utilized, GFCI utilized
**Heavy equipment hazards:** aware of backup signals, only approaches heavy equipment after eye contact/hand signal from operator, and operator stops equipment, stays out of heavy equipment blind spots
**Biological hazards addressed:** preventative measures for ticks, mosquitos, chiggers, bees, snakes when needed
**Physical hazards addressed:** fall protection, slip, trip, fall, overhead hazards, compressed gases, pressure relief, etc.
**Work Permits:** obtained for working at heights, confined space entry, hot work, excavation, LOTO, etc.

62

Location 25 Paidge Ave Date 3/26/11

Project / Client Brooklyn Terminal Motiva

Well Gauging & Hand Bailing (Page 1)

Sovereign on site off @ 1200

M&S JH 2010 F150 Pickup

went over H&S and scope of work with Terminal owner.

Hand bailed 3 Gal of Product

| ID | Time | DTW | DTP | Product Thickness | Product Recovered |
|---|---|---|---|---|---|
| 1 | 7:36 | 2.82 | | | |
| 3 | 7:40 | 2.22 | | | |
| 29 | 7:44 | 1.35 | | | |
| 4 | 7:47 | 1.77 | 1.74 | .03 | |
| 30 | 7:51 | 1.72 | | | |
| 5 | 7:56 | 1.30 | | | |
| 28 | 8:01 | 1.14 | | | |
| 27 | 8:05 | 1.71 | | | |
| 6 | 8:09 | 4.25 | | | |
| 7R | 8:14 | 5.38 | | | |
| 8 | 8:16 | 5.81 | | | |
| 9 | 8:18 | 5.78 | | | |
| 21R | 8:25 | 7.66 | | | |
| 22R | 8:26 | 7.72 | | | |
| 13 | 8:29 | 7.04 | | | |
| 14 | 8:32 | 5.86 | | | |
| 23 | 8:36 | 3.46 | | | |
| 24 | 8:40 | 3.36 | | | |
| 43 | 8:44 | 3.10 | | | |
| 42 | 8:49 | 3.07 | | | |
| 44 | 8:55 | 3.04 | | | |

63

Location 25 Paidge Ave Date 3/26/11

Project / Client Brooklyn Terminal Motiva

Well Gauging & Hand Bailing (Page 2)

| ID | Time | DTW | DTP | Product Thickness | Product Recovered |
|---|---|---|---|---|---|
| 25 | 9:00 | 2.47 | | | |
| TW1 | 9:30 | | | | Underwater |
| 26 | 9:32 | | | | Underwater |
| TW2 | 9:36 | 2.36 | | | |
| MW2 | 9:42 | 3.21 | 3.13 | .08 | |
| TW3 | 9:46 | | | | Underwater |
| TW4 | 9:50 | | | | Underwater |
| TW5 | 9:55 | 2.51 | 2.48 | .03 | |
| 31 | 9:59 | 3.16 | 2.83 | .33 | 1.00 |
| TW6 | 10:05 | | | | Underwater |
| 20 | 10:09 | 2.46 | | | |
| 15 | 10:13 | 2.62 | | | |
| 16 | 10:16 | 2.61 | | | |
| 17 | 10:20 | 2.08 | | | |
| 18 | 10:24 | 2.54 | | | |
| 32 | 10:28 | 3.11 | | | |
| 34 | 10:38 | 6.71 | 6.69 | .02 | |
| 33 | 10:39 | 5.22 | | | |
| 39 | 10:45 | 5.99 | | | |
| 40 | 10:50 | 8.42 | 7.45 | 1.03 | 2.00 |
| 35 | 10:54 | 5.96 | | | |
| 36 | 10:58 | 8.08 | 7.99 | .09 | |
| 41 | 11:04 | 7.65 | 7.61 | .04 | |
| 37 | 11:07 | 7.09 | 7.07 | .02 | |

Shell/Motiva 0007540

62 64

Location 25 Paidge Ave Date 3/26/11

Project / Client Brooklyn Terminal Motiva (Page 3)

Well Gauging & Hand Bailing

| ID | Time | DTW | DTP | Product Thickness | Product Recovered |
|---|---|---|---|---|---|
| 38 | 11:15 | 6.56 | | | |

(Gal Recovered 3 Gal)

Shell/Motiva 0007541

**Sovereign Consulting Inc.**
**SHELL Tailgate Safety Meeting Form**
(To be submitted with field notes to Project Manager each day)

| | |
|---|---|
| **Project Name:** Brooklyn Terminal | **Date:** 4/27/11 |
| **Location:** 25 Paidge Ave | **Weather:** |
| **Project Manager [Print]:** Doug. J | **Temp:** ~ 60°F |
| **Contractors/Subcontractors:** | |

**Scope of Work:** Well gaugin (Annual)

| **Task Hazards:** (check all that apply) *requires Permit to Work | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☑ | Ladders* | ☐ | Haz. Substances | ☑ | Sharp Objects | ☑ |
| Confined Spaces* | ☐ | Explosion | ☐ | Heavy Equipment | ☐ | Tools | ☑ |
| Cutting/Welding* | ☐ | Falling Objects | ☐ | Flying Debris | ☑ | Traffic | ☑ |
| Electrical | ☐ | Fire | ☐ | Noise | ☑ | Weather | ☑ |
| Environmental Hazard | ☑ | Insects/Biological | ☐ | Slip/Trip, Hazards | ☑ | Other (describe below) | ☐ |
| Elevated Work* | ☐ | Ticks – Biohazard | ☐ | Overhead | ☑ | | |
| Excavations* | ☐ | Bees, Wasps, Hornets – Biohazard | ☐ | Sanitation | ☐ | | |

| Work Zone Delineation Level | Level 1 ☐ | Level 2 ☐ | Level 3 ☑ *Watchperson required | Level 4 ☐ *Temp. Traffic Control Plan required |
|---|---|---|---|---|

| **Title of JSAs reviewed today:** | General Site Activities<br>Manhole cover removal/replacement<br>Decon equipment<br>MW gauging |
|---|---|

**Engineering Controls / Work Practices:** PPE + Traffic Control

| **Levels of Protection / Personal Protective Equipment:** | | | |
|---|---|---|---|
| Level A | ☐ | Eye & Face Protection ☑ | Safety Glasses ☑ Face Shield ☐ |
| Level B | ☐ | Foot Protection ☑ | Steel Toes ☑ Hip Boots/Waders ☐ |
| Level C | ☐ | Hand Protection ☑ | Nitrile Gloves ☑ Leather Gloves ☑ Full Arm Chemical ☐ |
| Level D | ☑ | Head Protection ☑ | Hard Hat ☑ |
| | | Hearing Protection ☑ | Ear Muffs/Plugs ☑ |
| | | Other ☐ | Barricades ☑ High Visibility Safety Vests ☑ Cones/Flags ☑ |
| | | | Amber Light/Vehicle Hazards ☐ Crash Truck ☑ Tyvek/Coveralls ☐ |

| **Air Monitoring/Sampling** | | **Emergency Response** | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☐ | Emergency Alarms | ☑ | First Aid Kit Location | ☑ | Cell Phone Use none | ☐ |
| FID/PID | ☐ | Emergency Contacts | ☑ | Spill Kit Location | ☑ | Fire Ext. Location | ☑ |
| Detector Tubes | ☐ | Evacuation Routes | ☑ | Hospital Route | ☑ | Pedestrian Safety | ☑ |
| Dust Monitor | ☐ | Explosion/Fire | ☑ | Work Area | ☑ | Vapor/Dust Suppression | ☑ |
| Personal Air | ☐ | Medical Emergency | ☑ | Smoking/Break Area | ☑ | Muster Location | ☑ |



Shell/Motiva 0007542

**Are site workers Fit To Work?** Yes ☐ No ☐ _____

**Do all site workers understand injury/intervention reporting requirements?** Yes ☑ No ☐

**Comments:** _____

**Name & Title of Person Conducting Tailgate Safety Meeting:** Nick Zurcher

**Signature:** _____ **Date:** 4/27/11

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth during the tailgate safety meeting and within the project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are **FIT** for work prior to work, duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

**SIGN IN**

| MEETING ATTENDEES | | | |
|---|---|---|---|
| Name [Print] | Signature | Company | Time |
| Nick Zurcher | | Sovereign | 0800 |
| Justin Young | | Sovereign | 0800 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

| | | | |
|---|---|---|---|
| Are all personnel fit to work? | (YES) | NO | |
| Have all personnel been informed of work to be completed? | (YES) | NO | |
| Have all personnel been informed on **STOP WORK** procedures? | (YES) | NO | |
| Have all personnel reviewed all JSAs applicable to scope of work? | (YES) | NO | |
| Has fuel delivery service been informed? | YES | NO | (N/A) |
| Is fuel delivery due today? | YES | NO | (N/A) |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | (N/A) |
| Are work areas controlled to protect workers, site staff, and the public? | (YES) | NO | N/A |
| Do all contractors have their API Safety Key card? | YES | NO | (N/A) |
| Have all personnel reviewed and understand the Shell 12 Life-Saving Rules? | (YES) | NO | |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Nick Zurcher | | 4/27/11 0800 | N. Sohn | N. Sohn |



Shell/Motiva 0007543

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest that they were **FIT** for work upon completion of work.

## SIGN OUT

| MEETING ATTENDEES | | | |
|---|---|---|---|
| Name [Print] | Signature | Company | Time |
| Nick Zarcone | | Sovereign | 01 00 |
| Justin King | | Sovereign | 100 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

| | | | |
|---|---|---|---|
| Are all personnel fit to work (i.e., no injury or illness during workday)? | YES | NO | |
| Has the work area been left tidy and safe? | YES | NO | |
| Are site personnel aware of status of work? | YES | NO | |
| Are changes to equipment documented and communicated? | YES | NO | N/A |
| All incidents, near misses, unsafe situations reported? | YES | NO | N/A |
| All **STOP WORK** initiatives have been documented in comment section? | YES | NO | N/A |

Did the work activity require any Modifications/Changes not listed above? ☐ YES ☑ NO ☐ N/A Briefly Describe: _____

Note: If YES, was it authorized by management? ☐ YES ☐ NO ☑ N/A Authorized by: _____

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Nick Zarcone | | 4/27/11 | N. Solis | N. Solis |

## SHELL 12 Life-Saving Rules

Shell/Motiva 0007544

SOVEREIGN CONSULTING INC.

## Behavior Based Safety Checklist - FIELD WORK
WILL YOUR NEXT CHOICE BE THE SAFE CHOICE?

Observer: JKing
Date: 4/27/11
Office: Farmingdale

Tasks Observed: MW
SE017 gauging
Job Site: Motiva Termal

Total Safe Behaviors Observed: _____
Total At Risk Behaviors Observed: _____
% Safe Behaviors: _____

| Critical Behaviors | Safe | At Risk | Critical Behaviors | Safe | At Risk |
|---|---|---|---|---|---|
| Clear of pinch points | II | | Traffic awareness | I | |
| Use of traffic control devices | III | | Review of JSAs | IIII | |
| Use of tools | III | | Lifting / moving of equipment | I | |
| Precautions for weather | I | | Emergency equipment | II | |
| PPE - safety vest and safety glasses | II | | Electrical safety | — | |
| PPE- hard hat | I | | Heavy equipment hazards | — | |
| PPE - hearing protection | I | | Biological hazards addressed | I | |
| PPE - task appropriate gloves | II | | Physical hazards addressed | I | |
| PPE - other | — | | Work Permits | I | |
| Use of air monitoring equipment | — | | | | |
| Clear of moving / rotating equipment | — | | | | |

### OBSERVED SAFE BEHAVIORS / GOOD PRACTICES

Reviewed JSAs

### OBSERVED AT RISK BEHAVIORS

| What was observed to be at-risk? | Why was it at risk? |
|---|---|
| N/A | |
| | |
| | |

Comments:

### Definitions for Critical Behaviors:

**Clear of pinch points:** body parts are kept out of pinch points -such as under gratings, manhole covers, etc.
**Use of traffic control devices:** Work zone delineators / traffic control devices used per the HASP/Scorecard
**Use of tools:** proper tool for the job utilized, tool is used appropriately (no hammering with a screwdriver, etc.), tool is in good condition
**Precautions for weather:** applies sunscreen, drinks plenty of fluids in hot weather; dresses appropriately for cold weather
**PPE - safety vest, safety glasses:** worn on site at all times
**PPE - hard hat:** worn when there are overhead hazards, construction activities, drilling, excavation, or as required by HASP
**PPE- hearing protection:** worn during times where noise is >85 dBa; drilling, vac truck, bobcat, geoprobe, etc.
**PPE - task appropriate gloves:** leather or protective gloves for manhole handling, equipment handling; nitrile gloves for gw sampling, and minimal chemical exposures
**PPE- other:** Other PPE as required by site HASP
**Use of air monitoring equipment:** per the site HASP
**Clear of moving/rotating equipment:** long hair should be tied back, long sleeves buttoned or rolled up to elbows, stay out of point of operation
**Traffic awareness:** faces traffic, remains alert to oncoming vehicles, blocks off parking spots where encroachment may be a problem
**Review of JSAs:** Prior to task, JSA should be reviewed
**Lifting/moving equipment:** proper body positioning during lifting, lift with legs, load close to body, etc.
**Emergency equipment:** should have fire extinguisher, first aid kit, BBP kit available at site
**Electrical safety:** LOTO utilized, GFCI utilized
**Heavy equipment hazards:** aware of backup signals, only approaches heavy equipment after eye contact/hand signal from operator, and operator stops equipment, stays out of heavy equipment blind spots
**Biological hazards addressed:** preventative measures for ticks, mosquitos, chiggers, bees, snakes when needed
**Physical hazards addressed:** fall protection, slip, trip, fall, overhead hazards, compressed gases, pressure relief, etc.
**Work Permits:** obtained for working at heights, confined space entry, hot work, excavation, LOTO, etc.

SOVEREIGN CONSULTING INC.

**Behavior Based Safety Checklist - DRIVING**
**WILL YOUR NEXT CHOICE BE THE SAFE CHOICE?**

Observer: JKing
Date: 4/27/11
Office: Farmingdale

Job Site: 5E017 Motiva Terminal

Total Safe Behaviors Observed: _____
Total At Risk Behaviors Observed: _____
% Safe Behaviors: _____

| Critical Behavior List | Safe | AT RISK | Critical Behavior List | Safe | AT RISK |
|---|---|---|---|---|---|
| Seat belts | 1 | | Following distance | //// | |
| Seat adjustment | 1 | | Traffic lights/signs | /// | |
| Mirror adjustment | 1 | | Travel surface / speed | 1 | |
| Hands on wheel | 1 | | Distractions | /// | 1 |
| Personal health / task alignment | 1 | | Signaling / Changing lanes | 1 | |
| Walk around | 1 | | Parking | 1 | |
| Headrest adjusted | 1 | | Refueling | — | |
| Headlights | 1 | | Securing vehicle | 1 | |
| Eyes on path | 1 | | | | |
| | | | | | |

| OBSERVED SAFE BEHAVIORS / GOOD PRACTICES |
|---|
| Followed posted speed limits |
| |
| |

| OBSERVED AT RISK BEHAVIORS | |
|---|---|
| What was observed to be at-risk? | Why was it at risk? |
| Stayed with traffic around car accident | |
| | |
| | |

| Comments: |
|---|
| |
| |

**Definitions for Critical Behaviors:**

**Seat belts:** All seat belts should be fastened for driver and occupants.
**Seat and mirror adjustment:** Seat properly adjusted for driver; mirrors are aligned for optimum coverage of side and rear views.
**Hands on wheel:** Driver has both hands on steering wheel
**Personal health / task alignment:** Driver is rested, physically capable of driving, and not emotionally distracted
**Walk around:** performs walk around vehicle to check for unforeseen obstructions prior to entering
**Headrest adjusted:** Headrest is properly adjusted for current driver to prevent potential whip-lash from rear-end impact
**Headlights:** Turns on headlights during rainy, foggy, snowy weather, etc.
**Eyes on path:** Eyes are on the road ahead, not focused on reading a map or other
**Following distance:** Maintains a safe following distance of 3 seconds for cars & vans with dry conditions, 4 seconds for trucks
**Obeying traffic lights/signs:** This includes coming to a complete stop and/or yeilding at appropriate road signs and signals
**Travel surface / speed:** Travel within speed limits, and adjusts speed for poor road conditions
**Distractions:** Driver is not distracted by radios, maps, telephones or conversations within the car while moving.
**Signaling / changing lanes:** Driver checks mirrors and signals for turns and lane changes
**Parking:** Driver enters parking space slowly, allows room on each side of vehicle
**Refueling:** shuts off engine during refueling
**Securing vehicle:** all loads are secured properly both inside vehicle and outside vehicle

# TIME & MATERIAL FIELDSHEET

**Date: Wednesday, April 27, 2011**
**Page: 1 of 1**

**Project #: 5E017.140**
**Project Address: 25 Paldge Avenue, Brooklyn, New York**
**Client: Shell Oil Products, U.S.**

## Employee Time

| Employee Name | Task # | Subtask # | Prep Time | Travel Time | On-Site Time | Total Time |
|---|---|---|---|---|---|---|
| Nickolas Zarcone | 3 | 96 | 1 | 3 | 5 | 9 |
| Justin King | 3 | 96 | 1 | 3 | 5 | 9 |
| | | | | | | |
| | | | | | | |
| | | | | | | |


**SOVEREIGN CONSULTING, INC.**

290 Executive Drive, Suite 300
Cranberry Twp., PA 16066
www.sovcon.com


## SOVEREIGN OWNED OR LEASED EQUIPMENT AND MATERIALS LIST

| Item # | Item | Qty | Units |
|---|---|---|---|
| OE104 | Chevy Van | | hrs |
| OE124 | Ford F-150 | | hrs |
| OE115 | Interface Probe | | day |
| OE143 | Multi-Gas PID | | day |
| SR620 | Mobile Phone | | day |
| SR800 | 4" Bailer | | each |
| SR800 | 2" Bailer | | each |
| SR800 | 1" Bailer | | each |
| SR812 | QED Filters | | each |
| SR816 | LDPE Tubing | | ft |
| SR817 | Silicon Flex Hose | | ft |
| SR820 | Gloves (box) (100) | | each |

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR835 | Sorbent Sock | | each |
| SR836 | Sorbent Pads | 6 | each |
| SR837 | Sorbent Boom | | each |
| SR935 | 55 Gallon Drum | | each |
| SR980 | Gripper Plug - 1" | | each |
| SR981 | Gripper Plug - 2" | | each |
| SR982 | Gripper Plug - 4" | | each |
| SR983 | Brass Padlock | | each |
| SR205 | Hand Auger | | day |
| SR300 | Air Sampling Pump | | day |
| | | | |
| | | | |

## FET Rental Equipment (Need PO)

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR105 | Interface Probe | 1 | day |
| SR110 | DO Meter | | day |
| SR130 | Sub Pump 2" | | day |
| SR300 | Air Sampling Pump | | day |
| SR310 | PID | | day |
| SR335 | 4-Gas Meter | | day |
| SR420 | Level Logger | | day |
| SR635 | Survey Equipment | | day |
| SR645 | GW Multi-Meter | | day |
| SR655 | Peristaltic Pump | | day |
| | | | |
| | | | |

## RENTAL EQUIPMENT AND ADDITIONAL MATERIALS
List items rented or purchased to complete work

## Subcontractor Labor
Name & Description of Work

## WORK DESCRIPTION

NZ & JK on site @ 08:00 off @ 01:00
Well inspection.
Performed annual well gauging.
Bailed product from wells that exhibited recoverable product.
3.5 Gal of product were recovered by hand bailing.

**Project Manager / Supervisor Approval:** _____ **Date:** _____

SOVEREIGN CONSULTING - WELL GAUGING/HAND-BAILING DATA SUMMARY SHEET
PAGE 1 OF 1
DATE: 4/27/11

CLIENT: MOTIVA ENTERPRISES LLC
25 PAIDGE AVENUE, BROOKLYN NY
SCI JOB # 5E017.140

| WELL ID | TIME OF READING | WELL DIA. (IN) | TOTAL DEPTH (FT) | DEPTH TO PRODUCT (FT) | DEPTH TO WATER (FT) | PRODUCT THICKNESS (FT) | PRODUCT RECOVERED (GAL) | NOTES |
|---|---|---|---|---|---|---|---|---|
| MW-1 | 8:30 | 4 | | | 3.01 | | | |
| MW-3 | 8:33 | 4 | | | 2.39 | | | |
| MW-29 | 8:36 | 4 | | | 1.53 | | | |
| MW-04 | 8:40 | 4 | | 2.09 | 2.12 | 0.03 | | |
| MW-30 | 8:43 | 4 | | | 1.89 | | | |
| MW-5 | 8:47 | 4 | | | 1.49 | | | |
| MW-28 | 8:52 | 4 | | | 1.34 | | | |
| MW-27 | 8:55 | 4 | | | 2.02 | | | |
| MW-6 | 9:10 | 4 | | | 3.78 | | | |
| MW-7R | 9:12 | 4 | | | 4.48 | | | |
| MW-8 | 9:16 | 4 | | | 5.01 | | | |
| MW-9 | 9:18 | 4 | | | 4.95 | | | |
| MW-21R | 9:25 | 4 | | | 3.81 | | | |
| MW-22R | 9:27 | 4 | | | 3.82 | | | |
| MW-13 | 9:30 | 4 | | | 7.09 | | | |
| MW-14 | 9:33 | 4 | | | 5.92 | | | |
| MW-23 | 9:36 | 4 | | | 3.57 | | | |
| MW-24 | 9:39 | 4 | | | 3.45 | | | |
| MW-43 | 9:44 | 4 | | | 3.22 | | | |
| MW-42 | 9:47 | 4 | | | 3.19 | | | |
| MW-44 | 9:51 | 4 | | | 3.16 | | | |
| MW-25 | 9:55 | 4 | | | | | | |
| TW-1 | | 6 | | | | | | underwater |
| MW-26 | 10:20 | 4 | | 3.42 | 3.43 | 0.01 | | |
| TW-2 | 10:23 | 6 | | | 3.45 | | | |
| MW-2 | 10:26 | 4 | | 3.26 | 3.29 | 0.03 | | |
| TW-3 | | 6 | | | | | | underwater |
| TW-4 | | 6 | | | | | | underwater |
| TW-5 | 10:31 | 6 | | 2.69 | 2.76 | 0.07 | | |
| MW-31 | | 4 | | 3.26 | 3.01 | 0.25 | 0.25 | |
| TW-6 | | 6 | | | | | | underwater |
| MW-20 | 10:40 | 4 | | | 2.66 | | | |
| MW-15 | 10:42 | 4 | | | 2.79 | | | |
| MW-16 | 10:44 | 4 | | | 2.74 | | | |
| MW-17 | 10:47 | 4 | | | 2.21 | | | |
| MW-18 | 10:50 | 4 | | | 2.70 | | | |
| MW-32 | 10:52 | 4 | | | 3.29 | | | |
| RW-34 | 10:59 | 6 | | 7.05 | 7.09 | 0.04 | | |
| MW-33 | 11:03 | 4 | | | 5.53 | | | |
| MW-39 | 11:07 | 4 | | | 6.10 | | | |
| RW-40 | 11:11 | 6 | | 7.84 | 9.81 | 2.03 | 3.00 | |
| MW-35 | 11:15 | 4 | | | 6.40 | | | |
| RW-36 | 11:20 | 6 | | 8.31 | 8.43 | 0.12 | 0.25 | |
| MW-41 | 11:24 | 4 | | 7.63 | 7.71 | 0.08 | | |
| RW-37 | 11:29 | 6 | | 7.48 | 7.49 | 0.01 | | |
| MW-38 | 11:33 | 4 | | | 6.69 | | | |
| | | | | | | | | |
| | | | | | | | | |

Location 25 Paidge Ave Date 4/27/11

Project / Client Brooklyn Terminal Motiva

Well Gauging & Hand Bailing (Page 1)

Sovereign on site @ 0800 off @ 1250
M & JK 2010 F150 Pickup ~ 60 °F
Wentover H&S and Scope of work with terminal walker
Hand Bail Product / Well inspection / Gauge all wells

| ID | Time | DTW | DTP | Product Thickness | Product Recovered |
|---|---|---|---|---|---|
| 1 | 8:30 | 3.01 | | | |
| 3 | 8:33 | 2.39 | | | |
| 29 | 8:36 | 1.53 | | | |
| 4 | 8:40 | 2.12 | 2.09 | .03 | |
| 30 | 8:43 | 1.89 | | | |
| 5 | 8:47 | 1.49 | | | |
| 28 | 8:52 | 1.34 | | | |
| 27 | 8:55 | 2.02 | | | |
| 6 | 9:10 | 3.78 | | | |
| 7R | 9:12 | 4.48 | | | |
| 8 | 9:16 | 5.01 | | | |
| 9 | 9:18 | 4.95 | | | |
| 21R | 9:25 | 3.81 | | | |
| 22R | 9:27 | 3.82 | | | |
| 13 | 9:30 | 7.09 | | | |
| 14 | 9:33 | 5.92 | | | |
| 23 | 9:36 | 3.57 | | | |
| 24 | 9:39 | 3.45 | | | |
| 43 | 9:44 | 3.22 | | | |
| 42 | 9:47 | 3.19 | | | |
| 44 | 9:51 | 3.16 | | | |

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Location 25 Paidge Ave Date 4/27/11

Project / Client Brooklyn Terminal

Well Gauging & Hand Bailing (Page 2)

| ID | Time | DTW | DTP | Product Thickness | Product Recovered | |
|---|---|---|---|---|---|---|
| 25 | 9:55 | 2.60 | | | | |
| TW1 | underwater | | | | | |
| 26 | 10:20 | 3.43 | 3.42 | .01 | | |
| TW2 | 10:23 | 3.45 | | | | |
| MW2 | 10:26 | 3.29 | 3.26 | .03 | | |
| TW3 | underwater | | | | | |
| TW4 | underwater | | | | | |
| TW5 | 10:31 | 2.76 | 2.69 | .07 | | |
| 31 | 10:35 | 3.26 | 3.01 | .25 | .25 | |
| TW6 | underwater | | | | | |
| 20 | 10:40 | 2.66 | | | | |
| 15 | 10:42 | 2.79 | | | | |
| 16 | 10:44 | 2.74 | | | | |
| 17 | 10:47 | 2.21 | | | | |
| 18 | 10:50 | 2.70 | | | * | |
| 32 | 10:52 | 3.29 | | | J-Plug Cap size | |
| 34 | 10:59 | 7.09 | 7.05 | .04 | 6" | |
| 33 | 11:03 | 5.53 | | | 4" | |
| 39 | 11:07 | 6.10 | | | 4" | |
| 40 | 11:11 | 9.81 | 7.84 | 2.03 | 6" | 3.00 |
| 35 | 11:15 | 6.40 | | | 4" | |
| 36 | 11:20 | 8.43 | 8.31 | .12 | 6" | .25 |
| 41 | 11:24 | 7.71 | 7.63 | .08 | 4" | |
| 37 | 11:29 | 7.49 | 7.48 | .01 | 6" | |

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Location 25 Paidge Ave Date 4/27/11

Project / Client Brooklyn Terminal

Well Gauging & Hand Bailing (Page 3)

| ID | Time | DTW | DTP | Product Thickness | Product Recovered |
|---|---|---|---|---|---|
| 38 | 11:33 | 6.69 | | | |

(Gal. Recovered 3.50)

# ENVIRONMENTAL WELL, REMEDIATION COMPOUND, AND SITE INSPECTION FORM



COST CENTER # 58603 ADDRESS 25 Paidge Ave

DATE: 4/27/11 CITY & STATE Brooklyn NY

| Well ID | Observations Upon Arrival: Manway/Cover Type, Condition & Size | | | | | | Well Labeled / Painted Properly* | | Well Cap (Gripper) Condition | | Well Lock Condition | | | Well Pad / Surface Condition | | Note Repairs Made or Detailed Explanation of Maintenance Recommended and Performed | Photos of Well Condition | | Repair Date and PM Initials |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Standpipe | Flush | G | P | Size (inch) 4" | | Y | N | G | R | G | R | NL | G | P | needs bolts | Y | N | |
| 3 | Standpipe | Flush | G | P | Size (inch) 4" | | Y | N | G | R | G | R | NL | G | P | ears stripped | Y | N | |
| 29 | Standpipe | Flush | G | P | Size (inch) 4" | | Y | N | G | R | G | R | NL | G | P | need bolts / 1 ear broken | Y | N | |
| 4 | Standpipe | Flush | G | P | Size (inch) 4" | | Y | N | G | R | G | R | NL | G | P | ears stripped | Y | N | |
| 30 | Standpipe | Flush | G | P | Size (inch) 4" | | Y | N | G | R | G | R | NL | G | P | ← (needs repair) No ears & bolts | Y | N | |
| 5 | Standpipe | Flush | G | P | Size (inch) 4" | | Y | N | G | R | G | R | NL | G | P | ears stripped | Y | N | |
| 28 | Standpipe | Flush | G | P | Size (inch) 4" | | Y | N | G | R | G | R | NL | G | P | no bolts | Y | N | |
| 27 | Standpipe | Flush | G | P | Size (inch) 4" | | Y | N | G | R | G | R | NL | G | P | lift off cover | Y | N | |
| 6 | Standpipe | Flush | G | P | Size (inch) 4" | | Y | N | G | R | G | R | NL | G | P | ears stripped | Y | N | |
| 7A | Standpipe | Flush | G | P | Size (inch) 4 | | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| On-site Drinking Water Well | Standpipe | Flush | G | P | Size (inch) | | Y | N | G | R | G | R | NL | G | P | | Y | N | |

TOTAL # CAPS REPLACED = 0 TOTAL # OF LOCKS REPLACED = 0

| Condition of Soil Boring Patches or Abandoned Monitoring Wells: | G | P | N/A | If POOR, Borings/Well ID's or Location Description | Photos of Condition Y | Photos of Condition N |
|---|---|---|---|---|---|---|
| | | | | | | |

| Remediation Compound Type (Check boxes that apply) | | Condition of Enclosure | | | Condition of Area Inside Enclosure | | | Compound Security | | | Emergency Contact Info Visible | | | Cleaning / Repairs Recommended and Conducted | Photos of Condition Y | Photos of Condition N | Repair Date and PM Initials |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NA | ✓ | G | P | N/A | G | P | N/A | G | P | N/A | Y | N | N/A | | Y | N | |
| Building | | | | | | | | | | | | | | | | | |
| Building w/ Fence Comp. | | | | | | | | | | | | | | | | | |
| Fenced Compound | | | | | | | | | | | | | | | | | |
| Trailer | | | | | | | | | | | | | | | | | |

| Number of Drums On-site | Does the Label Reveal the Source of the Contents | | | Labeled Correctly and Writing Legible | | | Drum Condition | | | Confirm Drums Related to Environmental | | Drums Located to Min. Business Interference | | | Detailed Explanation of Any Issues Resolved | Photos of Drum Condition Y | Photos of Drum Condition N | Date Drums Removed from Site and PM Initials |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | Y | N | N/A | Y | N | N/A | G | P | N/A | Y | N | Y | N | N/A | | Y | N | |

G = Good (Acceptable) R = Replaced

P = Poor (needs attention) NL = No Lock Required

Note: All repairs other than locks and grippers require Shell PM approval prior to repair.

* = Groundwater monitoring well covers must be painted and labeled in accordance with applicable regulations.

Version 2.4, March 2008

*All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).*

Nick Zarcone Sovereign

Print or type Name of Field Personnel & Consultant Company

Shell/Motiva 0007551

# ENVIRONMENTAL WELL, REMEDIATION COMPOUND, AND SITE INSPECTION FORM

COST CENTER # 58603

DATE: 4/27/11

ADDRESS 25 Paidge Ave

CITY & STATE Brooklyn NY

| Well ID | Observations Upon Arrival: Manway Cover Type, Condition & Size | | | | | Well Labeled / Painted Properly* | | Well Cap (Gripper) Condition | | Well Lock Condition | | | Well Pad / Surface Condition | | Note Repairs Made Detailed Explanation of Maintenance Recommended and Performed | Photos of Well Condition | | Repair Date and PM Initials |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | Standpipe | Flush | G | P | Size (inch) 4" | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| 9 | Standpipe | Flush | G | P | Size (inch) 4" | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| 21R | Standpipe | Flush | G | P | Size (inch) 4" | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| 22R | Standpipe | Flush | G | P | Size (inch) 4" | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| 13 | Standpipe | Flush | G | P | Size (inch) 4" | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| 14 | Standpipe | Flush | G | P | Size (inch) 4" | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| 23 | Standpipe | Flush | G | P | Size (inch) 4" | Y | N | G | R | G | R | NL | G | P | Lift off Cover | Y | N | |
| 24 | Standpipe | Flush | G | P | Size (inch) 4" | Y | N | G | R | G | R | NL | G | P | ← needs replacement | Y | N | |
| 43 | Standpipe | Flush | G | P | Size (inch) 4" | Y | N | G | R | G | R | NL | G | P | No Bolts / ears broken | Y | N | |
| 42 | Standpipe | Flush | G | P | Size (inch) 4" | Y | N | G | R | G | R | NL | G | P | lear broken | Y | N | |
| On-site Drinking Water Well | Standpipe | Flush | G | P | Size (inch) | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| TOTAL # CAPS REPLACED = | | | | | | | | | 0 | | 0 | = TOTAL # OF LOCKS REPLACED | | | | | | |

| Condition of Soil Boring Patches or Abandoned Monitoring Wells | G | P | N/A | IF POOR, Borings/Well IDs or Location Description | Y | N | |
|---|---|---|---|---|---|---|---|

| Remediation Compound Type (Check boxes that apply) | | Condition of Enclosure | | | Condition of Area Inside Enclosure | | | Compound Security | | | Emergency Contact Info Visible | | | Cleaning / Repairs Recommended and Conducted | Photos of Condition | | Repair Date and PM Initials |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NA | | G | P | N/A | G | P | N/A | G | P | N/A | Y | N | N/A | | Y | N | |
| Building | | | | | | | | | | | | | | | | | |
| Building w/ Fence Comp. | | | | | | | | | | | | | | | | | |
| Fenced Compound | | | | | | | | | | | | | | | | | |
| Trailer | | | | | | | | | | | | | | | | | |

| Number of Drums On-site | Does the Label Reveal the Source of the Contents | | | Labeled Correctly and Writing Legible | | | Drum Condition | | | Confirm Drums Related to Environmental | | Drums Located to Min Business Interference | | | Detailed Explanation of Any Issues Resolved | Photos of Drum Condition | | Date Drums Removed from Site and PM Initials |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | Y | N | N/A | Y | N | N/A | G | P | N/A | Y | N | Y | N | N/A | | Y | N | |

G = Good (Acceptable) R = Replaced

P = Poor (needs attention) NL = No Lock Required

Note: All repairs other than locks and grippers require Shell PM approval prior to repair.

* = Groundwater monitoring well covers must be painted and labeled in accordance with applicable regulations.

Version 2.4, March 2008

*All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).*

Nick Zarcone Sovereign

Print or type Name of Field Personnel & Consultant Company

# ENVIRONMENTAL WELL, REMEDIATION COMPOUND, AND SITE INSPECTION FORM

COST CENTER # 58603 ADDRESS 25 Paidge Ave

DATE: 4/27/11 CITY & STATE Brooklyn NY

| Well ID | Manway Cover Type | Condition & Size | | | | Observations Upon Arrival: Well Labeled / Painted Properly* | | Well Cap (Gripper) Condition | | Well Lock Condition | | | Well Pad / Surface Condition | | Note Repairs Made, Detailed Explanation of Maintenance Recommended and Performed | Photos of Well Condition | | Repair Date and PM Initials |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 44 | Standpipe | Flush | G | P | Size (inch) 4" | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| 25 | Standpipe | Flush | G | P | Size (inch) 4" | Y | N | G | R | G | R | NL | G | P | lift off cover | Y | N | |
| TW1 | Standpipe | Flush | G | P | Size (inch) | Y | N | G | R | G | R | NL | G | P | Vault Box under water | Y | N | |
| 26 | Standpipe | Flush | G | P | Size (inch) 4" | Y | N | G | R | G | R | NL | G | P | Vault Box | Y | N | |
| TW2 | Standpipe | Flush | G | P | Size (inch) 6" | Y | N | G | R | G | R | NL | G | P | Vault Box | Y | N | |
| MW2 | Standpipe | Flush | G | P | Size (inch) 4" | Y | N | G | R | G | R | NL | G | P | Vault Box | Y | N | |
| TW3 | Standpipe | Flush | G | P | Size (inch) | Y | N | G | R | G | R | NL | G | P | Vault Box under water | Y | N | |
| TW4 | Standpipe | Flush | G | P | Size (inch) | Y | N | G | R | G | R | NL | G | P | Vault Box under water | Y | N | |
| TW5 | Standpipe | Flush | G | P | Size (inch) 6" | Y | N | G | R | G | R | NL | G | P | Vault Box | Y | N | |
| 31 | Standpipe | Flush | G | P | Size (inch) 4" | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| On-site Drinking Water Well | Standpipe | Flush | G | P | Size (inch) | Y | N | G | R | G | R | NL | G | P | | Y | N | |

TOTAL # CAPS REPLACED = 0 | 0 = TOTAL # OF LOCKS REPLACED

| Condition of Soil Boring Patches or Abandoned Monitoring Wells: | G | P | N/A | If POOR, Borings/Well IDs or Location Description | | | Y | N | |
|---|---|---|---|---|---|---|---|---|---|

| Remediation Compound Type (Check Boxes that apply) | | Condition of Enclosure | | | Condition of Area Inside Enclosure | | | Compound Security | | | Emergency Contact Info Visible | | | Cleaning / Repairs Recommended and Conducted | Photos of Condition | | Repair Date and PM Initials |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NA | | G | P | N/A | G | P | N/A | G | P | N/A | Y | N | N/A | | Y | N | |
| Building | | | | | | | | | | | | | | | | | |
| Building w/ Fence Comp. | | | | | | | | | | | | | | | | | |
| Fenced Compound | | | | | | | | | | | | | | | | | |
| Trailer | | | | | | | | | | | | | | | | | |

| Number of Drums On-site | Does the Label Reveal the Source of the Contents | | | Labeled Correctly and Writing Legible | | | Drum Condition | | | Confirm Drums Related to Environmental | | Drums Located to Min Business Interference | | | Detailed Explanation of Any Issues Resolved | Photos of Drum Condition | | Date Drums Removed from Site and PM Initials |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | Y | N | N/A | Y | N | N/A | G | P | N/A | Y | N | Y | N | N/A | | Y | N | |

G = Good (Acceptable) R = Replaced

P = Poor (needs attention) NL = No Lock Required

Note: All repairs other than locks and grippers require Shell PM approval prior to repair.

* = Groundwater monitoring well covers must be painted and labeled in accordance with applicable regulations.

Version 2.4, March 2008

*All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).*

Nick Zarcone Sovereign

Print or type Name of Field Personnel & Consultant Company

Shell/Motiva 0007553

# ENVIRONMENTAL WELL, REMEDIATION COMPOUND, AND SITE INSPECTION FORM



COST CENTER # 58603 ADDRESS 25 Paige Ave

DATE: 4/27/11 CITY & STATE Brooklyn NY

| Well ID | Manway Cover Type / Condition & Size | | | | | Observations Upon Arrival: Well Labeled Painted Properly* | | Well Cap / Gripper Condition | | Well Lock Condition | | | Well Pad / Surface Condition | | Note Repairs Made / Detailed Explanation of Maintenance Recommended and Performed | Photos of Well Condition | | Repair Date and PM Initials |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TW6 | Standpipe | Flush | G | P | Size (inch) 6" | Y | N | G | R | G | R | NL | G | P | Vault Box Under water | Y | N | |
| 20 | Standpipe | Flush | G | P | Size (inch) 4" | Y | N | G | R | G | R | NL | G | P | lift off cover | Y | N | |
| 15 | Standpipe | Flush | G | P | Size (inch) 4" | Y | N | G | R | G | R | NL | G | P | lift off cover | Y | N | |
| 16 | Standpipe | Flush | G | P | Size (inch) 4" | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| 17 | Standpipe | Flush | G | P | Size (inch) 4" | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| 18 | Standpipe | Flush | G | P | Size (inch) 4" | Y | N | G | R | G | R | NL | G | P | needs flush Pad replacing / lift off cover | Y | N | |
| 32 | Standpipe | Flush | G | P | Size (inch) 4" | Y | N | G | R | G | R | NL | G | P | floor Pad | Y | N | |
| 34 | Standpipe | Flush | G | P | Size (inch) 6" | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| 33 | Standpipe | Flush | G | P | Size (inch) 4" | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| 39 | Standpipe | Flush | G | P | Size (inch) 4" | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| On-site Drinking Water Well | Standpipe | Flush | G | P | Size (inch) | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| TOTAL # CAPS REPLACED = | | | | | | | | | 0 | | 0 | = TOTAL # OF LOCKS REPLACED | | | | | | |

| Condition of Soil Boring Patches or Abandoned Monitoring Wells: | G | P | N/A | If POOR, Borings/Well IDs or Location Description: | | Y | N | |
|---|---|---|---|---|---|---|---|---|
| | | | N/A | | | | | |

| Remediation Compound Type (Check boxes that apply) | | Condition of Enclosure | | | Condition of Area Inside Enclosure | | | Compound Security | | | Emergency Contact Info Visible | | | Cleaning / Repairs Recommended and Conducted | Photos of Condition | | Repair Date and PM Initials |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NA | | G | P | N/A | G | P | N/A | G | P | N/A | Y | N | N/A | | Y | N | |
| Building | | | | | | | | | | | | | | | | | |
| Building w/ Fence Comp. | | | | | | | | | | | | | | | | | |
| Fenced Compound | | | | | | | | | | | | | | | | | |
| Trailer | | | | | | | | | | | | | | | | | |

| Number of Drums On-site | Does the Label Reveal the Source of the Contents | | | Labeled Correctly and Writing Legible | | | Drum Condition | | | Confirm Drums Related to Environmental | | Drums Located to Min Business Interference | | | Detailed Explanation of Any Issues Resolved | Photos of Drum Condition | | Date Drums Removed from Site and PM Initials |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | Y | N | N/A | Y | N | N/A | G | P | N/A | Y | N | Y | N | N/A | | Y | N | |

G = Good (Acceptable) R = Replaced

P = Poor (needs attention) NL = No Lock Required

Note: All repairs other than locks and grippers require Shell PM approval prior to repair.

* = Groundwater monitoring well covers must be painted and labeled in accordance with applicable regulations.

Version 2.4, March 2008

*All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).*

Nick Zarcone Sovereign

Print or type Name of Field Personnel & Consultant Company

Shell/Motiva 0007554

# ENVIRONMENTAL WELL, REMEDIATION COMPOUND, AND SITE INSPECTION FORM



COST CENTER # 58663

ADDRESS 25 Paidge Ave

DATE: 4/27/11

CITY & STATE Brooklyn N.Y.

| Well ID | Observations upon Arrival: Manway Cover, Type, Condition & Size | | | | | Well Labeled / Painted Properly* | | Well Cap (Gripper) Condition | | Well Lock Condition | | | Well Pad / Surface Condition | | Note Repairs Made / Detailed Explanation of Maintenance Recommended and Performed | Photos of Well Condition | | Repair Date and PM Initials |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 40 | Standpipe | Flush | G | P | Size (inch) 6" | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| 35 | Standpipe | Flush | G | P | Size (inch) 4" | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| 36 | Standpipe | Flush | G | P | Size (inch) 6" | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| 41 | Standpipe | Flush | G | P | Size (inch) 4" | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| 37 | Standpipe | Flush | G | P | Size (inch) 6" | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| 38 | Standpipe | Flush | G | P | Size (inch) 4" | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| | Standpipe | Flush | G | P | Size (inch) | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| | Standpipe | Flush | G | P | Size (inch) | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| | Standpipe | Flush | G | P | Size (inch) | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| | Standpipe | Flush | G | P | Size (inch) | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| On-site Drinking Water Well | Standpipe | Flush | G | P | Size (inch) | Y | N | G | R | G | R | NL | G | P | | Y | N | |

TOTAL # CAPS REPLACED = 0 | 0 = TOTAL # OF LOCKS REPLACED

| Condition of Soil Boring Patches or Abandoned Monitoring Wells: | G | P | N/A | If POOR, Borings/Well IDs or Location Description | | | Y | N | |
|---|---|---|---|---|---|---|---|---|---|
| | | | N/A | | | | | | |

| Remediation Compound Type (Check boxes that apply) | | Condition of Enclosure | | | Condition of Area Inside Enclosure | | | Compound Security | | | Emergency Contact Info Visible | | | Cleaning / Repairs Recommended and Conducted | Photos of Condition | | Repair Date and PM Initials |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NA | | G | P | N/A | G | P | N/A | G | P | N/A | Y | N | N/A | | Y | N | |
| Building | | | | | | | | | | | | | | | | | |
| Building w/ Fence Comp. | | | | | | | | | | | | | | | | | |
| Fenced Compound | | | | | | | | | | | | | | | | | |
| Trailer | | | | | | | | | | | | | | | | | |

| Number of Drums On-site | Does the Label Reveal the Source of the Contents | | | Labeled Correctly and Writing Legible | | | Drum Condition | | | Confirm Drums Related to Environmental | | Drums Located to Min Business Interference | | | Detailed Explanation of Any Issues Resolved | Photos of Drum Condition | | Date Drums Removed from Site and PM Initials |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | Y | N | N/A | Y | N | N/A | G | P | N/A | Y | N | Y | N | N/A | | Y | N | |

G = Good (Acceptable) R = Replaced

P = Poor (needs attention) NL = No Lock Required

Note: All repairs other than locks and grippers require Shell PM approval prior to repair.

* = Groundwater monitoring well covers must be painted and labeled in accordance with applicable regulations.

Version 2.4, March 2008

***All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).***

Nick Zaccone Sovereign

Print or type Name of Field Personnel & Consultant Company

Shell/Motiva 0007555

Site Navigation

**Shopping**
- Camping Gear
- Hunting Gear
- Maglite Sales

**Resources**
- Link Directory
- AIG Top Sites
- Fishing Charters
- Free Tackle
- Charter Listings
- Saltwater Tides

# Go Fishing Forum Message Boards

The only way you can catch fish is to Go Fishing Forum!

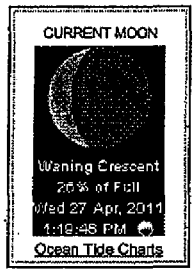
**Please leave a comment about our tide prediction website!**

**Search Tide Stations**

**Search Term: (i.e. Potomac):**

All States

Search Tide Stations




- Go Fishing Forum Home
- You won't catch fish unless you Go Fishing Forum!

Select a different tide station

FISHING Top 100

Start Date: April 27 2011 Number of Days: 4

Update Charts

**iboats.com Marine Store**
Huge Selection of Boat Parts. Find Engine Parts, Hardware, & Supplies!
iboats.com/Boat-Parts...

**Fishing Spot Advertising**
Advertise Your Fishing Spot With Us Lifetime Memberships From $250
www.sportsmansinterf...

**Local Coupons**
1 ridiculously huge coupon a day. Get 50-90% off your city's best!
www.Groupon.com

**Miami Sportfishing**
The Qualifier is now available! 1st class boat and crew. Book now.
www.qualifierfishing.c...

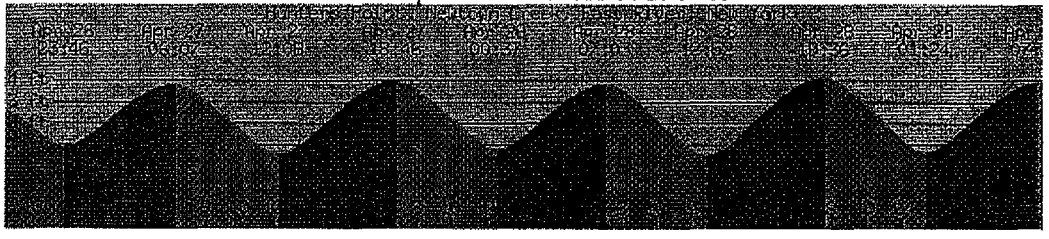
**NOT FOR NAVIGATION** The accuracy of these tide predictions is not guaranteed in any way. You should not use this program if anyone or anything could come to harm as a result of an incorrect tide prediction. NOAA and similar agencies in other countries can provide you with certified tide predictions if that is what you need. XTide's predictions do not incorporate the effects of tropical storms, El Niño, seismic events, subsidence, uplift, or changes in global sea level.

Bookmark this page

**Hunters Point, Newtown Creek, East River, New York**
**(40.7400° N, 73.9617° W)**

Print Today's Tide Prediction for this location

Tide Graph Start Time: 2011-04-27 00:00



**Wednesday, April 27th, 2011**

| Time | Type | Height |
|---|---|---|
| 6:07 AM EDT | High Tide | 3.81 feet |
| 12:08 PM EDT | Low Tide | 0.54 feet |
| 6:46 PM EDT | High Tide | 3.96 feet |

**Thursday, April 28th, 2011**

| Time | Type | Height |
|---|---|---|
| 12:37 AM EDT | Low Tide | 0.79 feet |
| 7:03 AM EDT | High Tide | 3.81 feet |
| 12:52 PM EDT | Low Tide | 0.48 feet |
| 7:36 PM EDT | High Tide | 4.14 feet |

Tide Graph Start Time: 2011-04-29 00:00



Shell/Motiva 0007556

**Sovereign Consulting Inc.**
**SHELL Tailgate Safety Meeting Form**
(To be submitted with field notes to Project Manager each day)

| | |
|---|---|
| **Project Name:** SEQ17 Motiva Terminal | **Date:** 4/28/11 |
| **Location:** 25 Paige Ave., Brooklyn | **Weather:** Cloudy |
| **Project Manager [Print]:** Doug Jakim | **Temp:** 2600 |
| **Contractors/Subcontractors:** | |

**Scope of Work:** GWS

**Task Hazards:** (check all that apply) *requires Permit to Work

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☐ | Ladders* | ☐ | Haz. Substances | ☒ | Sharp Objects | ☒ |
| Confined Spaces* | ☐ | Explosion | ☐ | Heavy Equipment | ☐ | Tools | ☒ |
| Cutting/Welding* | ☐ | Falling Objects | ☐ | Flying Debris | ☐ | Traffic | ☒ |
| Electrical | ☐ | Fire | ☐ | Noise | ☐ | Weather | ☒ |
| Environmental Hazard | ☐ | Insects/Biological | ☐ | Slip/Trip, Hazards | ☒ | Other (describe below) | ☐ |
| Elevated Work* | ☐ | Ticks – Biohazard | ☐ | Overhead | ☐ | | |
| Excavations* | ☐ | Bees, Wasps, Hornets – Biohazard | ☐ | Sanitation | ☐ | | |

| Work Zone Delineation Level | Level 1 ☐ | Level 2 ☐ | Level 3 ☒ *Watchperson required | Level 4 ☐ *Temp. Traffic Control Plan required |
|---|---|---|---|---|

**Title of JSAs reviewed today:**
General Site Activities
Opening/Closing manhole covers
Equipment Decon
GW Sampling activities

**Engineering Controls / Work Practices:** PPE + Traffic Control

**Levels of Protection / Personal Protective Equipment:**

| | | | |
|---|---|---|---|
| Level A | ☐ | Eye & Face Protection | ☒ | Safety Glasses ☒ Face Shield ☐ |
| Level B | ☐ | Foot Protection | ☒ | Steel Toes ☒ Hip Boots/Waders ☐ |
| Level C | ☐ | Hand Protection | ☒ | Nitrile Gloves ☒ Leather Gloves ☒ Full Arm Chemical ☐ |
| Level D | ☒ | Head Protection | ☒ | Hard Hat ☒ |
| | | Hearing Protection | ☐ | Ear Muffs/Plugs ☐ |
| | | Other | ☒ | Barricades ☒ High Visibility Safety Vests ☒ Cones/Flags ☒ |
| | | | | Amber Light/Vehicle Hazards ☐ Crash Truck ☐ Tyvek/Coveralls ☐ |

| Air Monitoring/Sampling | | Emergency Response | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☐ | Emergency Alarms | ☒ | First Aid Kit Location | ☒ | Cell Phone Use | ☒ |
| FID/PID | ☐ | Emergency Contacts | ☒ | Spill Kit Location | ☐ | Fire Ext. Location | ☒ |
| Detector Tubes | ☐ | Evacuation Routes | ☒ | Hospital Route | ☒ | Pedestrian Safety | ☐ |
| Dust Monitor | ☐ | Explosion/Fire | ☒ | Work Area | ☒ | Vapor/Dust Suppression | ☐ |
| Personal Air | ☐ | Medical Emergency | ☒ | Smoking/Break Area | ☒ | Muster Location | ☒ |



Shell/Motiva 0007557

**Are site workers Fit To Work?** Yes ☒ No ☐

**Do all site workers understand injury/intervention reporting requirements?** Yes ☒ No ☐

**Comments:**

**Name & Title of Person Conducting Tailgate Safety Meeting:** Justin King - Env. Sci.

**Signature:** **Date:** 4/28/11

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth during the tailgate safety meeting and within the project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are **FIT** for work prior to work, duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

## SIGN IN

| MEETING ATTENDEES | | | |
|---|---|---|---|
| Name [Print] | Signature | Company | Time |
| Nick Zercher | | Sovereign | 0730 |
| Justin King | | Sovereign | 0730 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

| | | | |
|---|---|---|---|
| Are all personnel fit to work? | YES | NO | |
| Have all personnel been informed of work to be completed? | YES | NO | |
| Have all personnel been informed on **STOP WORK** procedures? | YES | NO | |
| Have all personnel reviewed all JSAs applicable to scope of work? | YES | NO | |
| Has fuel delivery service been informed? | YES | NO | N/A |
| Is fuel delivery due today? | YES | NO | N/A |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | N/A |
| Are work areas controlled to protect workers, site staff, and the public? | YES | NO | N/A |
| Do all contractors have their API Safety Key card? | YES | NO | N/A |
| Have all personnel reviewed and understand the Shell 12 Life-Saving Rules? | YES | NO | |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Nick Zercher | | 4/28/11 0730 | N. Edis | N. Edis |



Shell/Motiva 0007558

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest that they were **FIT** for work upon completion of work.

**SIGN OUT**

| MEETING ATTENDEES | | | |
|---|---|---|---|
| Name [Print] | Signature | Company | Time |
| Nick Zarcone | | Sovereign | 0206 |
| Justin King | | Sovereign | 2pm |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

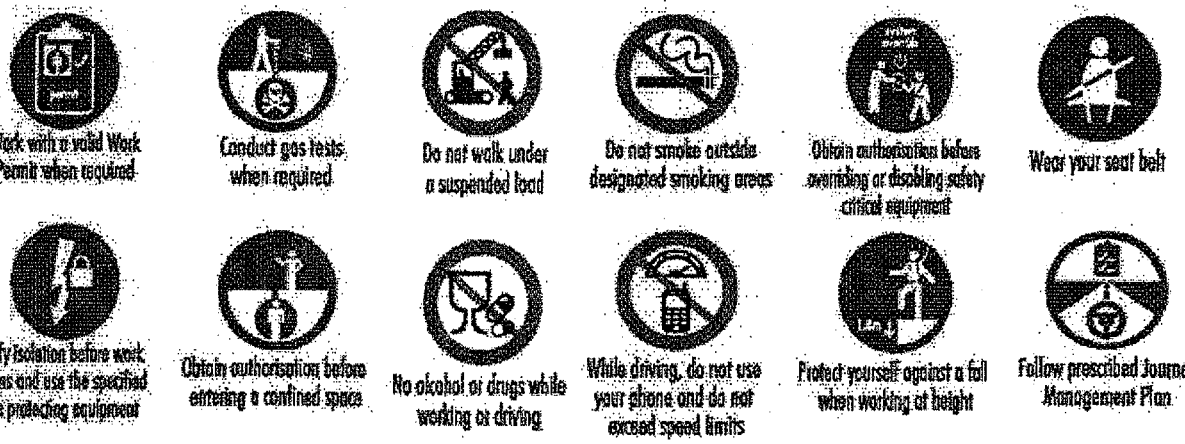
| | | | |
|---|---|---|---|
| Are all personnel fit to work (i.e., no injury or illness during workday)? | YES | NO | |
| Has the work area been left tidy and safe? | YES | NO | |
| Are site personnel aware of status of work? | YES | NO | |
| Are changes to equipment documented and communicated? | YES | NO | N/A |
| All Incidents, near misses, unsafe situations reported? | YES | NO | N/A |
| All **STOP WORK** initiatives have been documented in comment section? | YES | NO | N/A |

Did the work activity require any Modifications/Changes not listed above? ☐ YES ☑ NO ☐ N/A Briefly Describe: _____

Note: If YES, was it authorized by management? ☐ YES ☐ NO ☑ N/A Authorized by: _____

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Nick Zarcone | | 4/25/11 0206 | | |

## SHELL 12 Life-Saving Rules






Shell/Motiva 0007559

SOVEREIGN CONSULTING INC.

**Behavior Based Safety Checklist - DRIVING**
**WILL YOUR NEXT CHOICE BE THE SAFE CHOICE?**

Observer: Jking
Date: 4/28/11
Office: Farmingdale

Job Site: SEQ27
Motiva-terminal

Total Safe Behaviors Observed: _____
Total At Risk Behaviors Observed: _____
% Safe Behaviors: _____

| Critical Behavior List | Safe | At Risk | Critical Behavior List | Safe | At Risk |
|---|---|---|---|---|---|
| Seat belts | 1 | | Following distance | HHT | |
| Seat adjustment | 1 | | Traffic lights/signs | 1111 | |
| Mirror adjustment | 1 | | Travel surface / speed | 11 | |
| Hands on wheel | 1 | | Distractions | 1 | |
| Personal health / task alignment | 1 | | Signaling / Changing lanes | HH 1 | |
| Walk around | 1 | | Parking | 1 | |
| Headrest adjusted | 1 | | Refueling | — | |
| Headlights | 1 | | Securing vehicle | 1 | |
| Eyes on path | 1 | | | | |
| | | | | | |

| OBSERVED SAFE BEHAVIORS / GOOD PRACTICES |
|---|
| Did walk around |
| |
| |
| |

| OBSERVED AT RISK BEHAVIORS | |
|---|---|
| What was observed to be at-risk? | Why was it at risk? |
| N/A | |
| | |
| | |
| | |

| Comments: |
|---|
| |
| |

**Definitions for Critical Behaviors:**

**Seat belts:** All seat belts should be fastened for driver and occupants.
**Seat and mirror adjustment:** Seat properly adjusted for driver; mirrors are aligned for optimum coverage of side and rear views.
**Hands on wheel:** Driver has both hands on steering wheel
**Personal health / task alignment:** Driver is rested, physically capable of driving, and not emotionally distracted
**Walk around:** performs walk around vehicle to check for unforeseen obstructions prior to entering
**Headrest adjusted:** Headrest is properly adjusted for current driver to prevent potential whip-lash from rear-end impact
**Headlights:** Turns on headlights during rainy, foggy, snowy weather, etc.
**Eyes on path:** Eyes are on the road ahead, not focused on reading a map or other
**Following distance:** Maintains a safe following distance of 3 seconds for cars & vans with dry conditions, 4 seconds for trucks
**Obeying traffic lights/signs:** This includes coming to a complete stop and/or yeilding at appropriate road signs and signals
**Travel surface / speed:** Travel within speed limits, and adjusts speed for poor road conditions
**Distractions:** Driver is not distracted by radios, maps, telephones or conversations within the car while moving.
**Signaling / changing lanes:** Driver checks mirrors and signals for turns and lane changes
**Parking:** Driver enters parking space slowly, allows room on each side of vehicle
**Refueling:** shuts off engine during refueling
**Securing vehicle:** all loads are secured properly both inside vehicle and outside vehicle

Sovereign Consulting Inc.

**Behavior Based Safety Checklist - FIELD WORK**
**WILL YOUR NEXT CHOICE BE THE SAFE CHOICE?**

Observer: JKing
Date: 4/28/11
Office: Farmingdale

Tasks Observed: GWS
Job Site: SEOIT Motiva Terminal

Total Safe Behaviors Observed: _____
Total At Risk Behaviors Observed: _____
% Safe Behaviors: _____

| Critical Behavior List | Safe | At Risk | Critical Behavior List | Safe | At Risk |
|---|---|---|---|---|---|
| Clear of pinch points | III | | Traffic awareness | I | |
| Use of traffic control devices | III | | Review of JSAs | IIII | |
| Use of tools | II | | Lifting / moving of equipment | I | |
| Precautions for weather | I | | Emergency equipment | II | |
| PPE - safety vest and safety glasses | II | | Electrical safety | — | |
| PPE- hard hat | I | | Heavy equipment hazards | — | |
| PPE - hearing protection | I | | Biological hazards addressed | I | |
| PPE - task appropriate gloves | II | | Physical hazards addressed | I | |
| PPE - other | — | | Work Permits | I | |
| Use of air monitoring equipment | — | | | | |
| Clear of moving / rotating equipment | — | | | | |

| OBSERVED SAFE BEHAVIORS / GOOD PRACTICES |
|---|
| Wore all PPE |
| |
| |
| |

| OBSERVED AT RISK BEHAVIORS | |
|---|---|
| What was observed to be at-risk? | Why was it at risk? |
| N/A | |
| | |
| | |
| | |

| Comments: |
|---|
| |
| |

**Definitions for Critical Behaviors:**

**Clear of pinch points:** body parts are kept out of pinch points -such as under gratings, manhole covers, etc.
**Use of traffic control devices:** Work zone delineators / traffic control devices used per the HASP/Scorecard
**Use of tools:** proper tool for the job utilized, tool is used appropriately (no hammering with a screwdriver, etc.), tool is in good condition
**Precautions for weather:** applies sunscreen, drinks plenty of fluids in hot weather; dresses appropriately for cold weather
**PPE - safety vest, safety glasses:** worn on site at all times
**PPE - hard hat:** worn when there are overhead hazards, construction activities, drilling, excavation, or as required by HASP
**PPE- hearing protection:** worn during times where noise is >85 dBa; drilling, vac truck, bobcat, geoprobe, etc.
**PPE - task appropriate gloves:** leather or protective gloves for manhole handling, equipment handling; nitrile gloves for gw sampling, and minimal chemical exposures
**PPE- other:** Other PPE as required by site HASP
**Use of air monitoring equipment:** per the site HASP
**Clear of moving/rotating equipment:** long hair should be tied back, long sleeves buttoned or rolled up to elbows, stay out of point of operation
**Traffic awareness:** faces traffic, remains alert to oncoming vehicles, blocks off parking spots where encroachment may be a problem
**Review of JSAs:** Prior to task, JSA should be reviewed
**Lifting/moving equipment:** proper body positioning during lifting, lift with legs, load close to body, etc.
**Emergency equipment:** should have fire extinguisher, first aid kit, BBP kit available at site
**Electrical safety:** LOTO utilized, GFCI utilized
**Heavy equipment hazards:** aware of backup signals, only approaches heavy equipment after eye contact/hand signal from operator, and operator stops equipment, stays out of heavy equipment blind spots
**Biological hazards addressed:** preventative measures for ticks, mosquitos, chiggers, bees, snakes when needed
**Physical hazards addressed:** fall protection, slip, trip, fall, overhead hazards, compressed gases, pressure relief, etc.
**Work Permits:** obtained for working at heights, confined space entry, hot work, excavation, LOTO, etc.

# TIME & MATERIAL FIELDSHEET

Date: Thursday, April 28, 2011
Page: 1 of 1

Project #: 5E017.140
Project Address: 25 Paidge Avenue, Brooklyn, New York
Client: Shell Oil Products, U.S.

## Employee Time

| Employee Name | Task # | Subtask # | Prep Time | Travel Time | On-Site Time | Total Time |
|---|---|---|---|---|---|---|
| Nickolas Zarcone | 3 | 96 | 1 | 3 | 6.5 | 10.5 |
| Justin King | 3 | 96 | 1 | 3 | 6.5 | 10.5 |
| | | | | | | |
| | | | | | | |
| | | | | | | |


SOVEREIGN CONSULTING, INC.
290 Executive Drive, Suite 300
Cranberry Twp., PA 16066
www.sovcon.com


## SOVEREIGN OWNED OR LEASED EQUIPMENT AND MATERIALS LIST

| Item # | Item | Qty | Units |
|---|---|---|---|
| OE104 | Chevy Van | | hrs |
| OE124 | Ford F-150 | | hrs |
| OE115 | Interface Probe | | day |
| OE143 | Multi-Gas PID | | day |
| SR620 | Mobile Phone | | day |
| SR800 | 4" Bailer | | each |
| SR800 | 2" Bailer | | each |
| SR800 | 1" Bailer | | each |
| SR812 | QED Filters | | each |
| SR816 | LDPE Tubing | | ft |
| SR817 | Silicon Flex Hose | | ft |
| SR820 | Gloves (box) (100) | | each |

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR835 | Sorbent Sock | | each |
| SR836 | Sorbent Pads | | each |
| SR837 | Sorbent Boom | | each |
| SR935 | 55 Gallon Drum | | each |
| SR980 | Gripper Plug - 1" | | each |
| SR981 | Gripper Plug - 2" | | each |
| SR982 | Gripper Plug - 4" | | each |
| SR983 | Brass Padlock | | each |
| SR205 | Hand Auger | | day |
| SR300 | Air Sampling Pump | | day |
| | | | |
| | | | |

## FEI Rental Equipment (Need PO)

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR105 | Interface Probe | 1 | day |
| SR110 | DO Meter | | day |
| SR130 | Sub Pump 2" | | day |
| SR300 | Air Sampling Pump | | day |
| SR310 | PID | | day |
| SR335 | 4-Gas Meter | | day |
| SR420 | Level Logger | | day |
| SR635 | Survey Equipment | | day |
| SR645 | GW Multi-Meter | | day |
| SR655 | Peristaltic Pump | | day |
| | | | |
| | | | |

## RENTAL EQUIPMENT AND ADDITIONAL MATERIALS
List items rented or purchased to complete work

(18) 1.6 x 48" bailers

## Subcontractor Labor
Name & Description of Work

## WORK DESCRIPTION

NZ & JK on site @ 07:30 off @ 02:00
Annual GWS (18) wells

Project Manager / Supervisor Approval: _____ Date: _____

SOVEREIGN CONSULTING - WELL GAUGING/HAND-BAILING DATA SUMMARY SHEET

PAGE 1 OF 1

DATE: 4/28/11

CLIENT: MOTIVA ENTERPRISES LLC
25 PAIDGE AVENUE, BROOKLYN NY
SCI JOB # 5E017.140

| WELL ID | TIME OF READING | WELL DIA. (IN) | TOTAL DEPTH (FT) | DEPTH TO PRODUCT (FT) | DEPTH TO WATER (FT) | PRODUCT THICKNESS (FT) | PRODUCT RECOVERED (GAL) | NOTES |
|---|---|---|---|---|---|---|---|---|
| MW-1 | | 4 | | | | | | |
| MW-3 | 8:15 | 4 | | | | | | |
| MW-29 | 8:33 | 4 | | | | | | |
| MW-04 | | 4 | | | | | | |
| MW-30 | 8:48 | 4 | | | | | | |
| MW-5 | 9:02 | 4 | | | | | | |
| MW-28 | 9:17 | 4 | | | | | | |
| MW-27 | 9:40 | 4 | | | | | | |
| MW-6 | 9:55 | 4 | | | | | | |
| MW-7R | 10:30 | 4 | | | | | | |
| MW-8 | 10:57 | 4 | | | | | | |
| MW-9 | 11:24 | 4 | | | | | | |
| MW-21R | 11:45 | 4 | | | | | | |
| MW-22R | 12:08 | 4 | | | | | | |
| MW-13 | 12:26 | 4 | | | | | | |
| MW-14 | 12:40 | 4 | | | | | | |
| MW-23 | 13:12 | 4 | | | | | | |
| MW-24 | 1:16 | 4 | | | | | | |
| MW-43 | 1:30 | 4 | | | | | | |
| MW-42 | 1:45 | 4 | | | | | | |
| MW-44 | | 4 | | | | | | |
| MW-25 | | 4 | | | | | | |
| TW-1 | | 6 | | | | | | |
| MW-26 | | 4 | | | | | | |
| TW-2 | | 6 | | | | | | |
| MW-2 | | 4 | | | | | | |
| TW-3 | | 6 | | | | | | |
| TW-4 | | 6 | | | | | | |
| TW-5 | | 6 | | | | | | |
| MW-31 | | 4 | | | | | | |
| TW-6 | | 6 | | | | | | |
| MW-20 | | 4 | | | | | | |
| MW-15 | | 4 | | | | | | |
| MW-16 | | 4 | | | | | | |
| MW-17 | | 4 | | | | | | |
| MW-18 | | 4 | | | | | | |
| MW-32 | | 4 | | | | | | |
| RW-34 | | 6 | | | | | | |
| MW-33 | | 4 | | | | | | |
| MW-39 | | 4 | | | | | | |
| RW-40 | | 6 | | | | | | |
| MW-35 | | 4 | | | | | | |
| RW-36 | | 6 | | | | | | |
| MW-41 | | 4 | | | | | | |
| RW-37 | | 6 | | | | | | |
| MW-38 | | 4 | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Location 25 Paige Ave Date 4/28/11

Project / Client Beverly Terminal
GWS

| ID | Time | DTW | DTP |
|---|---|---|---|
| 3 | 8:15 | | |
| 29 | 8:33 | | |
| 4 | ~~8:45~~ | NZ | |
| 30 | 8:48 | | |
| 5 | 9:02 | | |
| 28 | 9:17 | | |
| 27 | 9:40 | | |
| 6 | 9:55 | | |
| 7R | 10:30 | | |
| 8 | 10:57 | | |
| 9 | 11:24 | | |
| 21R | 11:45 | | |
| 22R | 12:08 | | |
| 13 | 12:20 | | |
| 14 | 12:40 | | |
| 23 | 12:55 | | |
| 24 | 1:16 | | |
| 43 | 1:30 | | |
| 42 | 1:45 | | |

FIELD BLANK - 10:45

Sovereign on site @ 0730 off @ 0200
M + JH 2010 F150 Pickup ~60 °F
Went over H & S and scope of work with terminal worker
GWS (18) wells

Shell/Motiva 0007564

Site Navigation

Shopping
- Camping Gear
- Hunting Gear
- Maglite Sales

Resources
- Link Directory
- AIG Top Sites
- Fishing Charters
- Free Tackle
- Charter Listings
- Saltwater Tides

# Go Fishing Forum Message Boards

The only way you can catch fish is to Go Fishing Forum!

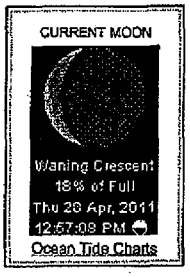
**Please leave a comment about our tide prediction website!**

**Search Tide Stations**

**Search Term: (i.e. Potomac):**

All States

Search Tide Stations




- Go Fishing Forum Home
- You won't catch fish unless you Go Fishing Forum!

Select a different tide station

FISHING Top 100

Saskatchewan Fishing
With Trout, Pike & More, Your Trip Starts In Saskatchewan. Info Here!
www.Fishing-In-Saska...

iboats.com Marine Store
Huge Selection of Boat Parts. Find Engine Parts, Hardware, & Supplies!
iboats.com/Boat-Parts...

Fishing Testers Wanted
Test & keep fishing products. Join The North American Fishing Club.
FishingClub.com

Rio Mansa Lodge
Patagonia's Best Fly Fishing & Mountain Lodge
www.riomansolodge.c...

**Start Date:** April 28 2011 **Number of Days:** 2

Update Charts

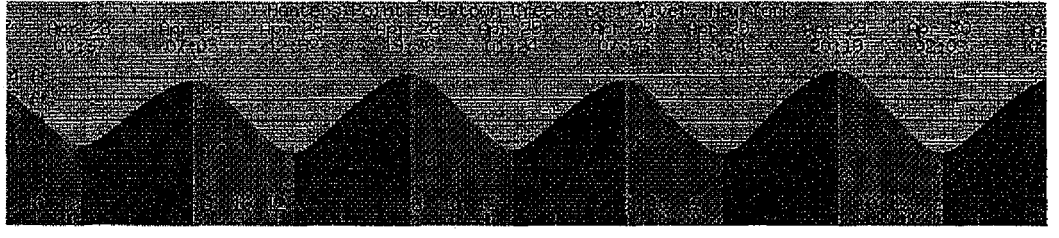
**NOT FOR NAVIGATION** The accuracy of these tide predictions is not guaranteed in any way. You should not use this program if anyone or anything could come to harm as a result of an incorrect tide prediction. NOAA and similar agencies in other countries can provide you with certified tide predictions if that is what you need. XTide's predictions do not incorporate the effects of tropical storms, El Niño, seismic events, subsidence, uplift, or changes in global sea level.

Bookmark this page

**Hunters Point, Newtown Creek, East River, New York**
**(40.7400° N, 73.9617° W)**

**Print Today's Tide Prediction for this location**

Tide Graph Start Time: 2011-04-28 00:00



| Thursday, April 28th, 2011 | | | Friday, April 29th, 2011 | | |
|---|---|---|---|---|---|
| **Time** | **Type** | **Height** | **Time** | **Type** | **Height** |
| 12:37 AM EDT | Low Tide | 0.79 feet | 1:24 AM EDT | Low Tide | 0.63 feet |
| 7:03 AM EDT | High Tide | 3.81 feet | 7:53 AM EDT | High Tide | 3.86 feet |
| 12:52 PM EDT | Low Tide | 0.48 feet | 1:34 PM EDT | Low Tide | 0.42 feet |
| 7:36 PM EDT | High Tide | 4.14 feet | 8:19 PM EDT | High Tide | 4.33 feet |

**Raw Tide Data**

Hunters Point, Newtown Creek,



Shell/Motiva 0007565

# Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
- ☑ ACCUTEST (_____)
- ☐ CALSCIENCE (_____)
- ☐ TESTAMERICA (_____)
- ☐ Other (_____)

Lab/Vendor # 1d36b (Accutest)

Please Check Appropriate Box:
- ☐ ENV. SERVICES
- ☐ MOTIVA RETAIL
- ☐ SHELL RETAIL
- ☐ MOTIVA SD&CM
- ☑ CONSULTANT
- ☐ LUBES
- ☐ SHELL PIPELINE
- ☐ OTHER _____

Print Bill To Contact Name: Douglas Jakim

INCIDENT # (ENV SERVICES): 9 7 0 9 4 9 8 1 ☐ CHECK IF NO INCIDENT # APPLIES

DATE: 4/28/2011

PAGE: 1 of 1

PO #

SAP #: 1 0 0 6 2 3

SAMPLING COMPANY: Sovereign Consulting Inc.

LOG CODE:

SITE ADDRESS: Street and City: 25 Paidge Avenue, Brooklyn

State: NY

GLOBAL ID NO.:

ADDRESS: 290 Executive Drive, Suite 300, Cranberry Township, PA 16066

EDF DELIVERABLE TO (Name, Company, Office Location):

PHONE NO.:

E-MAIL:

CONSULTANT PROJECT NO.: 5E017.140

PROJECT CONTACT (Hardcopy or PDF Report to): John McCollums / Douglas Jakim

SAMPLER NAME(S) (Print): Justin King and Nick Zarcone

LAB USE ONLY

TELEPHONE: (724) 553-5084

FAX: (724) 553-5089

Bill To Contact E-MAIL: djakim@sovcon.com

TURNAROUND TIME (CALENDAR DAYS):
- ☑ STANDARD (14 DAY)
- ☐ 5 DAYS
- ☐ 3 DAYS
- ☐ 2 DAYS
- ☐ 24 HOURS
- ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

DELIVERABLES: ☑ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY) _____

TEMPERATURE ON RECEIPT C° Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:

Report to WPA email list.

- ☑ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMBURSEMENT RATE APPLIES
- ☐ EDD NOT NEEDED
- ☐ RECEIPT VERIFICATION REQUESTED
- ☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | UNIT COST: TPH DRO | UNIT COST: 8260B - BTEX/MTBE | FIELD NOTES: Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-3 | 4/28/11 | 8:15 | GW | 2 | | | | | 2 | X | | |
| | MW-27 | 4/28/11 | 9:40 | GW | 2 | | | | | 2 | X | | |
| | MW-7R | 4/28/11 | 10:30 | GW | 2 | | | | | 2 | X | | |
| | MW-8 | 4/28/11 | 10:57 | GW | 2 | | | | | 2 | X | | |
| | MW-9 | 4/28/11 | 11:24 | GW | 2 | | | | | 2 | X | | |
| | TRIP BLANK | 4/25/11 | 5:00 | TB | 2 | | | | | 2 | | X | |

FIELD NOTES:

TEMPERATURE ON RECEIPT C°

| | | | |
|---|---|---|---|
| Relinquished by: (Signature) | Received by: (Signature) | Date: 4/28/11 | Time: 3:30 pm |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |

05/2/06 Revision

Shell/Motiva 00075666

# Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
- ☑ ACCUTEST (_____)
- ☐ CALSCIENCE (_____)
- ☐ TESTAMERICA (_____)
- ☐ Other (_____)

Lab Vendor # 1343540 (Accutest)

Please Check Appropriate Box:
- ☐ ENV. SERVICES
- ☐ MOTIVA RETAIL
- ☐ SHELL RETAIL
- ☐ MOTIVA SD&CM
- ☑ CONSULTANT
- ☐ LUBES
- ☐ SHELL PIPELINE
- ☐ OTHER _____

Print Bill To Contact Name: Douglas Jakim

INCIDENT # (ENV SERVICES): 9 7 0 9 4 9 8 1

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 4/28/2011

PAGE: 1 of 1

PO #

SAP #: 1 0 0 6 2 3

| | |
|---|---|
| SAMPLING COMPANY: Sovereign Consulting Inc. | LOG CODE: |
| SITE ADDRESS: Street and City: 25 Paidge Avenue, Brooklyn | State: NY |
| GLOBAL ID NO.: | |
| ADDRESS: 290 Executive Drive, Suite 300, Cranberry Township, PA 16066 | EDF DELIVERABLE TO (Name, Company, Office Location): |
| PHONE NO.: | E-MAIL: |
| CONSULTANT PROJECT NO.: 5E017.140 | |
| PROJECT CONTACT (Hardcopy or PDF Report to): John McCollums / Douglas Jakim | SAMPLER NAME(S) (Print): Justin King and Nick Zarcone |
| LAB USE ONLY | |
| TELEPHONE: (724) 553-5084 | FAX: (724) 553-5089 |
| Bill To Contact E-MAIL: djakim@soycon.com | |

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

DELIVERABLES: ☑ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY) _____

TEMPERATURE ON RECEIPT C° Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :

Report to WPA email list.

- ☑ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMBURSEMENT RATE APPLIES
- ☐ EDD NOT NEEDED
- ☐ RECEIPT VERIFICATION REQUESTED
- ☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | UNIT COST: TPH DRO | UNIT COST: 8260B - BTEX/MTBE | FIELD NOTES: Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-21R | 4/28/11 | 11:45 | GW | X | | | | | 2 | X | | |
| | MW-22R | 4/28/11 | 12:08 | GW | X | | | | | 2 | X | | |
| | MW-13 | 4/28/11 | 12:26 | GW | X | | | | | 2 | X | | |
| | MW-24 | 4/28/11 | 1:16 | GW | X | | | | | 2 | X | | |
| | TRIP BLANK | 4/25/11 | 5:00 | TB | X | | | | | 2 | | X | |

FIELD NOTES:

TEMPERATURE ON RECEIPT C°

| | | | |
|---|---|---|---|
| Relinquished by: (Signature) | Received by: (Signature) | Date: 4/28/11 | Time: 3:30 pm |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |

05/2/06 Revision

Shell/Motiva 00075567

# Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
☑ ACCUTEST (_____)
☐ CALSCIENCE (_____)
☐ TESTAMERICA (_____)
☐ Other (_____)
Lab Vendor #: 10-3940 (Accutest)

**Please Check Appropriate Box:**
☐ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA SD&CM ☑ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER _____

Print Bill To Contact Name: Douglas Jakim

INCIDENT # (ENV SERVICES): 97094981 ☐ CHECK IF NO INCIDENT # APPLIES

DATE: 4/28/2011

PAGE: 1 of 1

PO #:

SAP #: 100623

SAMPLING COMPANY: Sovereign Consulting Inc.

LOG CODE:

SITE ADDRESS: Street and City: 25 Paidge Avenue, Brooklyn

State: NY

GLOBAL ID NO.:

ADDRESS: 290 Executive Drive, Suite 300, Cranberry Township, PA 16066

EDF DELIVERABLE TO (Name, Company, Office Location):

PHONE NO.:

E-MAIL:

CONSULTANT PROJECT NO.: 5E017.140

PROJECT CONTACT (Hardcopy or PDF Report to): John McCollums / Douglas Jakim

TELEPHONE: (724) 553-5084

FAX: (724) 553-5089

Bill To Contact E-MAIL: djakim@sovcon.com

SAMPLER NAME(S) (Print): Justin King and Nick Zarcone

LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

DELIVERABLES: ☑ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY) _____

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
Report to WPA email list.

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☐ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | UNIT COST: TPH GRO | Ethanol | 8260B - BTEX/MTBE | NON-UNIT COST | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-3 | 4/28/11 | 8:15 | GW | 5 | | | | | 5 | X | X | | | |
| | MW-27 | 4/28/11 | 9:40 | GW | 5 | | | | | 5 | X | X | | | |
| | MW-7R | 4/28/11 | 10:30 | GW | 5 | | | | | 5 | X | X | | | |
| | MW-8 | 4/28/11 | 10:57 | GW | 5 | | | | | 5 | X | X | | | |
| | MW-9 | 4/28/11 | 11:24 | GW | 5 | | | | | 5 | X | X | | | |
| | MW-21R | 4/28/11 | 11:45 | GW | 5 | | | | | 5 | X | X | | | |
| | MW-22R | 4/28/11 | 12:08 | GW | 5 | | | | | 5 | X | X | | | |
| | MW-13 | 4/28/11 | 12:26 | GW | 5 | | | | | 5 | X | X | | | |
| | MW-24 | 4/28/11 | 1:16 | GW | 5 | | | | | 5 | X | X | | | |
| | TRIP BLANK | 4/25/11 | 5:00 | TB | 2 | | | | | 2 | | | X | | |

FIELD NOTES:
TEMPERATURE ON RECEIPT C°

| | | | |
|---|---|---|---|
| Relinquished by: (Signature) | | Received by: (Signature) | Date: 4/28/11 Time: 3:30 pm |
| Relinquished by: (Signature) | | Received by: (Signature) | Date: Time: |
| Relinquished by: (Signature) | | Received by: (Signature) | Date: Time: |

06/2/08 Revision

Shell/Motiva 0007568

# Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
- [x] ACCUTEST (_____)
- [ ] CALSCIENCE (_____)
- [ ] TESTAMERICA (_____)
- [ ] Other (_____)

Lab Vendor # 1813640 (Accutest)

**Please Check Appropriate Box:**
- [ ] ENV. SERVICES
- [ ] MOTIVA RETAIL
- [ ] SHELL RETAIL
- [ ] MOTIVA SD&CM
- [x] CONSULTANT
- [ ] LUBES
- [ ] SHELL PIPELINE
- [ ] OTHER _____

**Print Bill To Contact Name:** Douglas Jakim

**INCIDENT # (ENV SERVICES):** 9 7 0 9 4 9 8 1 — [ ] CHECK IF NO INCIDENT # APPLIES

DATE: 4/28/2011

PAGE: 1 of 2

**PO #:**

**SAP #:** 1 0 0 6 2 3

SAMPLING COMPANY: Sovereign Consulting Inc.

LOG CODE:

SITE ADDRESS: Street and City: 25 Paidge Avenue, Brooklyn

State: NY

GLOBAL ID NO.:

ADDRESS: 290 Executive Drive, Suite 300, Cranberry Township, PA 16066

EDF DELIVERABLE TO (Name, Company, Office Location):

PHONE NO.:

E-MAIL:

CONSULTANT PROJECT NO.: 5E017.140

PROJECT CONTACT (Hardcopy or PDF Report to): John McCollums / Douglas Jakim

TELEPHONE: (724) 553-5084

FAX: (724) 553-5089

Bill To Contact E-MAIL: djakim@sovcon.com

SAMPLER NAME(S) (Print): Justin King and Nick Zarcone

*LAB USE ONLY*

TURNAROUND TIME (CALENDAR DAYS):
- [x] STANDARD (14 DAY)
- [ ] 5 DAYS
- [ ] 3 DAYS
- [ ] 2 DAYS
- [ ] 24 HOURS
- [ ] RESULTS NEEDED ON WEEKEND

- [ ] LA - RWQCB REPORT FORMAT
- [ ] UST AGENCY:

DELIVERABLES:
- [x] LEVEL 1
- [ ] LEVEL 2
- [ ] LEVEL 3
- [ ] LEVEL 4
- [ ] OTHER (SPECIFY) _____

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:

Report to WPA email list.

- [x] SHELL CONTRACT RATE APPLIES
- [ ] STATE REIMBURSEMENT RATE APPLIES
- [ ] EDD NOT NEEDED
- [ ] RECEIPT VERIFICATION REQUESTED
- [ ] PROVIDE LEDD DISK

**REQUESTED ANALYSIS**

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | UNIT COST: EPA 8260 (See attached list) | NON-UNIT COST |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-3 | 4/28/11 | 8:15 | GW | 3 | | | | | 3 | x | |
| | MW-29 | 4/28/11 | 8:33 | GW | 3 | | | | | 3 | x | |
| | MW-30 | 4/28/11 | 8:48 | GW | 3 | | | | | 3 | x | |
| | MW-5 | 4/28/11 | 9:02 | GW | 3 | | | | | 3 | x | |
| | MW-28 | 4/28/11 | 9:17 | GW | 3 | | | | | 3 | x | |
| | MW-27 | 4/28/11 | 9:40 | GW | 3 | | | | | 3 | x | |
| | MW-6 | 4/28/11 | 9:55 | GW | 3 | | | | | 3 | x | |
| | MW-7R | 4/28/11 | 10:30 | GW | 3 | | | | | 3 | x | |
| | MW-8 | 4/28/11 | 10:57 | GW | 3 | | | | | 3 | x | |
| | MW-9 | 4/28/11 | 11:24 | GW | 3 | | | | | 3 | x | |

**FIELD NOTES:**

TEMPERATURE ON RECEIPT C°

Container PID Readings or Laboratory Notes

| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
|---|---|---|---|
| | | 4/28/11 | 3:30pm |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |

05/2/06 Revision

Shell/Motiva 0007569

# Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
- [x] ACCUTEST (_____)
- [ ] CALSCIENCE (_____)
- [ ] TESTAMERICA (_____)
- [ ] Other (_____)

Lab Vendor # 81560 (Accutest)

**Please Check Appropriate Box:**

| | | |
|---|---|---|
| [ ] ENV. SERVICES | [ ] MOTIVA RETAIL | [ ] SHELL RETAIL |
| [ ] MOTIVA SD&CM | [x] CONSULTANT | [ ] LUBES |
| [ ] SHELL PIPELINE | [ ] OTHER _____ | |

Print Bill To Contact Name: Douglas Jakim

INCIDENT # (ENV SERVICES): 97094981

[ ] CHECK IF NO INCIDENT # APPLIES

DATE: 4/28/2011

PAGE: 2 of 2

PO #:

SAP #: 100623

SAMPLING COMPANY: Sovereign Consulting Inc.

LOG CODE:

SITE ADDRESS: Street and City: 25 Paidge Avenue, Brooklyn

State: NY

GLOBAL ID NO.:

ADDRESS: 290 Executive Drive, Suite 300, Cranberry Township, PA 16066

EDF DELIVERABLE TO (Name, Company, Office Location):

PHONE NO.:

E-MAIL:

CONSULTANT PROJECT NO.: 5E017.140

PROJECT CONTACT (Hardcopy or PDF Report to): John McCollums / Douglas Jakim

SAMPLER NAME(S) (Print): Justin King and Nick Zarcone

LAB USE ONLY

TELEPHONE: (724) 553-5084

FAX: (724) 553-5089

Bill To Contact E-MAIL: djakim@sovcon.com

TURNAROUND TIME (CALENDAR DAYS):
- [x] STANDARD (14 DAY)
- [ ] 5 DAYS
- [ ] 3 DAYS
- [ ] 2 DAYS
- [ ] 24 HOURS
- [ ] RESULTS NEEDED ON WEEKEND

- [ ] LA - RWQCB REPORT FORMAT
- [ ] UST AGENCY:

DELIVERABLES:
- [x] LEVEL 1
- [ ] LEVEL 2
- [ ] LEVEL 3
- [ ] LEVEL 4
- [ ] OTHER (SPECIFY) _____

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:

Report to WPA email list.

- [x] SHELL CONTRACT RATE APPLIES
- [ ] STATE REIMBURSEMENT RATE APPLIES
- [ ] EDD NOT NEEDED
- [ ] RECEIPT VERIFICATION REQUESTED
- [ ] PROVIDE LEDD DISK

REQUESTED ANALYSIS

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | UNIT COST: EPA 8260 (See attached list) | UNIT COST: 8260B - BTEX/MTBE | NON-UNIT COST |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-21R | 4/28/11 | 11:45 | GW | 3 | | | | | 3 | X | | |
| | MW-22R | 4/28/11 | 12:08 | GW | 3 | | | | | 3 | X | | |
| | MW-13 | 4/28/11 | 12:26 | GW | 3 | | | | | 3 | X | | |
| | MW-14 | 4/28/11 | 12:40 | GW | 3 | | | | | 3 | X | | |
| | MW-23 | 4/28/11 | 12:55 | GW | 3 | | | | | 3 | X | | |
| | MW-24 | 4/28/11 | 1:16 | GW | 3 | | | | | 3 | X | | |
| | MW-43 | 4/28/11 | 1:30 | GW | 3 | | | | | 3 | X | | |
| | MW-42 | 4/28/11 | 1:45 | GW | 3 | | | | | 3 | X | | |
| | FIELD BLANK | 4/28/11 | 10:45 | GW | 3 | | | | | 3 | | X | |
| | TRIP BLANK | 4/25/11 | 5:00 | TB | 2 | | | | | 2 | | X | |

FIELD NOTES:

TEMPERATURE ON RECEIPT C°

Container PID Readings or Laboratory Notes

| | | | |
|---|---|---|---|
| Relinquished by: (Signature) | Received by: (Signature) | Date: 4/28/11 | Time: 3:30 PM |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |

05/2/06 Revision

Shell/Motiva 0007570

FedEx. US Airbill
Express

FedEx Tracking Number 8708 8445 7530

0200 Sender's Copy

**1 From** Please print and press hard.

Date 4/25/11 Sender's FedEx Account Number SENDER'S FEDEX ACCOUNT NUMBER ONLY

Sender's Name Justin King Phone 631 753-8380

Company Sovereign Consulting

Address 1855 New Highway Suite C Dept/Floor/Suite/Room

City Farmingdale State NY ZIP 11735

**2 Your Internal Billing Reference** First 24 characters will appear on invoice. OPTIONAL

**3 To**

Recipient's Name Sample Receiving Phone 732 329-0200

Company Accutest Labs ☐ HOLD Weekday This FedEx location address below NOT available for FedEx First Overnight. ☐ HOLD Saturday Print FedEx location address below. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Address 2235 Route 130

We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept./Floor/Suite/Room

Address

Print FedEx location address here if a HOLD option is selected.

City Dayton State NJ ZIP 0810

**4a Express Package Service** *To most locations. *Packages up to 150 lbs.*

- [X] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

**4b Express Freight Service** *To most locations. *Packages over 150 lbs.*

- [ ] FedEx 1Day Freight — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected. CALL 1.800.332.0807 FedEx 1Day Freight Booking No.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

**5 Packaging** *Declared value limit $500.

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [X] Other

**6 Special Handling and Delivery Signature Options**

- [ ] SATURDAY Delivery — NOT available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.

Signature Options

- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. Fee applies.
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.

**Does this shipment contain dangerous goods?** One box must be checked.

- [X] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

- [ ] Cargo Aircraft Only

**7 Payment** *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below.

- [ ] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

FedEx Acct. No. / Credit Card No. 114759503 Exp. Date

| Total Packages | Total Weight | Total Declared Value† |
|---|---|---|
| | lbs. | $ .00 |

†Our liability is limited to $100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability.

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Simplify your shipping. Manage your account. Access all the tools you need.

Shell/Motiva 0007571

FedEx. US Airbill
Express

FedEx Tracking Number 8708 8445 7529

0200 Sender's Copy

**1 From** Please print and press hard.

Date 4/28/11 Sender's FedEx Account Number SENDER'S FEDEX ACCOUNT NUMBER ONLY

Sender's Name Justin King Phone 631 753-8380

Company Sovereign Consulting

Address 1655 New Highway Suite C
Dept./Floor/Suite/Room

City Farmingdale State NY ZIP 11735

**2 Your Internal Billing Reference** OPTIONAL
First 24 characters will appear on invoice.

**3 To**

Recipient's Name Sample Receiving Phone ( 732 329-0200

Company Accutest Labs ☐ HOLD Weekday Print FedEx location address below. NOT available for FedEx First Overnight. ☐ HOLD Saturday Print FedEx location address below. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Address 2235 Route 130
We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept./Floor/Suite/Room

Address
Print FedEx location address here if a HOLD option is selected.

City Dayton State NJ ZIP 08810

Ship and track packages at fedex.com
Simplify your shipping. Manage your account. Access all the tools you need.

**4a Express Package Service** *To most locations. *Packages up to 150 lbs.*

- ☒ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
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☐ FedEx Envelope* ☐ FedEx Pak* Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak. ☐ FedEx Box ☐ FedEx Tube ☒ Other

**6 Special Handling and Delivery Signature Options**

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NOT available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.

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☐ Cargo Aircraft Only

**7 Payment** *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below.

☐ Sender Acct. No. in Section 1 will be billed. ☒ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

FedEx Acct. No. / Credit Card No. 1147595O3 Exp. Date

Total Packages ____ Total Weight ____ lbs. Total Declared Value† $ ____ .00

†Our liability is limited to $100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability.

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Shell/Motiva 0007572

FedEx. US Airbill
Express

FedEx Tracking Number 8708 8445 7518

Sender's Copy

**1 From** Please print and press hard.

Date 4/28/11 Sender's FedEx Account Number SENDER'S FEDEX ACCOUNT NUMBER ONLY

Sender's Name Justin King Phone (631) 753-8380

Company Sakreen Consulting

Address 1655 New Highway Suite C
Dept./Floor/Suite/Room

City Farmingdale State NY ZIP 11735

**2 Your Internal Billing Reference** OPTIONAL
First 24 characters will appear on invoice.

**3 To**

Recipient's Name Sample Receiving Phone (732) 329-0200

Company Accutest Labs

HOLD Weekday — Print FedEx location address below. NOT available for FedEx First Overnight.

HOLD Saturday — Print FedEx location address below. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Address 2235 Route 130
We cannot deliver to P.O. boxes or P.O. ZIP codes.
Dept./Floor/Suite/Room

Address
Print FedEx location address here if a HOLD option is selected.

City Dayton State NJ ZIP 08810

**4a Express Package Service** * To most locations. Packages up to 150 lbs.

- [X] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
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- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [X] Other

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- [ ] Cargo Aircraft Only

**7 Payment** *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

- [ ] Sender — Acct. No. in Section 1 will be billed.
- [X] Recipient 114759503
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

FedEx Acct. No. / Credit Card No. Exp. Date

Total Packages ____ Total Weight ____ lbs. Total Declared Value $ ____ .00

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Our liability is limited to $100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability.

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Shell/Motiva 0007573

FedEx. US Airbill
Express

FedEx Tracking Number 8708 8445 7507

Sender's Copy

**1 From** Please print and press hard.

Date 4/28/11 Sender's FedEx Account Number SENDER'S FEDEX ACCOUNT NUMBER ONLY

Sender's Name Justin King Phone (631) 753-8380

Company Sovereign Consulting

Address 1855 New Highway Suite C Dept./Floor/Suite/Room

City Farmingdale State NY ZIP 11735

**2 Your Internal Billing Reference** OPTIONAL
First 24 characters will appear on invoice.

**3 To**

Recipient's Name Sample Receiving Phone (732) 329-0300

Company Accutest Labs

HOLD Weekday Print FedEx location address below. NOT available for FedEx First Overnight.

HOLD Saturday Print FedEx location address below. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Address 2235 Route 130
We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept./Floor/Suite/Room

Address
Print FedEx location address here if a HOLD option is selected.

City Dayton State NJ ZIP 08810

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- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
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CALL 1.800.332.0807
FedEx 1Day Freight Booking No.

**5 Packaging** * Declared value limit $500.

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**7 Payment** *Bill to:*

- [ ] Sender — Acct. No. in Section 1 will be billed.
- [X] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

Enter FedEx Acct. No. or Credit Card No. below.

FedEx Acct. No. / Credit Card No. 114759503 Exp. Date

Total Packages ____ Total Weight ____ lbs. Total Declared Value† $ ____ .00

†Our liability is limited to $100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability.

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Shell/Motiva 0007574

**Sovereign Consulting Inc.**
**SHELL Tailgate Safety Meeting Form**
(To be submitted with field notes to Project Manager each day)

| | |
|---|---|
| **Project Name:** Brooklyn Terminal | **Date:** 4/29/11 |
| **Location:** 25 Paidge Ave | **Weather:** Clear |
| **Project Manager [Print]:** Doug - Javin | **Temp:** ~ 63°F |
| **Contractors/Subcontractors:** | |

**Scope of Work:** GWS Annual

| **Task Hazards:** (check all that apply) *requires Permit to Work | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☐ | Ladders* | ☐ | Haz. Substances | ☑ | Sharp Objects | ☑ |
| Confined Spaces* | ☐ | Explosion | ☐ | Heavy Equipment | ☐ | Tools | ☑ |
| Cutting/Welding* | ☐ | Falling Objects | ☐ | Flying Debris | ☐ | Traffic | ☑ |
| Electrical | ☐ | Fire | ☐ | Noise | ☑ | Weather | ☑ |
| Environmental Hazard | ☑ | Insects/Biological | ☐ | Slip/Trip, Hazards | ☑ | Other (describe below) | ☐ |
| Elevated Work* | ☐ | Ticks – Biohazard | ☐ | Overhead | ☑ | | |
| Excavations* | ☐ | Bees, Wasps, Hornets – Biohazard | ☐ | Sanitation | ☐ | | |

| Work Zone Delineation Level | Level 1 ☐ | Level 2 ☐ | Level 3 ☑ *Watchperson required | Level 4 ☐ *Temp. Traffic Control Plan required |
|---|---|---|---|---|

| **Title of JSAs reviewed today:** | General Site Activities<br>Opening & closing manhole covers<br>Equipment Decon<br>GW Sampling activities |
|---|---|

**Engineering Controls / Work Practices:** PPE & Traffic Control

| **Levels of Protection / Personal Protective Equipment:** | | | |
|---|---|---|---|
| Level A ☐ | Eye & Face Protection ☑ | Safety Glasses ☑ | Face Shield ☐ |
| Level B ☐ | Foot Protection ☑ | Steel Toes ☑ | Hip Boots/Waders ☐ |
| Level C ☐ | Hand Protection ☑ | Nitrile Gloves ☑ | Leather Gloves ☑ Full Arm Chemical ☐ |
| Level D ☑ | Head Protection ☑ | Hard Hat ☑ | |
| | Hearing Protection ☑ | Ear Muffs/Plugs ☑ | |
| | Other ☐ | Barricades ☑ | High Visibility Safety Vests ☑ Cones/Flags ☑ |
| | | Amber Light/Vehicle Hazards ☐ | Crash Truck ☑ Tyvek/Coveralls ☐ |

| **Air Monitoring/Sampling** | | **Emergency Response** | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☐ | Emergency Alarms | ☑ | First Aid Kit Location | ☑ | Cell Phone Use None | ☐ |
| FID/PID | ☐ | Emergency Contacts | ☐ | Spill Kit Location | ☐ | Fire Ext. Location | ☑ |
| Detector Tubes | ☐ | Evacuation Routes | ☐ | Hospital Route | ☑ | Pedestrian Safety | ☑ |
| Dust Monitor | ☐ | Explosion/Fire | ☐ | Work Area | ☐ | Vapor/Dust Suppression | ☐ |
| Personal Air | ☐ | Medical Emergency | ☑ | Smoking/Break Area | ☐ | Muster Location | ☑ |



Shell/Motiva 0007575

**Are site workers Fit To Work?** Yes ☑ No ☐

**Do all site workers understand injury/intervention reporting requirements?** Yes ☑ No ☐

**Comments:**

**Name & Title of Person Conducting Tailgate Safety Meeting:** Nick Zarcone

**Signature:** | **Date:** 4/29/11

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth during the tailgate safety meeting and within the project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are **FIT** for work prior to work, duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

## SIGN IN

| MEETING ATTENDEES | | | |
|---|---|---|---|
| Name [Print] | Signature | Company | Time |
| Nick Zarcone | | Sovereign | 0730 |
| Justin King | | Sovereign | 0730 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

| | | | |
|---|---|---|---|
| Are all personnel fit to work? | (YES) | NO | |
| Have all personnel been informed of work to be completed? | (YES) | NO | |
| Have all personnel been informed on **STOP WORK** procedures? | (YES) | NO | |
| Have all personnel reviewed all JSAs applicable to scope of work? | (YES) | NO | |
| Has fuel delivery service been informed? | YES | NO | (N/A) |
| Is fuel delivery due today? | YES | NO | (N/A) |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | (N/A) |
| Are work areas controlled to protect workers, site staff, and the public? | (YES) | NO | N/A |
| Do all contractors have their API Safety Key card? | YES | NO | (N/A) |
| Have all personnel reviewed and understand the Shell 12 Life-Saving Rules? | (YES) | NO | |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Nick Zarcone | | 4/29/11 | Gustavo Soto | |



Shell/Motiva 0007576

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest that they were **FIT** for work upon completion of work.

**SIGN OUT**

| MEETING ATTENDEES | | | |
|---|---|---|---|
| Name [Print] | Signature | Company | Time |
| Nick Zirone | | Sovereign | 1230 |
| Justin King | | Sovereign | 1230 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

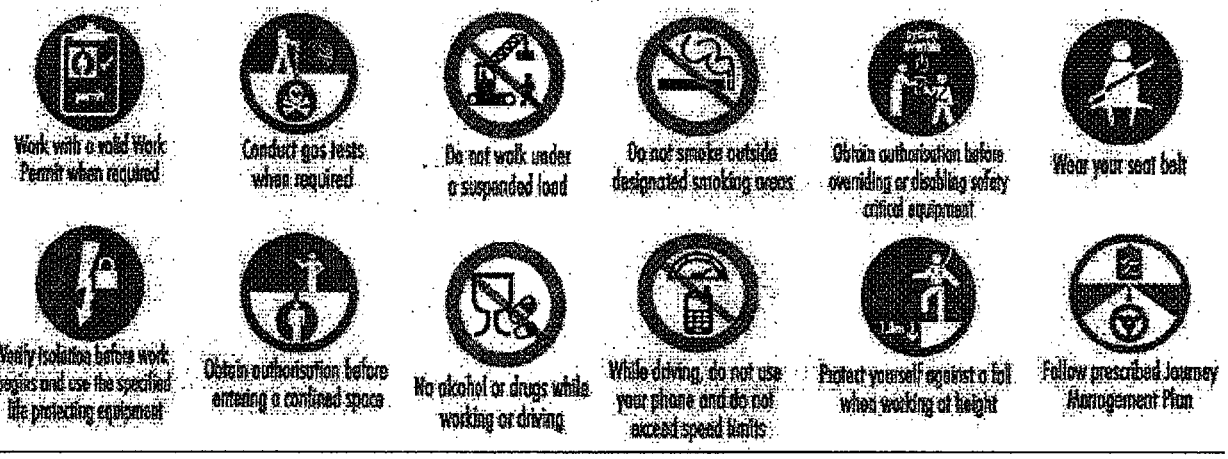
| | | | |
|---|---|---|---|
| Are all personnel fit to work (i.e., no injury or illness during workday)? | YES | NO | |
| Has the work area been left tidy and safe? | YES | NO | |
| Are site personnel aware of status of work? | YES | NO | |
| Are changes to equipment documented and communicated? | YES | NO | N/A |
| All incidents, near misses, unsafe situations reported? | YES | NO | N/A |
| All **STOP WORK** Initiatives have been documented in comment section? | YES | NO | N/A |

Did the work activity require any Modifications/Changes not listed above? ☐ YES ☑ NO ☐ N/A Briefly Describe: _____

Note: If YES, was it authorized by management? ☐ YES ☐ NO ☑ N/A Authorized by: _____

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Nick Zirone | | 4/21/11 | Julio Martinez | |

## SHELL 12 Life-Saving Rules






Shell/Motiva 0007577

SOVEREIGN CONSULTING INC.

**Behavior Based Safety Checklist - DRIVING**
**WILL YOUR NEXT CHOICE BE THE SAFE CHOICE?**

Observer: King
Date: 4/29/11
Office: Farmingdale

Job Site: SEQ24 Motiva Terminal

Total Safe Behaviors Observed: _____
Total At Risk Behaviors Observed: _____
% Safe Behaviors: _____

| Critical Behavior List | Safe | At Risk | Critical Behavior List | Safe | At Risk |
|---|---|---|---|---|---|
| Seat belts | 1 | | Following distance | 1111 | |
| Seat adjustment | 1 | | Traffic lights/signs | 1111 | |
| Mirror adjustment | 1 | | Travel surface / speed | 111 | |
| Hands on wheel | 1 | | Distractions | 1 | |
| Personal health / task alignment | 1 | | Signaling / Changing lanes | 1111 | |
| Walk around | 1 | | Parking | 1 | |
| Headrest adjusted | 1 | | Refueling | 1 | |
| Headlights | 1 | | Securing vehicle | 1 | |
| Eyes on path | 1 | | | | |
| | | | | | |

| OBSERVED SAFE BEHAVIORS / GOOD PRACTICES |
|---|
| Made all adjustments |
| |
| |
| |

| OBSERVED AT RISK BEHAVIORS | |
|---|---|
| What was observed to be at-risk? | Why was it at risk? |
| No observed risk behaviors | |
| | |
| | |
| | |

| Comments: |
|---|
| |
| |

**Definitions for Critical Behaviors:**

**Seat belts**: All seat belts should be fastened for driver and occupants.
**Seat and mirror adjustment:** Seat properly adjusted for driver; mirrors are aligned for optimum coverage of side and rear views.
**Hands on wheel:** Driver has both hands on steering wheel
**Personal health / task alignment:** Driver is rested, physically capable of driving, and not emotionally distracted
**Walk around:** performs walk around vehicle to check for unforeseen obstructions prior to entering
**Headrest adjusted:** Headrest is properly adjusted for current driver to prevent potential whip-lash from rear-end impact
**Headlights:** Turns on headlights during rainy, foggy, snowy weather, etc.
**Eyes on path:** Eyes are on the road ahead, not focused on reading a map or other
**Following distance:** Maintains a safe following distance of 3 seconds for cars & vans with dry conditions, 4 seconds for trucks
**Obeying traffic lights/signs:** This includes coming to a complete stop and/or yeilding at appropriate road signs and signals
**Travel surface / speed:** Travel within speed limits, and adjusts speed for poor road conditions
**Distractions:** Driver is not distracted by radios, maps, telephones or conversations within the car while moving.
**Signaling / changing lanes:** Driver checks mirrors and signals for turns and lane changes
**Parking:** Driver enters parking space slowly, allows room on each side of vehicle
**Refueling:** shuts off engine during refueling
**Securing vehicle:** all loads are secured properly both inside vehicle and outside vehicle

SOVEREIGN CONSULTING INC.

**Behavior Based Safety Checklist - FIELD WORK**
**WILL YOUR NEXT CHOICE BE THE SAFE CHOICE?**

Observer: Jking
Date: 4/29/11
Office: Farmindale

Tasks Observed: GWS
SEday
Job Site: Motiva Terminal

Total Safe Behaviors Observed: _____
Total At Risk Behaviors Observed: _____
% Safe Behaviors: _____

| Critical Behavior List | Safe | At Risk | Critical Behavior List | Safe | At Risk |
|---|---|---|---|---|---|
| Clear of pinch points | III | | Traffic awareness | I | |
| Use of traffic control devices | II | | Review of JSAs | IIII | |
| Use of tools | III | | Lifting / moving of equipment | I | |
| Precautions for weather | I | | Emergency equipment | II | |
| PPE - safety vest and safety glasses | II | | Electrical safety | — | |
| PPE- hard hat | I | | Heavy equipment hazards | — | |
| PPE - hearing protection | I | | Biological hazards addressed | I | |
| PPE - task appropriate gloves | II | | Physical hazards addressed | I | |
| PPE - other | I | | Work Permits | I | |
| Use of air monitoring equipment | — | | | | |
| Clear of moving / rotating equipment | — | | | | |

| OBSERVED SAFE BEHAVIORS / GOOD PRACTICES |
|---|
| Use tools correctley |
| |
| |

| OBSERVED AT RISK BEHAVIORS | |
|---|---|
| What was observed to be at-risk? | Why was it at risk? |
| N/A | |
| | |
| | |

| Comments: |
|---|
| |
| |

**Definitions for Critical Behaviors:**

**Clear of pinch points:** body parts are kept out of pinch points -such as under gratings, manhole covers, etc.
**Use of traffic control devices:** Work zone delineators / traffic control devices used per the HASP/Scorecard
**Use of tools:** proper tool for the job utilized, tool is used appropriately (no hammering with a screwdriver, etc.), tool is in good condition
**Precautions for weather:** applies sunscreen, drinks plenty of fluids in hot weather; dresses appropriately for cold weather
**PPE - safety vest, safety glasses:** worn on site at all times
**PPE - hard hat:** worn when there are overhead hazards, construction activities, drilling, excavation, or as required by HASP
**PPE- hearing protection:** worn during times where noise is >85 dBa; drilling, vac truck, bobcat, geoprobe, etc.
**PPE - task appropriate gloves:** leather or protective gloves for manhole handling, equipment handling; nitrile gloves for gw sampling, and minimal chemical exposures
**PPE- other:** Other PPE as required by site HASP
**Use of air monitoring equipment:** per the site HASP
**Clear of moving/rotating equipment:** long hair should be tied back, long sleeves buttoned or rolled up to elbows, stay out of point of operation
**Traffic awareness:** faces traffic, remains alert to oncoming vehicles, blocks off parking spots where encroachment may be a problem
**Review of JSAs:** Prior to task, JSA should be reviewed
**Lifting/moving equipment:** proper body positioning during lifting, lift with legs, load close to body, etc.
**Emergency equipment:** should have fire extinguisher, first aid kit, BBP kit available at site
**Electrical safety:** LOTO utilized, GFCI utilized
**Heavy equipment hazards:** aware of backup signals, only approaches heavy equipment after eye contact/hand signal from operator, and operator stops equipment, stays out of heavy equipment blind spots
**Biological hazards addressed:** preventative measures for ticks, mosquitos, chiggers, bees, snakes when needed
**Physical hazards addressed:** fall protection, slip, trip, fall, overhead hazards, compressed gases, pressure relief, etc.
**Work Permits:** obtained for working at heights, confined space entry, hot work, excavation, LOTO, etc.

# TIME & MATERIAL FIELDSHEET

Date: Friday, April 29, 2011
Page: 1 of 1

Project #: 5E017.140
Project Address: 25 Paidge Avenue, Brooklyn, New York
Client: Shell Oil Products, U.S.

## Employee Time

| Employee Name | Task # | Subtask # | Prep Time | Travel Time | On-Site Time | Total Time |
|---|---|---|---|---|---|---|
| Nickolas Zarcone | 3 | 96 | 1 | 3 | 5 | 9 |
| Justin King | 3 | 96 | 1 | 3 | 5 | 9 |
| | | | | | | |
| | | | | | | |
| | | | | | | |

SOVEREIGN CONSULTING, INC.

290 Executive Drive, Suite 300
Cranberry Twp., PA 16066
www.sovcon.com


## SOVEREIGN OWNED OR LEASED EQUIPMENT AND MATERIALS LIST

| Item # | Item | Qty | Units |
|---|---|---|---|
| OE104 | Chevy Van | | hrs |
| OE124 | Ford F-150 | | hrs |
| OE115 | Interface Probe | | day |
| OE143 | Multi-Gas PID | | day |
| SR620 | Mobile Phone | | day |
| SR800 | 4" Bailer | | each |
| SR800 | 2" Bailer | | each |
| SR800 | 1" Bailer | | each |
| SR812 | QED Filters | | each |
| SR816 | LDPE Tubing | | ft |
| SR817 | Silicon Flex Hose | | ft |
| SR820 | Gloves (box) (100) | | each |

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR835 | Sorbent Sock | | each |
| SR836 | Sorbent Pads | | each |
| SR837 | Sorbent Boom | | each |
| SR935 | 55 Gallon Drum | | each |
| SR980 | Gripper Plug - 1" | | each |
| SR981 | Gripper Plug - 2" | | each |
| SR982 | Gripper Plug - 4" | | each |
| SR983 | Brass Padlock | | each |
| SR205 | Hand Auger | | day |
| SR300 | Air Sampling Pump | | day |
| | | | |
| | | | |

## FEI Rental Equipment (Need PO)

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR105 | Interface Probe | 1 | day |
| SR110 | DO Meter | | day |
| SR130 | Sub Pump 2" | | day |
| SR300 | Air Sampling Pump | | day |
| SR310 | PID | | day |
| SR335 | 4-Gas Meter | | day |
| SR420 | Level Logger | | day |
| SR635 | Survey Equipment | | day |
| SR645 | GW Multi-Meter | | day |
| SR655 | Peristaltic Pump | | day |
| | | | |
| | | | |

## RENTAL EQUIPMENT AND ADDITIONAL MATERIALS

List items rented or purchased to complete work.

(14) 1.6 x 48" bailers

## Subcontractor Labor

Name & Description of Work

## WORK DESCRIPTION

NZ & JK on site @ 07:30 off @ 12:30
Annaul GWS (14) wells

**Project Manager / Supervisor Approval:** _____ **Date:** _____

CLIENT: MOTIVA ENTERPRISES LLC - 25 PAIDGE AVENUE, BROOKLYN NY
SCI JOB # 5E017.140

DATE: 4/29/2011

| WELL ID | TIME OF READING | WELL DIA. (IN) | TOTAL DEPTH (FT) | DEPTH TO PRODUCT (FT) | DEPTH TO WATER (FT) | VOLUME PURGED (GAL) | D.O. (UG/L) | TEMP (DEG. C) |
|---|---|---|---|---|---|---|---|---|
| MW-1 | 8:30 | 4 | | | | | | |
| MW-3 | | 4 | | | | | | |
| MW-29 | | 4 | | | | | | |
| MW-30 | | 4 | | | | | | |
| MW-4 | | 4 | | | | | | |
| MW-5 | | 4 | | | | | | |
| MW-28 | | 4 | | | | | | |
| MW-27 | | 4 | | | | | | |
| MW-6 | | 4 | | | | | | |
| MW-7R | | 4 | | | | | | |
| MW-8 | | 4 | | | | | | |
| MW-9 | | 4 | | | | | | |
| MW-21R | | 4 | | | | | | |
| MW-22R | | 4 | | | | | | |
| MW-13 | | 4 | | | | | | |
| MW-14 | | 4 | | | | | | |
| MW-23 | | 4 | | | | | | |
| MW-24 | | 4 | | | | | | |
| MW-43 | | 4 | | | | | | |
| MW-42 | | 4 | | | | | | |
| MW-44 | 8:45 | 4 | | | | | | |
| MW-25 | 10:15 | 4 | | | | | | |
| TW-1 | | 6 | | | | | | underwater |
| MW-26 | | 4 | | | | | | |
| TW-2 | | 6 | | | | | | |
| MW-2 | 10:45 | 4 | | | | | | |
| TW-3 | | 6 | | | | | | underwater |
| TW-4 | | 6 | | | | | | underwater |
| TW-5 | | 6 | | | | | | |
| MW-31 | | 4 | | | | | | |
| TW-6 | | 6 | | | | | | |
| MW-20 | 9:00 | 4 | | | | | | |
| MW-15 | 9:15 | 4 | | | | | | |
| MW-16 | 9:30 | 4 | | | | | | |
| MW-17 | 9:45 | 4 | | | | | | |
| MW-18 | 10:00 | 4 | | | | | | |
| MW-32 | 10:30 | 4 | | | | | | |
| RW-34 | | 6 | | | | | | |
| MW-33 | 11:15 | 4 | | | | | | |
| MW-39 | 11:30 | 4 | | | | | | |
| RW-40 | | 6 | | | | | | |
| MW-35 | 11:45 | 4 | | | | | | |
| RW-36 | | 6 | | | | | | |
| MW-41 | | 4 | | | | | | |
| RW-37 | | 6 | | | | | | |
| MW-38 | 12:00 | 4 | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Location 25 Paidge Ave Date 4/29/11

Project / Client Brooklyn Terminal
GWS

| ID | Time | DTW | DTP |
|---|---|---|---|
| 1 | 8:30 | | |
| 44 | 8:45 | | |
| 25 | 10:15 | | |
| TW1 | — | | |
| 26 | — | | |
| TW2 | 10:45 | | |
| TW3 | — | | |
| TW4 | — | | |
| TW6 | ~~11:00~~ | (M) | |
| 20 | 9:00 | | |
| 15 | 9:15 | | |
| 16 | 9:30 | | |
| 17 | 9:45 | | |
| 18 | 10:00 | | |
| 32 | 10:30 | | |
| 33 | 11:15 | | |
| 39 | 11:30 | | |
| 35 | 11:45 | | |
| 38 | 12:00 | | |

FIELD BLANK - 9:38

Sovereign on site @ 0750 off @ 12:30
NZ & SK 2010 F150 Pickup ~63°F
went over H&S and scope of work with terminal worker
GWS (14) wells

# Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
- [x] ACCUTEST (_____)
- [ ] CALSCIENCE (_____)
- [ ] TESTAMERICA (_____)
- [ ] Other (_____)

Lab Vendor # 1813640 (Accutest)

Please Check Appropriate Box:
- [ ] ENV. SERVICES
- [ ] MOTIVA RETAIL
- [ ] SHELL RETAIL
- [ ] MOTIVA SD&CM
- [x] CONSULTANT
- [ ] LUBES
- [ ] SHELL PIPELINE
- [ ] OTHER

Print Bill To Contact Name: Douglas Jakim

INCIDENT # (ENV SERVICES): 9 7 0 9 4 9 8 1 [ ] CHECK IF NO INCIDENT # APPLIES

DATE: 4/29/2011

PAGE: 1 of 2

PO #

SAP #: 1 0 0 6 2 3

SAMPLING COMPANY: Sovereign Consulting Inc.

LOG CODE:

SITE ADDRESS: Street and City: 25 Paidge Avenue, Brooklyn

State: NY

GLOBAL ID NO.:

ADDRESS: 290 Executive Drive, Suite 300, Cranberry Township, PA 16066

EDF DELIVERABLE TO (Name, Company, Office Location):

PHONE NO.:

E-MAIL:

CONSULTANT PROJECT NO.: 5E017.140

PROJECT CONTACT (Hardcopy or PDF Report to): John McCollums / Douglas Jakim

SAMPLER NAME(S) (Print): Justin King and Nick Zarcone

LAB USE ONLY

TELEPHONE: (724) 553-5084

FAX: (724) 553-5089

Bill To Contact E-MAIL: djakim@sovcon.com

TURNAROUND TIME (CALENDAR DAYS):
- [x] STANDARD (14 DAY)
- [ ] 5 DAYS
- [ ] 3 DAYS
- [ ] 2 DAYS
- [ ] 24 HOURS
- [ ] RESULTS NEEDED ON WEEKEND

- [ ] LA - RWQCB REPORT FORMAT
- [ ] UST AGENCY:

DELIVERABLES:
- [x] LEVEL 1
- [ ] LEVEL 2
- [ ] LEVEL 3
- [ ] LEVEL 4
- [ ] OTHER (SPECIFY) _____

TEMPERATURE ON RECEIPT C° Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :

Report to WPA email list.

- [x] SHELL CONTRACT RATE APPLIES
- [ ] STATE REIMBURSEMENT RATE APPLIES
- [ ] EDD NOT NEEDED
- [ ] RECEIPT VERIFICATION REQUESTED
- [ ] PROVIDE LEDD DISK

REQUESTED ANALYSIS

UNIT COST | NON-UNIT COST

FIELD NOTES:

TEMPERATURE ON RECEIPT C°

Container PID Readings or Laboratory Notes

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | EPA 8260 (See attached list) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-1 | 4/29/11 | 8:30 | GW | 3 | | | | | 3 | X |
| | MW-44 | 4/29/11 | 8:45 | GW | 3 | | | | | 3 | X |
| | MW-25 | 4/29/11 | 10:15 | GW | 3 | | | | | 3 | X |
| | TW-2 | 4/29/11 | 10:45 | GW | 3 | | | | | 3 | X |
| | MW-20 | 4/29/11 | 9:00 | GW | 3 | | | | | 3 | X |
| | MW-15 | 4/29/11 | 9:15 | GW | 3 | | | | | 3 | X |
| | MW-16 | 4/29/11 | 9:30 | GW | 3 | | | | | 3 | X |
| | MW-17 | 4/29/11 | 9:45 | GW | 3 | | | | | 3 | X |
| | MW-18 | 4/29/11 | 10:00 | GW | 3 | | | | | 3 | X |
| | MW-32 | 4/29/11 | 10:30 | GW | 3 | | | | | 3 | X |

| | | | |
|---|---|---|---|
| Relinquished by: (Signature) | Received by: (Signature) | Date: 4/29/11 | Time: 2:00 pm |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |

05/2/08 Revision

Shell/Motiva 0007583

# Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
- ☑ ACCUTEST (_____)
- ☐ CALSCIENCE (_____)
- ☐ TESTAMERICA (_____)
- ☐ Other (_____)

Lab Vendor # 103340 (Accutest)

Please Check Appropriate Box:
- ☐ ENV. SERVICES
- ☐ MOTIVA RETAIL
- ☐ SHELL RETAIL
- ☐ MOTIVA SD&CM
- ☑ CONSULTANT
- ☐ LUBES
- ☐ SHELL PIPELINE
- ☐ OTHER _____

Print Bill To Contact Name: Douglas Jakim

PO #

INCIDENT # (ENV SERVICES): 9 7 0 9 4 9 8 1

SAP #: 1 0 0 6 2 3

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 4/29/2011

PAGE: 2 of 2

SAMPLING COMPANY: Sovereign Consulting Inc.

LOG CODE:

SITE ADDRESS: Street and City: 25 Paidge Avenue, Brooklyn

State: NY

GLOBAL ID NO.:

ADDRESS: 290 Executive Drive, Suite 300, Cranberry Township, PA 16066

EDF DELIVERABLE TO (Name, Company, Office Location):

PHONE NO.:

E-MAIL:

CONSULTANT PROJECT NO.: 5E017.140

PROJECT CONTACT (Hardcopy or PDF Report to): John McCollums / Douglas Jakim

TELEPHONE: (724) 553-5084

FAX: (724) 553-5089

Bill To Contact E-MAIL: djakim@sovcon.com

SAMPLER NAME(S) (Print): Justin King and Nick Zarcone

LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS):
- ☑ STANDARD (14 DAY)
- ☐ 5 DAYS
- ☐ 3 DAYS
- ☐ 2 DAYS
- ☐ 24 HOURS
- ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

DELIVERABLES: ☑ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY) _____

TEMPERATURE ON RECEIPT C° Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:

Report to WPA email list.

- ☑ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMBURSEMENT RATE APPLIES
- ☐ EDD NOT NEEDED
- ☐ RECEIPT VERIFICATION REQUESTED
- ☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

UNIT COST | NON-UNIT COST

FIELD NOTES:

TEMPERATURE ON RECEIPT C°

Container PID Readings or Laboratory Notes

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | EPA 8260 (See attached list) | 8260B - BTEX/MTBE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-33 | 4/29/11 | 11:15 | GW | 3 | | | | | 3 | X | |
| | MW-39 | 4/29/11 | 11:30 | GW | 3 | | | | | 3 | X | |
| | MW-35 | 4/29/11 | 11:45 | GW | 3 | | | | | 3 | X | |
| | MW-38 | 4/29/11 | 12:00 | GW | 3 | | | | | 3 | X | |
| | FIELD BLANK | 4/29/11 | 9:38 | GW | 3 | | | | | 3 | | X |
| | TRIP BLANK | 4/25/11 | 5:00 | TB | 2 | | | | | 2 | | X |

| | | | |
|---|---|---|---|
| Relinquished by: (Signature) | Received by: (Signature) | Date: 4/29/11 | Time: 2:00 PM |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |

05/2/06 Revision

Shell/Motiva 0007584

FedEx. US Airbill
Express

FedEx Tracking Number 8708 8445 7540

0200

Sender's Copy

**1 From** Please print and press hard.

Date 4/29/11 Sender's FedEx Account Number SENDER'S FEDEX ACCOUNT NUMBER ONLY

Sender's Name Justin King Phone 631 753-8380

Company Sovereign Consulting

Address 1655 New Highway Suite C
Dept./Floor/Suite/Room

City Farmingdale State NY ZIP 11735

**2 Your Internal Billing Reference** OPTIONAL
First 24 characters will appear on invoice.

**3 To**

Recipient's Name Sample Receiving Phone (732) 329-0200

Company Accutest Labs

HOLD Weekday — Print FedEx location address below. NOT available for FedEx First Overnight.

HOLD Saturday — Print FedEx location address below. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Address 2235 Route 130
We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept./Floor/Suite/Room

Address
Print FedEx location address here if a HOLD option is selected.

City Dayton State NJ ZIP 08810

Schedule a pickup at fedex.com
Simplify your shipping. Manage your account. Access all the tools you need.

**4a Express Package Service** * To most locations. *Packages up to 150 lbs.*

- [x] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

**4b Express Freight Service** * To most locations. *Packages over 150 lbs.*

- [ ] FedEx 1Day Freight — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected. CALL 1.800.332.0807 FedEx 1Day Freight Booking No.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

**5 Packaging** * Declared value limit $500.

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [x] Other

**6 Special Handling and Delivery Signature Options**

- [x] SATURDAY Delivery — NOT available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.

- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. Fee applies.
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.

Does this shipment contain dangerous goods? One box must be checked.

- [x] No
- [ ] Yes — As per attached Shipper's Declaration
- [ ] Yes — Shipper's Declaration not required
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

- [x] Cargo Aircraft Only

**7 Payment** *Bill to:*

- [ ] Sender — Acct. No. in Section 1 will be billed
- [x] Recipient — Enter FedEx Acct. No. or Credit Card No. below: 114595 03
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

FedEx Acct. No. / Credit Card No. Exp. Date

Total Packages ____ Total Weight ____ lbs. Total Declared Value† $ ____ .00

†Our liability is limited to $100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability.

554

Rev. Date 2/08 Part #158261 ©1994–2008 FedEx PRINTED IN U.S.A. SRY

RETAIN THIS COPY FOR YOUR RECORDS.

Shell/Motiva 0007585

Site Navigation

Shopping
- Camping Gear
- Hunting Gear
- Maglite Sales

Resources
- Link Directory
- AIG Top Sites
- Fishing Charters
- Free Tackle
- Charter Listings
- Saltwater Tides

# Go Fishing Forum Message Boards

The only way you can catch fish is to Go Fishing Forum!

**Please leave a comment about our tide prediction website!**

**Search Tide Stations**

**Search Term: (i.e. Potomac):**

All States

Search Tide Stations

CURRENT MOON

Waning Crescent
18% of Full
Thu 28 Apr 2011
1:01:30 PM

Ocean Tide Charts

- Go Fishing Forum Home
- You won't catch fish unless you Go Fishing Forum!

Select a different tide station

FISHING Top 100

Fishing in Saskatchewan
Experience World Class Fishing in Saskatchewan. Start Planning Here!
www.Fishing-In-Saska...

iboats.com Marine Store
Huge Selection of Boat Parts. Find Engine Parts, Hardware, & Supplies!
iboats.com/Boat-Parts...

St. Augustine Fishing
Redfish, Trout, Flounder And More Check Out My Daily Fish Report
www.staugustinefishin...

Fishing Testers Wanted
Test & keep fishing products. Join The North American Fishing Club.
FishingClub.com

**Start Date:** April 29 2011 **Number of Days:** 2

Update Charts

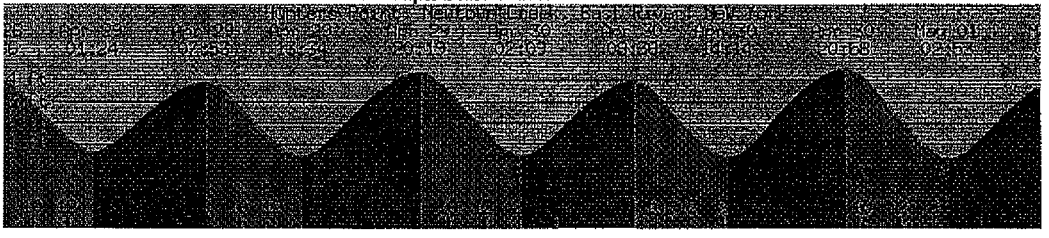
**NOT FOR NAVIGATION** The accuracy of these tide predictions is not guaranteed in any way. You should not use this program if anyone or anything could come to harm as a result of an incorrect tide prediction. NOAA and similar agencies in other countries can provide you with certified tide predictions if that is what you need. XTide's predictions do not incorporate the effects of tropical storms, El Niño, seismic events, subsidence, uplift, or changes in global sea level.

Bookmark this page

**Hunters Point, Newtown Creek, East River, New York**
**(40.7400° N, 73.9617° W)**

Print Today's Tide Prediction for this location

Tide Graph Start Time: 2011-04-29 00:00



| Friday, April 29th, 2011 | | | Saturday, April 30th, 2011 | | |
|---|---|---|---|---|---|
| Time | Type | Height | Time | Type | Height |
| 1:24 AM EDT | Low Tide | 0.63 feet | 2:09 AM EDT | Low Tide | 0.46 feet |
| 7:53 AM EDT | High Tide | 3.86 feet | 8:38 AM EDT | High Tide | 3.93 feet |
| 1:34 PM EDT | Low Tide | 0.42 feet | 2:14 PM EDT | Low Tide | 0.38 feet |
| 8:19 PM EDT | High Tide | 4.33 feet | 8:58 PM EDT | High Tide | 4.49 feet |

**Raw Tide Data**

Hunters Point, Newtown Creek,



Shell/Motiva 0007586

**Sovereign Consulting Inc.**
**SHELL Tailgate Safety Meeting Form**
(To be submitted with field notes to Project Manager each day)

| | | | |
|---|---|---|---|
| **Project Name:** | Brooklyn Terminal | **Date:** | 5/9/11 |
| **Location:** | 25 Paidge Ave | **Weather:** | Clear |
| **Project Manager [Print]:** | Doug Jahim | **Temp:** | 62° F |
| **Contractors/Subcontractors:** | | | |

**Scope of Work:** Monthly Gauging

| **Task Hazards:** (check all that apply) *requires Permit to Work | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☑ | Ladders* | ☐ | Haz. Substances | ☑ | Sharp Objects | ☑ |
| Confined Spaces* | ☐ | Explosion | ☐ | Heavy Equipment | ☐ | Tools | ☑ |
| Cutting/Welding* | ☐ | Falling Objects | ☐ | Flying Debris | ☐ | Traffic | ☑ |
| Electrical | ☐ | Fire | ☐ | Noise | ☑ | Weather | ☑ |
| Environmental Hazard | ☑ | Insects/Biological | ☐ | Slip/Trip, Hazards | ☑ | Other (describe below) | ☐ |
| Elevated Work* | ☐ | Ticks – Biohazard | ☐ | Overhead | ☑ | | |
| Excavations* | ☐ | Bees, Wasps, Hornets – Biohazard | ☐ | Sanitation | ☐ | | |

| Work Zone Delineation Level | Level 1 ☐ | Level 2 ☐ | Level 3 ☑ *Watchperson required | Level 4 ☐ *Temp. Traffic Control Plan required |
|---|---|---|---|---|

| **Title of JSAs reviewed today:** | General Site Activities<br>Opening/closing manhole covers<br>Decon equipment<br>GW gauging + LNAPL Recovery |
|---|---|

**Engineering Controls / Work Practices:** PPE & Traffic Control

| **Levels of Protection / Personal Protective Equipment:** | | | |
|---|---|---|---|
| Level A ☐ | Eye & Face Protection | ☑ | Safety Glasses ☑ Face Shield ☐ |
| Level B ☐ | Foot Protection | ☑ | Steel Toes ☑ Hip Boots/Waders ☐ |
| Level C ☐ | Hand Protection | ☑ | Nitrile Gloves ☑ Leather Gloves ☑ Full Arm Chemical ☐ |
| Level D ☑ | Head Protection | ☑ | Hard Hat ☑ |
| | Hearing Protection | ☑ | Ear Muffs/Plugs ☑ |
| | Other | ☐ | Barricades ☑ High Visibility Safety Vests ☑ Cones/Flags ☑ |
| | | | Amber Light/Vehicle Hazards ☐ Crash Truck ☑ Tyvek/Coveralls ☐ |

| **Air Monitoring/Sampling** | | **Emergency Response** | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☐ | Emergency Alarms | ☑ | First Aid Kit Location | ☑ | Cell Phone Use none | ☐ |
| FID/PID | ☐ | Emergency Contacts | ☑ | Spill Kit Location | ☑ | Fire Ext. Location | ☑ |
| Detector Tubes | ☐ | Evacuation Routes | ☑ | Hospital Route | ☑ | Pedestrian Safety | ☑ |
| Dust Monitor | ☐ | Explosion/Fire | ☑ | Work Area | ☑ | Vapor/Dust Suppression | ☑ |
| Personal Air | ☐ | Medical Emergency | ☑ | Smoking/Break Area | ☑ | Muster Location | ☑ |



Shell/Motiva 0007587

Are site workers Fit To Work? Yes ☑ No ☐

Do all site workers understand injury/intervention reporting requirements? Yes ☑ No ☐

Comments:

Name & Title of Person Conducting Tailgate Safety Meeting: Nick Zurcher

Signature: [signature] Date: 5/9/11

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth during the tailgate safety meeting and within the project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are FIT for work prior to work, duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

## SIGN IN

| MEETING ATTENDEES | | | |
|---|---|---|---|
| Name [Print] | Signature | Company | Time |
| Nick Zurcher | [signature] | Sovereign | 0800 |
| Justin King | [signature] | Sovereign | 800 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

| | | | |
|---|---|---|---|
| Are all personnel fit to work? | YES | NO | |
| Have all personnel been informed of work to be completed? | YES | NO | |
| Have all personnel been informed on **STOP WORK** procedures? | YES | NO | |
| Have all personnel reviewed all JSAs applicable to scope of work? | YES | NO | |
| Has fuel delivery service been informed? | YES | NO | N/A |
| Is fuel delivery due today? | YES | NO | N/A |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | N/A |
| Are work areas controlled to protect workers, site staff, and the public? | YES | NO | N/A |
| Do all contractors have their API Safety Key card? | YES | NO | N/A |
| Have all personnel reviewed and understand the Shell 12 Life-Saving Rules? | YES | NO | |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Nick Zurcher | [signature] | 5/9/11 0800 | YEONG LEE | [signature] |



Shell/Motiva 0007588

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest that they were **FIT** for work upon completion of work.

## SIGN OUT

| MEETING ATTENDEES | | | |
|---|---|---|---|
| Name [Print] | Signature | Company | Time |
| Nick Zyrcow | [signature] | Sovereign | 02:30 |
| Justin King | [signature] | Sovereign | 2:30 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

| | | | |
|---|---|---|---|
| Are all personnel fit to work (i.e., no injury or illness during workday)? | YES | NO | |
| Has the work area been left tidy and safe? | YES | NO | |
| Are site personnel aware of status of work? | YES | NO | |
| Are changes to equipment documented and communicated? | YES | NO | N/A |
| All incidents, near misses, unsafe situations reported? | YES | NO | N/A |
| All **STOP WORK** initiatives have been documented in comment section? | YES | NO | N/A |

Did the work activity require any Modifications/Changes not listed above? ☐ YES ☑ NO ☐ N/A Briefly Describe: _____

Note: If YES, was it authorized by management? ☐ YES ☐ NO ☑ N/A Authorized by: _____

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Nick Zyrcow | [signature] | 5/9/11 0230 | N. Schio | N. Schio |

## SHELL 12 Life-Saving Rules

Work with a valid Work Permit when required

Conduct gas tests when required

Do not walk under a suspended load

Do not smoke outside designated smoking areas

Obtain authorisation before overriding or disabling safety critical equipment

Wear your seat belt

Verify isolation before work begins and use the specified life protecting equipment

Obtain authorisation before entering a confined space

No alcohol or drugs while working or driving

While driving, do not use your phone and do not exceed speed limits

Protect yourself against a fall when working at height

Follow prescribed Journey Management Plan



Shell/Motiva 0007589

SOVEREIGN CONSULTING INC.

## Behavior Based Safety Checklist - FIELD WORK
### WILL YOUR NEXT CHOICE BE THE SAFE CHOICE?

Observer: Nick Z  Tasks Observed: Gauging  Total Safe Behaviors Observed: _____

Date: 5/1/11  Total At Risk Behaviors Observed: _____

Office: Farmingdale  Job Site: SE 017  % Safe Behaviors: _____

| Critical Behavior List | Safe | At Risk | Critical Behavior List | Safe | At Risk |
|---|---|---|---|---|---|
| Clear of pinch points | /// | | Traffic awareness | // | |
| Use of traffic control devices | //// | | Review of JSAs | //// | |
| Use of tools | // | | Lifting / moving of equipment | — | |
| Precautions for weather | / | | Emergency equipment | / | |
| PPE - safety vest and safety glasses | // | | Electrical safety | // | |
| PPE- hard hat | / | | Heavy equipment hazards | — | |
| PPE - hearing protection | // | | Biological hazards addressed | / | |
| PPE - task appropriate gloves | //// | | Physical hazards addressed | / | |
| PPE - other | — | | Work Permits | // | |
| Use of air monitoring equipment | — | | | | |
| Clear of moving / rotating equipment | — | | | | |

| OBSERVED SAFE BEHAVIORS / GOOD PRACTICES |
|---|
| All PPE |
| |
| |
| |

| OBSERVED AT RISK BEHAVIORS | |
|---|---|
| What was observed to be at-risk? | Why was it at risk? |
| none | |
| | |
| | |
| | |

| Comments: |
|---|
| |
| |

### Definitions for Critical Behaviors:

**Clear of pinch points:** body parts are kept out of pinch points -such as under gratings, manhole covers, etc.
**Use of traffic control devices:** Work zone delineators / traffic control devices used per the HASP/Scorecard
**Use of tools:** proper tool for the job utilized, tool is used appropriately (no hammering with a screwdriver, etc.); tool is in good condition
**Precautions for weather:** applies sunscreen, drinks plenty of fluids in hot weather; dresses appropriately for cold weather
**PPE - safety vest, safety glasses:** worn on site at all times
**PPE - hard hat:** worn when there are overhead hazards, construction activities, drilling, excavation, or as required by HASP
**PPE- hearing protection:** worn during times where noise is >85 dBa; drilling, vac truck, bobcat, geoprobe, etc.
**PPE - task appropriate gloves:** leather or protective gloves for manhole handling, equipment handling; nitrile gloves for gw sampling, and minimal chemical exposures
**PPE- other:** Other PPE as required by site HASP
**Use of air monitoring equipment:** per the site HASP
**Clear of moving/rotating equipment:** long hair should be tied back, long sleeves buttoned or rolled up to elbows, stay out of point of operation
**Traffic awareness:** faces traffic, remains alert to oncoming vehicles, blocks off parking spots where encroachment may be a problem
**Review of JSAs:** Prior to task, JSA should be reviewed
**Lifting/moving equipment:** proper body positioning during lifting, lift with legs, load close to body, etc.
**Emergency equipment:** should have fire extinguisher, first aid kit, BBP kit available at site
**Electrical safety:** LOTO utilized, GFCI utilized
**Heavy equipment hazards:** aware of backup signals, only approaches heavy equipment after eye contact/hand signal from operator, and operator stops equipment, stays out of heavy equipment blind spots
**Biological hazards addressed:** preventative measures for ticks, mosquitos, chiggers, bees, snakes when needed
**Physical hazards addressed:** fall protection, slip, trip, fall, overhead hazards, compressed gases, pressure relief, etc.
**Work Permits:** obtained for working at heights, confined space entry, hot work, excavation, LOTO, etc.

SOVEREIGN CONSULTING INC.

## Behavior Based Safety Checklist - DRIVING
**WILL YOUR NEXT CHOICE BE THE SAFE CHOICE?**

Observer: Nick Z  Job Site: 5E07  Total Safe Behaviors Observed: _____

Date: 5/1/11  Total At Risk Behaviors Observed: _____

Office: Farmingdale  % Safe Behaviors: _____

| Critical Behavior List | Safe | At Risk | Critical Behavior List | Safe | At Risk |
|---|---|---|---|---|---|
| Seat belts | / | | Following distance | //// | |
| Seat adjustment | // | | Traffic lights/signs | //// | |
| Mirror adjustment | /// | | Travel surface / speed | /// | |
| Hands on wheel | // | | Distractions | // | |
| Personal health / task alignment | / | | Signaling / Changing lanes | ///// | |
| Walk around | / | | Parking | / | |
| Headrest adjusted | / | | Refueling | / | |
| Headlights | // | | Securing vehicle | //// | |
| Eyes on path | // | | | | |
| | | | | | |

| OBSERVED SAFE BEHAVIORS / GOOD PRACTICES |
|---|
| Driver was safe. |
| |
| |
| |

| OBSERVED AT RISK BEHAVIORS | |
|---|---|
| What was observed to be at-risk? | Why was it at risk? |
| None. | |
| | |
| | |
| | |

| Comments: |
|---|
| |
| |

### Definitions for Critical Behaviors:

**Seat belts:** All seat belts should be fastened for driver and occupants.
**Seat and mirror adjustment:** Seat properly adjusted for driver; mirrors are aligned for optimum coverage of side and rear views.
**Hands on wheel:** Driver has both hands on steering wheel
**Personal health / task alignment:** Driver is rested, physically capable of driving, and not emotionally distracted
**Walk around:** performs walk around vehicle to check for unforeseen obstructions prior to entering
**Headrest adjusted:** Headrest is properly adjusted for current driver to prevent potential whip-lash from rear-end impact
**Headlights:** Turns on headlights during rainy, foggy, snowy weather, etc.
**Eyes on path:** Eyes are on the road ahead, not focused on reading a map or other
**Following distance:** Maintains a safe following distance of 3 seconds for cars & vans with dry conditions, 4 seconds for trucks
**Obeying traffic lights/signs:** This includes coming to a complete stop and/or yeilding at appropriate road signs and signals
**Travel surface / speed:** Travel within speed limits, and adjusts speed for poor road conditions
**Distractions:** Driver is not distracted by radios, maps, telephones or conversations within the car while moving.
**Signaling / changing lanes:** Driver checks mirrors and signals for turns and lane changes
**Parking:** Driver enters parking space slowly, allows room on each side of vehicle
**Refueling:** shuts off engine during refueling
**Securing vehicle:** all loads are secured properly both inside vehicle and outside vehicle

# TIME & MATERIAL FIELDSHEET

**Date:** Monday, May 09, 2011
**Page:** 1 of 1

**Project #:** 5E017.140
**Project Address:** 25 Paidge Avenue, Brooklyn, New York
**Client:** Shell Oil Products, U.S.

## Employee Time

| Employee Name | Task # | Subtask # | Prep Time | Travel Time | On-Site Time | Total Time |
|---|---|---|---|---|---|---|
| Nickolas Zarcone | 3 | 96 | 0.5 | 3 | 6.5 | 10 |
| Justin King | 3 | 96 | 0.5 | 3 | 6.5 | 10 |
| | | | | | | |
| | | | | | | |
| | | | | | | |


**SOVEREIGN CONSULTING, INC.**
290 Executive Drive, Suite 300
Cranberry Twp., PA 16066
www.sovcon.com


## SOVEREIGN OWNED OR LEASED EQUIPMENT AND MATERIALS LIST

| Item # | Item | Qty | Units |
|---|---|---|---|
| OE104 | Chevy Van | | hrs |
| OE124 | Ford F-150 | | hrs |
| OE115 | Interface Probe | | day |
| OE143 | Multi-Gas PID | | day |
| SR620 | Mobile Phone | | day |
| SR800 | 4" Bailer | | each |
| SR800 | 2" Bailer | | each |
| SR800 | 1" Bailer | | each |
| SR812 | QED Filters | | each |
| SR816 | LDPE Tubing | | ft |
| SR817 | Silicon Flex Hose | | ft |
| SR820 | Gloves (box) (100) | | each |

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR835 | Sorbent Sock | | each |
| SR836 | Sorbent Pads | 4 | each |
| SR837 | Sorbent Boom | | each |
| SR935 | 55 Gallon Drum | | each |
| SR980 | Gripper Plug - 1" | | each |
| SR981 | Gripper Plug - 2" | | each |
| SR982 | Gripper Plug - 4" | | each |
| SR983 | Brass Padlock | | each |
| SR205 | Hand Auger | | day |
| SR300 | Air Sampling Pump | | day |
| | | | |
| | | | |

## FE Rental Equipment (Need PO)

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR105 | Interface Probe | 1 | day |
| SR110 | DO Meter | | day |
| SR130 | Sub Pump 2" | | day |
| SR300 | Air Sampling Pump | | day |
| SR310 | PID | | day |
| SR335 | 4-Gas Meter | | day |
| SR420 | Level Logger | | day |
| SR635 | Survey Equipment | | day |
| SR645 | GW Multi-Meter | | day |
| SR655 | Peristaltic Pump | | day |
| | | | |
| | | | |

## RENTAL EQUIPMENT AND ADDITIONAL MATERIALS

List items rented or purchased to complete work

## Subcontractor Labor

Name & Description of Work

## WORK DESCRIPTION

NZ & JK on site @ 08:00 off @ 02:30.
Performed monthly well gauging.
Bailed product from wells that exhibited recoverable product.
1.75 gallons of product were recovered by hand bailing.

**Project Manager / Supervisor Approval:** _____ **Date:** _____

SOVEREIGN CONSULTING - WELL GAUGING/HAND-BAILING DATA SUMMARY SHEET
PAGE 1 OF 1
DATE:

CLIENT: MOTIVA ENTERPRISES LLC
25 PAIDGE AVENUE, BROOKLYN NY
SCI JOB # 5E017.140

| WELL ID | TIME OF READING | WELL DIA. (IN) | TOTAL DEPTH (FT) | DEPTH TO PRODUCT (FT) | DEPTH TO WATER (FT) | PRODUCT THICKNESS (FT) | PRODUCT RECOVERED (GAL) | NOTES |
|---|---|---|---|---|---|---|---|---|
| MW-1 | 8:30 | 4 | | | 3.25 | | | |
| MW-3 | 8:34 | 4 | | | 2.72 | | | |
| MW-29 | 8:37 | 4 | | | 1.78 | | | |
| MW-04 | 12:50 | 4 | | 2.25 | 2.32 | 0.07 | | |
| MW-30 | 9:30 | 4 | | | 2.17 | | | |
| MW-5 | 9:34 | 4 | | | 1.72 | | | |
| MW-28 | 9:39 | 4 | | | 1.57 | | | |
| MW-27 | 9:43 | 4 | | | 2.25 | | | |
| MW-6 | 9:46 | 4 | | | 5.04 | | | |
| MW-7R | 10:00 | 4 | | | 5.77 | | | |
| MW-8 | 10:03 | 4 | | | 6.32 | | | |
| MW-9 | 10:06 | 4 | | | 6.26 | | | |
| MW-21R | 10:11 | 4 | | | 3.97 | | | |
| MW-22R | 10:13 | 4 | | | 3.96 | | | |
| MW-13 | 10:16 | 4 | | | 7.28 | | | |
| MW-14 | 10:20 | 4 | | | 6.49 | | | |
| MW-23 | 10:24 | 4 | | | 4.01 | | | |
| MW-24 | 10:27 | 4 | | | 3.86 | | | |
| MW-43 | 10:31 | 4 | | | 3.59 | | | |
| MW-42 | 10:35 | 4 | | | 3.67 | | | |
| MW-44 | 10:40 | 4 | | | 3.53 | | | |
| MW-25 | 10:44 | 4 | | | 2.97 | | | |
| TW-1 | | 6 | | | | | | underwater |
| MW-26 | 1:09 | 4 | | 3.73 | 3.69 | 0.04 | | |
| TW-2 | 10:49 | 6 | | | 3.72 | | | |
| MW-2 | 1:05 | 4 | | 3.60 | 3.66 | 0.06 | | |
| TW-3 | | 6 | | | | | | underwater |
| TW-4 | | 6 | | | | | | underwater |
| TW-5 | 1:00 | 6 | | 3.02 | 3.08 | 0.06 | | |
| MW-31 | 12:54 | 4 | | 3.35 | 3.59 | 0.24 | 0.25 | |
| TW-6 | | 6 | | | | | | underwater |
| MW-20 | 11:00 | 4 | | | 2.84 | | | |
| MW-15 | 11:02 | 4 | | | 3.04 | | | |
| MW-16 | 11:06 | 4 | | | 3.02 | | | |
| MW-17 | 11:09 | 4 | | | 2.55 | | | |
| MW-18 | 11:12 | 4 | | | 3.02 | | | |
| MW-32 | 11:15 | 4 | | | 3.72 | | | |
| RW-34 | 1:20 | 6 | | 7.11 | 7.16 | 0.05 | | |
| MW-33 | 11:20 | 4 | | | 5.61 | | | |
| MW-39 | 11:24 | 4 | | | 6.88 | | | |
| RW-40 | 1:27 | 6 | | 8.77 | 9.82 | 1.05 | 1.25 | |
| MW-35 | 11:30 | 4 | | | 6.48 | | | |
| RW-36 | 1:30 | 6 | | 8.63 | 8.81 | 0.18 | 0.25 | |
| MW-41 | 1:35 | 4 | | 8.07 | 8.13 | 0.06 | | |
| RW-37 | 1:40 | 6 | | 7.60 | 7.61 | 0.01 | | |
| MW-38 | 11:40 | 4 | | | 6.90 | | | |
| | | | | | | | | |
| | | | | | | | | |

Location 25 Pridge Ave Date 5/9/11

Project / Client Brooklyn Terminal

Monthly Gauging + Hand Bailing (Page 1)

Sovereign on site @ 0800 off @ 0230

M & JK 2010 F150 Pickup 62 °F

Went over H&S and scope of work with Terminal worker

Pine sent the wrong probe. Pine came @ 12:45 new probe !!!

| ID | Time | DTW | DTP | Product Thickness | Product Recovered |
|---|---|---|---|---|---|
| 1 | 8:30 | 3.25 | | | |
| 3 | 8:34 | 2.72 | | | |
| 29 | 8:37 | 1.78 | | | |
| 4 | 12:50 | 2.32 | 2.25 | .07 | |
| 30 | 9:30 | 2.17 | | | |
| 5 | 9:34 | 1.72 | | | |
| 28 | 9:39 | 1.57 | | | |
| 27 | 9:43 | 2.25 | | | |
| 6 | 9:46 | 5.04 | | | |
| 7R | 10:00 | 5.77 | | | |
| 8 | 10:03 | 6.32 | | | |
| 9 | 10:06 | 6.26 | | | |
| 21R | 10:11 | 3.97 | | | |
| 22R | 10:13 | 3.96 | | | |
| 13 | 10:16 | 7.28 | | | |
| 14 | 10:20 | 6.49 | | | |
| 23 | 10:24 | 4.01 | | | |
| 24 | 10:27 | 3.86 | | | |
| 43 | 10:31 | 3.59 | | | |
| 42 | 10:35 | 3.67 | | | |

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Location 25 Pridge Ave Date 5/9/11

Project / Client Brooklyn Terminal

Monthly Gauging & Hand Bailing (Page 2)

| ID | Time | DTW | DTP | Product Thickness | Product Recovered |
|---|---|---|---|---|---|
| 44 | 10:40 | 3.53 | | | |
| 25 | 10:44 | 2.97 | | | |
| TW1 | Underwater | | | | Underwater |
| 26 | 1:09 | 3.73 | 3.69 | .04 | |
| TW2 | 10:49 | 3.72 | | | |
| MW2 | 1:05 | 3.66 | 3.60 | .06 | |
| TW3 | Underwater | | | | |
| TW4 | Underwater | | | | |
| TW5 | 1:00 | 3.08 | 3.02 | .06 | |
| 31 | 12:54 | 3.59 | 3.35 | .24 | .25 |
| TW6 | Underwater | | | | |
| 20 | 11:00 | 2.84 | | | |
| 15 | 11:02 | 3.04 | | | |
| 16 | 11:06 | 3.02 | | | |
| 17 | 11:09 | 2.55 | | | |
| 18 | 11:12 | 3.02 | | | |
| 32 | 11:15 | 3.72 | | | |
| 34 | 1:20 | 7.16 | 7.11 | .05 | |
| 33 | 11:20 | 5.61 | | | |
| 39 | 11:24 | 6.88 | | | |
| 40 | 1:27 | 9.82 | 8.77 | 1.05 | 1.25 |
| 35 | 11:30 | 6.48 | | | |
| 36 | 1:30 | 9.81 | 8.63 | .18 | .25 |
| 41 | 1:35 | 8.13 | 8.07 | .06 | |

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Location 25 Pridge Ave Date 5/9/11

Project / Client Brooklyn Terminal

Monthly Gauging & Hand Bailing (Page 3)

| ID | Time | DTW | DTP | Product Thickness | Product Recovered |
|---|---|---|---|---|---|
| 37 | 1:40 | 7.61 | 7.60 | .01 | |
| 38 | 11:40 | 6.90 | | | |

(Gal. Recovered 1.75)

Shell/Motiva 0007595

Site Navigation

Shopping
- Camping Gear
- Hunting Gear
- Maglite Sales

Resources
- Link Directory
- AIG Top Sites
- Fishing Charters
- Free Tackle
- Charter Listings
- Saltwater Tides

# Go Fishing Forum Message Boards

The only way you can catch fish is to Go Fishing Forum!

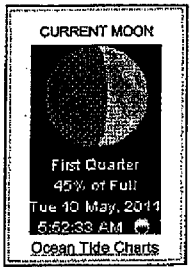
**Please leave a comment about our tide prediction website!**

**Search Tide Stations**

**Search Term: (i.e. Potomac):**

All States

Search Tide Stations




- Go Fishing Forum Home
- You won't catch fish unless you Go Fishing Forum!

Select a different tide station

Start Date: May 9 2011 Number of Days: 2

Update Charts

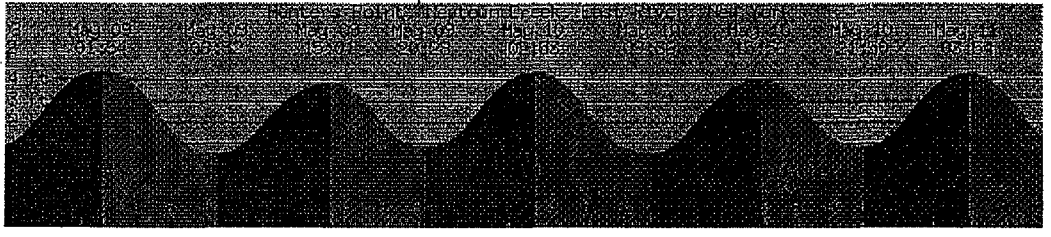
**NOT FOR NAVIGATION** The accuracy of these tide predictions is not guaranteed in any way. You should not use this program if anyone or anything could come to harm as a result of an incorrect tide prediction. NOAA and similar agencies in other countries can provide you with certified tide predictions if that is what you need. XTide's predictions do not incorporate the effects of tropical storms, El Niño, seismic events, subsidence, uplift, or changes in global sea level.

Bookmark this page

**Hunters Point, Newtown Creek, East River, New York**
**(40.7400° N, 73.9617° W)**

Print Today's Tide Prediction for this location

Tide Graph Start Time: 2011-05-09 00:00



| Monday, May 9th, 2011 | | | Tuesday, May 10th, 2011 | | |
|---|---|---|---|---|---|
| Time | Type | Height | Time | Type | Height |
| 1:54 AM EDT | High Tide | 4.38 feet | 2:53 AM EDT | High Tide | 4.32 feet |
| 8:32 AM EDT | Low Tide | 0.49 feet | 9:36 AM EDT | Low Tide | 0.47 feet |
| 3:01 PM EDT | High Tide | 3.82 feet | 3:56 PM EDT | High Tide | 3.98 feet |
| 8:28 PM EDT | Low Tide | 0.84 feet | 9:50 PM EDT | Low Tide | 0.81 feet |

**Raw Tide Data**

Hunters Point, Newtown Creek,

**Charter Fishing Galveston**
Call us at (409) 692-3474 for early bird specials! Inshore Offshore Fun
www.coastalcharterad...

**When Is High Tide ?**
Stylish Brass Tide Clocks Free Shipping on all Tide Clocks
CapeCodWeathervan...

**Fishing Long Island**
Experienced local fishing charter at great prices
www.funinthesunLI.com

**lake erie walleye charter**
one of the largest guide services over 30 years experience
www.wscba.com



Shell/Motiva 0007596

**Sovereign Consulting Inc.**
**SHELL Tailgate Safety Meeting Form**
(To be submitted with field notes to Project Manager each day)

| | |
|---|---|
| **Project Name:** Brooklyn Terminal | **Date:** 6/6/11 |
| **Location:** 25 Paidge Ave | **Weather:** Clear |
| **Project Manager [Print]:** Doug Jakim | **Temp:** 68°F |
| **Contractors/Subcontractors:** | |

**Scope of Work:** Monthly Gauging

| **Task Hazards:** (check all that apply) *requires Permit to Work | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☑ | Ladders* | ☐ | Haz. Substances | ☑ | Sharp Objects | ☑ |
| Confined Spaces* | ☐ | Explosion | ☐ | Heavy Equipment | ☑ | Tools | ☑ |
| Cutting/Welding* | ☐ | Falling Objects | ☐ | Flying Debris | ☐ | Traffic | ☑ |
| Electrical | ☐ | Fire | ☐ | Noise | ☑ | Weather | ☑ |
| Environmental Hazard | ☑ | Insects/Biological | ☐ | Slip/Trip, Hazards | ☑ | Other (describe below) | ☐ |
| Elevated Work* | ☐ | Ticks – Biohazard | ☑ | Overhead | ☑ | | |
| Excavations* | ☐ | Bees, Wasps, Hornets – Biohazard | ☑ | Sanitation | ☐ | | |

| Work Zone Delineation Level | Level 1 ☐ | Level 2 ☐ | Level 3 ☑ *Watchperson required | Level 4 ☐ *Temp. Traffic Control Plan required |
|---|---|---|---|---|

| **Title of JSAs reviewed today:** | General Site activities<br>Opening & closing manhole covers<br>Decon Equipment<br>GW gauging & LNAPL Recovery |
|---|---|

**Engineering Controls / Work Practices:** PPE & Traffic Control

| **Levels of Protection / Personal Protective Equipment:** | | | | | | |
|---|---|---|---|---|---|---|
| Level A | ☐ | Eye & Face Protection | ☑ | Safety Glasses ☑ | Face Shield ☐ | |
| Level B | ☐ | Foot Protection | ☑ | Steel Toes ☑ | Hip Boots/Waders ☐ | |
| Level C | ☐ | Hand Protection | ☑ | Nitrile Gloves ☑ | Leather Gloves ☑ | Full Arm Chemical ☐ |
| Level D | ☑ | Head Protection | ☑ | Hard Hat ☑ | | |
| | | Hearing Protection | ☑ | Ear Muffs/Plugs ☑ | | |
| | | Other | ☐ | Barricades ☑ | High Visibility Safety Vests ☑ | Cones/Flags ☑ |
| | | | | Amber Light/Vehicle Hazards ☐ | Crash Truck ☑ | Tyvek/Coveralls ☐ |

| **Air Monitoring/Sampling** | | **Emergency Response** | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☐ | Emergency Alarms | ☑ | First Aid Kit Location | ☑ | Cell Phone Use none | ☐ |
| FID/PID | ☐ | Emergency Contacts | ☑ | Spill Kit Location | ☑ | Fire Ext. Location | ☑ |
| Detector Tubes | ☐ | Evacuation Routes | ☑ | Hospital Route | ☑ | Pedestrian Safety | ☑ |
| Dust Monitor | ☐ | Explosion/Fire | ☑ | Work Area | ☑ | Vapor/Dust Suppression | ☑ |
| Personal Air | ☐ | Medical Emergency | ☑ | Smoking/Break Area | ☑ | Muster Location | ☐ |



Shell/Motiva 0007597

**Are site workers Fit To Work?** Yes ☑ No ☐

**Do all site workers understand injury/intervention reporting requirements?** Yes ☑ No ☐

**Comments:**

**Name & Title of Person Conducting Tailgate Safety Meeting:** Nick Zarcone

**Signature:** | **Date:** 6/6/11

Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth during the tailgate safety meeting and within the project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are **FIT** for work prior to work, duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

**SIGN IN**

| MEETING ATTENDEES | | | |
|---|---|---|---|
| Name [Print] | Signature | Company | Time |
| Nick Zarcone | | Sovereign | 07:45 |
| Michael Blight | | Sovereign | 07:45 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

| | | | |
|---|---|---|---|
| Are all personnel fit to work? | YES | NO | |
| Have all personnel been informed of work to be completed? | YES | NO | |
| Have all personnel been informed on **STOP WORK** procedures? | YES | NO | |
| Have all personnel reviewed all JSAs applicable to scope of work? | YES | NO | |
| Has fuel delivery service been informed? | YES | NO | N/A |
| Is fuel delivery due today? | YES | NO | N/A |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | N/A |
| Are work areas controlled to protect workers, site staff, and the public? | YES | NO | N/A |
| Do all contractors have their API Safety Key card? | YES | NO | N/A |
| Have all personnel reviewed and understand the Shell 12 Life-Saving Rules? | YES | NO | |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Nick Zarcone | | 6/6/11 0745 | Gustavo Islas | |



Shell/Motiva 0007598

Shell/Motiva 0007599

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest that they were **FIT** for work upon completion of work.

**SIGN OUT**

| MEETING ATTENDEES | | | |
|---|---|---|---|
| Name [Print] | Signature | Company | Time |
| Nick Zarlenga | | Sovereign | 1200 |
| Mike Bright | | Sovereign | 12:00 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

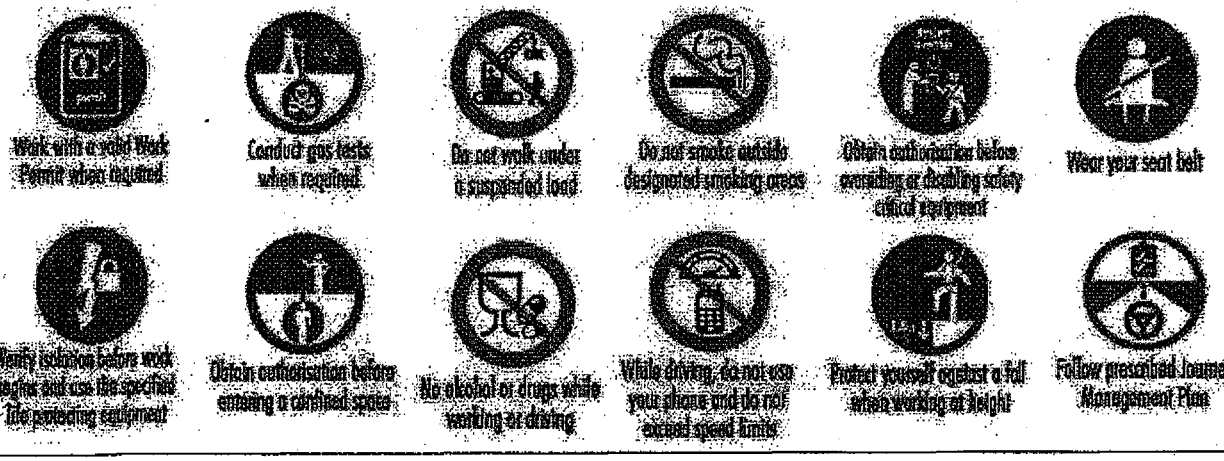
Are all personnel fit to work (i.e., no injury or illness during workday)? YES NO
Has the work area been left tidy and safe? YES NO
Are site personnel aware of status of work? YES NO
Are changes to equipment documented and communicated? YES NO N/A
All Incidents, near misses, unsafe situations reported? YES NO N/A
All **STOP WORK** initiatives have been documented in comment section? YES NO N/A

Did the work activity require any Modifications/Changes not listed above? ☐ YES ☑ NO ☐ N/A Briefly Describe: _____

Note: If YES, was it authorized by management? ☐ YES ☐ NO ☑ N/A Authorized by: _____

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Nick Zarlenga | | 6/6/11 1200 | N. Sloss | N. Sloss |

## SHELL 12 Life-Saving Rules



SOVEREIGN CONSULTING INC.

**Behavior Based Safety Checklist - FIELD WORK**
**WILL YOUR NEXT CHOICE BE THE SAFE CHOICE?**

Observer: Nick L  Tasks Observed: well Gauging  Total Safe Behaviors Observed: _____
Date: 6/6/11  Total At Risk Behaviors Observed: _____
Office: Farmingdale  Job Site: SE017  % Safe Behaviors: _____

| Critical Behavior List | Safe | At Risk | Critical Behavior List | Safe | At Risk |
|---|---|---|---|---|---|
| Clear of pinch points | // | | Traffic awareness | //// | |
| Use of traffic control devices | //// | | Review of JSAs | //// | |
| Use of tools | // | | Lifting / moving of equipment | //// | |
| Precautions for weather | /// | | Emergency equipment | / | |
| PPE - safety vest and safety glasses | // | | Electrical safety | / | |
| PPE- hard hat | / | | Heavy equipment hazards | — | |
| PPE - hearing protection | // | | Biological hazards addressed | / | |
| PPE - task appropriate gloves | //// | | Physical hazards addressed | // | |
| PPE - other | / | | Work Permits | // | |
| Use of air monitoring equipment | — | | | | |
| Clear of moving / rotating equipment | — | | | | |

| OBSERVED SAFE BEHAVIORS / GOOD PRACTICES |
|---|
| all PPE |
| |
| |
| |

| OBSERVED AT RISK BEHAVIORS | |
|---|---|
| What was observed to be at-risk? | Why was it at risk? |
| none | |
| | |
| | |
| | |

| Comments: |
|---|
| |
| |

**Definitions for Critical Behaviors:**

**Clear of pinch points:** body parts are kept out of pinch points -such as under gratings, manhole covers, etc.
**Use of traffic control devices:** Work zone delineators / traffic control devices used per the HASP/Scorecard
**Use of tools:** proper tool for the job utilized, tool is used appropriately (no hammering with a screwdriver, etc.), tool is in good condition
**Precautions for weather:** applies sunscreen, drinks plenty of fluids in hot weather; dresses appropriately for cold weather
**PPE - safety vest, safety glasses:** worn on site at all times
**PPE - hard hat:** worn when there are overhead hazards, construction activities, drilling, excavation, or as required by HASP
**PPE- hearing protection:** worn during times where noise is >85 dBa; drilling, vac truck, bobcat, geoprobe, etc.
**PPE - task appropriate gloves:** leather or protective gloves for manhole handling, equipment handling; nitrile gloves for gw sampling, and minimal chemical exposures
**PPE- other:** Other PPE as required by site HASP
**Use of air monitoring equipment:** per the site HASP
**Clear of moving/rotating equipment:** long hair should be tied back, long sleeves buttoned or rolled up to elbows, stay out of point of operation
**Traffic awareness:** faces traffic, remains alert to oncoming vehicles, blocks off parking spots where encroachment may be a problem
**Review of JSAs:** Prior to task, JSA should be reviewed
**Lifting/moving equipment:** proper body positioning during lifting, lift with legs, load close to body, etc.
**Emergency equipment:** should have fire extinguisher, first aid kit, BBP kit available at site
**Electrical safety:** LOTO utilized, GFCI utilized
**Heavy equipment hazards:** aware of backup signals, only approaches heavy equipment after eye contact/hand signal from operator, and operator stops equipment, stays out of heavy equipment blind spots
**Biological hazards addressed:** preventative measures for ticks, mosquitos, chiggers, bees, snakes when needed
**Physical hazards addressed:** fall protection, slip, trip, fall, overhead hazards, compressed gases, pressure relief, etc.
**Work Permits:** obtained for working at heights, confined space entry, hot work, excavation, LOTO, etc.

# TIME & MATERIAL FIELDSHEET

**Date: Monday, June 06, 2011**
**Page: 1 of 1**

**Project #: 5E017.140**
**Project Address: 25 Paidge Ave Brooklyn, New York**
**Client: Shell Oil Products, U.S.**

## Employee Time

| Employee Name | Task # | Subtask # | Prep Time | Travel Time | On-Site Time | Total Time |
|---|---|---|---|---|---|---|
| Nickolas Zarcone | 3 | 96 | 1.5 | 3 | 4.5 | 9 |
| Mike Blaisht | 3 | 96 | 0.5 | 3 | 4.5 | 8 |
| | | | | | | |
| | | | | | | |
| | | | | | | |


**SOVEREIGN CONSULTING, INC.**

290 Executive Drive, Suite 300
Cranberry Twp., PA 16066
www.sovcon.com


## SOVEREIGN OWNED OR LEASED EQUIPMENT AND MATERIALS LIST

| Item # | Item | Qty | Units |
|---|---|---|---|
| OE104 | Chevy Van | | hrs |
| OE124 | Ford F-150 | | hrs |
| OE115 | Interface Probe | | day |
| OE143 | Multi-Gas PID | | day |
| SR620 | Mobile Phone | | day |
| SR800 | 4" Bailer | | each |
| SR800 | 2" Bailer | | each |
| SR800 | 1" Bailer | | each |
| SR812 | QED Filters | | each |
| SR816 | LDPE Tubing | | ft |
| SR817 | Silicon Flex Hose | | ft |
| SR820 | Gloves (box) (100) | | each |

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR835 | Sorbent Sock | | each |
| SR836 | Sorbent Pads | 3 | each |
| SR837 | Sorbent Boom | | each |
| SR935 | 55 Gallon Drum | | each |
| SR980 | Gripper Plug - 1" | | each |
| SR981 | Gripper Plug - 2" | | each |
| SR982 | Gripper Plug - 4" | | each |
| SR983 | Brass Padlock | | each |
| SR205 | Hand Auger | | day |
| SR300 | Air Sampling Pump | | day |

## FET Rental Equipment (Need PO)

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR105 | Interface Probe | 1 | day |
| SR110 | DO Meter | | day |
| SR130 | Sub Pump 2" | | day |
| SR300 | Air Sampling Pump | | day |
| SR310 | PID | | day |
| SR335 | 4-Gas Meter | | day |
| SR420 | Level Logger | | day |
| SR635 | Survey Equipment | | day |
| SR645 | GW Multi-Meter | | day |
| SR655 | Peristaltic Pump | | day |

## RENTAL EQUIPMENT AND ADDITIONAL MATERIALS

List items rented or purchased to complete work

## Subcontractor Labor

Name & Description of Work

## WORK DESCRIPTION

NZ & MB on site @ 07:30 off @ 12:00
Performed monthly well gauging.
Hand bailed product from wells that exhibited recoverable product.
5.75 gallons of product were recovered by hand bailing.

**Project Manager / Supervisor Approval:** _____ **Date:** _____

Revised 05/26/2011

# SOVEREIGN CONSULTING INC. — USAGE FORM - FARMINGDALE (10)

| Field Event Start Date | Field Event End Date | ID of Emp. Submitting | Project ID | Approval ID | Project Name / Title | Project Manager |
|---|---|---|---|---|---|---|
| 6/6/11 | 6/6/11 | NAZ | 5E017 | 140 | Brooklyn Terminal | Doug Jakim |

## LEASED EQUIPMENT USAGE

Tracking Log Number

PM Approval (Initial/Date)

| Task & Subtask ID | Charge By Days Used | | Charge By Weeks Used | | Equipment Description | Accounting Use | Leased From |
|---|---|---|---|---|---|---|---|
| | LE112 | | LW112 | | MiniRAE 2000 PID | | USER |
| | LE113 | | LW113 | | Solinst Model 122 IP | | USER |
| | LE117 | | LW117 | | YSI 556 w/ Flow Through Cell | | USER |
| | LE172 | 1.00 | LW172 | | Heron H.01L.TP (Terminals) | | USER |

## OWNED EQUIPMENT USAGE

| Task & Subtask ID | Charge By Days Used | | Charge By Weeks Used | | Equipment Description |
|---|---|---|---|---|---|
| | OE004 | | OW004 | | Field Scale |
| | OE005 | | OW005 | | Vacuum-Pressure Pump |
| | OE011 | | OW011 | | Hand Auger Kit |
| | OE012 | | OW012 | | Trash Pump |
| | OE024 | | OW024 | | Ecological Sampling Kit |
| | OE030 | | OW030 | | Magnehelic Gauges |
| | OE031 | | OW031 | | Anemometer |
| | OE037 | | OW037 | | Test Plugs - 2" & 4" |
| | OE039 | | OW039 | | Voltmeter |
| | OE040 | | OW040 | | Magnehelic Gauge |
| | OE041 | | OW041 | | Submersible Pump (4"x10gpm) |
| | OE042 | | OW042 | | Flow Meter |
| | OE044 | | OW044 | | Wetlands Delineation Kit |
| | OE050 | | OW050 | | Air Knife Tools |
| | OE054 | | OW054 | | Submersible Transfer Pump |
| | OE056 | | OW056 | | Split Spoon Sampler |
| | OE076 | | OW076 | | Poly Storage Tank (200-250 G) |
| | OE077 | | OW077 | | Thermo-Anemometer |
| | OE109 | | OW109 | | Digital Manometer |
| | OE157 | | OW157 | | 1" Double Diaphragm Pump |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

## STOCK ITEMS USAGE

| Stock Item | Charge Item Code | Quantity Used | Task & Subtask ID |
|---|---|---|---|
| Level C Safety Equipment/Day | SR700 | | |
| Mod. Level D Safety Equip/Day | SR705 | | |
| Level D Safety Equipment/Day | SR710 | | |
| Disposable Bailer/Each | SR800 | | |
| Weighted Disposable Bailer/Each | SR805 | | |
| Disposable Bailer w/ Filter/Each | SR810 | | |
| Disposable Sample Filter/Each | SR812 | | |
| 100 ft. Box Tubing/Each | SR816 | | |
| Silicon Flex Hose/Foot | SR817 | | |
| Box (100) Nitrile Gloves/Ea | SR820 | | |
| Groundwater Sampling Kit/Well | SR825 | | |
| Disposable 12 Volt Purge Pump/Ea | SR830 | | |
| Sorbent Sock/Each | SR835 | | |
| Sorbent Pads/Each | SR836 | 3.00 | 03.96 |
| Sorbent Boom/Each | SR837 | | |
| QED MicroPurge Bladder Kit/Ea | SR845 | | |
| QED MicroPurge Bladder/Each | SR846 | | |
| 7 lb Bag of Ice/Each | SR850 | | |
| Petroflag Test Kit/Each | SR900 | | |
| 55 Gallon Drum/Each | SR935 | | |
| Encore Sampler - 5g/Each | SR945 | | |
| Encore Sampler -25g/Each | SR950 | | |
| Tedlar Bag - 3 Liter | SR960 | | |
| Gripper Plug - 1" | SR980 | | |
| Gripper Plug - 2" | SR981 | | |
| Gripper Plug - 4" | SR982 | | |
| 1-1/4" Brass Lock | SR983 | | |
| Tedlar Bag - 1 Liter | SR985 | | |
| | | | |

## OWNED VEHICLE USAGE

| Task & Subtask ID | Charge By Hours Used (Daily Rate) | | Charge By Hours Used (Wkly Rate) | | Vehicle Description |
|---|---|---|---|---|---|
| | OE114 | | OW114 | | '07 Ford Ranger |
| | OE134 | | OW134 | | '08 Ford Escape |
| | OE174 | | OW174 | | '10 Ford F150 (NAZ) |

ACCOUNTING USE

Shell/Motiva 0007602

SOVEREIGN CONSULTING - WELL GAUGING/HAND-BAILING DATA SUMMARY SHEET
PAGE 1 OF 1

DATE: 6/6/2011

CLIENT: MOTIVA ENTERPRISES LLC
25 PAIDGE AVENUE, BROOKLYN NY
SCI JOB # 5E017.140

| WELL ID | TIME OF READING | WELL DIA. (IN) | TOTAL DEPTH (FT) | DEPTH TO PRODUCT (FT) | DEPTH TO WATER (FT) | PRODUCT THICKNESS (FT) | PRODUCT RECOVERED (GAL) | NOTES |
|---|---|---|---|---|---|---|---|---|
| MW-1 | 8:00 | 4 | | | 3.25 | | | |
| MW-3 | 8:10 | 4 | | | 2.79 | | | |
| MW-29 | 8:13 | 4 | | | 1.79 | | | |
| MW-04 | 8:17 | 4 | | 2.67 | 2.82 | 0.15 | 0.50 | |
| MW-30 | 8:20 | 4 | | | 2.24 | | | |
| MW-5 | 8:23 | 4 | | | 1.78 | | | |
| MW-28 | 8:27 | 4 | | | 1.66 | | | |
| MW-27 | 8:32 | 4 | | | 2.29 | | | |
| MW-6 | 8:35 | 4 | | | 5.25 | | | |
| MW-7R | 8:45 | 4 | | | 5.99 | | | |
| MW-8 | 8:47 | 4 | | | 6.56 | | | |
| MW-9 | 8:49 | 4 | | | 6.46 | | | |
| MW-21R | 8:55 | 4 | | | 4.00 | | | |
| MW-22R | 8:29 | 4 | | | 3.98 | | | |
| MW-13 | 9:02 | 4 | | | 7.32 | | | |
| MW-14 | 9:05 | 4 | | | 6.71 | | | |
| MW-23 | 9:10 | 4 | | | 4.16 | | | |
| MW-24 | 9:14 | 4 | | | 4.00 | | | |
| MW-43 | 9:18 | 4 | | | 3.73 | | | |
| MW-42 | 9:23 | 4 | | | 3.85 | | | |
| MW-44 | 9:35 | 4 | | | 3.69 | | | |
| MW-25 | 10:00 | 4 | | | 3.09 | | | |
| TW-1 | underwater | 6 | | | | | | |
| MW-26 | 10:10 | 4 | | 3.75 | 3.77 | 0.02 | | |
| TW-2 | 10:15 | 6 | | | 3.81 | | | |
| MW-2 | 10:18 | 4 | | | 3.73 | | | |
| TW-3 | underwater | 6 | | | | | | |
| TW-4 | underwater | 6 | | | | | | |
| TW-5 | 10:25 | 6 | | | 3.13 | | | |
| MW-31 | 10:30 | 4 | | 3.50 | 3.61 | 0.11 | 0.50 | |
| TW-6 | underwater | 6 | | | | | | |
| MW-20 | 10:34 | 4 | | | 2.95 | | | |
| MW-15 | 10:40 | 4 | | | 3.12 | | | |
| MW-16 | 10:44 | 4 | | | 3.13 | | | |
| MW-17 | 10:50 | 4 | | | 2.65 | | | |
| MW-18 | 10:52 | 4 | | | 3.11 | | | |
| MW-32 | 10:56 | 4 | | | 3.99 | | | |
| RW-34 | 11:00 | 6 | | 7.12 | 7.16 | 0.04 | | |
| MW-33 | 11:03 | 4 | | | 5.65 | | | |
| MW-39 | 11:10 | 4 | | | 7.26 | | | |
| RW-40 | 11:14 | 6 | | 7.95 | 10.25 | 2.30 | 3.75 | |
| MW-35 | 11:16 | 4 | | | 6.49 | | | |
| RW-36 | 11:19 | 6 | | 8.91 | 9.17 | 0.26 | 1.00 | |
| MW-41 | 11:25 | 4 | | 8.25 | 8.31 | 0.06 | | |
| RW-37 | 6:28 | 6 | | | 7.58 | | | |
| MW-38 | 7:26 | 4 | | | 7.01 | | | |
| | | | | | | | | |
| | | | | | | | | |

Location 25 Paidge Ave Date 6/6/11

Project / Client Brooklyn Terminal

Monthly Gauging & Hand Bailing (Page 1)

Sovereign on site @ 0730 off @ 12:00

NL & MB Fish Pickup ~ 68°F

went over H&S and Scope of work with Terminal worker

| ID | Time | DTW | DTP | Product Thickness | Product Recovered |
|---|---|---|---|---|---|
| 1 | 8:00 | 3.25 | — | — | |
| 3 | 8:10 | 2.79 | — | — | |
| 29 | 8:13 | 1.79 | — | — | |
| 4 | 8:17 | 2.82 | 2.67 | 0.15 ✓ | 0.5 gal |
| ① 30 | 8:20 | 2.24 | — | — | |
| 5 | 8:23 | 1.78 | — | — | |
| 28 | 8:27 | 1.66 | — | — | |
| 27 | 8:32 | 2.29 | — | — | |
| 6 | 8:35 | 5.25 | — | — | |
| 7R | 8:45 | 5.99 | — | — | |
| 8 | 8:47 | 6.56 | — | — | |
| 9 | 8:49 | 6.46 | — | — | |
| 21R | 8:55 | 4.00 | — | — | |
| 22R | 8:59 | 3.98 | — | — | |
| 13 | 9:02 | 7.32 | — | — | |
| 14 | 9:05 | 6.71 | — | — | |
| 23 | 9:10 | 4.16 | — | — | |
| ② 24 | 9:14 | 4.00 | — | — | |
| 43 | 9:18 | 3.73 | — | — | |
| 42 | 9:23 | 3.85 | — | — | |

Location 25 Paidge Ave Date 6/6/11

Project / Client Brooklyn Terminal

Monthly Gauging & Hand Bailing (Page 2)

| ID | Time | DTW | DTP | Product Thickness | Product Recovered |
|---|---|---|---|---|---|
| 44 | 9:35 | 3.69 | — | — | |
| 25 | 10:00 | 3.09 | — | — | |
| TW1 | Underwater | — | — | — | |
| 26 | 10:10 | 3.77 | 3.75 | 0.02 | |
| TW2 | 10:15 | 3.81 | — | — | |
| MW 2 | 10:18 | 3.73 | — | — | |
| TW 3 | Underwater | — | — | — | |
| TW4 | underwater | — | — | — | |
| TW 5 | 10:25 | 3.13 | — | — | |
| 31 | 10:30 | 3.61 | 3.50 | 0.11 | 0.50 gal |
| TW6 | underwater | — | — | — | |
| 20 | 10:34 | 2.95 | — | — | |
| 15 | 10:40 | 3.12 | — | — | |
| 16 | 10:44 | 3.13 | — | — | |
| 17 | 10:50 | 2.65 | — | — | |
| 18 (3) | 10:52 | 3.11 | — | — | |
| 32 | 10:56 | 3.99 | — | — | |
| 34 | 11:00 | 7.16 | 7.12 | 0.04 | |
| 33 | 11:03 | 5.65 | — | — | |
| 39 | 11:10 | 7.26 | — | — | |
| 40 | 11:14 | 10.25 | 7.95 | 2.30 | 3.75 gal |
| 35 | 11:16 | 6.49 | — | — | |
| 36 | 11:19 | 9.17 | 8.91 | 0.26 | 1.00 gal |
| 41 | 11:25 | 8.31 | 8.25 | 0.06 | |



Location 25 Paidge Ave Date 6/6/11

Project / Client Brooklyn Terminal (Page 3)

Monthly Gauging & Hand Bailing

| ID | Time | DTW | DTP | Product Thickness | Product Recovered |
|---|---|---|---|---|---|
| 37 | 11:27 | 7.58 | — | — | |
| 38 | 11:31 | 7.01 | — | — | |

(Gal. Recovered 5.75) 5.75 gal (approx) product recovered

Notes:

(1)/(2): MW-30 / MW-24: Significant well pad damage

(3): MW-18: Well pad damage

Site Navigation

Shopping
- Camping Gear
- Hunting Gear
- Maglite Sales

Resources
- Link Directory
- AIG Top Sites
- Fishing Charters
- Free Tackle
- Charter Listings
- Saltwater Tides

# Go Fishing Forum Message Boards

The only way you can catch fish is to Go Fishing Forum!

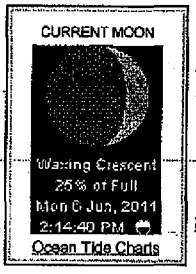
**Please leave a comment about our tide prediction website!**

**Search Tide Stations**

**Search Term: (i.e. Potomac):**

All States

Search Tide Stations




- Go Fishing Forum Home
- You won't catch fish unless you Go Fishing Forum!

Select a different tide station

Start Date: June 6 2011 Number of Days: 2

Update Charts

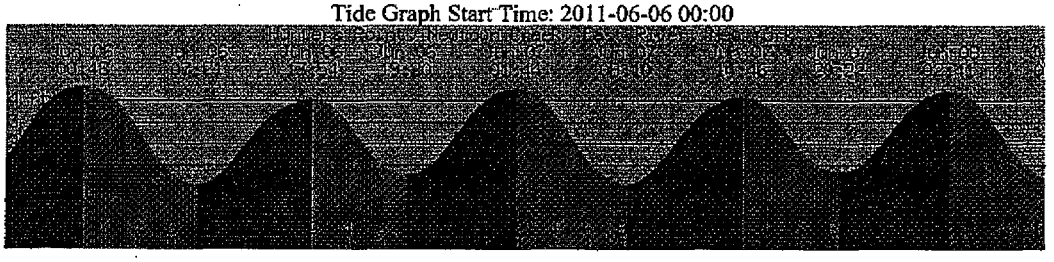
**NOT FOR NAVIGATION** The accuracy of these tide predictions is not guaranteed in any way. You should not use this program if anyone or anything could come to harm as a result of an incorrect tide prediction. NOAA and similar agencies in other countries can provide you with certified tide predictions if that is what you need. XTide's predictions do not incorporate the effects of tropical storms, El Niño, seismic events, subsidence, uplift, or changes in global sea level.

Bookmark this page

**Hunters Point, Newtown Creek, East River, New York**
**(40.7400° N, 73.9617° W)**

Print Today's Tide Prediction for this location

Tide Graph Start Time: 2011-06-06 00:00



| Monday, June 6th, 2011 | | | Tuesday, June 7th, 2011 | | |
|---|---|---|---|---|---|
| Time | Type | Height | Time | Type | Height |
| 12:48 AM EDT | High Tide | 4.64 feet | 1:44 AM EDT | High Tide | 4.54 feet |
| 7:21 AM EDT | Low Tide | 0.08 feet | 8:10 AM EDT | Low Tide | 0.15 feet |
| 1:54 PM EDT | High Tide | 4.03 feet | 2:46 PM EDT | High Tide | 4.18 feet |
| 7:20 PM EDT | Low Tide | 0.55 feet | 8:22 PM EDT | Low Tide | 0.65 feet |

**Raw Tide Data**

Hunters Point, Newtown Creek,
East River, New York
40.7400° N, 73.9617° W

2011-06-06 12:48 AM EDT 4.64

FISHING Top 100

**Local Coupons**
1 ridiculously huge coupon a day. Get 50-90% off your city's best!
www.Groupon.com

**Niantic Sportfishing**
Osprey Sportfishing Offers Ocean Adventures at Low Rates. Call Now!
www.ospreyfishingcha...

**Charter Fishing Galveston**
Call us at (409) 692-3474 for early bird specials! Inshore Offshore Fun
www.coastalcharterad...

**Hawaii Sport Fishing**
Private, Affordable, Custom Charter Out of Ko Olina Resort and Marina
www.hawaiiluxuryfishi...



Shell/Motiva 0007606

**Sovereign Consulting Inc.**
**SHELL Tailgate Safety Meeting Form**
(To be submitted with field notes to Project Manager each day)

| | |
|---|---|
| **Project Name:** Brooklyn Terminal | **Date:** 6/6/11 |
| **Location:** 25 Paidge Ave | **Weather:** Clear |
| **Project Manager [Print]:** Doug Jeffries | **Temp:** 68°F |
| **Contractors/Subcontractors:** | |

**Scope of Work:** Monthly Gauging

| **Task Hazards:** (check all that apply) *requires Permit to Work | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☑ | Ladders* | ☐ | Haz. Substances | ☑ | Sharp Objects | ☑ |
| Confined Spaces* | ☐ | Explosion | ☐ | Heavy Equipment | ☑ | Tools | ☑ |
| Cutting/Welding* | ☐ | Falling Objects | ☐ | Flying Debris | ☐ | Traffic | ☑ |
| Electrical | ☐ | Fire | ☐ | Noise | ☑ | Weather | ☑ |
| Environmental Hazard | ☑ | Insects/Biological | ☐ | Slip/Trip, Hazards | ☑ | Other (describe below) | ☐ |
| Elevated Work* | ☐ | Ticks – Biohazard | ☑ | Overhead | ☑ | | |
| Excavations* | ☐ | Bees, Wasps, Hornets – Biohazard | ☑ | Sanitation | ☐ | | |

| Work Zone Delineation Level | Level 1 ☐ | Level 2 ☐ | Level 3 ☑ *Watchperson required | Level 4 ☐ *Temp. Traffic Control Plan required |
|---|---|---|---|---|

| **Title of JSAs reviewed today:** | General Site activities<br>Opening & closing manhole covers<br>Drum Equipment<br>GW gauging & LNAPL Recovery |
|---|---|

**Engineering Controls / Work Practices:** PPE & Traffic Control

| **Levels of Protection / Personal Protective Equipment:** | | | |
|---|---|---|---|
| Level A ☐ | Eye & Face Protection ☑ | Safety Glasses ☑ | Face Shield ☐ |
| Level B ☐ | Foot Protection ☑ | Steel Toes ☑ | Hip Boots/Waders ☐ |
| Level C ☐ | Hand Protection ☑ | Nitrile Gloves ☑ | Leather Gloves ☑ Full Arm Chemical ☐ |
| Level D ☑ | Head Protection ☑ | Hard Hat ☑ | |
| | Hearing Protection ☑ | Ear Muffs/Plugs ☑ | |
| | Other ☐ | Barricades ☑ | High Visibility Safety Vests ☑ Cones/Flags ☑ |
| | | Amber Light/Vehicle Hazards ☐ | Crash Truck ☑ Tyvek/Coveralls ☐ |

| **Air Monitoring/Sampling** | | **Emergency Response** | | | |
|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☐ | Emergency Alarms | ☑ | First Aid Kit Location ☑ | Cell Phone Use None ☐ |
| FID/PID | ☐ | Emergency Contacts | ☑ | Spill Kit Location ☑ | Fire Ext. Location ☑ |
| Detector Tubes | ☐ | Evacuation Routes | ☑ | Hospital Route ☑ | Pedestrian Safety ☑ |
| Dust Monitor | ☐ | Explosion/Fire | ☑ | Work Area ☑ | Vapor/Dust Suppression ☑ |
| Personal Air | ☐ | Medical Emergency | ☑ | Smoking/Break Area ☑ | Muster Location ☐ |



Shell/Motiva 0007607

**Are site workers Fit To Work?** Yes ☑ No ☐

**Do all site workers understand injury/intervention reporting requirements?** Yes ☑ No ☐

**Comments:**

**Name & Title of Person Conducting Tailgate Safety Meeting:** Nick Zarcone

**Signature:** | **Date:** 6/6/11

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth during the tailgate safety meeting and within the project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are **FIT** for work prior to work, duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

**SIGN IN**

| MEETING ATTENDEES | | | |
|---|---|---|---|
| Name [Print] | Signature | Company | Time |
| Nick Zarcone | | Sovereign | 07:45 |
| Michael Blight | | Sovereign | 07:45 |
| | | | |
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| | | | |
|---|---|---|---|
| Are all personnel fit to work? | YES | NO | |
| Have all personnel been informed of work to be completed? | YES | NO | |
| Have all personnel been informed on **STOP WORK** procedures? | YES | NO | |
| Have all personnel reviewed all JSAs applicable to scope of work? | YES | NO | |
| Has fuel delivery service been informed? | YES | NO | N/A |
| Is fuel delivery due today? | YES | NO | N/A |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | N/A |
| Are work areas controlled to protect workers, site staff, and the public? | YES | NO | N/A |
| Do all contractors have their API Safety Key card? | YES | NO | N/A |
| Have all personnel reviewed and understand the Shell 12 Life-Saving Rules? | YES | NO | |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Nick Zarcone | | 6/6/11 0745 | Gustavo Tellez | |



Shell/Motiva 0007608

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest that they were **FIT** for work upon completion of work.

## SIGN OUT

| MEETING ATTENDEES | | | |
|---|---|---|---|
| Name [Print] | Signature | Company | Time |
| Nick Zarcone | | Sovereign | 1200 |
| Mike Bright | | Sovereign | 12:00 |
| | | | |
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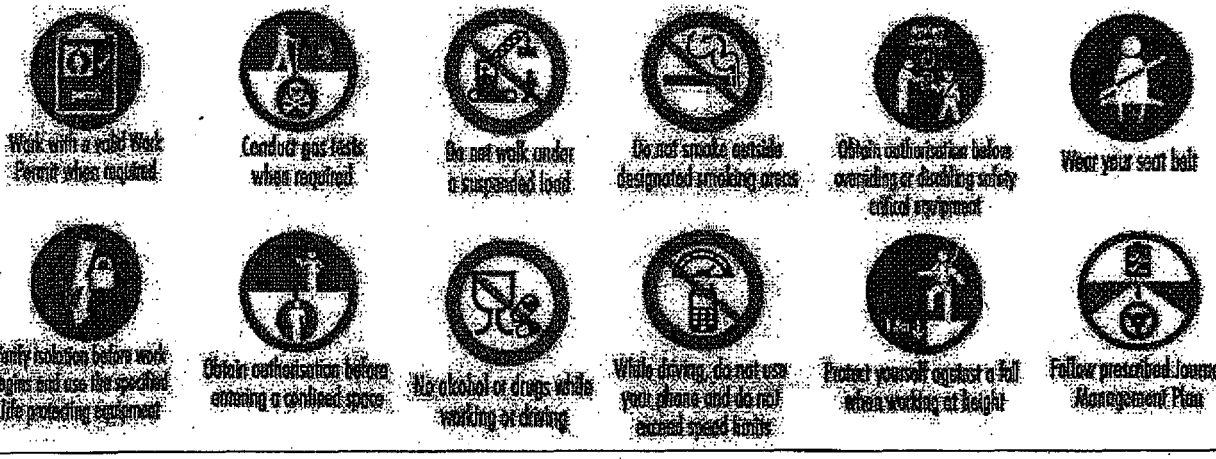
| | | | |
|---|---|---|---|
| Are all personnel fit to work (i.e., no injury or illness during workday)? | YES | NO | |
| Has the work area been left tidy and safe? | YES | NO | |
| Are site personnel aware of status of work? | YES | NO | |
| Are changes to equipment documented and communicated? | YES | NO | N/A |
| All incidents, near misses, unsafe situations reported? | YES | NO | N/A |
| All **STOP WORK** initiatives have been documented in comment section? | YES | NO | N/A |

Did the work activity require any Modifications/Changes not listed above? ☐ YES ☑ NO ☐ N/A Briefly Describe: _____

Note: If YES, was it authorized by management? ☐ YES ☐ NO ☑ N/A Authorized by: _____

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Nick Zarcone | | 6/6/11 1200 | N. Sds. | N. Sds. |

## SHELL 12 Life-Saving Rules






Shell/Motiva 0007609

SOVEREIGN CONSULTING INC.

## Behavior Based Safety Checklist - FIELD WORK
### WILL YOUR NEXT CHOICE BE THE SAFE CHOICE?

Observer: Nick L  Tasks Observed: well Gauging  Total Safe Behaviors Observed: _____

Date: 6/6/11  Total At Risk Behaviors Observed: _____

Office: Farmingdale  Job Site: SE017  % Safe Behaviors: _____

| Critical Behavior List | Safe | At Risk | Critical Behavior List | Safe | At Risk |
|---|---|---|---|---|---|
| Clear of pinch points | // | | Traffic awareness | //// | |
| Use of traffic control devices | //// | | Review of JSAs | //// | |
| Use of tools | // | | Lifting / moving of equipment | //// | |
| Precautions for weather | /// | | Emergency equipment | / | |
| PPE - safety vest and safety glasses | // | | Electrical safety | / | |
| PPE- hard hat | / | | Heavy equipment hazards | — | |
| PPE - hearing protection | // | | Biological hazards addressed | / | |
| PPE - task appropriate gloves | //// | | Physical hazards addressed | // | |
| PPE - other | / | | Work Permits | // | |
| Use of air monitoring equipment | — | | | | |
| Clear of moving / rotating equipment | — | | | | |

| OBSERVED SAFE BEHAVIORS / GOOD PRACTICES |
|---|
| all PPE |
| |
| |
| |

| OBSERVED AT RISK BEHAVIORS | |
|---|---|
| What was observed to be at-risk? | Why was it at risk? |
| none | |
| | |
| | |
| | |

| Comments: |
|---|
| |
| |

### Definitions for Critical Behaviors:

**Clear of pinch points:** body parts are kept out of pinch points -such as under gratings, manhole covers, etc.
**Use of traffic control devices:** Work zone delineators / traffic control devices used per the HASP/Scorecard
**Use of tools:** proper tool for the job utilized, tool is used appropriately (no hammering with a screwdriver, etc.), tool is in good condition
**Precautions for weather:** applies sunscreen, drinks plenty of fluids in hot weather; dresses appropriately for cold weather
**PPE - safety vest, safety glasses:** worn on site at all times
**PPE - hard hat:** worn when there are overhead hazards, construction activities, drilling, excavation, or as required by HASP
**PPE- hearing protection:** worn during times where noise is >85 dBa; drilling, vac truck, bobcat, geoprobe, etc.
**PPE - task appropriate gloves:** leather or protective gloves for manhole handling, equipment handling; nitrile gloves for gw sampling, and minimal chemical exposures
**PPE- other:** Other PPE as required by site HASP
**Use of air monitoring equipment:** per the site HASP
**Clear of moving/rotating equipment:** long hair should be tied back, long sleeves buttoned or rolled up to elbows, stay out of point of operation
**Traffic awareness:** faces traffic, remains alert to oncoming vehicles, blocks off parking spots where encroachment may be a problem
**Review of JSAs:** Prior to task, JSA should be reviewed
**Lifting/moving equipment:** proper body positioning during lifting, lift with legs, load close to body, etc.
**Emergency equipment:** should have fire extinguisher, first aid kit, BBP kit available at site
**Electrical safety:** LOTO utilized, GFCI utilized
**Heavy equipment hazards:** aware of backup signals, only approaches heavy equipment after eye contact/hand signal from operator, and operator stops equipment, stays out of heavy equipment blind spots
**Biological hazards addressed:** preventative measures for ticks, mosquitos, chiggers, bees, snakes when needed
**Physical hazards addressed:** fall protection, slip, trip, fall, overhead hazards, compressed gases, pressure relief, etc.
**Work Permits:** obtained for working at heights, confined space entry, hot work, excavation, LOTO, etc.

# TIME & MATERIAL FIELDSHEET

**Date:** Monday, June 06, 2011
**Page:** 1 of 1

**Project #:** 5E017.140
**Project Address:** 25 Paldge Ave Brooklyn, New York
**Client:** Shell Oil Products, U.S.

## Employee Time

| Employee Name | Task # | Subtask # | Prep Time | Travel Time | On-Site Time | Total Time |
|---|---|---|---|---|---|---|
| Nickolas Zarcone | 3 | 96 | 1.5 | 3 | 4.5 | 9 |
| Mike Blight | 3 | 96 | 0.5 | 3 | 4.5 | 8 |
| | | | | | | |
| | | | | | | |
| | | | | | | |


**SOVEREIGN CONSULTING, INC.**
290 Executive Drive, Suite 300
Cranberry Twp., PA 16066
www.sovcon.com


## SOVEREIGN OWNED OR LEASED EQUIPMENT AND MATERIALS LIST

| Item # | Item | Qty | Units |
|---|---|---|---|
| OE104 | Chevy Van | | hrs |
| OE124 | Ford F-150 | | hrs |
| OE115 | Interface Probe | | day |
| OE143 | Multi-Gas PID | | day |
| SR620 | Mobile Phone | | day |
| SR600 | 4" Bailer | | each |
| SR800 | 2" Bailer | | each |
| SR800 | 1" Bailer | | each |
| SR812 | QED Filters | | each |
| SR816 | LDPE Tubing | | ft |
| SR817 | Silicon Flex Hose | | ft |
| SR820 | Gloves (box) (100) | | each |

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR835 | Sorbent Sock | | each |
| SR836 | Sorbent Pads | 3 | each |
| SR837 | Sorbent Boom | | each |
| SR935 | 55 Gallon Drum | | each |
| SR980 | Gripper Plug - 1" | | each |
| SR981 | Gripper Plug - 2" | | each |
| SR982 | Gripper Plug - 4" | | each |
| SR983 | Brass Padlock | | each |
| SR205 | Hand Auger | | day |
| SR300 | Air Sampling Pump | | day |

## FE Rental Equipment (Need PO)

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR105 | Interface Probe | 1 | day |
| SR110 | DO Meter | | day |
| SR130 | Sub Pump 2" | | day |
| SR300 | Air Sampling Pump | | day |
| SR310 | PID | | day |
| SR335 | 4-Gas Meter | | day |
| SR420 | Level Logger | | day |
| SR635 | Survey Equipment | | day |
| SR645 | GW Multi-Meter | | day |
| SR655 | Peristaltic Pump | | day |

## RENTAL EQUIPMENT AND ADDITIONAL MATERIALS

List items rented or purchased to complete work

## Subcontractor Labor

Name & Description of Work

## WORK DESCRIPTION

NZ & MB on site @ 07:30 off @ 12:00
Performed monthly well gauging.
Hand bailed product from wells that exhibited recoverable product.
5.75 gallons of product were recovered by hand bailing.

**Project Manager / Supervisor Approval:** _____ **Date:** _____

Revised 05/26/2011

# SOVEREIGN CONSULTING INC. — USAGE FORM - FARMINGDALE (10)

| Field Event Start Date | Field Event End Date | ID of Emp Submitting | Project ID | Approval ID | Project Name / Title | Project Manager |
|---|---|---|---|---|---|---|
| 6/6/11 | 6/6/11 | NAZ | 5E017 | 140 | Brooklyn Terminal | Doug Jakim |

## LEASED EQUIPMENT USAGE

Tracking Log Number

PM Approval (Initial/Date)

| Task & Subtask ID | Charge By Days Used | | Charge By Weeks Used | | Equipment Description | Accounting Use | Leased From |
|---|---|---|---|---|---|---|---|
| | LE112 | | LW112 | | MiniRAE 2000 PID | | USER |
| | LE113 | | LW113 | | Solinst Model 122 IP | | USER |
| | LE117 | | LW117 | | YSI 556 w/ Flow Through Cell | | USER |
| | LE172 | 1.00 | LW172 | | Heron H.01L.IP (Terminals) | | USER |

## OWNED EQUIPMENT USAGE

| Task & Subtask ID | Charge By Days Used | | Charge By Weeks Used | | Equipment Description |
|---|---|---|---|---|---|
| | OE004 | | OW004 | | Field Scale |
| | OE005 | | OW005 | | Vacuum-Pressure Pump |
| | OE011 | | OW011 | | Hand Auger Kit |
| | OE012 | | OW012 | | Trash Pump |
| | OE024 | | OW024 | | Ecological Sampling Kit |
| | OE030 | | OW030 | | Magnehelic Gauges |
| | OE031 | | OW031 | | Anemometer |
| | OE037 | | OW037 | | Test Plugs - 2" & 4" |
| | OE039 | | OW039 | | Voltmeter |
| | OE040 | | OW040 | | Magnehelic Gauge |
| | OE041 | | OW041 | | Submersible Pump (4"x10gpm) |
| | OE042 | | OW042 | | Flow Meter |
| | OE044 | | OW044 | | Wetlands Delineation Kit |
| | OE050 | | OW050 | | Air Knife Tools |
| | OE054 | | OW054 | | Submersible Transfer Pump |
| | OE056 | | OW056 | | Split Spoon Sampler |
| | OE076 | | OW076 | | Poly Storage Tank (200-250 G) |
| | OE077 | | OW077 | | Thermo-Anemometer |
| | OE109 | | OW109 | | Digital Manometer |
| | OE157 | | OW157 | | 1" Double Diaphragm Pump |
| | | | | | |
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## STOCK ITEMS USAGE

| Stock Item | Charge Item Code | Quantity Used | Task & Subtask ID |
|---|---|---|---|
| Level C Safety Equipment/Day | SR700 | | |
| Mod. Level D Safety Equip/Day | SR705 | | |
| Level D Safety Equipment/Day | SR710 | | |
| Disposable Bailer/Each | SR800 | | |
| Weighted Disposable Bailer/Each | SR805 | | |
| Disposable Bailer w/ Filter/Each | SR810 | | |
| Disposable Sample Filter/Each | SR812 | | |
| 100 ft. Box Tubing/Each | SR816 | | |
| Silicon Flex Hose/Foot | SR817 | | |
| Box (100) Nitrile Gloves/Ea | SR820 | | |
| Groundwater Sampling Kit/Well | SR825 | | |
| Disposable 12 Volt Purge Pump/Ea | SR830 | | |
| Sorbent Sock/Each | SR835 | | |
| Sorbent Pads/Each | SR836 | 3.00 | 03.96 |
| Sorbent Boom/Each | SR837 | | |
| QED MicroPurge Bladder Kit/Ea | SR845 | | |
| QED MicroPurge Bladder/Each | SR846 | | |
| 7 lb Bag of Ice/Each | SR850 | | |
| Petroflag Test Kit/Each | SR900 | | |
| 55 Gallon Drum/Each | SR935 | | |
| Encore Sampler - 5g/Each | SR945 | | |
| Encore Sampler -25g/Each | SR950 | | |
| Tedlar Bag - 3 Liter | SR960 | | |
| Gripper Plug - 1" | SR980 | | |
| Gripper Plug - 2" | SR981 | | |
| Gripper Plug - 4" | SR982 | | |
| 1-1/4" Brass Lock | SR983 | | |
| Tedlar Bag - 1 Liter | SR985 | | |
| | | | |

## OWNED VEHICLE USAGE

| Task & Subtask ID | Charge By Hours Used (Daily Rate) | | Charge By Hours Used (Wkly Rate) | | Vehicle Description |
|---|---|---|---|---|---|
| | OE114 | | OW114 | | '07 Ford Ranger |
| | OE134 | | OW134 | | '08 Ford Escape |
| | OE174 | | OW174 | | '10 Ford F150 (NAZ) |

Accounting Use

Shell/Motiva 0007612

SOVEREIGN CONSULTING - WELL GAUGING/HAND-BAILING DATA SUMMARY SHEET
PAGE 1 OF 1

DATE: 6/6/2011

CLIENT: MOTIVA ENTERPRISES LLC
25 PAIDGE AVENUE, BROOKLYN NY
SCI JOB # 5E017.140

| WELL ID | TIME OF READING | WELL DIA. (IN) | TOTAL DEPTH (FT) | DEPTH TO PRODUCT (FT) | DEPTH TO WATER (FT) | PRODUCT THICKNESS (FT) | PRODUCT RECOVERED (GAL) | NOTES |
|---|---|---|---|---|---|---|---|---|
| MW-1 | 8:00 | 4 | | | 3.25 | | | |
| MW-3 | 8:10 | 4 | | | 2.79 | | | |
| MW-29 | 8:13 | 4 | | | 1.79 | | | |
| MW-04 | 8:17 | 4 | | 2.67 | 2.82 | 0.15 | 0.50 | |
| MW-30 | 8:20 | 4 | | | 2.24 | | | |
| MW-5 | 8:23 | 4 | | | 1.78 | | | |
| MW-28 | 8:27 | 4 | | | 1.66 | | | |
| MW-27 | 8:32 | 4 | | | 2.29 | | | |
| MW-6 | 8:35 | 4 | | | 5.25 | | | |
| MW-7R | 8:45 | 4 | | | 5.99 | | | |
| MW-8 | 8:47 | 4 | | | 6.56 | | | |
| MW-9 | 8:49 | 4 | | | 6.46 | | | |
| MW-21R | 8:55 | 4 | | | 4.00 | | | |
| MW-22R | 8:29 | 4 | | | 3.98 | | | |
| MW-13 | 9:02 | 4 | | | 7.32 | | | |
| MW-14 | 9:05 | 4 | | | 6.71 | | | |
| MW-23 | 9:10 | 4 | | | 4.16 | | | |
| MW-24 | 9:14 | 4 | | | 4.00 | | | |
| MW-43 | 9:18 | 4 | | | 3.73 | | | |
| MW-42 | 9:23 | 4 | | | 3.85 | | | |
| MW-44 | 9:35 | 4 | | | 3.69 | | | |
| MW-25 | 10:00 | 4 | | | 3.09 | | | |
| TW-1 | underwater | 6 | | | | | | |
| MW-26 | 10:10 | 4 | | 3.75 | 3.77 | 0.02 | | |
| TW-2 | 10:15 | 6 | | | 3.81 | | | |
| MW-2 | 10:18 | 4 | | | 3.73 | | | |
| TW-3 | underwater | 6 | | | | | | |
| TW-4 | underwater | 6 | | | | | | |
| TW-5 | 10:25 | 6 | | | 3.13 | | | |
| MW-31 | 10:30 | 4 | | 3.50 | 3.61 | 0.11 | 0.50 | |
| TW-6 | underwater | 6 | | | | | | |
| MW-20 | 10:34 | 4 | | | 2.95 | | | |
| MW-15 | 10:40 | 4 | | | 3.12 | | | |
| MW-16 | 10:44 | 4 | | | 3.13 | | | |
| MW-17 | 10:50 | 4 | | | 2.65 | | | |
| MW-18 | 10:52 | 4 | | | 3.11 | | | |
| MW-32 | 10:56 | 4 | | | 3.99 | | | |
| RW-34 | 11:00 | 6 | | 7.12 | 7.16 | 0.04 | | |
| MW-33 | 11:03 | 4 | | | 5.65 | | | |
| MW-39 | 11:10 | 4 | | | 7.26 | | | |
| RW-40 | 11:14 | 6 | | 7.95 | 10.25 | 2.30 | 3.75 | |
| MW-35 | 11:16 | 4 | | | 6.49 | | | |
| RW-36 | 11:19 | 6 | | 8.91 | 9.17 | 0.26 | 1.00 | |
| MW-41 | 11:25 | 4 | | 8.25 | 8.31 | 0.06 | | |
| RW-37 | 6:28 | 6 | | | 7.58 | | | |
| MW-38 | 7:26 | 4 | | | 7.01 | | | |
| | | | | | | | | |
| | | | | | | | | |

Location 25 Paidge Ave Date 6/6/11

Project / Client Brooklyn Terminal

Monthly Gauging & Hand Bailing (Page 1)

Sovereign on site @ 0730 off @ 12:00

NL & MB F150 Pickup ~ 68°F

went over H&S and Scope of work with Terminal worker

| ID | Time | DTW | DTP | Product Thickness | Product Recovered |
|---|---|---|---|---|---|
| 1 | 8:00 | 3.25 | — | — | |
| 3 | 8:10 | 2.79 | — | — | |
| 29 | 8:13 | 1.79 | — | — | |
| 4 | 8:17 | 2.82 | 2.67 | 0.15 ✓ | 0.5 gal |
| ① 30 | 8:20 | 2.24 | — | — | |
| 5 | 8:23 | 1.78 | — | — | |
| 28 | 8:27 | 1.66 | — | — | |
| 27 | 8:32 | 2.29 | — | — | |
| 6 | 8:35 | 5.25 | — | — | |
| 7R | 8:45 | 5.99 | — | — | |
| 8 | 8:47 | 6.56 | — | — | |
| 9 | 8:49 | 6.46 | — | — | |
| 21R | 8:55 | 4.00 | — | — | |
| 22R | 8:59 | 3.98 | — | — | |
| 13 | 9:02 | 7.32 | — | — | |
| 14 | 9:05 | 6.71 | — | — | |
| 23 | 9:10 | 4.16 | — | — | |
| ② 24 | 9:14 | 4.00 | — | — | |
| 43 | 9:18 | 3.73 | — | — | |
| 42 | 9:23 | 3.85 | — | — | |

98

Location 25 Pridge Ave  Date 6/6/11

Project / Client Brooklyn Terminal

Monthly Gauging & Hand Bailing (Page 2)

| ID | Time | DTW | DTP | Product Thickness | Product Recovered |
|---|---|---|---|---|---|
| 44 | 9:35 | 3.69 | — | — | |
| 25 | 10:00 | 3.09 | — | — | |
| TW1 | Underwater | — | — | — | |
| 26 | 10:10 | 3.77 | 3.75 | 0.02 | |
| TW2 | 10:15 | 3.81 | — | — | |
| MW2 | 10:18 | 3.73 | — | — | |
| TW3 | Underwater | — | — | — | |
| TW4 | Underwater | — | — | — | |
| TW5 | 10:25 | 3.13 | — | — | |
| 31 | 10:30 | 3.61 | 3.50 | 0.11 ✓ | 0.50 gal |
| TW6 | Underwater | — | — | — | |
| 20 | 10:34 | 2.95 | — | — | |
| 15 | 10:40 | 3.12 | — | — | |
| 16 | 10:44 | 3.13 | — | — | |
| 17 | 10:50 | 2.65 | — | — | |
| 18 (3) | 10:52 | 3.11 | — | — | |
| 32 | 10:56 | 3.84 | — | — | |
| 34 | 11:06 | 7.16 | 7.12 | 0.04 | |
| 33 | 11:03 | 5.65 | — | — | |
| 39 | 11:10 | 7.26 | — | — | |
| 40 | 11:14 | 10.35 | 7.95 | 2.30 ✓ | 3.75 gal |
| 35 | 11:16 | 6.49 | — | — ✓ | |
| 36 | 11:19 | 9.17 | 8.91 | 0.26 | 1.00 gal |
| 41 | 11:25 | 8.31 | 8.25 | 0.06 | |

99

Location 25 Pridge Ave  Date 6/6/11

Project / Client Brooklyn Terminal (Page 3)

Monthly Gauging & Hand Bailing

| ID | Time | DTW | DTP | Product Thickness | Product Recovered |
|---|---|---|---|---|---|
| 37 | 11:27 | 7.58 | — | — | |
| 38 | 11:31 | 7.01 | — | — | |

(Gal. Recovered 5.75) 5.75 gal (approx) product recovered

Notes:

6/8: MW-30 / MW-24: significant well pad damage

3: MW-18: Well pad damage

Shell/Motiva 0007615

**Site Navigation**

**Shopping**
- Camping Gear
- Hunting Gear
- Maglite Sales

**Resources**
- Link Directory
- AIG Top Sites
- Fishing Charters
- Free Tackle
- Charter Listings
- Saltwater Tides

# Go Fishing Forum Message Boards

The only way you can catch fish is to Go Fishing Forum!

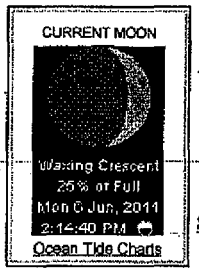
**Please leave a comment about our tide prediction website!**

**Search Tide Stations**

**Search Term: (i.e. Potomac):**

All States

Search Tide Stations




- Go Fishing Forum Home
- You won't catch fish unless you Go Fishing Forum!

Select a different tide station

**Start Date:** June 6 2011 **Number of Days:** 2

Update Charts

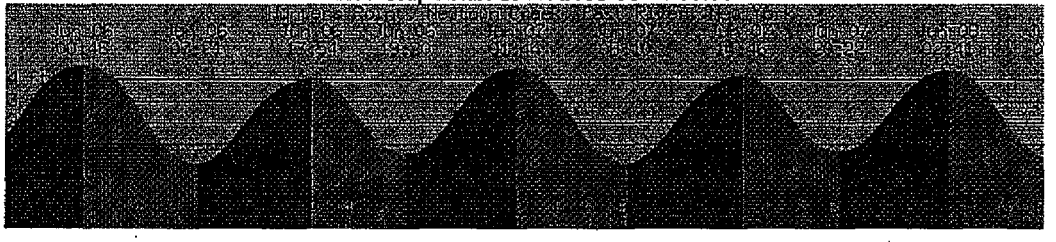
**NOT FOR NAVIGATION** The accuracy of these tide predictions is not guaranteed in any way. You should not use this program if anyone or anything could come to harm as a result of an incorrect tide prediction. NOAA and similar agencies in other countries can provide you with certified tide predictions if that is what you need. XTide's predictions do not incorporate the effects of tropical storms, El Niño, seismic events, subsidence, uplift, or changes in global sea level.

Bookmark this page

**Hunters Point, Newtown Creek, East River, New York**
**(40.7400° N, 73.9617° W)**

Print Today's Tide Prediction for this location

Tide Graph Start Time: 2011-06-06 00:00



| Monday, June 6th, 2011 | | | Tuesday, June 7th, 2011 | | |
|---|---|---|---|---|---|
| **Time** | **Type** | **Height** | **Time** | **Type** | **Height** |
| 12:48 AM EDT | High Tide | 4.64 feet | 1:44 AM EDT | High Tide | 4.54 feet |
| 7:21 AM EDT | Low Tide | 0.08 feet | 8:10 AM EDT | Low Tide | 0.15 feet |
| 1:54 PM EDT | High Tide | 4.03 feet | 2:46 PM EDT | High Tide | 4.18 feet |
| 7:20 PM EDT | Low Tide | 0.55 feet | 8:22 PM EDT | Low Tide | 0.65 feet |

**Raw Tide Data**

Hunters Point, Newtown Creek,
East River, New York
40.7400° N, 73.9617° W

2011-06-06 12:48 AM EDT 4.64

FISHING Top 100

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www.hawaiiluxuryfishi...



Shell/Motiva 0007616

# TIME & MATERIAL FIELDSHEET

Date: Monday, May 09, 2011
Page: 1 of 1

Project #: 5E017.140
Project Address: 25 Paidge Avenue, Brooklyn, New York
Client: Shell Oil Products, U.S.

## Employee Time

| Employee Name | Task # | Subtask # | Prep Time | Travel Time | On-Site Time | Total Time |
|---|---|---|---|---|---|---|
| Nickolas Zarcone | 3 | 96 | 0.5 | 3 | 6.5 | 10 |
| Justin King | 3 | 96 | 0.5 | 3 | 6.5 | 10 |
| | | | | | | |
| | | | | | | |
| | | | | | | |


SOVEREIGN CONSULTING, INC.
290 Executive Drive, Suite 300
Cranberry Twp., PA 16066
www.sovcon.com


## SOVEREIGN OWNED OR LEASED EQUIPMENT AND MATERIALS LIST

| Item # | Item | Qty | Units | Item # | Item | Qty | Units |
|---|---|---|---|---|---|---|---|
| OE104 | Chevy Van | | hrs | SR835 | Sorbent Sock | | each |
| OE124 | Ford F-150 | | hrs | SR836 | Sorbent Pads | 4 | each |
| OE115 | Interface Probe | | day | SR837 | Sorbent Boom | | each |
| OE143 | Multi-Gas PID | | day | SR935 | 55 Gallon Drum | | each |
| SR620 | Mobile Phone | | day | SR980 | Gripper Plug - 1" | | each |
| SR800 | 4" Bailer | | each | SR981 | Gripper Plug - 2" | | each |
| SR800 | 2" Bailer | | each | SR982 | Gripper Plug - 4" | | each |
| SR800 | 1" Bailer | | each | SR983 | Brass Padlock | | each |
| SR812 | QED Filters | | each | SR205 | Hand Auger | | day |
| SR816 | LDPE Tubing | | ft | SR300 | Air Sampling Pump | | day |
| SR817 | Silicon Flex Hose | | ft | | | | |
| SR820 | Gloves (box) (100) | | each | | | | |

## EI Rental Equipment (Need PO)

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR105 | Interface Probe | 1 | day |
| SR110 | DO Meter | | day |
| SR130 | Sub Pump 2" | | day |
| SR300 | Air Sampling Pump | | day |
| SR310 | PID | | day |
| SR335 | 4-Gas Meter | | day |
| SR420 | Level Logger | | day |
| SR635 | Survey Equipment | | day |
| SR645 | GW Multi-Meter | | day |
| SR655 | Peristaltic Pump | | day |
| | | | |
| | | | |

## RENTAL EQUIPMENT AND ADDITIONAL MATERIALS

List items rented or purchased to complete work

## Subcontractor Labor

Name & Description of Work

## WORK DESCRIPTION

NZ & JK on site @ 08:00 off @ 02:30.
Performed monthly well gauging.
Bailed product from wells that exhibited recoverable product.
1.75 gallons of product were recovered by hand bailing.

Project Manager / Supervisor Approval: JAM 5-25-2011 [signature] Date: 6/7/11

SOVEREIGN CONSULTING - WELL GAUGING/HAND-BAILING DATA SUMMARY SHEET
PAGE 1 OF 1
DATE:

CLIENT: MOTIVA ENTERPRISES LLC
25 PAIDGE AVENUE, BROOKLYN NY
SCI JOB # 5E017.140

| WELL ID | TIME OF READING | WELL DIA. (IN) | TOTAL DEPTH (FT) | DEPTH TO PRODUCT (FT) | DEPTH TO WATER (FT) | PRODUCT THICKNESS (FT) | PRODUCT RECOVERED (GAL) | NOTES |
|---|---|---|---|---|---|---|---|---|
| MW-1 | 8:30 | 4 | | | 3.25 | | | |
| MW-3 | 8:34 | 4 | | | 2.72 | | | |
| MW-29 | 8:37 | 4 | | | 1.78 | | | |
| MW-04 | 12:50 | 4 | | 2.25 | 2.32 | 0.07 | | |
| MW-30 | 9:30 | 4 | | | 2.17 | | | |
| MW-5 | 9:34 | 4 | | | 1.72 | | | |
| MW-28 | 9:39 | 4 | | | 1.57 | | | |
| MW-27 | 9:43 | 4 | | | 2.25 | | | |
| MW-6 | 9:46 | 4 | | | 5.04 | | | |
| MW-7R | 10:00 | 4 | | | 5.77 | | | |
| MW-8 | 10:03 | 4 | | | 6.32 | | | |
| MW-9 | 10:06 | 4 | | | 6.26 | | | |
| MW-21R | 10:11 | 4 | | | 3.97 | | | |
| MW-22R | 10:13 | 4 | | | 3.96 | | | |
| MW-13 | 10:16 | 4 | | | 7.28 | | | |
| MW-14 | 10:20 | 4 | | | 6.49 | | | |
| MW-23 | 10:24 | 4 | | | 4.01 | | | |
| MW-24 | 10:27 | 4 | | | 3.86 | | | |
| MW-43 | 10:31 | 4 | | | 3.59 | | | |
| MW-42 | 10:35 | 4 | | | 3.67 | | | |
| MW-44 | 10:40 | 4 | | | 3.53 | | | |
| MW-25 | 10:44 | 4 | | | 2.97 | | | |
| TW-1 | | 6 | | | | | | underwater |
| MW-26 | 1:09 | 4 | | 3.73 | 3.69 | 0.04 | | |
| TW-2 | 10:49 | 6 | | | 3.72 | | | |
| MW-2 | 1:05 | 4 | | 3.60 | 3.66 | 0.06 | | |
| TW-3 | | 6 | | | | | | underwater |
| TW-4 | | 6 | | | | | | underwater |
| TW-5 | 1:00 | 6 | | 3.02 | 3.08 | 0.06 | | |
| MW-31 | 12:54 | 4 | | 3.35 | 3.59 | 0.24 | 0.25 | |
| TW-6 | | 6 | | | | | | underwater |
| MW-20 | 11:00 | 4 | | | 2.84 | | | |
| MW-15 | 11:02 | 4 | | | 3.04 | | | |
| MW-16 | 11:06 | 4 | | | 3.02 | | | |
| MW-17 | 11:09 | 4 | | | 2.55 | | | |
| MW-18 | 11:12 | 4 | | | 3.02 | | | |
| MW-32 | 11:15 | 4 | | | 3.72 | | | |
| RW-34 | 1:20 | 6 | | 7.11 | 7.16 | 0.05 | | |
| MW-33 | 11:20 | 4 | | | 5.61 | | | |
| MW-39 | 11:24 | 4 | | | 6.88 | | | |
| RW-40 | 1:27 | 6 | | 8.77 | 9.82 | 1.05 | 1.25 | |
| MW-35 | 11:30 | 4 | | | 6.48 | | | |
| RW-36 | 1:30 | 6 | | 8.63 | 8.81 | 0.18 | 0.25 | |
| MW-41 | 1:35 | 4 | | 8.07 | 8.13 | 0.06 | | |
| RW-37 | 1:40 | 6 | | 7.60 | 7.61 | 0.01 | | |
| MW-38 | 11:40 | 4 | | | 6.90 | | | |
| | | | | | | | | |
| | | | | | | | | |

Location 25 Paidge Ave Date 5/9/11

Project / Client Brooklyn Terminal

Monthly Gauging + Hand Bailing (Page 1)

Sovereign on site @ 0800 off @ 0230

M & JK 2010 F150 Pickup 62 °F

Went over H&S and scope of work with Terminal walker

Pine sent the wrong probe. Pine came @ 12:45 new probe !!!

| ID | Time | DTW | DTP | Product Thickness | Product Recovered |
|---|---|---|---|---|---|
| 1 | 8:30 | 3.25 | | | |
| 3 | 8:34 | 2.72 | | | |
| 29 | 8:37 | 1.78 | | | |
| 4 | 12:50 | 2.32 | 2.25 | .07 | |
| 30 | 9:30 | 2.17 | | | |
| 5 | 9:34 | 1.72 | | | |
| 28 | 9:39 | 1.57 | | | |
| 27 | 9:43 | 2.25 | | | |
| 6 | 9:46 | 5.04 | | | |
| 7R | 10:00 | 5.77 | | | |
| 8 | 10:03 | 6.32 | | | |
| 9 | 10:06 | 6.26 | | | |
| 21R | 10:11 | 3.97 | | | |
| 22R | 10:13 | 3.96 | | | |
| 13 | 10:16 | 7.28 | | | |
| 14 | 10:20 | 6.49 | | | |
| 23 | 10:24 | 4.01 | | | |
| 24 | 10:27 | 3.86 | | | |
| 43 | 10:31 | 3.59 | | | |
| 42 | 10:35 | 3.67 | | | |

86

Location 25 Pridge Ave Date 5/9/11

Project / Client Brooklyn Terminal

Monthly Gauging & Hand Bailing (Page 2)

| ID | Time | DTW | DTP | Product Thickness | Product Recovered |
|---|---|---|---|---|---|
| 44 | 10:40 | 3.53 | | | |
| 25 | 10:44 | 2.97 | | | |
| TW1 | underwater | | | | underwater |
| 26 | 1:09 | 3.73 | 3.69 | .04 | |
| TW2 | 10:49 | 3.72 | | | |
| MW2 | 1:05 | 3.66 | 3.60 | .06 | |
| TW3 | underwater | | | | |
| TW4 | underwater | | | | |
| TW5 | 1:00 | 3.08 | 3.02 | .06 | |
| 31 | 12:54 | 3.59 | 3.35 | .24 | .25 |
| TW6 | underwater | | | | |
| 20 | 11:00 | 2.84 | | | |
| 15 | 11:02 | 3.04 | | | |
| 16 | 11:06 | 3.02 | | | |
| 17 | 11:09 | 2.55 | | | |
| 18 | 11:12 | 3.02 | | | |
| 32 | 11:15 | 3.72 | | | |
| 34 | 1:20 | 7.16 | 7.11 | .05 | |
| 33 | 11:20 | 5.61 | | | |
| 39 | 11:24 | 6.88 | | | |
| 40 | 1:27 | 9.82 | 8.77 | 1.05 | 1.25 |
| 35 | 11:30 | 6.48 | | | |
| 36 | 1:30 | 8.81 | 8.63 | .18 | .25 |
| 41 | 1:35 | 8.13 | 8.07 | .06 | |

87

Location 25 Pridge Ave Date 5/9/11

Project / Client Brooklyn Terminal

Monthly Gauging & Hand Bailing (Page 3)

| ID | Time | DTW | DTP | Product Thickness | Product Recovered |
|---|---|---|---|---|---|
| 22 | 1:40 | 7.61 | 7.60 | .01 | |
| 23 | 11:40 | 6.90 | | | |

(5 gal. Recovered 1.75)

Shell/Motiva 0007620

SOVEREIGN CONSULTING INC.

**Behavior Based Safety Checklist - FIELD WORK**
**WILL YOUR NEXT CHOICE BE THE SAFE CHOICE?**

Observer: Nick. Z  Tasks Observed: Gauging  Total Safe Behaviors Observed: _____

Date: 5/1/11  Total At Risk Behaviors Observed: _____

Office: Farmingdale  Job Site: SE017  % Safe Behaviors: _____

| Critical Behaviors | Safe | At Risk | Critical Behaviors | Safe | At Risk |
|---|---|---|---|---|---|
| Clear of pinch points | /// | | Traffic awareness | // | |
| Use of traffic control devices | //// | | Review of JSAs | //// | |
| Use of tools | // | | Lifting / moving of equipment | — | |
| Precautions for weather | / | | Emergency equipment | / | |
| PPE - safety vest and safety glasses | // | | Electrical safety | // | |
| PPE- hard hat | / | | Heavy equipment hazards | — | |
| PPE - hearing protection | // | | Biological hazards addressed | / | |
| PPE - task appropriate gloves | //// | | Physical hazards addressed | / | |
| PPE - other | — | | Work Permits | // | |
| Use of air monitoring equipment | — | | | | |
| Clear of moving / rotating equipment | — | | | | |

| OBSERVED SAFE BEHAVIORS / GOOD PRACTICES |
|---|
| all PPE |
| |
| |
| |

| OBSERVED AT RISK BEHAVIORS | |
|---|---|
| What was observed to be at-risk? | Why was it at risk? |
| none | |
| | |
| | |
| | |

| Comments: |
|---|
| |
| |

**Definitions for Critical Behaviors:**

**Clear of pinch points:** body parts are kept out of pinch points -such as under gratings, manhole covers, etc.
**Use of traffic control devices:** Work zone delineators / traffic control devices used per the HASP/Scorecard
**Use of tools:** proper tool for the job utilized, tool is used appropriately (no hammering with a screwdriver, etc.); tool is in good condition
**Precautions for weather:** applies sunscreen, drinks plenty of fluids in hot weather; dresses appropriately for cold weather
**PPE - safety vest, safety glasses:** worn on site at all times
**PPE - hard hat:** worn when there are overhead hazards, construction activities, drilling, excavation, or as required by HASP
**PPE- hearing protection:** worn during times where noise is >85 dBa; drilling, vac truck, bobcat, geoprobe, etc.
**PPE - task appropriate gloves:** leather or protective gloves for manhole handling, equipment handling; nitrile gloves for gw sampling, and minimal chemical exposures
**PPE- other:** Other PPE as required by site HASP
**Use of air monitoring equipment:** per the site HASP
**Clear of moving/rotating equipment:** long hair should be tied back, long sleeves buttoned or rolled up to elbows, stay out of point of operation
**Traffic awareness:** faces traffic, remains alert to oncoming vehicles, blocks off parking spots where encroachment may be a problem
**Review of JSAs:** Prior to task, JSA should be reviewed
**Lifting/moving equipment:** proper body positioning during lifting, lift with legs, load close to body, etc.
**Emergency equipment:** should have fire extinguisher, first aid kit, BBP kit available at site
**Electrical safety:** LOTO utilized, GFCI utilized
**Heavy equipment hazards:** aware of backup signals, only approaches heavy equipment after eye contact/hand signal from operator, and operator stops equipment, stays out of heavy equipment blind spots
**Biological hazards addressed:** preventative measures for ticks, mosquitos, chiggers, bees, snakes when needed
**Physical hazards addressed:** fall protection, slip, trip, fall, overhead hazards, compressed gases, pressure relief, etc.
**Work Permits:** obtained for working at heights, confined space entry, hot work, excavation, LOTO, etc.

SOUTHERN CONSULTING INC.

**Behavior Based Safety Checklist - DRIVING**
**WILL YOUR NEXT CHOICE BE THE SAFE CHOICE?**

Observer: Nick L  Job Site: 5E017  Total Safe Behaviors Observed: _____

Date: 5/9/11  Total At Risk Behaviors Observed: _____

Office: Farmington  % Safe Behaviors: _____

| Critical Behaviors | Safe | At Risk | Critical Behaviors | Safe | At Risk |
|---|---|---|---|---|---|
| Seat belts | / | | Following distance | //// | |
| Seat adjustment | // | | Traffic lights/signs | //// | |
| Mirror adjustment | /// | | Travel surface / speed | /// | |
| Hands on wheel | // | | Distractions | // | |
| Personal health / task alignment | / | | Signaling / Changing lanes | ///// | |
| Walk around | / | | Parking | / | |
| Headrest adjusted | / | | Refueling | / | |
| Headlights | // | | Securing vehicle | ///// | |
| Eyes on path | // | | | | |
| | | | | | |

| Observed Safe Behaviors / Good Practices |
|---|
| Driver was safe. |
| |
| |

| Observed At Risk Behaviors | |
|---|---|
| What was observed to be at-risk? | Why was it at risk? |
| None. | |
| | |
| | |
| | |

| Comments: |
|---|
| |
| |

**Definitions for Critical Behaviors:**

**Seat belts:** All seat belts should be fastened for driver and occupants.
**Seat and mirror adjustment:** Seat properly adjusted for driver; mirrors are aligned for optimum coverage of side and rear views.
**Hands on wheel:** Driver has both hands on steering wheel
**Personal health / task alignment:** Driver is rested, physically capable of driving, and not emotionally distracted
**Walk around:** performs walk around vehicle to check for unforeseen obstructions prior to entering
**Headrest adjusted:** Headrest is properly adjusted for current driver to prevent potential whip-lash from rear-end impact
**Headlights:** Turns on headlights during rainy, foggy, snowy weather, etc.
**Eyes on path:** Eyes are on the road ahead, not focused on reading a map or other
**Following distance:** Maintains a safe following distance of 3 seconds for cars & vans with dry conditions, 4 seconds for trucks
**Obeying traffic lights/signs:** This includes coming to a complete stop and/or yeilding at appropriate road signs and signals
**Travel surface / speed:** Travel within speed limits, and adjusts speed for poor road conditions
**Distractions:** Driver is not distracted by radios, maps, telephones or conversations within the car while moving.
**Signaling / changing lanes:** Driver checks mirrors and signals for turns and lane changes
**Parking:** Driver enters parking space slowly, allows room on each side of vehicle
**Refueling:** shuts off engine during refueling
**Securing vehicle:** all loads are secured properly both inside vehicle and outside vehicle

Site Navigation

Shopping
- Camping Gear
- Hunting Gear
- Maglite Sales

Resources
- Link Directory
- AIG Top Sites
- Fishing Charters
- Free Tackle
- Charter Listings
- Saltwater Tides

# Go Fishing Forum Message Boards

The only way you can catch fish is to Go Fishing Forum!

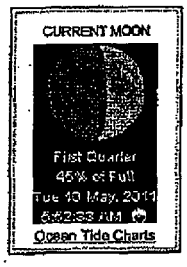
**Please leave a comment about our tide prediction website!**

**Search Tide Stations**

**Search Term: (i.e. Potomac):**

All States

Search Tide Stations




- Go Fishing Forum Home
- You won't catch fish unless you Go Fishing Forum!

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**Start Date:** May 9 2011 **Number of Days:** 2

Update Charts

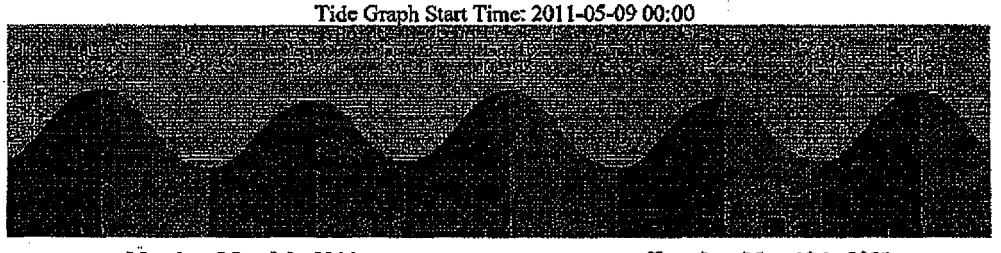
**NOT FOR NAVIGATION** The accuracy of these tide predictions is not guaranteed in any way. You should not use this program if anyone or anything could come to harm as a result of an incorrect tide prediction. NOAA and similar agencies in other countries can provide you with certified tide predictions if that is what you need. XTide's predictions do not incorporate the effects of tropical storms, El Niño, seismic events, subsidence, uplift, or changes in global sea level.

Bookmark this page

**Hunters Point, Newtown Creek, East River, New York**
**(40.7400° N, 73.9617° W)**

Print Today's Tide Prediction for this location

Tide Graph Start Time: 2011-05-09 00:00



| Monday, May 9th, 2011 | | | Tuesday, May 10th, 2011 | | |
|---|---|---|---|---|---|
| Time | Type | Height | Time | Type | Height |
| 1:54 AM EDT | High Tide | 4.38 feet | 2:53 AM EDT | High Tide | 4.32 feet |
| 8:32 AM EDT | Low Tide | 0.49 feet | 9:36 AM EDT | Low Tide | 0.47 feet |
| 3:01 PM EDT | High Tide | 3.82 feet | 3:56 PM EDT | High Tide | 3.98 feet |
| 8:28 PM EDT | Low Tide | 0.84 feet | 9:50 PM EDT | Low Tide | 0.81 feet |

**Raw Tide Data**

Hunters Point, Newtown Creek,



Shell/Motiva 0007623

**Sovereign Consulting Inc.**
**SHELL Tailgate Safety Meeting Form**
(To be submitted with field notes to Project Manager each day)

| | | | |
|---|---|---|---|
| **Project Name:** | Brooklyn Terminal | **Date:** | 5/9/11 |
| **Location:** | 25 Paidge Ave | **Weather:** | Clear |
| **Project Manager [Print]:** | Doug Jakim | **Temp:** | 62° F |
| **Contractors/Subcontractors:** | | | |

**Scope of Work:** Monthly Gaging

**Task Hazards:** (check all that apply) *requires Permit to Work

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☑ | Ladders* | ☐ | Haz. Substances | ☑ | Sharp Objects | ☑ |
| Confined Spaces* | ☐ | Explosion | ☐ | Heavy Equipment | ☐ | Tools | ☑ |
| Cutting/Welding* | ☐ | Falling Objects | ☐ | Flying Debris | ☐ | Traffic | ☑ |
| Electrical | ☐ | Fire | ☐ | Noise | ☑ | Weather | ☑ |
| Environmental Hazard | ☑ | Insects/Biological | ☐ | Slip/Trip, Hazards | ☑ | Other (describe below) | ☐ |
| Elevated Work* | ☐ | Ticks – Biohazard | ☐ | Overhead | ☑ | | |
| Excavations* | ☐ | Bees, Wasps, Hornets – Biohazard | ☐ | Sanitation | ☐ | | |

| Work Zone Delineation Level | Level 1 ☐ | Level 2 ☐ | Level 3 ☑ *Watchperson required | Level 4 ☐ *Temp. Traffic Control Plan required |
|---|---|---|---|---|

**Title of JSAs reviewed today:**
General Site Activities
Opening/closing manhole covers
Decon equipment
GW gauging + LNAPL Recovery

**Engineering Controls / Work Practices:** PPE & Traffic Control

**Levels of Protection / Personal Protective Equipment:**

| | | | |
|---|---|---|---|
| Level A ☐ | Eye & Face Protection | ☑ | Safety Glasses ☑ Face Shield ☐ |
| Level B ☐ | Foot Protection | ☑ | Steel Toes ☑ Hip Boots/Waders ☐ |
| Level C ☐ | Hand Protection | ☑ | Nitrile Gloves ☑ Leather Gloves ☑ Full Arm Chemical ☐ |
| Level D ☑ | Head Protection | ☑ | Hard Hat ☑ |
| | Hearing Protection | ☑ | Ear Muffs/Plugs ☑ |
| | Other | ☐ | Barricades ☑ High Visibility Safety Vests ☑ Cones/Flags ☑ |
| | | | Amber Light/Vehicle Hazards ☐ Crash Truck ☑ Tyvek/Coveralls ☐ |

| Air Monitoring/Sampling | | Emergency Response | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☐ | Emergency Alarms | ☑ | First Aid Kit Location | ☑ | Cell Phone Use None | ☐ |
| FID/PID | ☐ | Emergency Contacts | ☑ | Spill Kit Location | ☑ | Fire Ext. Location | ☑ |
| Detector Tubes | ☐ | Evacuation Routes | ☑ | Hospital Route | ☑ | Pedestrian Safety | ☑ |
| Dust Monitor | ☐ | Explosion/Fire | ☑ | Work Area | ☑ | Vapor/Dust Suppression | ☑ |
| Personal Air | ☐ | Medical Emergency | ☑ | Smoking/Break Area | ☑ | Muster Location | ☑ |



Shell/Motiva 0007624

Are site workers Fit To Work? Yes ☑ No ☐

Do all site workers understand injury/intervention reporting requirements? Yes ☑ No ☐

Comments:

Name & Title of Person Conducting Tailgate Safety Meeting: Nick Zurcher

Signature: | Date: 5/7/11

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth during the tailgate safety meeting and within the project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are **FIT** for work prior to work, duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

**SIGN IN**

| MEETING ATTENDEES | | | |
|---|---|---|---|
| Name [Print] | Signature | Company | Time |
| Nick Zurcher | | Sovereign | 0800 |
| Jestin King | | Sovereign | 800 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

| | | | |
|---|---|---|---|
| Are all personnel fit to work? | (YES) | NO | |
| Have all personnel been informed of work to be completed? | (YES) | NO | |
| Have all personnel been informed on **STOP WORK** procedures? | (YES) | NO | |
| Have all personnel reviewed all JSAs applicable to scope of work? | (YES) | NO | |
| Has fuel delivery service been informed? | YES | NO | (N/A) |
| Is fuel delivery due today? | YES | NO | (N/A) |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | (N/A) |
| Are work areas controlled to protect workers, site staff, and the public? | (YES) | NO | N/A |
| Do all contractors have their API Safety Key card? | YES | NO | (N/A) |
| Have all personnel reviewed and understand the Shell 12 Life-Saving Rules? | (YES) | NO | |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Nick Zurcher | | 5/7/11 0800 | YEONG LEE | Yeong Lee |



Shell/Motiva 0007625

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest that they were **FIT** for work upon completion of work.

**SIGN OUT**

| MEETING ATTENDEES | | | |
|---|---|---|---|
| Name [Print] | Signature | Company | Time |
| Nick Zyrour | [signature] | Sovereign | 02:30 |
| Justin King | [signature] | Sovereign | 2:30 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

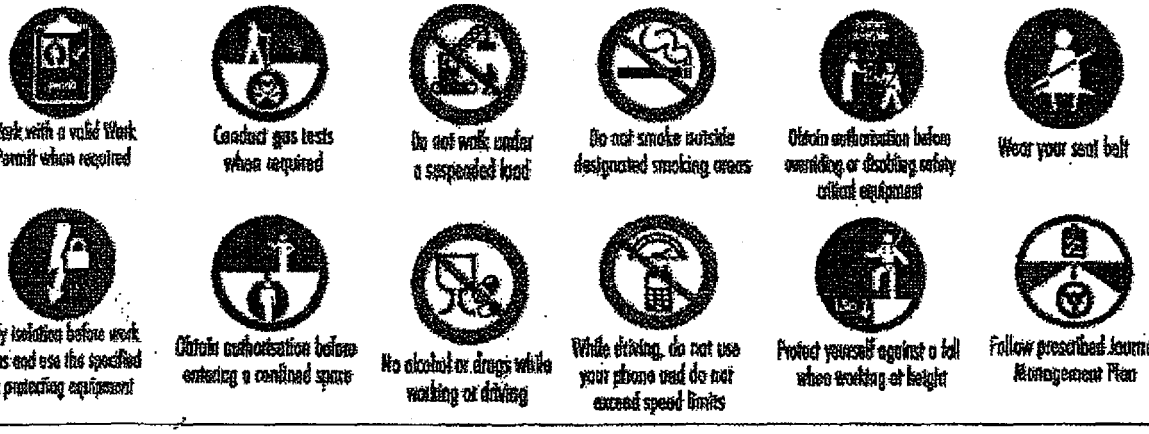
| | | | |
|---|---|---|---|
| Are all personnel fit to work (i.e., no injury or illness during workday)? | YES | NO | |
| Has the work area been left tidy and safe? | YES | NO | |
| Are site personnel aware of status of work? | YES | NO | |
| Are changes to equipment documented and communicated? | YES | NO | N/A |
| All incidents, near misses, unsafe situations reported? | YES | NO | N/A |
| All **STOP WORK** initiatives have been documented in comment section? | YES | NO | N/A |

Did the work activity require any Modifications/Changes not listed above? ☐ YES ☑ NO ☐ N/A Briefly Describe: _____

Note: If YES, was it authorized by management? ☐ YES ☐ NO ☑ N/A Authorized by: _____

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| Nick Zyrour | [signature] | 5/9/11 0230 | N. Sdiri | N. Sdiri |

## SHELL 12 Life-Saving Rules






Shell/Motiva 0007626

# TIME & MATERIAL FIELDSHEET

**Date:** Tuesday, April 05, 2011
**Page:** 1 of 1

**Project #:** 5E900.140
**Project Address:** 25 Paidge Avenue, Brooklyn, New York
**Client:** Motiva Enterprises, LLC.

## Employee Time

| Employee Name | Appr. # | Task ID | Prep Time | Travel Time | On-Site Time | Total Time |
|---|---|---|---|---|---|---|
| Doug Jakim | 02 | 96 | | 4 | 9 | 13 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |


**SOVEREIGN CONSULTING, INC.**
290 Executive Drive, Suite 300
Cranberry Twp., PA 16066
www.sovcon.com


## SOVEREIGN OWNED OR LEASED EQUIPMENT AND MATERIALS LIST

| Item # | Item | Qty | Units |
|---|---|---|---|
| OE104 | Chevy Van | | hrs |
| OE124 | Ford F-150 | | hrs |
| OE124 | Ford Escape | | hrs |
| OE115 | Interface Probe | | day |
| OE143 | Multi-Gas PID | | day |
| OE172 | Multi-Meter (DO) | | day |
| SR800 | 4" Bailer | | each |
| SR800 | 2" Bailer | | each |
| SR800 | 1" Bailer | | each |
| SR800 | 2" Bailer x 1-ft length | | each |
| SR812 | QED Filters | | each |
| SR816 | LDPE Tubing | | ft |

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR817 | Silicon Flex Hose | | ft |
| SR835 | Sorbent Sock | | each |
| SR836 | Sorbent Pads | | each |
| SR837 | Sorbent Boom | | each |
| SR935 | 55 Gallon Drum | | each |
| SR980 | Gripper Plug - 1" | | each |
| SR981 | Gripper Plug - 2" | | each |
| SR982 | Gripper Plug - 4" | | each |
| SR983 | Brass Padlock | | each |
| SR205 | Hand Auger | | day |
| SR300 | Air Sampling Pump | | day |
| SR820 | Gloves (box) (100) | | each |

## FEI Rental Equipment (Need PO)

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR105 | Interface Probe | | day |
| SR110 | DO Meter | | day |
| SR130 | Sub Pump 2" | | day |
| SR300 | Air Sampling Pump | | day |
| SR310 | PID | | day |
| SR335 | 4-Gas Meter | | day |
| SR420 | Level Logger | | day |
| SR635 | Survey Equipment | | day |
| SR645 | GW Multi-Meter | | day |
| SR655 | Peristaltic Pump | | day |
| SR145 | Generator | | day |

## RENTAL EQUIPMENT AND ADDITIONAL MATERIALS

List items rented or purchased to complete work

## Subcontractor Labor

Name & Description of Work

## WORK DESCRIPTION

On Site at 0730
Reviewed Work Plan w/ onsite personnel
Surveyed work area for potential risks or hazards
URS transit time extended, would not arrive onsite before 5pm
Offsite at 1630

**Project Manager / Supervisor Approval:** _____ **Date:** 4/11/11

# TIME & MATERIAL FIELDSHEET

**Date:** Wednesday, April 06, 2011
**Page:** 1 of 1

**Project #:** 5E900140
**Project Address:** 25 Paidge Avenue, Brooklyn, New York
**Client:** Motiva Enterprises, LLC.

## Employee Time

| Employee Name | Appr. # | Task ID | Prep Time | Travel Time | On-Site Time | Total Time |
|---|---|---|---|---|---|---|
| Doug Jakim | 02 | 96 | | 1 | 9 | 10 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |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Cranberry Twp., PA 16066
www.sovcon.com


## SOVEREIGN OWNED OR LEASED EQUIPMENT AND MATERIALS LIST

| Item # | Item | Qty | Units |
|---|---|---|---|
| OE104 | Chevy Van | | hrs |
| OE124 | Ford F-150 | | hrs |
| OE124 | Ford Escape | | hrs |
| OE115 | Interface Probe | | day |
| OE143 | Multi-Gas PID | | day |
| OE172 | Multi-Meter (DO) | | day |
| SR800 | 4" Bailer | | each |
| SR800 | 2" Bailer | | each |
| SR800 | 1" Bailer | | each |
| SR800 | 2" Bailer x 1-ft length | | each |
| SR812 | QED Filters | | each |
| SR816 | LDPE Tubing | | ft |

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR817 | Silicon Flex Hose | | ft |
| SR835 | Sorbent Sock | | each |
| SR836 | Sorbent Pads | | each |
| SR837 | Sorbent Boom | | each |
| SR935 | 55 Gallon Drum | | each |
| SR980 | Gripper Plug - 1" | | each |
| SR981 | Gripper Plug - 2" | | each |
| SR982 | Gripper Plug - 4" | | each |
| SR983 | Brass Padlock | | each |
| SR205 | Hand Auger | | day |
| SR300 | Air Sampling Pump | | day |
| SR820 | Gloves (box) (100) | | each |

## FET Rental Equipment* (Need PO)

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR105 | Interface Probe | | day |
| SR110 | DO Meter | | day |
| SR130 | Sub Pump 2" | | day |
| SR300 | Air Sampling Pump | | day |
| SR310 | PID | | day |
| SR335 | 4-Gas Meter | | day |
| SR420 | Level Logger | | day |
| SR635 | Survey Equipment | | day |
| SR645 | GW Multi-Meter | | day |
| SR655 | Peristaltic Pump | | day |
| SR145 | Generator | | day |
| | | | |

## RENTAL EQUIPMENT AND ADDITIONAL MATERIALS

List items rented or purchased to complete work

## Subcontractor Labor

Name & Description of Work

URS- Michael Greer
URS- Nikolay Boykov
Electromagnetic and GPR Surveys
Trimble GPS Survey

## WORK DESCRIPTION

On Site at 0730
Reviewed Work Plan w/ URS, URS views Terminal Safety video, purchased safety eyewear for H&S compliance
Hold Tailgate Safety Meeting, URS signs HASP
Set up equipment, assist in Electromagnetic and GPR Surveys. URS also conducts GPS Trimble survey for mapping.
Offsite at 1700

**Project Manager / Supervisor Approval:** _____ **Date:** 4/11/11

**Sovereign Consulting Inc.**
**Tailgate Safety Meeting Form**
(To be submitted with field notes to Project Manager each day)

| | | | |
|---|---|---|---|
| **Project Name:** | BROOKLYN TERMINAL | **Date:** | APR 6, 2011 |
| **Location:** | BROOKLYN NY 25 PAIDGE AVE | **Weather:** | Clear |
| **Project Manager [Print]:** | DOUG JAKIM | **Temp:** | 50s |
| **Contractors/Subcontractors:** | URS Geophysics | | |
| **Scope of Work:** | Geophysical Investigation of UST Field | | |

| **Task Hazards:** (check all that apply) *requires Permit to Work | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☐ | Excavations* | ☐ | Haz. Substances | ☐ | Sanitation | ☐ |
| Confined Spaces* | ☐ | Explosion | ☐ | Heavy Equipment | ☐ | Sharp Objects | ☒ |
| Cutting/Welding* | ☐ | Falling Objects | ☐ | Ladders* | ☐ | Tools | ☐ |
| Electrical | ☐ | Fire | ☐ | Noise | ☒ | Traffic | ☐ |
| Environmental Hazard | ☒ | Insects/Biological | ☐ | Slip/Trip Hazards | ☐ | Weather | ☒ |
| Elevated Work* | ☐ | Ticks - Biohazard | ☐ | Overhead | ☐ | Flying Debris | ☐ |
| Other (describe below) ☐ | | | | | | | |

**Engineering Controls / Work Practices:**

| **Levels of Protection / Personal Protective Equipment:** | | | |
|---|---|---|---|
| Level A | ☐ | Eye & Face Protection ☒ | Safety Glasses ☒ Face Shield ☐ |
| Level B | ☐ | Foot Protection ☒ | Steel Toes ☒ Hip Boots/Waders ☐ |
| Level C | ☐ | Hand Protection AS Needed ☒ | Nitrile Gloves ☐ Leather Gloves ☒ Full Arm Chemical ☐ |
| Level D | ☒ | Head Protection ☒ | Hard Hat ☒ |
| | | Hearing Protection ☐ | Ear Muffs/Plugs ☐ |
| | | Other ☐ | Barricades ☐ High Visibility Safety Vests ☒ Cones/Flags ☐ |
| | | | Amber Light/Vehicle Hazards ☐ Crash Truck ☒ Tyvek/Coveralls ☐ |

| **Air Monitoring/Sampling** | | **Emergency Response** | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☐ | Emergency Alarms | ☐ | First Aid Kit | ☒ | Cell Phone | ☒ |
| FID/PID | ☐ | Emergency Contacts | ☒ | Spill Kit | ☐ | Fire Extinguisher | ☐ |
| Detector Tubes | ☐ | Evacuation Routes | ☒ | Hospital Route | ☒ | Pedestrian Safety | ☐ |
| Dust Monitor | ☐ | Explosion/Fire | ☒ | Work Area | ☒ | Vapor/Dust Suppression | ☐ |
| Personal Air | ☐ | Medical Emergency | ☒ | Smoking/Break Area | ☐ | | |

**Are site workers Fit To Work?** Yes ☒ No ☐

**Do all site workers understand injury/intervention reporting requirements?** Yes ☒ No ☐

**Comments:** Viewed Motiva HSSE Safety Orientation Video prior to the start of work

**Name & Title of Person Conducting Tailgate Safety Meeting:** DOUG JAKIM

**Signature:** [signature] **Date:** 4/6/11



Shell/Motiva 0007629

**SHELL**
**Life-Saving Rules**

Work with a valid Work Permit when required

Verify isolation before work begins and use the specified life-protecting equipment

Obtain authorisation before overriding or disabling safety critical equipment

Conduct gas tests when required

Obtain authorisation before entering a confined space

Protect yourself against a fall when working at height

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth within this project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

**SIGN IN**

MEETING ATTENDEES

| Name [Print] | Company | Signature |
|---|---|---|
| Douglas Akins | Sovereign | |
| Michael Greer | URS | |
| Nikolay Boykov | URS | |
| | | |
| | | |

Have all personnel been informed of work to be completed? YES NO NA
Has fuel delivery service been informed? YES NO NA
Is fuel delivery due today? YES NO NA
Have isolation procedures been agreed – lock out/tag out? YES NO NA
Are work areas controlled to protect workers, site staff, and the public? YES NO NA
Do all workers have their API Safety Key card? YES NO NA
Have all reviewed and understand the Shell 12 Life-Saving Rules YES NO NA

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| | | | | |

**SIGN OUT**

Has the work area been left tidy and safe? YES NO NA
Are site personnel aware of status of work? YES NO NA
Are changes to equipment documented and communicated? YES NO NA
All incidents, near misses, unsafe situations reported? YES NO NA

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| | | | | |

**SHELL**
**Life-Saving Rules**

Do not walk under a suspended load

No alcohol or drugs while working or driving

Wear your seat

Do not smoke outside designated smoking area

While driving, do not use your phone and do not exceed speed limits

Follow prescribed Journey Management



Shell/Motiva 0007630

# TIME & MATERIAL FIELDSHEET

**Date:** Thursday, April 07, 2011
**Page:** 1 of 1

**Project #:** 5E900.140
**Project Address:** 25 Paidge Avenue, Brooklyn, New York
**Client:** Motiva Enterprises, LLC.

## Employee Time

| Employee Name | Appr. # | Task ID | Prep Time | Travel Time | On-Site Time | Total Time |
|---|---|---|---|---|---|---|
| Doug Jakim | 02 | 96 | | 1 | 4 | 5 |
| Mike Bluight | 02 | 96 | | 2 | 4 | 6 |
| | | | | | | |
| | | | | | | |
| | | | | | | |


**SOVEREIGN CONSULTING, INC.**
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Cranberry Twp., PA 16066
www.sovcon.com


## SOVEREIGN OWNED OR LEASED EQUIPMENT AND MATERIALS LIST

| Item # | Item | Qty | Units |
|---|---|---|---|
| OE104 | Chevy Van | | hrs |
| OE124 | Ford F-150 | | hrs |
| OE124 | Ford Escape | | hrs |
| OE115 | Interface Probe | | day |
| OE143 | Multi-Gas PID | | day |
| OE172 | Multi-Meter (DO) | | day |
| SR800 | 4" Bailer | | each |
| SR800 | 2" Bailer | | each |
| SR800 | 1" Bailer | | each |
| SR800 | 2" Bailer x 1-ft length | | each |
| SR812 | QED Filters | | each |
| SR816 | LDPE Tubing | | ft |

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR817 | Silicon Flex Hose | | ft |
| SR835 | Sorbent Sock | | each |
| SR836 | Sorbent Pads | | each |
| SR837 | Sorbent Boom | | each |
| SR935 | 55 Gallon Drum | | each |
| SR980 | Gripper Plug - 1" | | each |
| SR981 | Gripper Plug - 2" | | each |
| SR982 | Gripper Plug - 4" | | each |
| SR983 | Brass Padlock | | each |
| SR205 | Hand Auger | | day |
| SR300 | Air Sampling Pump | | day |
| SR820 | Gloves (box) (100) | | each |

## FEI Rental Equipment (Need PO)

| Item # | Item | Qty | Units |
|---|---|---|---|
| SR105 | Interface Probe | | day |
| SR110 | DO Meter | | day |
| SR130 | Sub Pump 2" | | day |
| SR300 | Air Sampling Pump | | day |
| SR310 | PID | | day |
| SR335 | 4-Gas Meter | | day |
| SR420 | Level Logger | | day |
| SR635 | Survey Equipment | | day |
| SR645 | GW Multi-Meter | | day |
| SR655 | Peristaltic Pump | | day |
| SR145 | Generator | | day |
| | | | |

## RENTAL EQUIPMENT AND ADDITIONAL MATERIALS
List items rented or purchased to complete work

## Subcontractor Labor
Name & Description of Work

URS- Michael Greer
URS- Nikolay Boykov
Electromagnetic and GPR Surveys
Trimble GPS Survey

## WORK DESCRIPTION

On Site at 0730
Reviewed Work Plan w/ URS, Mike Bluight fro Farmingdale office onsite for orientation, views Terminal Safety Video
Hold Tailgate Safety Meeting, Mike B. signs HASP
Set up equipment, assist in Electromagnetic and GPR reurvey of points of interest from previous day's work.
URS also conducts GPS Trimble survey or points of interest for mapping.
Offsite at 1130

**Project Manager / Supervisor Approval:** _____ **Date:** 4/11/11

**Sovereign Consulting Inc.**
**Tailgate Safety Meeting Form**
(To be submitted with field notes to Project Manager each day)

| | |
|---|---|
| **Project Name:** Brooklyn Terminal | **Date:** 4/7/11 |
| **Location:** 25 Paidge Ave | **Weather:** Cloudy |
| **Project Manager [Print]:** Doug Jaeger | **Temp:** 50's |
| **Contractors/Subcontractors:** CRS | |
| **Scope of Work:** Geophysical Investigation | |

| **Task Hazards:** (check all that apply) *requires Permit to Work | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cold Heat Stress | ☐ | Excavations* | ☐ | Haz. Substances | ☐ | Sanitation | ☐ |
| Confined Spaces* | ☐ | Explosion | ☐ | Heavy Equipment | ☐ | Sharp Objects | ☐ |
| Cutting/Welding* | ☐ | Falling Objects | ☐ | Ladders* | ☐ | Tools | ☒ |
| Electrical | ☐ | Fire | ☐ | Noise | ☒ | Traffic | ☐ |
| Environmental Hazard | ☒ | Insects/Biological | ☐ | Slip/Trip Hazards | ☒ | Weather | ☒ |
| Elevated Work* | ☐ | Ticks - Biohazard | ☐ | Overhead | ☐ | Flying Debris | ☐ |
| Other (describe below) ☐ | | | | | | | |

**Engineering Controls / Work Practices:**

| **Levels of Protection / Personal Protective Equipment:** | | | |
|---|---|---|---|
| Level A | ☐ | Eye & Face Protection ☒ | Safety Glasses ☒ Face Shield ☐ |
| Level B | ☐ | Foot Protection ☒ | Steel Toes ☒ Hip Boots/Waders ☐ |
| Level C | ☐ | Hand Protection ☒ | Nitrile Gloves ☐ Leather Gloves ☒ Full Arm Chemical ☐ |
| Level D | ☒ | Head Protection ☒ | Hard Hat ☒ |
| | | Hearing Protection ☒ | Ear Muffs/Plugs ☒ as needed |
| | | Other ☐ | Barricades ☐ High Visibility Safety Vests ☐ Cones/Flags ☒ |
| | | | Amber Light/Vehicle Hazards ☐ Crash Truck ☒ Tyvek/Coveralls ☐ |

| **Air Monitoring/Sampling** | | **Emergency Response** | | | | | |
|---|---|---|---|---|---|---|---|
| LEL/O2/CO/H2S Meter | ☐ | Emergency Alarms | ☐ | First Aid Kit | ☒ | Cell Phone | ☒ |
| FID/PID | ☐ | Emergency Contacts | ☒ | Spill Kit | ☐ | Fire Extinguisher | ☒ |
| Detector Tubes | ☐ | Evacuation Routes | ☒ | Hospital Route | ☒ | Pedestrian Safety | ☐ |
| Dust Monitor | ☐ | Explosion/Fire | ☐ | Work Area | ☐ | Vapor/Dust Suppression | ☐ |
| Personal Air | ☐ | Medical Emergency | ☐ | Smoking/Break Area | ☒ | | |

**Are site workers Fit To Work?** Yes ☒ No ☐

**Do all site workers understand injury/intervention reporting requirements?** Yes ☒ No ☐

**Comments:**

**Name & Title of Person Conducting Tailgate Safety Meeting:** Douglas Jaeger

**Signature:** [signature] **Date:** 4/7/11



Shell/Motiva 0007632

**SHELL**
**Life-Saving Rules**

Work with a valid Work Permit when required

Verify isolation before work begins and use the specified life protecting equipment

Obtain authorisation before overriding or disabling safety critical equipment

Conduct gas tests when required

Obtain authorisation before entering a confined space

Protect yourself against a fall when working at height

## Attendance

The undersigned, regardless of being employed by, or hired by, Sovereign Consulting Inc., attest to having read, understand and agree to comply with the health and safety practices and requirements set forth within this project Health, Safety, and Emergency Response Plan. Additionally, the undersigned attest that they are duly trained and licensed by all applicable agencies and entities to conduct the work for which they are present to complete.

**SIGN IN**

MEETING ATTENDEES

| Name [Print] | Company | Signature |
|---|---|---|
| DOUGLAS [illegible] | SOVEREIGN | |
| Michael Greco | URS | |
| Nikolay Boykov | URS | |
| Michael Blight | Sovereign | |
| | | |

| | | | |
|---|---|---|---|
| Have all personnel been informed of work to be completed? | YES | NO | NA |
| Has fuel delivery service been informed? | YES | NO | NA |
| Is fuel delivery due today? | YES | NO | NA |
| Have isolation procedures been agreed – lock out/tag out? | YES | NO | NA |
| Are work areas controlled to protect workers, site staff, and the public? | YES | NO | NA |
| Do all workers have their API Safety Key card? | YES | NO | NA |
| Have all reviewed and understand the Shell 12 Life-Saving Rules | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| | | | | |

**SIGN OUT**

| | | | |
|---|---|---|---|
| Has the work area been left tidy and safe? | YES | NO | NA |
| Are site personnel aware of status of work? | YES | NO | NA |
| Are changes to equipment documented and communicated? | YES | NO | NA |
| All incidents, near misses, unsafe situations reported? | YES | NO | NA |

| Contractor Representative Name | Signature | Date / Time | Site Representative Name | Signature |
|---|---|---|---|---|
| | | | | |

**SHELL**
**Life-Saving Rules**

Do not walk under a suspended load

No alcohol or drugs while working or driving

Wear your seat

Do not smoke outside designated smoking area

While driving, do not use your phone and do not exceed speed limits

Follow prescribed Journey Management



Shell/Motiva 0007633

# DOCUMENT INFO

15

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New Jersey ACCUTEST Laboratories

IT'S ALL IN THE CHEMISTRY

05/16/09

## Technical Report for

Shell Oil Products US

REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY

ACCT# 276501

Accutest Job Number: JA17814

Sampling Date: 04/29/09

Report to:

REWPAMI
6310 Allentown Blvd.
Harrisburg, PA 17112

ATTN: Marc Reeves

Total number of pages in report: **71**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

David N. Speis
VP Ops, Laboratory Director

Client Service contact: Marty Vitanza 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, PA, RI, SC, TN, VA, WV

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Test results relate only to samples analyzed.

ACCUTEST LABORATORIES 50 YEARS 1956-2006

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Shell/Motiva 0007636

Accutest Laboratories

# Sample Summary

Shell Oil Products US

Job No: JA17814

REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY
Project No: ACCT# 276501

| Sample Number | Collected Date | Time By | Received | Matrix Code | Matrix Type | Client Sample ID |
|---|---|---|---|---|---|---|
| JA17814-1 | 04/29/09 | 09:50 NZ | 05/01/09 | AQ | Ground Water | MW-1 |
| JA17814-2 | 04/29/09 | 10:00 NZ | 05/01/09 | AQ | Ground Water | MW-3 |
| JA17814-3 | 04/29/09 | 10:10 NZ | 05/01/09 | AQ | Ground Water | MW-29 |
| JA17814-4 | 04/29/09 | 10:15 NZ | 05/01/09 | AQ | Ground Water | MW-30 |
| JA17814-5 | 04/29/09 | 10:20 NZ | 05/01/09 | AQ | Ground Water | MW-4 |
| JA17814-6 | 04/29/09 | 10:30 NZ | 05/01/09 | AQ | Ground Water | MW-5 |
| JA17814-7 | 04/29/09 | 10:40 NZ | 05/01/09 | AQ | Ground Water | MW-28 |
| JA17814-8 | 04/29/09 | 10:50 NZ | 05/01/09 | AQ | Ground Water | MW-27 |
| JA17814-9 | 04/29/09 | 11:00 NZ | 05/01/09 | AQ | Ground Water | MW-6 |
| JA17814-10 | 04/29/09 | 12:00 NZ | 05/01/09 | AQ | Ground Water | MW-13 |
| JA17814-11 | 04/29/09 | 12:10 NZ | 05/01/09 | AQ | Ground Water | MW-14 |
| JA17814-12 | 04/29/09 | 12:20 NZ | 05/01/09 | AQ | Ground Water | MW-23 |
| JA17814-13 | 04/29/09 | 12:30 NZ | 05/01/09 | AQ | Ground Water | MW-24 |



Shell/Motiva 0007637

Accutest Laboratories

# Sample Summary
(continued)

Shell Oil Products US

Job No: JA17814

REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY
Project No: ACCT# 276501

| Sample Number | Collected Date | Time By | Received | Matrix Code | Matrix Type | Client Sample ID |
|---|---|---|---|---|---|---|
| JA17814-14 | 04/29/09 | 12:40 NZ | 05/01/09 | AQ | Ground Water | MW-25 |
| JA17814-15 | 04/29/09 | 12:50 NZ | 05/01/09 | AQ | Ground Water | TW-2 |
| JA17814-16 | 04/29/09 | 13:00 NZ | 05/01/09 | AQ | Ground Water | MW-20 |
| JA17814-17 | 04/29/09 | 13:10 NZ | 05/01/09 | AQ | Ground Water | MW-15 |
| JA17814-18 | 04/29/09 | 13:20 NZ | 05/01/09 | AQ | Ground Water | MW-16 |
| JA17814-19 | 04/29/09 | 13:30 NZ | 05/01/09 | AQ | Ground Water | MW-17 |
| JA17814-20 | 04/29/09 | 13:40 NZ | 05/01/09 | AQ | Ground Water | MW-18 |
| JA17814-21 | 04/29/09 | 13:50 NZ | 05/01/09 | AQ | Ground Water | MW-19 |
| JA17814-22 | 04/29/09 | 14:00 NZ | 05/01/09 | AQ | Ground Water | MW-32 |
| JA17814-23 | 04/29/09 | 14:05 NZ | 05/01/09 | AQ | Ground Water | MW-34 |
| JA17814-24 | 04/29/09 | 14:10 NZ | 05/01/09 | AQ | Ground Water | MW-33 |
| JA17814-25 | 04/29/09 | 14:15 NZ | 05/01/09 | AQ | Ground Water | MW-35 |
| JA17814-26 | 04/29/09 | 14:20 NZ | 05/01/09 | AQ | Ground Water | MW-39 |



Shell/Motiva 0007638

# Sample Summary
(continued)

Shell Oil Products US

Job No: JA17814

REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY
Project No: ACCT# 276501

| Sample Number | Collected Date | Time By | Received | Matrix Code | Matrix Type | Client Sample ID |
|---|---|---|---|---|---|---|
| JA17814-27 | 04/29/09 | 14:30 NZ | 05/01/09 | AQ | Ground Water | MW-37 |
| JA17814-28 | 04/29/09 | 14:40 NZ | 05/01/09 | AQ | Ground Water | MW-38 |
| JA17814-29 | 04/29/09 | 09:30 NZ | 05/01/09 | AQ | Field Blank Water | FIELD BLANK |
| JA17814-30 | 04/29/09 | 14:40 NZ | 05/01/09 | AQ | Trip Blank Water | TRIP BLANK |



Shell/Motiva 0007639

## Sample Results

Report of Analysis



Shell/Motiva 0007640

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-1 | | |
| Lab Sample ID: | JA17814-1 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1A76117.D | 1 | 05/05/09 | TGE | n/a | n/a | V1A3247 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007641

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-1 | | |
| Lab Sample ID: | JA17814-1 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 94% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 90% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 86% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 85% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007642

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-3 | | |
| Lab Sample ID: | JA17814-2 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1A76118.D | 1 | 05/05/09 | TGE | n/a | n/a | V1A3247 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007643

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-3 | | |
| Lab Sample ID: | JA17814-2 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 94% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 92% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 82% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 85% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007644

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-29 | | |
| Lab Sample ID: | JA17814-3 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1A76119.D | 1 | 05/05/09 | TGE | n/a | n/a | V1A3247 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 105 | 1.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | 3.9 | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | 1.9 | 1.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007645

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-29 | | |
| Lab Sample ID: | JA17814-3 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 7.6 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 92% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 90% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 88% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 85% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007646

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-30 | | |
| Lab Sample ID: | JA17814-4 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1A76120.D | 1 | 05/05/09 | TGE | n/a | n/a | V1A3247 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007647

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-30 | | |
| Lab Sample ID: | JA17814-4 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 94% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 90% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 86% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 83% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007648

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-4 | | |
| Lab Sample ID: | JA17814-5 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1A76121.D | 1 | 05/05/09 | TGE | n/a | n/a | V1A3247 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 3.1 | 1.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007649

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-4 | | |
| Lab Sample ID: | JA17814-5 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 98% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 95% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 86% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 86% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007650

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-5 | | |
| Lab Sample ID: | JA17814-6 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1A76235.D | 1 | 05/07/09 | TGE | n/a | n/a | V1A3251 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | 7.8 | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007651

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-5 | | |
| Lab Sample ID: | JA17814-6 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 92% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 79% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 85% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 83% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007652

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-28 | | |
| Lab Sample ID: | JA17814-7 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1A76123.D | 1 | 05/05/09 | TGE | n/a | n/a | V1A3247 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 3.9 | 1.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007653

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-28 | | |
| Lab Sample ID: | JA17814-7 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 89% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 83% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 86% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 83% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007654

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-27 | | |
| Lab Sample ID: | JA17814-8 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1A76124.D | 1 | 05/05/09 | TGE | n/a | n/a | V1A3247 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007655

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-27 | | |
| Lab Sample ID: | JA17814-8 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 89% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 82% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 84% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 86% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007656

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-6 | | |
| Lab Sample ID: | JA17814-9 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1A76125.D | 1 | 05/05/09 | TGE | n/a | n/a | V1A3247 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007657

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-6 | | |
| Lab Sample ID: | JA17814-9 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 89% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 83% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 88% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 84% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007658

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-13 | | |
| Lab Sample ID: | JA17814-10 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1A76126.D | 1 | 05/05/09 | TGE | n/a | n/a | V1A3247 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007659

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-13 | | |
| Lab Sample ID: | JA17814-10 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 89% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 83% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 86% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 86% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007660

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-14 | | |
| Lab Sample ID: | JA17814-11 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1A76127.D | 1 | 05/05/09 | TGE | n/a | n/a | V1A3247 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007661

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-14 | | |
| Lab Sample ID: | JA17814-11 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 88% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 80% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 83% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 86% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007662

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-23 | | |
| Lab Sample ID: | JA17814-12 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1A76128.D | 1 | 05/05/09 | TGE | n/a | n/a | V1A3247 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 2.8 | 1.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007663

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-23 | | |
| Lab Sample ID: | JA17814-12 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 88% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 79% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 83% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 83% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007664

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-24 | | |
| Lab Sample ID: | JA17814-13 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1A76129.D | 1 | 05/05/09 | TGE | n/a | n/a | V1A3247 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 11.3 | 1.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 37.1 | 1.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007665

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-24 | | |
| Lab Sample ID: | JA17814-13 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 6.0 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 88% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 80% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 85% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 82% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007666

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-25 | | |
| Lab Sample ID: | JA17814-14 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1A76130.D | 1 | 05/05/09 | TGE | n/a | n/a | V1A3247 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 3.8 | 1.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007667

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-25 | | |
| Lab Sample ID: | JA17814-14 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 88% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 80% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 85% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 84% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007668

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | TW-2 | | |
| Lab Sample ID: | JA17814-15 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1A76131.D | 1 | 05/05/09 | TGE | n/a | n/a | V1A3247 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 3.4 | 1.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007669

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | TW-2 | | |
| Lab Sample ID: | JA17814-15 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 87% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 79% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 83% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 84% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007670

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-20 | | |
| Lab Sample ID: | JA17814-16 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1A76132.D | 1 | 05/05/09 | TGE | n/a | n/a | V1A3247 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 59.7 | 1.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | 7.3 | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 56.6 | 1.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | 2.5 | 1.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007671

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-20 | | |
| Lab Sample ID: | JA17814-16 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 5.9 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 87% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 80% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 86% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 81% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007672

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-15 | | |
| Lab Sample ID: | JA17814-17 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1A76133.D | 1 | 05/05/09 | TGE | n/a | n/a | V1A3247 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 165 | 1.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | 13.7 | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 45.9 | 1.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | 20.4 | 1.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007673

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-15 | | |
| Lab Sample ID: | JA17814-17 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 121 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 87% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 82% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 85% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 82% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007674

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-16 | | |
| Lab Sample ID: | JA17814-18 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1A76160.D | 1 | 05/06/09 | TGE | n/a | n/a | V1A3248 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 56.2 | 1.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | 1.4 | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | 2.2 | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 26.7 | 1.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | 5.3 | 1.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007675

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-16 | | |
| Lab Sample ID: | JA17814-18 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 15.2 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 89% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 86% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 87% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 83% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007676

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-17 | | |
| Lab Sample ID: | JA17814-19 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1A76161.D | 1 | 05/06/09 | TGE | n/a | n/a | V1A3248 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 30.1 | 1.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 4.6 | 1.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | 2.8 | 1.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007677

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-17 | | |
| Lab Sample ID: | JA17814-19 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 17.2 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 83% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 66% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 84% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 85% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007678

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-18 | | |
| Lab Sample ID: | JA17814-20 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1A76162.D | 1 | 05/06/09 | TGE | n/a | n/a | V1A3248 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 76.9 | 1.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | 1.7 | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | 7.7 | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 6.6 | 1.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | 4.8 | 1.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007679

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-18 | | |
| Lab Sample ID: | JA17814-20 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 33.4 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 89% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 86% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 86% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 84% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007680

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-19 | | |
| Lab Sample ID: | JA17814-21 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1A76163.D | 1 | 05/06/09 | TGE | n/a | n/a | V1A3248 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 7.5 | 1.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 7.7 | 1.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | 1.5 | 1.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007681

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-19 | | |
| Lab Sample ID: | JA17814-21 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 2.9 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 90% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 85% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 87% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 88% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007682

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-32 | | |
| Lab Sample ID: | JA17814-22 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1A76164.D | 1 | 05/06/09 | TGE | n/a | n/a | V1A3248 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 3.2 | 1.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007683

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-32 | | |
| Lab Sample ID: | JA17814-22 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 1.6 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 90% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 86% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 86% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 88% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007684

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-34 | | |
| Lab Sample ID: | JA17814-23 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1A76104.D | 1 | 05/04/09 | TGE | n/a | n/a | V1A3246 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 13.7 | 1.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 7.8 | 1.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007685

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-34 | | |
| Lab Sample ID: | JA17814-23 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 5.6 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 93% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 92% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 89% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 86% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007686

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-33 | | |
| Lab Sample ID: | JA17814-24 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1A76159.D | 1 | 05/05/09 | TGE | n/a | n/a | V1A3248 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 77.5 | 1.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 61.6 | 1.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007687

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-33 | | |
| Lab Sample ID: | JA17814-24 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 4.0 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 92% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 87% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 84% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 83% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007688

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-35 | | |
| Lab Sample ID: | JA17814-25 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1A76229.D | 1 | 05/07/09 | TGE | n/a | n/a | V1A3251 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 173 | 1.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | 2.0 | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 42.4 | 1.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | 4.3 | 1.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007689

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-35 | | |
| Lab Sample ID: | JA17814-25 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 14.1 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 96% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 92% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 92% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 84% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007690

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-39 | | |
| Lab Sample ID: | JA17814-26 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 [a] | 1A76154.D | 2 | 05/05/09 | TGE | n/a | n/a | V1A3248 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 100 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 100 | ug/l | |
| 71-43-2 | Benzene | 183 | 2.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 2.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 8.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 4.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 2.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 2.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 2.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 20 | ug/l | |
| 67-66-3 | Chloroform | ND | 2.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 2.0 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 2.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 2.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 2.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 10 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 2.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 2.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 2.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 2.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 2.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 2.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 2.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 2.0 | ug/l | |
| 100-41-4 | Ethylbenzene | 4.9 | 2.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 65.5 | 2.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 4.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 2.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 2.0 | ug/l | |
| 108-88-3 | Toluene | 7.3 | 2.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 2.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007691

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-39 | | |
| Lab Sample ID: | JA17814-26 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | ND | 2.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 2.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 10 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 2.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 20.6 | 2.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 92% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 94% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 86% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 82% | | 72-122% |

(a) Sample pH did not satisfy field preservation criteria.Diluted due to high concentration of non-target compounds.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007692

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-37 | | |
| Lab Sample ID: | JA17814-27 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1A76155.D | 1 | 05/05/09 | TGE | n/a | n/a | V1A3248 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 162 | 1.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 36.4 | 1.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | 1.9 | 1.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007693

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-37 | | |
| Lab Sample ID: | JA17814-27 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 3.0 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 90% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 85% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 89% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 87% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007694

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-38 | | |
| Lab Sample ID: | JA17814-28 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1A76156.D | 1 | 05/05/09 | TGE | n/a | n/a | V1A3248 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 2.9 | 1.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 3.4 | 1.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007695

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | MW-38 | | |
| Lab Sample ID: | JA17814-28 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Ground Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 90% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 86% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 86% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 88% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007696

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | FIELD BLANK | | |
| Lab Sample ID: | JA17814-29 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Field Blank Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1A76234.D | 1 | 05/07/09 | TGE | n/a | n/a | V1A3251 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007697

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | FIELD BLANK | | |
| Lab Sample ID: | JA17814-29 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Field Blank Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 90% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 79% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 87% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 83% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007698

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | TRIP BLANK | | |
| Lab Sample ID: | JA17814-30 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Trip Blank Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1A76158.D | 1 | 05/05/09 | TGE | n/a | n/a | V1A3248 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007699

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| Client Sample ID: | TRIP BLANK | | |
| Lab Sample ID: | JA17814-30 | Date Sampled: | 04/29/09 |
| Matrix: | AQ - Trip Blank Water | Date Received: | 05/01/09 |
| Method: | SW846 8260B | Percent Solids: | n/a |
| Project: | REWPAMI: 97094981, 25 Paidge Avenue, Brooklyn, NY | | |

VOA PPL List

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 90% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 85% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 88% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 88% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007700

## Misc. Forms

### Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



Shell/Motiva 0007701

# Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
☐ XENCO (_____)
☐ CALSCIENCE (_____)
☐ TEST AMERICA (_____)
☐ SPL (_____)
☐ OTHER (_____)

Please Check Appropriate Box:
☐ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA SD&DM ☐ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER

Print Bill To Contact Name: Anne Tillman (13702)
INCIDENT # (ENV SERVICES): 9 7 0 9 4 9 8 1
☐ CHECK IF NO INCIDENT # APPLIES
PO #:
SAP #: 1 0 0 6 2 3
DATE: 5/1/09
PAGE: 1 of 3

CONSULTANT COMPANY: Science Applications International Corporation (13702)
ADDRESS: 6310 Allentown Blvd.
CITY: Harrisburg, PA 17112
TELEPHONE: 717-901-8821 FAX: 717-901-8103 E-MAIL: MARC.A.REEVES@SAIC.COM

SITE ADDRESS (Street, City and State): 25 Paidge Ave., Brooklyn, NY
PROJECT CONTACT (Report to): Marc Reeves @ SAIC
CONSULTANT PROJECT NO.:
SAMPLER NAME(S) Print: Nick Zarcone 631-472-1732
LAB USE ONLY: JA17814

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

DELIVERABLES: ☐ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY) _____

TEMPERATURE ON RECEIPT C° Cooler #1 Cooler#2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
☐ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | EPA 8260 (FULL LIST) | MTBE | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MW-1 | 04/29/09 | 09:50 | GW | X | | | | | 3 | X | X | |
| 2 | MW-3 | 04/29/09 | 10:00 | GW | X | | | | | 3 | X | X | 451 |
| 3 | MW-29 | 04/29/09 | 10:10 | GW | X | | | | | 3 | X | X | 449 |
| 4 | MW-30 | 04/29/09 | 10:15 | GW | X | | | | | 3 | X | X | |
| 5 | MW-4 | 04/29/09 | 10:20 | GW | X | | | | | 3 | X | X | |
| 6 | MW-5 | 04/29/09 | 10:30 | GW | X | | | | | 3 | X | X | |
| 7 | MW-28 | 04/29/09 | 10:40 | GW | X | | | | | 3 | X | X | |
| 8 | MW-27 | 04/29/09 | 10:50 | GW | X | | | | | 3 | X | X | |
| 9 | MW-6 | 04/29/09 | 11:00 | GW | X | | | | | 3 | X | X | |

| | | | |
|---|---|---|---|
| Relinquished by: (Signature) | Received by: (Signature) | Date: 5/1/09 | Time: 1430 |
| Relinquished by: (Signature) | Received by: (Signature) | Date: 5/1/09 | Time: 2110 |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |

05/2/08 Revision

4.4°C

JA17814: Chain of Custody
Page 1 of 4



Shell/Motiva 0007702

LAB (LOCATION)
☐ XENCO (_____)
☐ CALSCIENCE (_____)
☐ TEST AMERICA (_____)
☐ SPL (_____)
☐ OTHER (_____)

# Shell Oil Products Chain Of Custody Record

Please Check Appropriate Box:
☐ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA SD&CM ☐ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER _____

Print Bill To Contact Name: Anne Tilman (13702)
INCIDENT # (ENV SERVICES): 9 7 0 9 4 9 8 1 ☐ CHECK IF NO INCIDENT # APPLIES
PO #:
SAP #: 1 0 0 8 2 3
DATE: 5/1/09
PAGE: 2 of 3

CONSULTANT COMPANY: Science Applications International Corporation (13702)
ADDRESS: 6310 Allentown Blvd.
CITY: Harrisburg, PA 17112
TELEPHONE: 717-901-8821 FAX: 717-901-8103 E-MAIL: MARC.A.REEVES@SAIC.COM

SITE ADDRESS (Street, City and State): 25 Paidge Ave., Brooklyn, NY
PROJECT CONTACT (Report to): Marc Reeves @ SAIC
CONSULTANT PROJECT NO.:
SAMPLER NAME(S) (Print): Nick Zarcone 631-472-1732
LAB USE ONLY: JA17814

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND
DELIVERABLES: ☐ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY) _____
TEMPERATURE ON RECEIPT C°: Cooler #1 Cooler #2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
☐ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | EPA 8260 (FULL LIST) | MTBE | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | MW-13 | 04/29/09 | 12:00 | GW | X | | | | | 3 | X | X | |
| 11 | MW-14 | 04/29/09 | 12:10 | GW | X | | | | | 3 | X | X | |
| 12 | MW-23 | 04/29/09 | 12:20 | GW | X | | | | | 3 | X | X | |
| 13 | MW-24 | 04/29/09 | 12:30 | GW | X | | | | | 3 | X | X | |
| 14 | MW-25 | 04/29/09 | 12:40 | GW | X | | | | | 3 | X | X | |
| 15 | TW-2 | 04/29/09 | 12:50 | GW | X | | | | | 3 | X | X | |
| 16 | MW-20 | 04/29/09 | 13:00 | GW | X | | | | | 3 | X | X | |
| 17 | MW-15 | 04/29/09 | 13:10 | GW | X | | | | | 3 | X | X | |
| 18 | MW-16 | 04/29/09 | 13:20 | GW | X | | | | | 3 | X | X | |
| 19 | MW-17 | 04/29/09 | 13:30 | GW | X | | | | | 3 | X | X | |

| Relinquished by: (Signature) | Received by: (Signature) | Date | Time |
|---|---|---|---|
| | | 5/1/09 | 1430 |
| | | 5/1/09 | 2110 |
| | | | |

05/2006 Revision

4.4°C

**JA17814: Chain of Custody**
**Page 2 of 4**



Shell/Motiva 0007703

# Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
- ☐ XENCO ( )
- ☐ CALSCIENCE ( )
- ☐ TEST AMERICA ( )
- ☐ SPL ( )
- ☐ OTHER ( )

Please Check Appropriate Box:
- ☐ ENV. SERVICES
- ☐ MOTIVA RETAIL
- ☐ SHELL RETAIL
- ☐ MOTIVA SD&CM
- ☐ CONSULTANT
- ☐ LUBES
- ☐ SHELL PIPELINE
- ☐ OTHER

Print Bill To Contact Name: Anna Tillman (13702)

INCIDENT # (ENV SERVICES): 9 7 0 9 4 9 8 1

PO #

SAP #: 1 0 0 6 2 3

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 5/1/09

PAGE: 3 of 3

CONSULTANT COMPANY: Science Applications International Corporation (13702)

ADDRESS: 6310 Allentown Blvd.

CITY: Harrisburg, PA 17112

TELEPHONE: 717-901-8821 FAX: 717-901-8103 E-MAIL: MARC.A.REEVES@SAIC.COM

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

DELIVERABLES: ☐ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY)

TEMPERATURE ON RECEIPT C° Cooler #1 Cooler #2 Cooler #3

SITE ADDRESS (Street, City and State): 25 Paidge Ave., Brooklyn, NY

PROJECT CONTACT (Report to): Marc Reeves @ SAIC

CONSULTANT PROJECT NO.:

SAMPLER NAME(S) (Print): Nick Zarcone 631-472-1732

LAB USE ONLY: JA17814

SPECIAL INSTRUCTIONS OR NOTES: NATB 5.1.09 mf

- ☐ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMBURSEMENT RATE APPLIES
- ☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | EPA 8260 (FULL LIST) | MTBE | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | MW-18 | 04/29/09 | 13:40 | GW | X | | | | | 3 | X | X | |
| 21 | MW-19 | 04/29/09 | 13:50 | GW | X | | | | | 3 | X | X | |
| 22 | MW-32 | 04/29/09 | 14:00 | GW | X | | | | | 3 | X | X | |
| 23 | MW-34 | 04/29/09 | 14:05 | GW | X | | | | | 3 | X | X | |
| 24 | MW-33 | 04/29/09 | 14:10 | GW | X | | | | | 3 | X | X | |
| 25 | MW-35 | 04/29/09 | 14:15 | GW | X | | | | | 3 | X | X | |
| 26 | MW-39 | 04/29/09 | 14:20 | GW | X | | | | | 3 | X | X | |
| 27 | MW-37 | 04/29/09 | 14:30 | GW | X | | | | | 3 | X | X | |
| 28 | MW-38 | 04/29/09 | 14:40 | GW | X | | | | | 3 | X | X | |
| 29 | FIELD BLANK | 04/29/09 | 09:30 | GW | X | | | | | 3 | X | X | |
| 30 | TRIP BLANK | 04/29/09 | 07:00 | GW | X | | | | | 3 | X | X | |

| Relinquished by: (Signature) | Received by: (Signature) | Date | Time |
|---|---|---|---|
| [signature] | [signature] | 5/1/09 | 1430 |
| [signature] | [signature] | 5/1/09 | 2110 |
| | | | |

05/2/05 Revision

4.4°C

JA17814: Chain of Custody
Page 3 of 4

# Accutest Laboratories Sample Receipt Summary

**Accutest Job Number:** JA17814 **Client:** _____ **Immediate Client Services Action Required:** No

**Date / Time Received:** 5/1/2009 **Delivery Method:** _____ **Client Service Action Required at Login:** No

**Project:** _____ **No. Coolers:** 1 **Airbill #'s:** _____

| Cooler Security | Y or N | | Y or N |
|---|---|---|---|
| 1. Custody Seals Present: | ☑ ☐ | 3. COC Present: | ☑ ☐ |
| 2. Custody Seals Intact: | ☑ ☐ | 4. Smpl Dates/Time OK | ☑ ☐ |

| Cooler Temperature | Y or N |
|---|---|
| 1. Temp criteria achieved: | ☑ ☐ |
| 2. Cooler temp verification: | Infared gun |
| 3. Cooler media: | Ice (bag) |

| Quality Control Preservatio | Y or N |
|---|---|
| 1. Trip Blank present / cooler: | ☑ ☐ |
| 2. Trip Blank listed on COC: | ☑ ☐ |
| 3. Samples preserved properly: | ☑ ☐ |
| 4. VOCs headspace free: | ☐ ☐ |

| Sample Integrity - Documentation | Y or N |
|---|---|
| 1. Sample labels present on bottles: | ☑ ☐ |
| 2. Container labeling complete: | ☑ ☐ |
| 3. Sample container label / COC agree: | ☑ ☐ |

| Sample Integrity - Condition | Y or N |
|---|---|
| 1. Sample recvd within HT: | ☑ ☐ |
| 2. All containers accounted for: | ☑ ☐ |
| 3. Condition of sample: | Intact |

| Sample Integrity - Instructions | Y or N |
|---|---|
| 1. Analysis requested is clear: | ☑ ☐ |
| 2. Bottles received for unspecified tests | ☐ ☑ |
| 3. Sufficient volume recvd for analysis: | ☑ ☐ |
| 4. Compositing instructions clear: | ☐ ☐ |
| 5. Filtering instructions clear: | ☐ ☐ |

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

**JA17814: Chain of Custody**
**Page 4 of 4**



Shell/Motiva 0007705

# Analytical Report 369409

## for

## Sovereign Consulting, Inc. (NY)

**Project Manager: Gregory Bosiljcic**

**25 Paidge Avenue**

**EQ24**

**30-APR-10**

**4143 Greenbriar Dr., Stafford, TX 77477**
**Ph:(281) 240-4200 Fax:(281) 240-4280**

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)
Xenco-Boca Raton (EPA Lab Code: FL00449):
Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)
North Carolina(444), Texas(T104704468-TX), Illinois(002295)



Shell/Motiva 0007706

30-APR-10

Project Manager: **Gregory Bosiljcic**
**Sovereign Consulting, Inc. (NY)**
3104 Unionville Road, Suite 150
Cranberry Twp, PA 16066

Reference: XENCO Report No: **369409**
**25 Paidge Avenue**
Project Address: Brooklyn, NY

**Gregory Bosiljcic**:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 369409. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 369409 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

**Carlos Castro**
Managing Director, Texas

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***
*Certified and approved by numerous States and Agencies.*
*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*
Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America



Shell/Motiva 0007707

XENCO Laboratories

# Sample Cross Reference 369409

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|---|---|---|---|---|
| MW-1 | W | Apr-15-10 07:00 | | 369409-001 |
| MW-3 | W | Apr-15-10 07:15 | | 369409-002 |
| MW-29 | W | Apr-15-10 07:30 | | 369409-003 |
| MW-5 | W | Apr-15-10 07:45 | | 369409-004 |
| MW-28 | W | Apr-15-10 07:55 | | 369409-005 |
| MW-27 | W | Apr-15-10 08:00 | | 369409-006 |
| MW-6 | W | Apr-15-10 08:10 | | 369409-007 |
| MW-7R | W | Apr-15-10 08:20 | | 369409-008 |
| MW-8 | W | Apr-15-10 08:30 | | 369409-009 |
| MW-9 | W | Apr-15-10 08:40 | | 369409-010 |
| MW-21R | W | Apr-15-10 08:50 | | 369409-011 |
| MW-22R | W | Apr-15-10 09:00 | | 369409-012 |
| MW-13 | W | Apr-15-10 09:10 | | 369409-013 |
| MW-14 | W | Apr-15-10 09:20 | | 369409-014 |
| MW-23 | W | Apr-15-10 09:30 | | 369409-015 |
| MW-24 | W | Apr-15-10 09:40 | | 369409-016 |
| MW-43 | W | Apr-15-10 09:50 | | 369409-017 |
| MW-42 | W | Apr-15-10 10:00 | | 369409-018 |
| MW-44 | W | Apr-15-10 10:10 | | 369409-019 |
| MW-30 | W | Apr-15-10 10:20 | | 369409-020 |
| MW-25 | W | Apr-15-10 10:30 | | 369409-021 |
| TRW-2 | W | Apr-15-10 10:40 | | 369409-022 |
| MW-20 | W | Apr-15-10 10:50 | | 369409-023 |
| MW-15 | W | Apr-15-10 11:00 | | 369409-024 |
| MW-16 | W | Apr-15-10 11:10 | | 369409-025 |
| MW-17 | W | Apr-15-10 11:20 | | 369409-026 |
| MW-19 | W | Apr-15-10 11:30 | | 369409-027 |
| MW-32 | W | Apr-15-10 11:40 | | 369409-028 |
| MW-33 | W | Apr-15-10 11:50 | | 369409-029 |
| MW-39 | W | Apr-15-10 12:00 | | 369409-030 |
| MW-35 | W | Apr-15-10 12:10 | | 369409-031 |
| MW-38 | W | Apr-15-10 12:20 | | 369409-032 |
| MW-18 | W | Apr-15-10 12:30 | | 369409-033 |
| Trip Blank | W | Apr-15-10 00:00 | | 369409-034 |
| Field Blank | W | Apr-15-10 07:00 | | 369409-035 |



Shell/Motiva 0007708

*Project ID:* EQ24 *Report Date:* 30-APR-10
*Work Order Number:* 369409 *Date Received:* 04/16/2010

***Sample receipt non conformances and Comments:***

None

***Sample receipt Non Conformances and Comments per Sample:***

None

***Analytical Non Conformances and Comments:***

Batch: LBA-803446 VOAs by SW-846 8260B
SW8260B

Batch 803446, Trichlorofluoromethane recovered above QC limits in the laboratory control sample. Any hits would be considered as biased high; however, there are no hits reporting for this compound for the affected sample.
Samples affected are: 369409-002, -001.

Batch: LBA-803645 VOAs by SW-846 8260B
SW8260B

Batch 803645, n-Propylbenzene recovered below QC limits in the Matrix Spike Duplicate.
Samples affected are: 369409-003.
The Laboratory Control Sample for n-Propylbenzene is within laboratory Control Limits

SW8260B

Batch 803645, Methylene Chloride recovered below QC limits in the laboratory control sample. Any hits would be considered as biased low; however, there are no hits reporting for this compound for the affected sample. The Laboratory Control Sample passes due to Nelac Quality Systems, Appendix D, Marginal Exceedences.
Samples affected are: 369409-003.

Batch: LBA-803828 VOAs by SW-846 8260B
SW8260B

Batch 803828, Toluene-D8 recovered above QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 369409-012.



Shell/Motiva 0007709

*Batch: LBA-804058 VOAs by SW-846 8260B*
*SW8260B*

*Batch 804058, Vinyl Chloride recovered below QC limits in the Matrix Spike.*
*Samples affected are: 369409-025.*
*The Laboratory Control Sample for Vinyl Chloride is within laboratory Control Limits*

*Batch: LBA-804067 VOAs by SW-846 8260B*
*None*

*Batch: LBA-804536 VOAs by SW-846 8260B*
*None*

XENCO Laboratories

# Certificate of Analytical Results 369409

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-1** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-001** | Date Collected: **Apr-15-10 07:00** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-20-10 19:12 Tech: CYE

Seq Number: 803446

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| MTBE | 1634-04-4 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/20/10 20:50 | | 1 |
| Chloroform | 67-66-3 | 7.96 | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/20/10 20:50 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| isopropylbenzene | 98-82-8 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |

Project: Standard List of Methods

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-1** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-001** | Date Collected: **Apr-15-10 07:00** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-20-10 19:12 Tech: CYE

Seq Number: 803446

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 04/20/10 20:50 | | 1 |
| n-Propylbenzene | 103-65-1 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 04/20/10 20:50 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/20/10 20:50 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | | ug/L | 04/20/10 20:50 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007712

XENCO Laboratories

# Certificate of Analytical Results 369409

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-3** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-002** | Date Collected: **Apr-15-10 07:15** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-20-10 20:30 Tech: CYE

Seq Number: 803446

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| MTBE | 1634-04-4 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/21/10 05:05 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/21/10 05:05 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| isopropylbenzene | 98-82-8 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007713

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-3** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-002** | Date Collected: **Apr-15-10 07:15** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-20-10 20:30 Tech: CYE

Seq Number: 803446

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 04/21/10 05:05 | | 1 |
| n-Propylbenzene | 103-65-1 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 04/21/10 05:05 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/21/10 05:05 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | | ug/L | 04/21/10 05:05 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007714

XENCO Laboratories

# Certificate of Analytical Results 369409

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-29** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-003** | Date Collected: **Apr-15-10 07:30** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-21-10 13:30 Tech: CYE

Seq Number: 803645

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 122 | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| MTBE | 1634-04-4 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| n-Butylbenzene | 104-51-8 | 10.9 | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| Sec-Butylbenzene | 135-98-8 | 7.19 | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/21/10 13:58 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/21/10 13:58 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| isopropylbenzene | 98-82-8 | 63.1 | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007715

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-29** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-003** | Date Collected: **Apr-15-10 07:30** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-21-10 13:30 Tech: CYE

Seq Number: 803645

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 04/21/10 13:58 | | 1 |
| n-Propylbenzene | 103-65-1 | 107 | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 04/21/10 13:58 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/21/10 13:58 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | | ug/L | 04/21/10 13:58 | | 1 |

Project: Standard List of Methods

XENCO Laboratories

# Certificate of Analytical Results 369409

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-5** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-004** | Date Collected: **Apr-15-10 07:45** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-22-10 15:06 Tech: CYE

Seq Number: 803828

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| MTBE | 1634-04-4 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/22/10 16:14 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/22/10 16:14 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| isopropylbenzene | 98-82-8 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007717

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-5** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-004** | Date Collected: **Apr-15-10 07:45** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-22-10 15:06 Tech: CYE

Seq Number: 803828

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 04/22/10 16:14 | | 1 |
| n-Propylbenzene | 103-65-1 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 04/22/10 16:14 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/22/10 16:14 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | | ug/L | 04/22/10 16:14 | | 1 |

Project: Standard List of Methods

XENCO Laboratories

# Certificate of Analytical Results 369409

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-28** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-005** | Date Collected: **Apr-15-10 07:55** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-22-10 18:56 Tech: CYE

Seq Number: 803828

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| MTBE | 1634-04-4 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/22/10 19:33 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/22/10 19:33 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| isopropylbenzene | 98-82-8 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007719

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-28** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-005** | Date Collected: **Apr-15-10 07:55** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-22-10 18:56 Tech: CYE

Seq Number: 803828

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 04/22/10 19:33 | | 1 |
| n-Propylbenzene | 103-65-1 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 04/22/10 19:33 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/22/10 19:33 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | | ug/L | 04/22/10 19:33 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007720

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

Sample Id: **MW-27** Matrix: **Water** % Moisture:

Lab Sample Id: **369409-006** Date Collected: **Apr-15-10 08:00**

Date Received: **Apr-16-10 09:00**

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-22-10 18:58 Tech: CYE

Seq Number: 803828

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| MTBE | 1634-04-4 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/22/10 19:55 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/22/10 19:55 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| isopropylbenzene | 98-82-8 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007721

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-27** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-006** | Date Collected: **Apr-15-10 08:00** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-22-10 18:58 Tech: CYE

Seq Number: 803828

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 04/22/10 19:55 | | 1 |
| n-Propylbenzene | 103-65-1 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 04/22/10 19:55 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/22/10 19:55 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | | ug/L | 04/22/10 19:55 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007722

XENCO Laboratories

# Certificate of Analytical Results 369409

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-6** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-007** | Date Collected: **Apr-15-10 08:10** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-22-10 19:00 Tech: CYE

Seq Number: 803828

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| MTBE | 1634-04-4 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/22/10 20:17 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/22/10 20:17 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| isopropylbenzene | 98-82-8 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007723

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-6** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-007** | Date Collected: **Apr-15-10 08:10** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-22-10 19:00 Tech: CYE

Seq Number: 803828

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 04/22/10 20:17 | | 1 |
| n-Propylbenzene | 103-65-1 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 04/22/10 20:17 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/22/10 20:17 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | | ug/L | 04/22/10 20:17 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007724

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-7R** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-008** | Date Collected: **Apr-15-10 08:20** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-22-10 19:02 Tech: CYE

Seq Number: 803828

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 16.9 | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| MTBE | 1634-04-4 | 31.5 | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/22/10 20:39 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/22/10 20:39 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| isopropylbenzene | 98-82-8 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |

Project: Standard List of Methods

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-7R** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-008** | Date Collected: **Apr-15-10 08:20** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-22-10 19:02 Tech: CYE

Seq Number: 803828

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 04/22/10 20:39 | | 1 |
| n-Propylbenzene | 103-65-1 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 04/22/10 20:39 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/22/10 20:39 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | | ug/L | 04/22/10 20:39 | | 1 |

Project: Standard List of Methods

XENCO Laboratories

# Certificate of Analytical Results 369409

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-8** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-009** | Date Collected: **Apr-15-10 08:30** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-22-10 19:04 Tech: CYE

Seq Number: 803828

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 44.9 | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| MTBE | 1634-04-4 | 37.6 | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/22/10 21:01 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/22/10 21:01 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| isopropylbenzene | 98-82-8 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007727

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-8** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-009** | Date Collected: **Apr-15-10 08:30** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-22-10 19:04 Tech: CYE

Seq Number: 803828

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 04/22/10 21:01 | | 1 |
| n-Propylbenzene | 103-65-1 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 04/22/10 21:01 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/22/10 21:01 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | | ug/L | 04/22/10 21:01 | | 1 |

Project: Standard List of Methods

XENCO Laboratories

# Certificate of Analytical Results 369409

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-9** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-010** | Date Collected: **Apr-15-10 08:40** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-22-10 19:06 Tech: CYE

Seq Number: 803828

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 12.5 | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| MTBE | 1634-04-4 | 15.2 | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/22/10 21:23 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/22/10 21:23 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| isopropylbenzene | 98-82-8 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007729

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-9** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-010** | Date Collected: **Apr-15-10 08:40** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-22-10 19:06 Tech: CYE

Seq Number: 803828

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 04/22/10 21:23 | | 1 |
| n-Propylbenzene | 103-65-1 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 04/22/10 21:23 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/22/10 21:23 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | | ug/L | 04/22/10 21:23 | | 1 |

Project: Standard List of Methods

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-21R** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-011** | Date Collected: **Apr-15-10 08:50** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-22-10 19:08 Tech: CYE

Seq Number: 803828

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 139 | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| MTBE | 1634-04-4 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| n-Butylbenzene | 104-51-8 | 11.0 | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| Sec-Butylbenzene | 135-98-8 | 29.9 | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/22/10 21:45 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/22/10 21:45 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | 5.29 | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| Ethylbenzene | 100-41-4 | 41.5 | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| isopropylbenzene | 98-82-8 | 145 | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007731

XENCO Laboratories

# Certificate of Analytical Results 369409

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-21R** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-011** | Date Collected: **Apr-15-10 08:50** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-22-10 19:08 Tech: CYE

Seq Number: 803828

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| Naphthalene | 91-20-3 | 20.0 | 10.0 | | ug/L | 04/22/10 21:45 | | 1 |
| n-Propylbenzene | 103-65-1 | 34.0 | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| Toluene | 108-88-3 | 12.2 | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 133 | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 139 | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| o-Xylene | 95-47-6 | 16.9 | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |
| m,p-Xylenes | 179601-23-1 | 37.7 | 10.0 | | ug/L | 04/22/10 21:45 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/22/10 21:45 | | 1 |
| Total Xylenes | 1330-20-7 | 54.6 | 5.00 | | ug/L | 04/22/10 21:45 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007732

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-22R** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-012** | Date Collected: **Apr-15-10 09:00** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-22-10 19:10 Tech: CYE

Seq Number: 803828

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 386 | 25.0 | | ug/L | 04/23/10 19:36 | D | 5 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| MTBE | 1634-04-4 | 42.8 | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| n-Butylbenzene | 104-51-8 | 29.9 | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| Sec-Butylbenzene | 135-98-8 | 19.2 | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/22/10 22:07 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/22/10 22:07 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | 6.61 | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| Ethylbenzene | 100-41-4 | 2140 | 100 | | ug/L | 04/23/10 19:58 | D | 20 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| isopropylbenzene | 98-82-8 | 217 | 25.0 | | ug/L | 04/23/10 19:36 | D | 5 |

Project: Standard List of Methods



Shell/Motiva 0007733

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-22R** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-012** | Date Collected: **Apr-15-10 09:00** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-22-10 19:10 Tech: CYE

Seq Number: 803828

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| Naphthalene | 91-20-3 | 412 | 50.0 | | ug/L | 04/23/10 19:36 | D | 5 |
| n-Propylbenzene | 103-65-1 | 426 | 25.0 | | ug/L | 04/23/10 19:36 | D | 5 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| Toluene | 108-88-3 | 68.4 | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 14.6 | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 217 | 25.0 | | ug/L | 04/23/10 19:36 | D | 5 |
| o-Xylene | 95-47-6 | 22.9 | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |
| m,p-Xylenes | 179601-23-1 | 88.3 | 10.0 | | ug/L | 04/22/10 22:07 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/22/10 22:07 | | 1 |
| Total Xylenes | 1330-20-7 | 111.2 | 5.00 | | ug/L | 04/22/10 22:07 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007734

XENCO Laboratories

# Certificate of Analytical Results 369409

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-13** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-013** | Date Collected: **Apr-15-10 09:10** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-22-10 19:14 Tech: CYE

Seq Number: 803828

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| MTBE | 1634-04-4 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/22/10 22:51 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/22/10 22:51 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| isopropylbenzene | 98-82-8 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007735

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-13** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-013** | Date Collected: **Apr-15-10 09:10** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-22-10 19:14 Tech: CYE

Seq Number: 803828

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 04/22/10 22:51 | | 1 |
| n-Propylbenzene | 103-65-1 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 04/22/10 22:51 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/22/10 22:51 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | | ug/L | 04/22/10 22:51 | | 1 |

Project: Standard List of Methods

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-14** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-014** | Date Collected: **Apr-15-10 09:20** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-22-10 19:16 Tech: CYE

Seq Number: 803828

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| MTBE | 1634-04-4 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/22/10 23:13 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/22/10 23:13 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| isopropylbenzene | 98-82-8 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007737

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-14** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-014** | Date Collected: **Apr-15-10 09:20** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-22-10 19:16 Tech: CYE

Seq Number: 803828

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 04/22/10 23:13 | | 1 |
| n-Propylbenzene | 103-65-1 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 04/22/10 23:13 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/22/10 23:13 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | | ug/L | 04/22/10 23:13 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007738

XENCO Laboratories

# Certificate of Analytical Results 369409

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-23** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-015** | Date Collected: **Apr-15-10 09:30** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-22-10 19:18 Tech: CYE

Seq Number: 803828

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| MTBE | 1634-04-4 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/22/10 23:35 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/22/10 23:35 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| isopropylbenzene | 98-82-8 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007739

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-23** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-015** | Date Collected: **Apr-15-10 09:30** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-22-10 19:18 Tech: CYE

Seq Number: 803828

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 04/22/10 23:35 | | 1 |
| n-Propylbenzene | 103-65-1 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 04/22/10 23:35 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/22/10 23:35 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | | ug/L | 04/22/10 23:35 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007740

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-24** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-016** | Date Collected: **Apr-15-10 09:40** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-22-10 19:20 Tech: CYE

Seq Number: 803828

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| MTBE | 1634-04-4 | 6.63 | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/22/10 23:57 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/22/10 23:57 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| isopropylbenzene | 98-82-8 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007741

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-24** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-016** | Date Collected: **Apr-15-10 09:40** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-22-10 19:20 Tech: CYE

Seq Number: 803828

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 04/22/10 23:57 | | 1 |
| n-Propylbenzene | 103-65-1 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 04/22/10 23:57 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/22/10 23:57 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | | ug/L | 04/22/10 23:57 | | 1 |

Project: Standard List of Methods

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-43** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-017** | Date Collected: **Apr-15-10 09:50** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-23-10 15:48 Tech: CYE

Seq Number: 804067

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| MTBE | 1634-04-4 | 17.5 | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/23/10 17:23 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/23/10 17:23 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| isopropylbenzene | 98-82-8 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007743

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-43** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-017** | Date Collected: **Apr-15-10 09:50** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-23-10 15:48 Tech: CYE

Seq Number: 804067

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 04/23/10 17:23 | | 1 |
| n-Propylbenzene | 103-65-1 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 04/23/10 17:23 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/23/10 17:23 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | | ug/L | 04/23/10 17:23 | | 1 |

Project: Standard List of Methods

XENCO Laboratories

# Certificate of Analytical Results 369409

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-42** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-018** | Date Collected: **Apr-15-10 10:00** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-23-10 18:46 Tech: CYE

Seq Number: 804067

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| MTBE | 1634-04-4 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/23/10 20:20 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/23/10 20:20 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| isopropylbenzene | 98-82-8 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007745

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-42** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-018** | Date Collected: **Apr-15-10 10:00** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-23-10 18:46 Tech: CYE

Seq Number: 804067

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 04/23/10 20:20 | | 1 |
| n-Propylbenzene | 103-65-1 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 04/23/10 20:20 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/23/10 20:20 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | | ug/L | 04/23/10 20:20 | | 1 |

Project: Standard List of Methods

XENCO Laboratories

# Certificate of Analytical Results 369409

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-44** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-019** | Date Collected: **Apr-15-10 10:10** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-23-10 18:48 Tech: CYE

Seq Number: 804067

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| MTBE | 1634-04-4 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/23/10 20:42 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/23/10 20:42 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| isopropylbenzene | 98-82-8 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007747

XENCO Laboratories

# Certificate of Analytical Results 369409

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-44** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-019** | Date Collected: **Apr-15-10 10:10** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-23-10 18:48 Tech: CYE

Seq Number: 804067

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 04/23/10 20:42 | | 1 |
| n-Propylbenzene | 103-65-1 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 04/23/10 20:42 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/23/10 20:42 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | | ug/L | 04/23/10 20:42 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007748

XENCO Laboratories

# Certificate of Analytical Results 369409

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-30** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-020** | Date Collected: **Apr-15-10 10:20** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-23-10 18:50 Tech: CYE

Seq Number: 804067

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| MTBE | 1634-04-4 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/23/10 21:04 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/23/10 21:04 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| isopropylbenzene | 98-82-8 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007749

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-30** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-020** | Date Collected: **Apr-15-10 10:20** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-23-10 18:50 Tech: CYE

Seq Number: 804067

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 04/23/10 21:04 | | 1 |
| n-Propylbenzene | 103-65-1 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 04/23/10 21:04 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/23/10 21:04 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | | ug/L | 04/23/10 21:04 | | 1 |

Project: Standard List of Methods

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-25** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-021** | Date Collected: **Apr-15-10 10:30** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-23-10 18:52 Tech: CYE

Seq Number: 804067

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| MTBE | 1634-04-4 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/23/10 21:26 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/23/10 21:26 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| isopropylbenzene | 98-82-8 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007751

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-25** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-021** | Date Collected: **Apr-15-10 10:30** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-23-10 18:52 Tech: CYE

Seq Number: 804067

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 04/23/10 21:26 | | 1 |
| n-Propylbenzene | 103-65-1 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 04/23/10 21:26 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/23/10 21:26 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | | ug/L | 04/23/10 21:26 | | 1 |

Project: Standard List of Methods

XENCO Laboratories

# Certificate of Analytical Results 369409

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **TRW-2** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-022** | Date Collected: **Apr-15-10 10:40** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-23-10 18:54 Tech: CYE

Seq Number: 804067

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| MTBE | 1634-04-4 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/23/10 21:48 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/23/10 21:48 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| isopropylbenzene | 98-82-8 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007753

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **TRW-2** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-022** | Date Collected: **Apr-15-10 10:40** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-23-10 18:54 Tech: CYE

Seq Number: 804067

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 04/23/10 21:48 | | 1 |
| n-Propylbenzene | 103-65-1 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 04/23/10 21:48 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/23/10 21:48 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | | ug/L | 04/23/10 21:48 | | 1 |

Project: Standard List of Methods

XENCO Laboratories

# Certificate of Analytical Results 369409

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-20** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-023** | Date Collected: **Apr-15-10 10:50** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-23-10 18:56 Tech: CYE

Seq Number: 804067

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 497 | 25.0 | | ug/L | 04/23/10 22:32 | D | 5 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| MTBE | 1634-04-4 | 145 | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/23/10 22:09 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/23/10 22:09 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| Ethylbenzene | 100-41-4 | 20.4 | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| isopropylbenzene | 98-82-8 | 12.7 | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007755

XENCO Laboratories

# Certificate of Analytical Results 369409

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-20** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-023** | Date Collected: **Apr-15-10 10:50** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-23-10 18:56 Tech: CYE

Seq Number: 804067

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| Naphthalene | 91-20-3 | 31.5 | 10.0 | | ug/L | 04/23/10 22:09 | | 1 |
| n-Propylbenzene | 103-65-1 | 14.4 | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| Toluene | 108-88-3 | 43.2 | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 18.0 | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 11.4 | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| o-Xylene | 95-47-6 | 28.4 | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |
| m,p-Xylenes | 179601-23-1 | 56.5 | 10.0 | | ug/L | 04/23/10 22:09 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/23/10 22:09 | | 1 |
| Total Xylenes | 1330-20-7 | 84.9 | 5.00 | | ug/L | 04/23/10 22:09 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007756

XENCO Laboratories

# Certificate of Analytical Results 369409

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-15** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-024** | Date Collected: **Apr-15-10 11:00** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-23-10 19:00 Tech: CYE

Seq Number: 804067

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 839 | 100 | | ug/L | 04/28/10 15:08 | D | 20 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| MTBE | 1634-04-4 | 38.8 | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| n-Butylbenzene | 104-51-8 | 36.3 | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| Sec-Butylbenzene | 135-98-8 | 23.4 | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/23/10 22:54 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/23/10 22:54 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | 6.37 | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| Ethylbenzene | 100-41-4 | 556 | 25.0 | | ug/L | 04/26/10 16:56 | D | 5 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| isopropylbenzene | 98-82-8 | 120 | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007757

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-15** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-024** | Date Collected: **Apr-15-10 11:00** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-23-10 19:00 Tech: CYE

Seq Number: 804067

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| Naphthalene | 91-20-3 | 101 | 10.0 | | ug/L | 04/23/10 22:54 | | 1 |
| n-Propylbenzene | 103-65-1 | 173 | 25.0 | | ug/L | 04/26/10 16:56 | D | 5 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| Toluene | 108-88-3 | 4350 | 250 | | ug/L | 04/28/10 15:30 | D | 50 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 532 | 100 | | ug/L | 04/28/10 15:08 | D | 20 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 111 | 5.00 | | ug/L | 04/23/10 22:54 | | 1 |
| o-Xylene | 95-47-6 | 705 | 100 | | ug/L | 04/28/10 15:08 | D | 20 |
| m,p-Xylenes | 179601-23-1 | 1730 | 200 | | ug/L | 04/28/10 15:08 | D | 20 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/23/10 22:54 | | 1 |
| Total Xylenes | 1330-20-7 | 3521 | 250 | | ug/L | 04/28/10 15:08 | | 20 |

Project: Standard List of Methods



Shell/Motiva 0007758

XENCO Laboratories

# Certificate of Analytical Results 369409

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-16** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-025** | Date Collected: **Apr-15-10 11:10** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-26-10 12:02 Tech: CYE

Seq Number: 804058

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 37.6 | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| MTBE | 1634-04-4 | 14.6 | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/26/10 13:11 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/26/10 13:11 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| isopropylbenzene | 98-82-8 | 53.4 | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007759

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-16** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-025** | Date Collected: **Apr-15-10 11:10** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-26-10 12:02 Tech: CYE

Seq Number: 804058

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 04/26/10 13:11 | | 1 |
| n-Propylbenzene | 103-65-1 | 51.3 | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 51.6 | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| o-Xylene | 95-47-6 | 5.22 | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 04/26/10 13:11 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/26/10 13:11 | | 1 |
| Total Xylenes | 1330-20-7 | 5.22 | 5.00 | | ug/L | 04/26/10 13:11 | | 1 |

Project: Standard List of Methods

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-17** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-026** | Date Collected: **Apr-15-10 11:20** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-23-10 19:04 Tech: CYE

Seq Number: 804067

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| MTBE | 1634-04-4 | 5.10 | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/23/10 23:38 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/23/10 23:38 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| isopropylbenzene | 98-82-8 | 18.0 | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007761

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-17** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-026** | Date Collected: **Apr-15-10 11:20** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-23-10 19:04 Tech: CYE

Seq Number: 804067

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 04/23/10 23:38 | | 1 |
| n-Propylbenzene | 103-65-1 | 12.9 | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 17.3 | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 04/23/10 23:38 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/23/10 23:38 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | | ug/L | 04/23/10 23:38 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007762

XENCO Laboratories

# Certificate of Analytical Results 369409

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-19** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-027** | Date Collected: **Apr-15-10 11:30** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-23-10 19:06 Tech: CYE

Seq Number: 804067

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 11.2 | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| MTBE | 1634-04-4 | 5.59 | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| n-Butylbenzene | 104-51-8 | 5.17 | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/24/10 00:00 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/24/10 00:00 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| isopropylbenzene | 98-82-8 | 51.8 | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007763

XENCO Laboratories

# Certificate of Analytical Results 369409

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-19** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-027** | Date Collected: **Apr-15-10 11:30** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-23-10 19:06 Tech: CYE

Seq Number: 804067

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 04/24/10 00:00 | | 1 |
| n-Propylbenzene | 103-65-1 | 51.6 | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| Toluene | 108-88-3 | 6.34 | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 50.9 | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| o-Xylene | 95-47-6 | 23.9 | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |
| m,p-Xylenes | 179601-23-1 | 21.0 | 10.0 | | ug/L | 04/24/10 00:00 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/24/10 00:00 | | 1 |
| Total Xylenes | 1330-20-7 | 44.9 | 5.00 | | ug/L | 04/24/10 00:00 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007764

XENCO Laboratories

# Certificate of Analytical Results 369409

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-32** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-028** | Date Collected: **Apr-15-10 11:40** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-23-10 19:08 Tech: CYE

Seq Number: 804067

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| MTBE | 1634-04-4 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/24/10 00:22 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/24/10 00:22 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| isopropylbenzene | 98-82-8 | 6.79 | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007765

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-32** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-028** | Date Collected: **Apr-15-10 11:40** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-23-10 19:08 Tech: CYE

Seq Number: 804067

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 04/24/10 00:22 | | 1 |
| n-Propylbenzene | 103-65-1 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 6.55 | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 04/24/10 00:22 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/24/10 00:22 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | | ug/L | 04/24/10 00:22 | | 1 |

Project: Standard List of Methods

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-33** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-029** | Date Collected: **Apr-15-10 11:50** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-23-10 19:10 Tech: CYE

Seq Number: 804067

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 223 | 25.0 | | ug/L | 04/24/10 01:06 | D | 5 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| MTBE | 1634-04-4 | 61.9 | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/24/10 00:44 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/24/10 00:44 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| isopropylbenzene | 98-82-8 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007767

XENCO Laboratories

# Certificate of Analytical Results 369409

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-33** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-029** | Date Collected: **Apr-15-10 11:50** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-23-10 19:10 Tech: CYE

Seq Number: 804067

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 04/24/10 00:44 | | 1 |
| n-Propylbenzene | 103-65-1 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 04/24/10 00:44 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/24/10 00:44 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | | ug/L | 04/24/10 00:44 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007768

XENCO Laboratories

# Certificate of Analytical Results 369409

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-39** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-030** | Date Collected: **Apr-15-10 12:00** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-23-10 19:14 Tech: CYE

Seq Number: 804067

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 65.9 | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| MTBE | 1634-04-4 | 36.7 | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| n-Butylbenzene | 104-51-8 | 8.38 | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/24/10 01:28 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/24/10 01:28 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| isopropylbenzene | 98-82-8 | 13.3 | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007769

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-39** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-030** | Date Collected: **Apr-15-10 12:00** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-23-10 19:14 Tech: CYE

Seq Number: 804067

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 04/24/10 01:28 | | 1 |
| n-Propylbenzene | 103-65-1 | 21.1 | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 12.7 | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 04/24/10 01:28 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/24/10 01:28 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | | ug/L | 04/24/10 01:28 | | 1 |

Project: Standard List of Methods

XENCO Laboratories

# Certificate of Analytical Results 369409

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-35** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-031** | Date Collected: **Apr-15-10 12:10** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-26-10 13:56 Tech: CYE

Seq Number: 804058

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 765 | 50.0 | | ug/L | 04/26/10 16:30 | D | 10 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| MTBE | 1634-04-4 | 97.4 | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/26/10 16:08 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/26/10 16:08 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| isopropylbenzene | 98-82-8 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007771

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-35** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-031** | Date Collected: **Apr-15-10 12:10** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-26-10 13:56 Tech: CYE

Seq Number: 804058

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 04/26/10 16:08 | | 1 |
| n-Propylbenzene | 103-65-1 | 5.87 | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| Toluene | 108-88-3 | 9.78 | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 04/26/10 16:08 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/26/10 16:08 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | | ug/L | 04/26/10 16:08 | | 1 |

Project: Standard List of Methods

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

Sample Id: **MW-38** Matrix: **Water** % Moisture:

Lab Sample Id: **369409-032** Date Collected: **Apr-15-10 12:20**

Date Received: **Apr-16-10 09:00**

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-26-10 13:48 Tech: CYE

Seq Number: 804058

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| MTBE | 1634-04-4 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/26/10 14:39 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/26/10 14:39 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| isopropylbenzene | 98-82-8 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007773

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-38** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-032** | Date Collected: **Apr-15-10 12:20** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-26-10 13:48 Tech: CYE

Seq Number: 804058

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 04/26/10 14:39 | | 1 |
| n-Propylbenzene | 103-65-1 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 04/26/10 14:39 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/26/10 14:39 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | | ug/L | 04/26/10 14:39 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007774

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-18** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-033** | Date Collected: **Apr-15-10 12:30** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-26-10 13:50 Tech: CYE

Seq Number: 804058

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 36.6 | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| MTBE | 1634-04-4 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/26/10 15:02 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/26/10 15:02 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| Ethylbenzene | 100-41-4 | 13.3 | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| isopropylbenzene | 98-82-8 | 51.7 | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007775

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-18** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-033** | Date Collected: **Apr-15-10 12:30** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-26-10 13:50 Tech: CYE

Seq Number: 804058

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 04/26/10 15:02 | | 1 |
| n-Propylbenzene | 103-65-1 | 35.9 | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| Toluene | 108-88-3 | 5.08 | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 50.2 | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| o-Xylene | 95-47-6 | 5.10 | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |
| m,p-Xylenes | 179601-23-1 | 11.8 | 10.0 | | ug/L | 04/26/10 15:02 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/26/10 15:02 | | 1 |
| Total Xylenes | 1330-20-7 | 16.9 | 5.00 | | ug/L | 04/26/10 15:02 | | 1 |

Project: Standard List of Methods

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **Trip Blank** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-034** | Date Collected: **Apr-15-10 00:00** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-26-10 13:52 Tech: CYE

Seq Number: 804058

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| MTBE | 1634-04-4 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/26/10 15:24 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/26/10 15:24 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| isopropylbenzene | 98-82-8 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007777

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **Trip Blank** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-034** | Date Collected: **Apr-15-10 00:00** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-26-10 13:52 Tech: CYE

Seq Number: 804058

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 04/26/10 15:24 | | 1 |
| n-Propylbenzene | 103-65-1 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 04/26/10 15:24 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/26/10 15:24 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | | ug/L | 04/26/10 15:24 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007778

XENCO Laboratories

# Certificate of Analytical Results 369409

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **Field Blank** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-035** | Date Collected: **Apr-15-10 07:00** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-26-10 13:54 Tech: CYE

Seq Number: 804058

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| MTBE | 1634-04-4 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 04/26/10 15:46 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 04/26/10 15:46 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| isopropylbenzene | 98-82-8 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007779

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **Field Blank** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **369409-035** | Date Collected: **Apr-15-10 07:00** | |
| | Date Received: **Apr-16-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: CYE Date Prep: Apr-26-10 13:54 Tech: CYE

Seq Number: 804058

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 04/26/10 15:46 | | 1 |
| n-Propylbenzene | 103-65-1 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 04/26/10 15:46 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 04/26/10 15:46 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | | ug/L | 04/26/10 15:46 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007780

XENCO Laboratories

# XENCO
# CHRONOLOGY OF HOLDING TIMES

Analytical Method : VOAs by SW-846 8260 Client : Sovereign Consulting, Inc. (N

Work Order #: 369409 Project ID: EQ24

| Field Sample ID | Date Collected | Date Received | Date Extracted | Max Holding Time Extracted (Days) | Time Held Extracted (Days) | Date Analyzed | Max Holding Time Analyzed (Days) | Time Held Analyzed (Days) | Q |
|---|---|---|---|---|---|---|---|---|---|
| MW-8 | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.22, 2010 | 14 | 7 | P |
| Field Blank | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.26, 2010 | 14 | 11 | P |
| MW-43 | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.23, 2010 | 14 | 8 | P |
| TRW-2 | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.23, 2010 | 14 | 8 | P |
| MW-21R | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.22, 2010 | 14 | 7 | P |
| MW-28 | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.22, 2010 | 14 | 7 | P |
| MW-7R | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.22, 2010 | 14 | 7 | P |
| MW-9 | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.22, 2010 | 14 | 7 | P |
| MW-42 | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.23, 2010 | 14 | 8 | P |
| MW-20 | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.23, 2010 | 14 | 8 | P |
| MW-15 | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.23, 2010 | 14 | 8 | P |
| MW-16 | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.26, 2010 | 14 | 11 | P |
| MW-18 | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.26, 2010 | 14 | 11 | P |
| MW-29 | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.21, 2010 | 14 | 6 | P |
| MW-27 | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.22, 2010 | 14 | 7 | P |
| MW-6 | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.22, 2010 | 14 | 7 | P |
| MW-30 | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.23, 2010 | 14 | 8 | P |
| MW-35 | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.26, 2010 | 14 | 11 | P |
| MW-1 | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.20, 2010 | 14 | 5 | P |
| MW-44 | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.23, 2010 | 14 | 8 | P |
| MW-3 | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.21, 2010 | 14 | 6 | P |
| MW-13 | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.22, 2010 | 14 | 7 | P |
| MW-23 | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.22, 2010 | 14 | 7 | P |
| MW-17 | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.23, 2010 | 14 | 8 | P |
| MW-19 | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.24, 2010 | 14 | 9 | P |
| MW-32 | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.24, 2010 | 14 | 9 | P |
| MW-33 | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.24, 2010 | 14 | 9 | P |
| MW-39 | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.24, 2010 | 14 | 9 | P |
| MW-5 | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.22, 2010 | 14 | 7 | P |
| MW-24 | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.22, 2010 | 14 | 7 | P |



Shell/Motiva 0007781

XENCO Laboratories

# XENCO
# CHRONOLOGY OF HOLDING TIMES

Analytical Method : VOAs by SW-846 8260

Sovereign Consulting, Inc. (N

Work Order #: 369409

Project ID: EQ24

| Field Sample ID | Date Collected | Date Received | Date Extracted | Max Holding Time Extracted (Days) | Time Held Extracted (Days) | Date Analyzed | Max Holding Time Analyzed (Days) | | Q |
|---|---|---|---|---|---|---|---|---|---|
| Trip Blank | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.26, 2010 | 14 | 11 | P |
| MW-22R | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.22, 2010 | 14 | 7 | P |
| MW-25 | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.23, 2010 | 14 | 8 | P |
| MW-38 | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.26, 2010 | 14 | 11 | P |
| MW-14 | Apr. 15, 2010 | Apr. 16, 2010 | | | | Apr.22, 2010 | 14 | 7 | P |

F = These samples were analyzed outside the recommended holding time.
P = Samples analyzed within the recommended holding time.



Shell/Motiva 0007782

# Flagging Criteria



**X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

**B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

**D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

**E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

**F** RPD exceeded lab control limits.

**J** The target analyte was positively identified below the MQL and above the SQL.

**U** Analyte was not detected.

**L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

**H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

**K** Sample analyzed outside of recommended hold time.

**JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

# Form 2 - Surrogate Recoveries

## Project Name: 25 Paidge Avenue

**Work Orders :** 369409,

**Project ID:** EQ24

**Lab Batch #:** 803446 **Sample:** 561312-1-BKS / BKS **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/20/10 19:44

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0511 | 0.0500 | 102 | 74-124 | |
| Dibromofluoromethane | 0.0497 | 0.0500 | 99 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0469 | 0.0500 | 94 | 63-144 | |
| Toluene-D8 | 0.0507 | 0.0500 | 101 | 80-117 | |

**Lab Batch #:** 803446 **Sample:** 561312-1-BLK / BLK **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/20/10 20:28

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0513 | 0.0500 | 103 | 74-124 | |
| Dibromofluoromethane | 0.0498 | 0.0500 | 100 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0472 | 0.0500 | 94 | 63-144 | |
| Toluene-D8 | 0.0478 | 0.0500 | 96 | 80-117 | |

**Lab Batch #:** 803446 **Sample:** 369409-001 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/20/10 20:50

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0501 | 0.0500 | 100 | 74-124 | |
| Dibromofluoromethane | 0.0492 | 0.0500 | 98 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0497 | 0.0500 | 99 | 63-144 | |
| Toluene-D8 | 0.0491 | 0.0500 | 98 | 80-117 | |

**Lab Batch #:** 803446 **Sample:** 369409-001 S / MS **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/20/10 21:11

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0519 | 0.0500 | 104 | 74-124 | |
| Dibromofluoromethane | 0.0523 | 0.0500 | 105 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0496 | 0.0500 | 99 | 63-144 | |
| Toluene-D8 | 0.0491 | 0.0500 | 98 | 80-117 | |

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.



Shell/Motiva 0007784

XENCO Laboratories

# Form 2 - Surrogate Recoveries

## Project Name: 25 Paidge Avenue

**Work Orders :** 369409,

**Project ID:** EQ24

**Lab Batch #:** 803446 **Sample:** 369409-001 SD / MSD **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/20/10 21:32

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0504 | 0.0500 | 101 | 74-124 | |
| Dibromofluoromethane | 0.0535 | 0.0500 | 107 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0491 | 0.0500 | 98 | 63-144 | |
| Toluene-D8 | 0.0490 | 0.0500 | 98 | 80-117 | |

**Lab Batch #:** 803446 **Sample:** 369409-002 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/21/10 05:05

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0512 | 0.0500 | 102 | 74-124 | |
| Dibromofluoromethane | 0.0512 | 0.0500 | 102 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0490 | 0.0500 | 98 | 63-144 | |
| Toluene-D8 | 0.0483 | 0.0500 | 97 | 80-117 | |

**Lab Batch #:** 803645 **Sample:** 561445-1-BKS / BKS **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/21/10 10:43

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0514 | 0.0500 | 103 | 74-124 | |
| Dibromofluoromethane | 0.0482 | 0.0500 | 96 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0458 | 0.0500 | 92 | 63-144 | |
| Toluene-D8 | 0.0522 | 0.0500 | 104 | 80-117 | |

**Lab Batch #:** 803645 **Sample:** 561445-1-BLK / BLK **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/21/10 11:27

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0517 | 0.0500 | 103 | 74-124 | |
| Dibromofluoromethane | 0.0495 | 0.0500 | 99 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0492 | 0.0500 | 98 | 63-144 | |
| Toluene-D8 | 0.0483 | 0.0500 | 97 | 80-117 | |

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.



Shell/Motiva 0007785

XENCO Laboratories

# Form 2 - Surrogate Recoveries

## Project Name: 25 Paidge Avenue

**Work Orders :** 369409,

**Project ID:** EQ24

**Lab Batch #:** 803645 **Sample:** 369409-003 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/21/10 13:58

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0533 | 0.0500 | 107 | 74-124 | |
| Dibromofluoromethane | 0.0487 | 0.0500 | 97 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0457 | 0.0500 | 91 | 63-144 | |
| Toluene-D8 | 0.0494 | 0.0500 | 99 | 80-117 | |

**Lab Batch #:** 803645 **Sample:** 369409-003 S / MS **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/21/10 14:20

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0522 | 0.0500 | 104 | 74-124 | |
| Dibromofluoromethane | 0.0526 | 0.0500 | 105 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0489 | 0.0500 | 98 | 63-144 | |
| Toluene-D8 | 0.0502 | 0.0500 | 100 | 80-117 | |

**Lab Batch #:** 803645 **Sample:** 369409-003 SD / MSD **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/21/10 14:42

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0515 | 0.0500 | 103 | 74-124 | |
| Dibromofluoromethane | 0.0529 | 0.0500 | 106 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0481 | 0.0500 | 96 | 63-144 | |
| Toluene-D8 | 0.0496 | 0.0500 | 99 | 80-117 | |

**Lab Batch #:** 803828 **Sample:** 561560-1-BKS / BKS **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/22/10 15:08

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0494 | 0.0500 | 99 | 74-124 | |
| Dibromofluoromethane | 0.0516 | 0.0500 | 103 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0482 | 0.0500 | 96 | 63-144 | |
| Toluene-D8 | 0.0503 | 0.0500 | 101 | 80-117 | |

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.



Shell/Motiva 0007786

XENCO Laboratories

# Form 2 - Surrogate Recoveries

## Project Name: 25 Paidge Avenue

**Work Orders :** 369409,

**Project ID:** EQ24

**Lab Batch #:** 803828 **Sample:** 561560-1-BLK / BLK **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/22/10 15:52

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0545 | 0.0500 | 109 | 74-124 | |
| Dibromofluoromethane | 0.0503 | 0.0500 | 101 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0510 | 0.0500 | 102 | 63-144 | |
| Toluene-D8 | 0.0495 | 0.0500 | 99 | 80-117 | |

**Lab Batch #:** 803828 **Sample:** 369409-004 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/22/10 16:14

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0513 | 0.0500 | 103 | 74-124 | |
| Dibromofluoromethane | 0.0494 | 0.0500 | 99 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0485 | 0.0500 | 97 | 63-144 | |
| Toluene-D8 | 0.0504 | 0.0500 | 101 | 80-117 | |

**Lab Batch #:** 803828 **Sample:** 369409-004 S / MS **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/22/10 16:36

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0495 | 0.0500 | 99 | 74-124 | |
| Dibromofluoromethane | 0.0523 | 0.0500 | 105 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0533 | 0.0500 | 107 | 63-144 | |
| Toluene-D8 | 0.0512 | 0.0500 | 102 | 80-117 | |

**Lab Batch #:** 803828 **Sample:** 369409-004 SD / MSD **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/22/10 16:58

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0510 | 0.0500 | 102 | 74-124 | |
| Dibromofluoromethane | 0.0519 | 0.0500 | 104 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0537 | 0.0500 | 107 | 63-144 | |
| Toluene-D8 | 0.0492 | 0.0500 | 98 | 80-117 | |

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.



Shell/Motiva 0007787

XENCO Laboratories

# Form 2 - Surrogate Recoveries

## Project Name: 25 Paidge Avenue

**Work Orders :** 369409,

**Project ID:** EQ24

**Lab Batch #:** 803828 **Sample:** 369409-005 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/22/10 19:33

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.0501 | 0.0500 | 100 | 74-124 | |
| Dibromofluoromethane | 0.0513 | 0.0500 | 103 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0519 | 0.0500 | 104 | 63-144 | |
| Toluene-D8 | 0.0507 | 0.0500 | 101 | 80-117 | |

**Lab Batch #:** 803828 **Sample:** 369409-006 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/22/10 19:55

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.0513 | 0.0500 | 103 | 74-124 | |
| Dibromofluoromethane | 0.0512 | 0.0500 | 102 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0534 | 0.0500 | 107 | 63-144 | |
| Toluene-D8 | 0.0495 | 0.0500 | 99 | 80-117 | |

**Lab Batch #:** 803828 **Sample:** 369409-007 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/22/10 20:17

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.0510 | 0.0500 | 102 | 74-124 | |
| Dibromofluoromethane | 0.0474 | 0.0500 | 95 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0539 | 0.0500 | 108 | 63-144 | |
| Toluene-D8 | 0.0486 | 0.0500 | 97 | 80-117 | |

**Lab Batch #:** 803828 **Sample:** 369409-008 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/22/10 20:39

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.0519 | 0.0500 | 104 | 74-124 | |
| Dibromofluoromethane | 0.0490 | 0.0500 | 98 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0541 | 0.0500 | 108 | 63-144 | |
| Toluene-D8 | 0.0528 | 0.0500 | 106 | 80-117 | |

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.



Shell/Motiva 0007788

XENCO Laboratories

# Form 2 - Surrogate Recoveries

## Project Name: 25 Paidge Avenue

**Work Orders :** 369409,

**Project ID:** EQ24

**Lab Batch #:** 803828 **Sample:** 369409-009 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/22/10 21:01

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0512 | 0.0500 | 102 | 74-124 | |
| Dibromofluoromethane | 0.0528 | 0.0500 | 106 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0492 | 0.0500 | 98 | 63-144 | |
| Toluene-D8 | 0.0509 | 0.0500 | 102 | 80-117 | |

**Lab Batch #:** 803828 **Sample:** 369409-010 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/22/10 21:23

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0513 | 0.0500 | 103 | 74-124 | |
| Dibromofluoromethane | 0.0482 | 0.0500 | 96 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0499 | 0.0500 | 100 | 63-144 | |
| Toluene-D8 | 0.0502 | 0.0500 | 100 | 80-117 | |

**Lab Batch #:** 803828 **Sample:** 369409-011 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/22/10 21:45

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0547 | 0.0500 | 109 | 74-124 | |
| Dibromofluoromethane | 0.0504 | 0.0500 | 101 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0485 | 0.0500 | 97 | 63-144 | |
| Toluene-D8 | 0.0527 | 0.0500 | 105 | 80-117 | |

**Lab Batch #:** 803828 **Sample:** 369409-012 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/22/10 22:07

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0536 | 0.0500 | 107 | 74-124 | |
| Dibromofluoromethane | 0.0488 | 0.0500 | 98 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0491 | 0.0500 | 98 | 63-144 | |
| Toluene-D8 | 0.0524 | 0.0500 | 105 | 80-117 | |

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.



Shell/Motiva 0007789

XENCO Laboratories

# Form 2 - Surrogate Recoveries

## Project Name: 25 Paidge Avenue

**Work Orders :** 369409,

**Project ID:** EQ24

**Lab Batch #:** 803828 **Sample:** 369409-013 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/22/10 22:51

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0537 | 0.0500 | 107 | 74-124 | |
| Dibromofluoromethane | 0.0504 | 0.0500 | 101 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0491 | 0.0500 | 98 | 63-144 | |
| Toluene-D8 | 0.0505 | 0.0500 | 101 | 80-117 | |

**Lab Batch #:** 803828 **Sample:** 369409-014 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/22/10 23:13

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0528 | 0.0500 | 106 | 74-124 | |
| Dibromofluoromethane | 0.0503 | 0.0500 | 101 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0485 | 0.0500 | 97 | 63-144 | |
| Toluene-D8 | 0.0508 | 0.0500 | 102 | 80-117 | |

**Lab Batch #:** 803828 **Sample:** 369409-015 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/22/10 23:35

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0530 | 0.0500 | 106 | 74-124 | |
| Dibromofluoromethane | 0.0507 | 0.0500 | 101 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0498 | 0.0500 | 100 | 63-144 | |
| Toluene-D8 | 0.0494 | 0.0500 | 99 | 80-117 | |

**Lab Batch #:** 803828 **Sample:** 369409-016 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/22/10 23:57

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0525 | 0.0500 | 105 | 74-124 | |
| Dibromofluoromethane | 0.0492 | 0.0500 | 98 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0502 | 0.0500 | 100 | 63-144 | |
| Toluene-D8 | 0.0512 | 0.0500 | 102 | 80-117 | |

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.



Shell/Motiva 0007790

XENCO Laboratories

# Form 2 - Surrogate Recoveries

## Project Name: 25 Paidge Avenue

**Work Orders :** 369409,

**Project ID:** EQ24

**Lab Batch #:** 804058 **Sample:** 561728-1-BKS / BKS **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/26/10 11:40

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0514 | 0.0500 | 103 | 74-124 | |
| Dibromofluoromethane | 0.0497 | 0.0500 | 99 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0495 | 0.0500 | 99 | 63-144 | |
| Toluene-D8 | 0.0481 | 0.0500 | 96 | 80-117 | |

**Lab Batch #:** 804058 **Sample:** 561728-1-BLK / BLK **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/26/10 12:23

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0494 | 0.0500 | 99 | 74-124 | |
| Dibromofluoromethane | 0.0505 | 0.0500 | 101 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0501 | 0.0500 | 100 | 63-144 | |
| Toluene-D8 | 0.0477 | 0.0500 | 95 | 80-117 | |

**Lab Batch #:** 804058 **Sample:** 369409-025 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/26/10 13:11

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0498 | 0.0500 | 100 | 74-124 | |
| Dibromofluoromethane | 0.0485 | 0.0500 | 97 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0479 | 0.0500 | 96 | 63-144 | |
| Toluene-D8 | 0.0485 | 0.0500 | 97 | 80-117 | |

**Lab Batch #:** 804058 **Sample:** 369409-025 S / MS **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/26/10 13:33

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0496 | 0.0500 | 99 | 74-124 | |
| Dibromofluoromethane | 0.0492 | 0.0500 | 98 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0505 | 0.0500 | 101 | 63-144 | |
| Toluene-D8 | 0.0479 | 0.0500 | 96 | 80-117 | |

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.



Shell/Motiva 0007791

XENCO Laboratories

# Form 2 - Surrogate Recoveries

## Project Name: 25 Paidge Avenue

**Work Orders :** 369409,

**Project ID:** EQ24

**Lab Batch #:** 804058 **Sample:** 369409-025 SD / MSD **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/26/10 13:55

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0500 | 0.0500 | 100 | 74-124 | |
| Dibromofluoromethane | 0.0513 | 0.0500 | 103 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0497 | 0.0500 | 99 | 63-144 | |
| Toluene-D8 | 0.0485 | 0.0500 | 97 | 80-117 | |

**Lab Batch #:** 804058 **Sample:** 369409-032 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/26/10 14:39

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0490 | 0.0500 | 98 | 74-124 | |
| Dibromofluoromethane | 0.0509 | 0.0500 | 102 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0507 | 0.0500 | 101 | 63-144 | |
| Toluene-D8 | 0.0483 | 0.0500 | 97 | 80-117 | |

**Lab Batch #:** 804058 **Sample:** 369409-033 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/26/10 15:02

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0516 | 0.0500 | 103 | 74-124 | |
| Dibromofluoromethane | 0.0501 | 0.0500 | 100 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0503 | 0.0500 | 101 | 63-144 | |
| Toluene-D8 | 0.0503 | 0.0500 | 101 | 80-117 | |

**Lab Batch #:** 804058 **Sample:** 369409-034 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/26/10 15:24

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0509 | 0.0500 | 102 | 74-124 | |
| Dibromofluoromethane | 0.0513 | 0.0500 | 103 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0496 | 0.0500 | 99 | 63-144 | |
| Toluene-D8 | 0.0404 | 0.0500 | 81 | 80-117 | |

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.



Shell/Motiva 0007792

XENCO Laboratories

# Form 2 - Surrogate Recoveries

## Project Name: 25 Paidge Avenue

**Work Orders :** 369409,

**Project ID:** EQ24

**Lab Batch #:** 804058 **Sample:** 369409-035 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/26/10 15:46

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.0489 | 0.0500 | 98 | 74-124 | |
| Dibromofluoromethane | 0.0499 | 0.0500 | 100 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0501 | 0.0500 | 100 | 63-144 | |
| Toluene-D8 | 0.0442 | 0.0500 | 88 | 80-117 | |

**Lab Batch #:** 804058 **Sample:** 369409-031 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/26/10 16:08

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.0470 | 0.0500 | 94 | 74-124 | |
| Dibromofluoromethane | 0.0497 | 0.0500 | 99 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0512 | 0.0500 | 102 | 63-144 | |
| Toluene-D8 | 0.0502 | 0.0500 | 100 | 80-117 | |

**Lab Batch #:** 804058 **Sample:** 369409-031 / DL **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/26/10 16:30

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.0496 | 0.0500 | 99 | 74-124 | |
| Dibromofluoromethane | 0.0531 | 0.0500 | 106 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0499 | 0.0500 | 100 | 63-144 | |
| Toluene-D8 | 0.0485 | 0.0500 | 97 | 80-117 | |

**Lab Batch #:** 804058 **Sample:** 369409-024 / DL **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/26/10 16:56

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.0497 | 0.0500 | 99 | 74-124 | |
| Dibromofluoromethane | 0.0505 | 0.0500 | 101 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0511 | 0.0500 | 102 | 63-144 | |
| Toluene-D8 | 0.0501 | 0.0500 | 100 | 80-117 | |

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.



Shell/Motiva 0007793

XENCO Laboratories

# Form 2 - Surrogate Recoveries

## Project Name: 25 Paidge Avenue

**Work Orders :** 369409,

**Project ID:** EQ24

**Lab Batch #:** 804067 **Sample:** 561731-1-BKS / BKS **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/23/10 16:17

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0504 | 0.0500 | 101 | 74-124 | |
| Dibromofluoromethane | 0.0504 | 0.0500 | 101 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0491 | 0.0500 | 98 | 63-144 | |
| Toluene-D8 | 0.0509 | 0.0500 | 102 | 80-117 | |

**Lab Batch #:** 804067 **Sample:** 561731-1-BLK / BLK **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/23/10 17:01

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0503 | 0.0500 | 101 | 74-124 | |
| Dibromofluoromethane | 0.0490 | 0.0500 | 98 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0527 | 0.0500 | 105 | 63-144 | |
| Toluene-D8 | 0.0495 | 0.0500 | 99 | 80-117 | |

**Lab Batch #:** 804067 **Sample:** 369409-017 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/23/10 17:23

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0489 | 0.0500 | 98 | 74-124 | |
| Dibromofluoromethane | 0.0496 | 0.0500 | 99 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0504 | 0.0500 | 101 | 63-144 | |
| Toluene-D8 | 0.0503 | 0.0500 | 101 | 80-117 | |

**Lab Batch #:** 804067 **Sample:** 369409-017 S / MS **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/23/10 17:45

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0490 | 0.0500 | 98 | 74-124 | |
| Dibromofluoromethane | 0.0505 | 0.0500 | 101 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0474 | 0.0500 | 95 | 63-144 | |
| Toluene-D8 | 0.0490 | 0.0500 | 98 | 80-117 | |

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.



Shell/Motiva 0007794

XENCO Laboratories

# Form 2 - Surrogate Recoveries

## Project Name: 25 Paidge Avenue

**Work Orders :** 369409,

**Project ID:** EQ24

**Lab Batch #:** 804067 **Sample:** 369409-017 SD / MSD **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/23/10 18:07

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0483 | 0.0500 | 97 | 74-124 | |
| Dibromofluoromethane | 0.0505 | 0.0500 | 101 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0512 | 0.0500 | 102 | 63-144 | |
| Toluene-D8 | 0.0502 | 0.0500 | 100 | 80-117 | |

**Lab Batch #:** 804067 **Sample:** 369409-012 / DL **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/23/10 19:36

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0504 | 0.0500 | 101 | 74-124 | |
| Dibromofluoromethane | 0.0501 | 0.0500 | 100 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0488 | 0.0500 | 98 | 63-144 | |
| Toluene-D8 | 0.0491 | 0.0500 | 98 | 80-117 | |

**Lab Batch #:** 804067 **Sample:** 369409-012 / DL **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/23/10 19:58

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0510 | 0.0500 | 102 | 74-124 | |
| Dibromofluoromethane | 0.0503 | 0.0500 | 101 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0496 | 0.0500 | 99 | 63-144 | |
| Toluene-D8 | 0.0497 | 0.0500 | 99 | 80-117 | |

**Lab Batch #:** 804067 **Sample:** 369409-018 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/23/10 20:20

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0496 | 0.0500 | 99 | 74-124 | |
| Dibromofluoromethane | 0.0481 | 0.0500 | 96 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0503 | 0.0500 | 101 | 63-144 | |
| Toluene-D8 | 0.0498 | 0.0500 | 100 | 80-117 | |

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.



Shell/Motiva 0007795

XENCO Laboratories

# Form 2 - Surrogate Recoveries

## Project Name: 25 Paidge Avenue

**Work Orders :** 369409,

**Project ID:** EQ24

**Lab Batch #:** 804067 **Sample:** 369409-019 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/23/10 20:42

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0500 | 0.0500 | 100 | 74-124 | |
| Dibromofluoromethane | 0.0480 | 0.0500 | 96 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0495 | 0.0500 | 99 | 63-144 | |
| Toluene-D8 | 0.0491 | 0.0500 | 98 | 80-117 | |

**Lab Batch #:** 804067 **Sample:** 369409-020 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/23/10 21:04

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0490 | 0.0500 | 98 | 74-124 | |
| Dibromofluoromethane | 0.0484 | 0.0500 | 97 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0509 | 0.0500 | 102 | 63-144 | |
| Toluene-D8 | 0.0503 | 0.0500 | 101 | 80-117 | |

**Lab Batch #:** 804067 **Sample:** 369409-021 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/23/10 21:26

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0497 | 0.0500 | 99 | 74-124 | |
| Dibromofluoromethane | 0.0504 | 0.0500 | 101 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0514 | 0.0500 | 103 | 63-144 | |
| Toluene-D8 | 0.0498 | 0.0500 | 100 | 80-117 | |

**Lab Batch #:** 804067 **Sample:** 369409-022 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/23/10 21:48

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0497 | 0.0500 | 99 | 74-124 | |
| Dibromofluoromethane | 0.0490 | 0.0500 | 98 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0510 | 0.0500 | 102 | 63-144 | |
| Toluene-D8 | 0.0502 | 0.0500 | 100 | 80-117 | |

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.



Shell/Motiva 0007796

XENCO Laboratories

# Form 2 - Surrogate Recoveries

## Project Name: 25 Paidge Avenue

**Work Orders :** 369409,

**Project ID:** EQ24

**Lab Batch #:** 804067 **Sample:** 369409-023 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/23/10 22:09

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0466 | 0.0500 | 93 | 74-124 | |
| Dibromofluoromethane | 0.0503 | 0.0500 | 101 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0497 | 0.0500 | 99 | 63-144 | |
| Toluene-D8 | 0.0513 | 0.0500 | 103 | 80-117 | |

**Lab Batch #:** 804067 **Sample:** 369409-023 / DL **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/23/10 22:32

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0490 | 0.0500 | 98 | 74-124 | |
| Dibromofluoromethane | 0.0516 | 0.0500 | 103 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0545 | 0.0500 | 109 | 63-144 | |
| Toluene-D8 | 0.0496 | 0.0500 | 99 | 80-117 | |

**Lab Batch #:** 804067 **Sample:** 369409-024 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/23/10 22:54

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0551 | 0.0500 | 110 | 74-124 | |
| Dibromofluoromethane | 0.0452 | 0.0500 | 90 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0473 | 0.0500 | 95 | 63-144 | |
| Toluene-D8 | 0.0564 | 0.0500 | 113 | 80-117 | |

**Lab Batch #:** 804067 **Sample:** 369409-026 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/23/10 23:38

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0500 | 0.0500 | 100 | 74-124 | |
| Dibromofluoromethane | 0.0497 | 0.0500 | 99 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0490 | 0.0500 | 98 | 63-144 | |
| Toluene-D8 | 0.0505 | 0.0500 | 101 | 80-117 | |

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.



Shell/Motiva 0007797

XENCO Laboratories

# Form 2 - Surrogate Recoveries

## Project Name: 25 Paidge Avenue

**Work Orders :** 369409,

**Project ID:** EQ24

**Lab Batch #:** 804067 **Sample:** 369409-027 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/24/10 00:00

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0492 | 0.0500 | 98 | 74-124 | |
| Dibromofluoromethane | 0.0491 | 0.0500 | 98 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0500 | 0.0500 | 100 | 63-144 | |
| Toluene-D8 | 0.0495 | 0.0500 | 99 | 80-117 | |

**Lab Batch #:** 804067 **Sample:** 369409-028 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/24/10 00:22

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0498 | 0.0500 | 100 | 74-124 | |
| Dibromofluoromethane | 0.0494 | 0.0500 | 99 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0508 | 0.0500 | 102 | 63-144 | |
| Toluene-D8 | 0.0501 | 0.0500 | 100 | 80-117 | |

**Lab Batch #:** 804067 **Sample:** 369409-029 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/24/10 00:44

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0505 | 0.0500 | 101 | 74-124 | |
| Dibromofluoromethane | 0.0482 | 0.0500 | 96 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0488 | 0.0500 | 98 | 63-144 | |
| Toluene-D8 | 0.0504 | 0.0500 | 101 | 80-117 | |

**Lab Batch #:** 804067 **Sample:** 369409-029 / DL **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/24/10 01:06

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0492 | 0.0500 | 98 | 74-124 | |
| Dibromofluoromethane | 0.0502 | 0.0500 | 100 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0531 | 0.0500 | 106 | 63-144 | |
| Toluene-D8 | 0.0489 | 0.0500 | 98 | 80-117 | |

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.



Shell/Motiva 0007798

XENCO Laboratories

# Form 2 - Surrogate Recoveries

## Project Name: 25 Paidge Avenue

**Work Orders :** 369409,

**Project ID:** EQ24

**Lab Batch #:** 804067 **Sample:** 369409-030 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/24/10 01:28

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0505 | 0.0500 | 101 | 74-124 | |
| Dibromofluoromethane | 0.0498 | 0.0500 | 100 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0506 | 0.0500 | 101 | 63-144 | |
| Toluene-D8 | 0.0528 | 0.0500 | 106 | 80-117 | |

**Lab Batch #:** 804536 **Sample:** 561998-1-BKS / BKS **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/28/10 11:02

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0506 | 0.0500 | 101 | 74-124 | |
| Dibromofluoromethane | 0.0522 | 0.0500 | 104 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0514 | 0.0500 | 103 | 63-144 | |
| Toluene-D8 | 0.0498 | 0.0500 | 100 | 80-117 | |

**Lab Batch #:** 804536 **Sample:** 561998-1-BLK / BLK **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/28/10 13:13

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0500 | 0.0500 | 100 | 74-124 | |
| Dibromofluoromethane | 0.0468 | 0.0500 | 94 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0492 | 0.0500 | 98 | 63-144 | |
| Toluene-D8 | 0.0507 | 0.0500 | 101 | 80-117 | |

**Lab Batch #:** 804536 **Sample:** 370094-006 S / MS **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/28/10 14:24

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0495 | 0.0500 | 99 | 74-124 | |
| Dibromofluoromethane | 0.0506 | 0.0500 | 101 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0525 | 0.0500 | 105 | 63-144 | |
| Toluene-D8 | 0.0497 | 0.0500 | 99 | 80-117 | |

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.



Shell/Motiva 0007799

XENCO Laboratories

# Form 2 - Surrogate Recoveries

## Project Name: 25 Paidge Avenue

**Work Orders :** 369409,

**Project ID:** EQ24

**Lab Batch #:** 804536 **Sample:** 370094-006 SD / MSD **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/28/10 14:46

| VOAs by SW-846 8260 | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.0513 | 0.0500 | 103 | 74-124 | |
| Dibromofluoromethane | 0.0501 | 0.0500 | 100 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0485 | 0.0500 | 97 | 63-144 | |
| Toluene-D8 | 0.0510 | 0.0500 | 102 | 80-117 | |

**Lab Batch #:** 804536 **Sample:** 369409-024 / DL **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/28/10 15:08

| VOAs by SW-846 8260 | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.0495 | 0.0500 | 99 | 74-124 | |
| Dibromofluoromethane | 0.0519 | 0.0500 | 104 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0525 | 0.0500 | 105 | 63-144 | |
| Toluene-D8 | 0.0503 | 0.0500 | 101 | 80-117 | |

**Lab Batch #:** 804536 **Sample:** 369409-024 / DL **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 04/28/10 15:30

| VOAs by SW-846 8260 | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.0484 | 0.0500 | 97 | 74-124 | |
| Dibromofluoromethane | 0.0508 | 0.0500 | 102 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0515 | 0.0500 | 103 | 63-144 | |
| Toluene-D8 | 0.0509 | 0.0500 | 102 | 80-117 | |

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.



Shell/Motiva 0007800

XENCO Laboratories

# Blank Spike Recovery

## Project Name: 25 Paidge Avenue

**Work Order #:** 369409 **Project ID:** EQ24

**Lab Batch #:** 803446 **Sample:** 561312-1-BKS **Matrix:** Water

**Date Analyzed:** 04/20/2010 **Date Prepared:** 04/20/2010 **Analyst:** CYE

**Reporting Units:** ug/L **Batch #:** 1

| | | BLANK /BLANK SPIKE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|---|
| **VOAs by SW-846 8260 Analytes** | **Blank Result [A]** | **Spike Added [B]** | **Blank Spike Result [C]** | **Blank Spike %R [D]** | **Control Limits %R** | **Flags** |
| Benzene | <5.00 | 50.0 | 43.3 | 87 | 66-142 | |
| Bromobenzene | <5.00 | 50.0 | 46.7 | 93 | 75-125 | |
| Bromochloromethane | <5.00 | 50.0 | 42.9 | 86 | 73-125 | |
| Bromodichloromethane | <5.00 | 50.0 | 50.3 | 101 | 75-125 | |
| Bromoform | <5.00 | 50.0 | 44.7 | 89 | 75-125 | |
| Bromomethane | <5.00 | 50.0 | 64.1 | 128 | 70-130 | |
| MTBE | <5.00 | 50.0 | 48.3 | 97 | 65-135 | |
| n-Butylbenzene | <5.00 | 50.0 | 49.8 | 100 | 75-125 | |
| Sec-Butylbenzene | <5.00 | 50.0 | 50.3 | 101 | 75-125 | |
| tert-Butylbenzene | <5.00 | 50.0 | 50.6 | 101 | 75-125 | |
| Carbon Tetrachloride | <5.00 | 50.0 | 54.0 | 108 | 62-125 | |
| Chlorobenzene | <5.00 | 50.0 | 47.1 | 94 | 60-133 | |
| Chloroethane | <10.0 | 50.0 | 51.2 | 102 | 70-130 | |
| Chloroform | <5.00 | 50.0 | 49.7 | 99 | 74-125 | |
| Chloromethane | <10.0 | 50.0 | 46.0 | 92 | 70-130 | |
| 2-Chlorotoluene | <5.00 | 50.0 | 46.9 | 94 | 73-125 | |
| 4-Chlorotoluene | <5.00 | 50.0 | 50.3 | 101 | 74-125 | |
| p-Cymene (p-Isopropyltoluene) | <5.00 | 50.0 | 51.3 | 103 | 75-125 | |
| Dibromochloromethane | <5.00 | 50.0 | 47.7 | 95 | 73-125 | |
| 1,2-Dibromo-3-Chloropropane | <5.00 | 50.0 | 46.4 | 93 | 59-125 | |
| Dibromomethane | <5.00 | 50.0 | 44.6 | 89 | 69-127 | |
| 1,2-Dichlorobenzene | <5.00 | 50.0 | 46.1 | 92 | 75-125 | |
| 1,3-Dichlorobenzene | <5.00 | 50.0 | 48.1 | 96 | 75-125 | |
| 1,4-Dichlorobenzene | <5.00 | 50.0 | 46.4 | 93 | 75-125 | |
| Dichlorodifluoromethane | <5.00 | 50.0 | 56.7 | 113 | 70-130 | |
| 1,1-Dichloroethane | <5.00 | 50.0 | 49.9 | 100 | 72-125 | |
| 1,2-Dichloroethane | <5.00 | 50.0 | 53.2 | 106 | 68-127 | |
| 1,1-Dichloroethene | <5.00 | 50.0 | 43.4 | 87 | 59-172 | |
| cis-1,2-Dichloroethene | <5.00 | 50.0 | 42.6 | 85 | 75-125 | |
| trans-1,2-dichloroethene | <5.00 | 50.0 | 44.1 | 88 | 75-125 | |
| 1,2-Dichloropropane | <5.00 | 50.0 | 44.9 | 90 | 74-125 | |
| 1,3-Dichloropropane | <5.00 | 50.0 | 44.4 | 89 | 75-125 | |
| 2,2-Dichloropropane | <5.00 | 50.0 | 54.8 | 110 | 75-125 | |

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit



Shell/Motiva 0007801

XENCO Laboratories

# Blank Spike Recovery

## Project Name: 25 Paidge Avenue

**Work Order #:** 369409 **Project ID:** EQ24

**Lab Batch #:** 803446 **Sample:** 561312-1-BKS **Matrix:** Water

**Date Analyzed:** 04/20/2010 **Date Prepared:** 04/20/2010 **Analyst:** CYE

**Reporting Units:** ug/L **Batch #:** 1

| VOAs by SW-846 8260<br>Analytes | Blank Result [A] | BLANK /BLANK SPIKE RECOVERY STUDY<br>Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | <5.00 | 50.0 | 44.4 | 89 | 75-125 | |
| cis-1,3-Dichloropropene | <5.00 | 50.0 | 48.8 | 98 | 74-125 | |
| trans-1,3-dichloropropene | <5.00 | 50.0 | 51.5 | 103 | 66-125 | |
| Ethylbenzene | <5.00 | 50.0 | 47.6 | 95 | 75-125 | |
| Hexachlorobutadiene | <5.00 | 50.0 | 48.7 | 97 | 75-125 | |
| isopropylbenzene | <5.00 | 50.0 | 47.5 | 95 | 75-125 | |
| Methylene Chloride | <5.00 | 50.0 | 40.7 | 81 | 75-125 | |
| Naphthalene | <10.0 | 50.0 | 45.2 | 90 | 75-125 | |
| n-Propylbenzene | <5.00 | 50.0 | 49.7 | 99 | 75-125 | |
| Styrene | <5.00 | 50.0 | 46.1 | 92 | 75-125 | |
| 1,1,1,2-Tetrachloroethane | <5.00 | 50.0 | 49.8 | 100 | 72-125 | |
| 1,1,2,2-Tetrachloroethane | <5.00 | 50.0 | 44.2 | 88 | 74-125 | |
| Tetrachloroethylene | <5.00 | 50.0 | 46.6 | 93 | 71-125 | |
| Toluene | <5.00 | 50.0 | 44.4 | 89 | 59-139 | |
| 1,2,3-Trichlorobenzene | <5.00 | 50.0 | 44.4 | 89 | 75-137 | |
| 1,2,4-Trichlorobenzene | <5.00 | 50.0 | 45.7 | 91 | 75-135 | |
| 1,1,1-Trichloroethane | <5.00 | 50.0 | 52.5 | 105 | 75-125 | |
| 1,1,2-Trichloroethane | <5.00 | 50.0 | 44.9 | 90 | 75-127 | |
| Trichloroethene | <5.00 | 50.0 | 47.7 | 95 | 62-137 | |
| Trichlorofluoromethane | <5.00 | 50.0 | 62.9 | 126 | 67-125 | H |
| 1,2,3-Trichloropropane | <5.00 | 50.0 | 48.2 | 96 | 75-125 | |
| 1,2,4-Trimethylbenzene | <5.00 | 50.0 | 51.0 | 102 | 75-125 | |
| 1,3,5-Trimethylbenzene | <5.00 | 50.0 | 51.3 | 103 | 70-125 | |
| o-Xylene | <5.00 | 50.0 | 45.8 | 92 | 75-125 | |
| m,p-Xylenes | <10.0 | 100 | 92.2 | 92 | 75-125 | |
| Vinyl Chloride | <2.00 | 50.0 | 53.3 | 107 | 75-125 | |

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit



Shell/Motiva 0007802

XENCO Laboratories

# Blank Spike Recovery

## Project Name: 25 Paidge Avenue

**Work Order #:** 369409 **Project ID:** EQ24

**Lab Batch #:** 803645 **Sample:** 561445-1-BKS **Matrix:** Water

**Date Analyzed:** 04/21/2010 **Date Prepared:** 04/21/2010 **Analyst:** CYE

**Reporting Units:** ug/L **Batch #:** 1

| VOAs by SW-846 8260 Analytes | Blank Result [A] | BLANK /BLANK SPIKE RECOVERY STUDY Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|---|
| Benzene | <5.00 | 50.0 | 43.5 | 87 | 66-142 | |
| Bromobenzene | <5.00 | 50.0 | 45.7 | 91 | 75-125 | |
| Bromochloromethane | <5.00 | 50.0 | 39.8 | 80 | 73-125 | |
| Bromodichloromethane | <5.00 | 50.0 | 48.3 | 97 | 75-125 | |
| Bromoform | <5.00 | 50.0 | 44.5 | 89 | 75-125 | |
| Bromomethane | <5.00 | 50.0 | 57.2 | 114 | 70-130 | |
| MTBE | <5.00 | 50.0 | 42.6 | 85 | 65-135 | |
| n-Butylbenzene | <5.00 | 50.0 | 50.9 | 102 | 75-125 | |
| Sec-Butylbenzene | <5.00 | 50.0 | 50.7 | 101 | 75-125 | |
| tert-Butylbenzene | <5.00 | 50.0 | 51.6 | 103 | 75-125 | |
| Carbon Tetrachloride | <5.00 | 50.0 | 53.6 | 107 | 62-125 | |
| Chlorobenzene | <5.00 | 50.0 | 44.8 | 90 | 60-133 | |
| Chloroethane | <10.0 | 50.0 | 44.6 | 89 | 70-130 | |
| Chloroform | <5.00 | 50.0 | 47.5 | 95 | 74-125 | |
| Chloromethane | <10.0 | 50.0 | 41.0 | 82 | 70-130 | |
| 2-Chlorotoluene | <5.00 | 50.0 | 46.5 | 93 | 73-125 | |
| 4-Chlorotoluene | <5.00 | 50.0 | 51.2 | 102 | 74-125 | |
| p-Cymene (p-Isopropyltoluene) | <5.00 | 50.0 | 52.5 | 105 | 75-125 | |
| Dibromochloromethane | <5.00 | 50.0 | 47.4 | 95 | 73-125 | |
| 1,2-Dibromo-3-Chloropropane | <5.00 | 50.0 | 54.0 | 108 | 59-125 | |
| Dibromomethane | <5.00 | 50.0 | 44.1 | 88 | 69-127 | |
| 1,2-Dichlorobenzene | <5.00 | 50.0 | 44.8 | 90 | 75-125 | |
| 1,3-Dichlorobenzene | <5.00 | 50.0 | 46.7 | 93 | 75-125 | |
| 1,4-Dichlorobenzene | <5.00 | 50.0 | 45.8 | 92 | 75-125 | |
| Dichlorodifluoromethane | <5.00 | 50.0 | 50.3 | 101 | 70-130 | |
| 1,1-Dichloroethane | <5.00 | 50.0 | 45.9 | 92 | 72-125 | |
| 1,2-Dichloroethane | <5.00 | 50.0 | 55.7 | 111 | 68-127 | |
| 1,1-Dichloroethene | <5.00 | 50.0 | 40.1 | 80 | 59-172 | |
| cis-1,2-Dichloroethene | <5.00 | 50.0 | 39.4 | 79 | 75-125 | |
| trans-1,2-dichloroethene | <5.00 | 50.0 | 40.0 | 80 | 75-125 | |
| 1,2-Dichloropropane | <5.00 | 50.0 | 42.9 | 86 | 74-125 | |
| 1,3-Dichloropropane | <5.00 | 50.0 | 44.4 | 89 | 75-125 | |
| 2,2-Dichloropropane | <5.00 | 50.0 | 54.2 | 108 | 75-125 | |

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit



Shell/Motiva 0007803

XENCO Laboratories

# Blank Spike Recovery

## Project Name: 25 Paidge Avenue

**Work Order #:** 369409 **Project ID:** EQ24

**Lab Batch #:** 803645 **Sample:** 561445-1-BKS **Matrix:** Water

**Date Analyzed:** 04/21/2010 **Date Prepared:** 04/21/2010 **Analyst:** CYE

**Reporting Units:** ug/L **Batch #:** 1

| VOAs by SW-846 8260 Analytes | Blank Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|---|
| | | BLANK /BLANK SPIKE RECOVERY STUDY | | | | |
| 1,1-Dichloropropene | <5.00 | 50.0 | 44.7 | 89 | 75-125 | |
| cis-1,3-Dichloropropene | <5.00 | 50.0 | 45.4 | 91 | 74-125 | |
| trans-1,3-dichloropropene | <5.00 | 50.0 | 52.4 | 105 | 66-125 | |
| Ethylbenzene | <5.00 | 50.0 | 46.9 | 94 | 75-125 | |
| Hexachlorobutadiene | <5.00 | 50.0 | 50.7 | 101 | 75-125 | |
| isopropylbenzene | <5.00 | 50.0 | 47.2 | 94 | 75-125 | |
| Methylene Chloride | <5.00 | 50.0 | 35.6 | 71 | 75-125 | L |
| Naphthalene | <10.0 | 50.0 | 45.0 | 90 | 75-125 | |
| n-Propylbenzene | <5.00 | 50.0 | 47.7 | 95 | 75-125 | |
| Styrene | <5.00 | 50.0 | 43.8 | 88 | 75-125 | |
| 1,1,1,2-Tetrachloroethane | <5.00 | 50.0 | 47.8 | 96 | 72-125 | |
| 1,1,2,2-Tetrachloroethane | <5.00 | 50.0 | 43.5 | 87 | 74-125 | |
| Tetrachloroethylene | <5.00 | 50.0 | 47.1 | 94 | 71-125 | |
| Toluene | <5.00 | 50.0 | 44.5 | 89 | 59-139 | |
| 1,2,3-Trichlorobenzene | <5.00 | 50.0 | 42.8 | 86 | 75-137 | |
| 1,2,4-Trichlorobenzene | <5.00 | 50.0 | 43.6 | 87 | 75-135 | |
| 1,1,1-Trichloroethane | <5.00 | 50.0 | 52.4 | 105 | 75-125 | |
| 1,1,2-Trichloroethane | <5.00 | 50.0 | 43.7 | 87 | 75-127 | |
| Trichloroethene | <5.00 | 50.0 | 46.5 | 93 | 62-137 | |
| Trichlorofluoromethane | <5.00 | 50.0 | 54.8 | 110 | 67-125 | |
| 1,2,3-Trichloropropane | <5.00 | 50.0 | 50.3 | 101 | 75-125 | |
| 1,2,4-Trimethylbenzene | <5.00 | 50.0 | 50.9 | 102 | 75-125 | |
| 1,3,5-Trimethylbenzene | <5.00 | 50.0 | 51.4 | 103 | 70-125 | |
| o-Xylene | <5.00 | 50.0 | 44.0 | 88 | 75-125 | |
| m,p-Xylenes | <10.0 | 100 | 87.8 | 88 | 75-125 | |
| Vinyl Chloride | <2.00 | 50.0 | 43.8 | 88 | 75-125 | |

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit



Shell/Motiva 0007804

XENCO Laboratories

# Blank Spike Recovery

## Project Name: 25 Paidge Avenue

**Work Order #:** 369409 **Project ID:** EQ24

**Lab Batch #:** 803828 **Sample:** 561560-1-BKS **Matrix:** Water

**Date Analyzed:** 04/22/2010 **Date Prepared:** 04/22/2010 **Analyst:** CYE

**Reporting Units:** ug/L **Batch #:** 1

| VOAs by SW-846 8260 Analytes | Blank Result [A] | BLANK /BLANK SPIKE RECOVERY STUDY Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|---|
| Benzene | <5.00 | 50.0 | 51.9 | 104 | 66-142 | |
| Bromobenzene | <5.00 | 50.0 | 47.8 | 96 | 75-125 | |
| Bromochloromethane | <5.00 | 50.0 | 52.2 | 104 | 73-125 | |
| Bromodichloromethane | <5.00 | 50.0 | 49.8 | 100 | 75-125 | |
| Bromoform | <5.00 | 50.0 | 50.7 | 101 | 75-125 | |
| Bromomethane | <5.00 | 50.0 | 53.3 | 107 | 70-130 | |
| MTBE | <5.00 | 50.0 | 58.8 | 118 | 65-135 | |
| n-Butylbenzene | <5.00 | 50.0 | 52.8 | 106 | 75-125 | |
| Sec-Butylbenzene | <5.00 | 50.0 | 53.6 | 107 | 75-125 | |
| tert-Butylbenzene | <5.00 | 50.0 | 52.8 | 106 | 75-125 | |
| Carbon Tetrachloride | <5.00 | 50.0 | 54.1 | 108 | 62-125 | |
| Chlorobenzene | <5.00 | 50.0 | 50.9 | 102 | 60-133 | |
| Chloroethane | <10.0 | 50.0 | 54.0 | 108 | 70-130 | |
| Chloroform | <5.00 | 50.0 | 51.3 | 103 | 74-125 | |
| Chloromethane | <10.0 | 50.0 | 61.0 | 122 | 70-130 | |
| 2-Chlorotoluene | <5.00 | 50.0 | 51.0 | 102 | 73-125 | |
| 4-Chlorotoluene | <5.00 | 50.0 | 51.3 | 103 | 74-125 | |
| p-Cymene (p-Isopropyltoluene) | <5.00 | 50.0 | 53.7 | 107 | 75-125 | |
| Dibromochloromethane | <5.00 | 50.0 | 51.3 | 103 | 73-125 | |
| 1,2-Dibromo-3-Chloropropane | <5.00 | 50.0 | 57.0 | 114 | 59-125 | |
| Dibromomethane | <5.00 | 50.0 | 49.4 | 99 | 69-127 | |
| 1,2-Dichlorobenzene | <5.00 | 50.0 | 50.0 | 100 | 75-125 | |
| 1,3-Dichlorobenzene | <5.00 | 50.0 | 50.2 | 100 | 75-125 | |
| 1,4-Dichlorobenzene | <5.00 | 50.0 | 49.9 | 100 | 75-125 | |
| Dichlorodifluoromethane | <5.00 | 50.0 | 59.4 | 119 | 70-130 | |
| 1,1-Dichloroethane | <5.00 | 50.0 | 53.3 | 107 | 72-125 | |
| 1,2-Dichloroethane | <5.00 | 50.0 | 51.4 | 103 | 68-127 | |
| 1,1-Dichloroethene | <5.00 | 50.0 | 52.3 | 105 | 59-172 | |
| cis-1,2-Dichloroethene | <5.00 | 50.0 | 52.9 | 106 | 75-125 | |
| trans-1,2-dichloroethene | <5.00 | 50.0 | 54.8 | 110 | 75-125 | |
| 1,2-Dichloropropane | <5.00 | 50.0 | 50.6 | 101 | 74-125 | |
| 1,3-Dichloropropane | <5.00 | 50.0 | 48.2 | 96 | 75-125 | |
| 2,2-Dichloropropane | <5.00 | 50.0 | 58.2 | 116 | 75-125 | |

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit



Shell/Motiva 0007805

XENCO Laboratories

# Blank Spike Recovery

## Project Name: 25 Paidge Avenue

**Work Order #:** 369409 **Project ID:** EQ24

**Lab Batch #:** 803828 **Sample:** 561560-1-BKS **Matrix:** Water

**Date Analyzed:** 04/22/2010 **Date Prepared:** 04/22/2010 **Analyst:** CYE

**Reporting Units:** ug/L **Batch #:** 1

| VOAs by SW-846 8260 Analytes | Blank Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|---|
| | | BLANK /BLANK SPIKE RECOVERY STUDY | | | | |
| 1,1-Dichloropropene | <5.00 | 50.0 | 49.7 | 99 | 75-125 | |
| cis-1,3-Dichloropropene | <5.00 | 50.0 | 50.7 | 101 | 74-125 | |
| Ethylbenzene | <5.00 | 50.0 | 52.1 | 104 | 75-125 | |
| Hexachlorobutadiene | <5.00 | 50.0 | 50.3 | 101 | 75-125 | |
| isopropylbenzene | <5.00 | 50.0 | 53.8 | 108 | 75-125 | |
| Methylene Chloride | <5.00 | 50.0 | 52.0 | 104 | 75-125 | |
| Naphthalene | <10.0 | 50.0 | 56.2 | 112 | 75-125 | |
| n-Propylbenzene | <5.00 | 50.0 | 52.4 | 105 | 75-125 | |
| Styrene | <5.00 | 50.0 | 51.8 | 104 | 75-125 | |
| 1,1,1,2-Tetrachloroethane | <5.00 | 50.0 | 52.0 | 104 | 72-125 | |
| Tetrachloroethylene | <5.00 | 50.0 | 49.5 | 99 | 71-125 | |
| Toluene | <5.00 | 50.0 | 50.1 | 100 | 59-139 | |
| 1,2,3-Trichlorobenzene | <5.00 | 50.0 | 56.0 | 112 | 75-137 | |
| 1,2,4-Trichlorobenzene | <5.00 | 50.0 | 52.6 | 105 | 75-135 | |
| 1,1,1-Trichloroethane | <5.00 | 50.0 | 53.0 | 106 | 75-125 | |
| 1,1,2-Trichloroethane | <5.00 | 50.0 | 50.7 | 101 | 75-127 | |
| Trichloroethene | <5.00 | 50.0 | 50.9 | 102 | 62-137 | |
| Trichlorofluoromethane | <5.00 | 50.0 | 59.5 | 119 | 67-125 | |
| 1,2,3-Trichloropropane | <5.00 | 50.0 | 54.2 | 108 | 75-125 | |
| 1,2,4-Trimethylbenzene | <5.00 | 50.0 | 52.6 | 105 | 75-125 | |
| 1,3,5-Trimethylbenzene | <5.00 | 50.0 | 52.3 | 105 | 70-125 | |
| o-Xylene | <5.00 | 50.0 | 53.4 | 107 | 75-125 | |
| m,p-Xylenes | <10.0 | 100 | 104 | 104 | 75-125 | |
| Vinyl Chloride | <2.00 | 50.0 | 52.7 | 105 | 75-125 | |

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit



Shell/Motiva 0007806

XENCO Laboratories

# Blank Spike Recovery

ACCREDITED IN ACCORDANCE WITH nelac

## Project Name: 25 Paidge Avenue

**Work Order #:** 369409 **Project ID:** EQ24

**Lab Batch #:** 804058 **Sample:** 561728-1-BKS **Matrix:** Water

**Date Analyzed:** 04/26/2010 **Date Prepared:** 04/26/2010 **Analyst:** CYE

**Reporting Units:** ug/L **Batch #:** 1

| | BLANK /BLANK SPIKE RECOVERY STUDY | | | | | |
|---|---|---|---|---|---|---|
| **VOAs by SW-846 8260**<br>**Analytes** | **Blank Result [A]** | **Spike Added [B]** | **Blank Spike Result [C]** | **Blank Spike %R [D]** | **Control Limits %R** | **Flags** |
| Benzene | <5.00 | 50.0 | 46.2 | 92 | 66-142 | |
| Bromobenzene | <5.00 | 50.0 | 51.6 | 103 | 75-125 | |
| Bromochloromethane | <5.00 | 50.0 | 48.3 | 97 | 73-125 | |
| Bromodichloromethane | <5.00 | 50.0 | 56.6 | 113 | 75-125 | |
| Bromoform | <5.00 | 50.0 | 58.7 | 117 | 75-125 | |
| Bromomethane | <5.00 | 50.0 | 38.5 | 77 | 70-130 | |
| MTBE | <5.00 | 50.0 | 49.1 | 98 | 65-135 | |
| n-Butylbenzene | <5.00 | 50.0 | 50.0 | 100 | 75-125 | |
| Sec-Butylbenzene | <5.00 | 50.0 | 53.9 | 108 | 75-125 | |
| tert-Butylbenzene | <5.00 | 50.0 | 54.7 | 109 | 75-125 | |
| Carbon Tetrachloride | <5.00 | 50.0 | 48.9 | 98 | 62-125 | |
| Chlorobenzene | <5.00 | 50.0 | 52.6 | 105 | 60-133 | |
| Chloroethane | <10.0 | 50.0 | 40.4 | 81 | 70-130 | |
| Chloroform | <5.00 | 50.0 | 49.4 | 99 | 74-125 | |
| Chloromethane | <10.0 | 50.0 | 38.9 | 78 | 70-130 | |
| 2-Chlorotoluene | <5.00 | 50.0 | 51.5 | 103 | 73-125 | |
| 4-Chlorotoluene | <5.00 | 50.0 | 50.7 | 101 | 74-125 | |
| p-Cymene (p-Isopropyltoluene) | <5.00 | 50.0 | 52.6 | 105 | 75-125 | |
| Dibromochloromethane | <5.00 | 50.0 | 60.6 | 121 | 73-125 | |
| 1,2-Dibromo-3-Chloropropane | <5.00 | 50.0 | 51.4 | 103 | 59-125 | |
| Dibromomethane | <5.00 | 50.0 | 48.5 | 97 | 69-127 | |
| 1,2-Dichlorobenzene | <5.00 | 50.0 | 52.1 | 104 | 75-125 | |
| 1,3-Dichlorobenzene | <5.00 | 50.0 | 52.4 | 105 | 75-125 | |
| 1,4-Dichlorobenzene | <5.00 | 50.0 | 51.2 | 102 | 75-125 | |
| Dichlorodifluoromethane | <5.00 | 50.0 | 46.2 | 92 | 70-130 | |
| 1,1-Dichloroethane | <5.00 | 50.0 | 49.9 | 100 | 72-125 | |
| 1,2-Dichloroethane | <5.00 | 50.0 | 48.5 | 97 | 68-127 | |
| 1,1-Dichloroethene | <5.00 | 50.0 | 42.7 | 85 | 59-172 | |
| cis-1,2-Dichloroethene | <5.00 | 50.0 | 46.0 | 92 | 75-125 | |
| trans-1,2-dichloroethene | <5.00 | 50.0 | 42.2 | 84 | 75-125 | |
| 1,2-Dichloropropane | <5.00 | 50.0 | 51.4 | 103 | 74-125 | |
| 1,3-Dichloropropane | <5.00 | 50.0 | 50.2 | 100 | 75-125 | |
| 2,2-Dichloropropane | <5.00 | 50.0 | 49.5 | 99 | 75-125 | |

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit



Shell/Motiva 0007807

XENCO Laboratories

# Blank Spike Recovery

## Project Name: 25 Paidge Avenue

**Work Order #:** 369409 **Project ID:** EQ24

**Lab Batch #:** 804058 **Sample:** 561728-1-BKS **Matrix:** Water

**Date Analyzed:** 04/26/2010 **Date Prepared:** 04/26/2010 **Analyst:** CYE

**Reporting Units:** ug/L **Batch #:** 1

| VOAs by SW-846 8260 Analytes | Blank Result [A] | BLANK /BLANK SPIKE RECOVERY STUDY Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | <5.00 | 50.0 | 40.8 | 82 | 75-125 | |
| cis-1,3-Dichloropropene | <5.00 | 50.0 | 57.1 | 114 | 74-125 | |
| trans-1,3-dichloropropene | <5.00 | 50.0 | 55.9 | 112 | 66-125 | |
| Ethylbenzene | <5.00 | 50.0 | 49.1 | 98 | 75-125 | |
| Hexachlorobutadiene | <5.00 | 50.0 | 51.6 | 103 | 75-125 | |
| isopropylbenzene | <5.00 | 50.0 | 49.7 | 99 | 75-125 | |
| Methylene Chloride | <5.00 | 50.0 | 44.8 | 90 | 75-125 | |
| Naphthalene | <10.0 | 50.0 | 50.3 | 101 | 75-125 | |
| n-Propylbenzene | <5.00 | 50.0 | 51.5 | 103 | 75-125 | |
| Styrene | <5.00 | 50.0 | 51.0 | 102 | 75-125 | |
| 1,1,1,2-Tetrachloroethane | <5.00 | 50.0 | 52.3 | 105 | 72-125 | |
| 1,1,2,2-Tetrachloroethane | <5.00 | 50.0 | 55.1 | 110 | 74-125 | |
| Tetrachloroethylene | <5.00 | 50.0 | 47.5 | 95 | 71-125 | |
| Toluene | <5.00 | 50.0 | 48.9 | 98 | 59-139 | |
| 1,2,3-Trichlorobenzene | <5.00 | 50.0 | 52.1 | 104 | 75-137 | |
| 1,2,4-Trichlorobenzene | <5.00 | 50.0 | 50.9 | 102 | 75-135 | |
| 1,1,1-Trichloroethane | <5.00 | 50.0 | 45.2 | 90 | 75-125 | |
| 1,1,2-Trichloroethane | <5.00 | 50.0 | 53.4 | 107 | 75-127 | |
| Trichloroethene | <5.00 | 50.0 | 47.0 | 94 | 62-137 | |
| Trichlorofluoromethane | <5.00 | 50.0 | 50.4 | 101 | 67-125 | |
| 1,2,3-Trichloropropane | <5.00 | 50.0 | 54.9 | 110 | 75-125 | |
| 1,2,4-Trimethylbenzene | <5.00 | 50.0 | 51.6 | 103 | 75-125 | |
| 1,3,5-Trimethylbenzene | <5.00 | 50.0 | 51.3 | 103 | 70-125 | |
| o-Xylene | <5.00 | 50.0 | 50.4 | 101 | 75-125 | |
| m,p-Xylenes | <10.0 | 100 | 99.9 | 100 | 75-125 | |
| Vinyl Chloride | <2.00 | 50.0 | 39.1 | 78 | 75-125 | |

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit



Shell/Motiva 0007808

XENCO Laboratories

# Blank Spike Recovery

## Project Name: 25 Paidge Avenue

**Work Order #:** 369409 **Project ID:** EQ24

**Lab Batch #:** 804067 **Sample:** 561731-1-BKS **Matrix:** Water

**Date Analyzed:** 04/23/2010 **Date Prepared:** 04/23/2010 **Analyst:** CYE

**Reporting Units:** ug/L **Batch #:** 1

| VOAs by SW-846 8260 Analytes | Blank Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|---|
| | | BLANK /BLANK SPIKE RECOVERY STUDY | | | | |
| Benzene | <5.00 | 50.0 | 48.7 | 97 | 66-142 | |
| Bromobenzene | <5.00 | 50.0 | 53.1 | 106 | 75-125 | |
| Bromochloromethane | <5.00 | 50.0 | 51.3 | 103 | 73-125 | |
| Bromodichloromethane | <5.00 | 50.0 | 55.1 | 110 | 75-125 | |
| Bromoform | <5.00 | 50.0 | 55.9 | 112 | 75-125 | |
| Bromomethane | <5.00 | 50.0 | 46.6 | 93 | 70-130 | |
| MTBE | <5.00 | 50.0 | 54.5 | 109 | 65-135 | |
| n-Butylbenzene | <5.00 | 50.0 | 52.1 | 104 | 75-125 | |
| Sec-Butylbenzene | <5.00 | 50.0 | 54.4 | 109 | 75-125 | |
| tert-Butylbenzene | <5.00 | 50.0 | 55.0 | 110 | 75-125 | |
| Carbon Tetrachloride | <5.00 | 50.0 | 50.9 | 102 | 62-125 | |
| Chlorobenzene | <5.00 | 50.0 | 53.7 | 107 | 60-133 | |
| Chloroethane | <10.0 | 50.0 | 46.8 | 94 | 70-130 | |
| Chloroform | <5.00 | 50.0 | 50.6 | 101 | 74-125 | |
| Chloromethane | <10.0 | 50.0 | 44.3 | 89 | 70-130 | |
| 2-Chlorotoluene | <5.00 | 50.0 | 51.8 | 104 | 73-125 | |
| 4-Chlorotoluene | <5.00 | 50.0 | 52.9 | 106 | 74-125 | |
| p-Cymene (p-Isopropyltoluene) | <5.00 | 50.0 | 53.6 | 107 | 75-125 | |
| Dibromochloromethane | <5.00 | 50.0 | 56.6 | 113 | 73-125 | |
| 1,2-Dibromo-3-Chloropropane | <5.00 | 50.0 | 52.3 | 105 | 59-125 | |
| Dibromomethane | <5.00 | 50.0 | 50.0 | 100 | 69-127 | |
| 1,2-Dichlorobenzene | <5.00 | 50.0 | 52.3 | 105 | 75-125 | |
| 1,3-Dichlorobenzene | <5.00 | 50.0 | 53.5 | 107 | 75-125 | |
| 1,4-Dichlorobenzene | <5.00 | 50.0 | 52.1 | 104 | 75-125 | |
| Dichlorodifluoromethane | <5.00 | 50.0 | 50.1 | 100 | 70-130 | |
| 1,1-Dichloroethane | <5.00 | 50.0 | 53.3 | 107 | 72-125 | |
| 1,2-Dichloroethane | <5.00 | 50.0 | 48.6 | 97 | 68-127 | |
| 1,1-Dichloroethene | <5.00 | 50.0 | 49.3 | 99 | 59-172 | |
| cis-1,2-Dichloroethene | <5.00 | 50.0 | 48.9 | 98 | 75-125 | |
| trans-1,2-dichloroethene | <5.00 | 50.0 | 49.3 | 99 | 75-125 | |
| 1,2-Dichloropropane | <5.00 | 50.0 | 51.5 | 103 | 74-125 | |
| 1,3-Dichloropropane | <5.00 | 50.0 | 51.7 | 103 | 75-125 | |
| 2,2-Dichloropropane | <5.00 | 50.0 | 54.3 | 109 | 75-125 | |

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit



Shell/Motiva 0007809

XENCO Laboratories

# Blank Spike Recovery

## Project Name: 25 Paidge Avenue

**Work Order #:** 369409 **Project ID:** EQ24

**Lab Batch #:** 804067 **Sample:** 561731-1-BKS **Matrix:** Water

**Date Analyzed:** 04/23/2010 **Date Prepared:** 04/23/2010 **Analyst:** CYE

**Reporting Units:** ug/L **Batch #:** 1

| VOAs by SW-846 8260 Analytes | Blank Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|---|
| | | BLANK /BLANK SPIKE RECOVERY STUDY | | | | |
| 1,1-Dichloropropene | <5.00 | 50.0 | 43.8 | 88 | 75-125 | |
| cis-1,3-Dichloropropene | <5.00 | 50.0 | 53.9 | 108 | 74-125 | |
| trans-1,3-dichloropropene | <5.00 | 50.0 | 54.6 | 109 | 66-125 | |
| Ethylbenzene | <5.00 | 50.0 | 50.8 | 102 | 75-125 | |
| Hexachlorobutadiene | <5.00 | 50.0 | 54.9 | 110 | 75-125 | |
| isopropylbenzene | <5.00 | 50.0 | 52.0 | 104 | 75-125 | |
| Methylene Chloride | <5.00 | 50.0 | 49.9 | 100 | 75-125 | |
| Naphthalene | <10.0 | 50.0 | 55.8 | 112 | 75-125 | |
| n-Propylbenzene | <5.00 | 50.0 | 52.8 | 106 | 75-125 | |
| Styrene | <5.00 | 50.0 | 52.1 | 104 | 75-125 | |
| 1,1,1,2-Tetrachloroethane | <5.00 | 50.0 | 52.1 | 104 | 72-125 | |
| 1,1,2,2-Tetrachloroethane | <5.00 | 50.0 | 54.7 | 109 | 74-125 | |
| Tetrachloroethylene | <5.00 | 50.0 | 51.6 | 103 | 71-125 | |
| Toluene | <5.00 | 50.0 | 49.5 | 99 | 59-139 | |
| 1,2,3-Trichlorobenzene | <5.00 | 50.0 | 56.4 | 113 | 75-137 | |
| 1,2,4-Trichlorobenzene | <5.00 | 50.0 | 55.4 | 111 | 75-135 | |
| 1,1,1-Trichloroethane | <5.00 | 50.0 | 47.9 | 96 | 75-125 | |
| 1,1,2-Trichloroethane | <5.00 | 50.0 | 53.3 | 107 | 75-127 | |
| Trichloroethene | <5.00 | 50.0 | 49.4 | 99 | 62-137 | |
| Trichlorofluoromethane | <5.00 | 50.0 | 56.0 | 112 | 67-125 | |
| 1,2,3-Trichloropropane | <5.00 | 50.0 | 55.6 | 111 | 75-125 | |
| 1,2,4-Trimethylbenzene | <5.00 | 50.0 | 52.3 | 105 | 75-125 | |
| 1,3,5-Trimethylbenzene | <5.00 | 50.0 | 52.0 | 104 | 70-125 | |
| o-Xylene | <5.00 | 50.0 | 52.7 | 105 | 75-125 | |
| m,p-Xylenes | <10.0 | 100 | 104 | 104 | 75-125 | |
| Vinyl Chloride | <2.00 | 50.0 | 44.6 | 89 | 75-125 | |

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit



Shell/Motiva 0007810

XENCO Laboratories

# Blank Spike Recovery

## Project Name: 25 Paidge Avenue

**Work Order #:** 369409 **Project ID:** EQ24

**Lab Batch #:** 804536 **Sample:** 561998-1-BKS **Matrix:** Water

**Date Analyzed:** 04/28/2010 **Date Prepared:** 04/28/2010 **Analyst:** CYE

**Reporting Units:** ug/L **Batch #:** 1

| VOAs by SW-846 8260 Analytes | Blank Result [A] | BLANK /BLANK SPIKE RECOVERY STUDY Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|---|
| Benzene | <5.00 | 50.0 | 52.0 | 104 | 66-142 | |
| Bromobenzene | <5.00 | 50.0 | 51.6 | 103 | 75-125 | |
| Bromochloromethane | <5.00 | 50.0 | 53.9 | 108 | 73-125 | |
| Bromodichloromethane | <5.00 | 50.0 | 58.3 | 117 | 75-125 | |
| Bromoform | <5.00 | 50.0 | 60.6 | 121 | 75-125 | |
| Bromomethane | <5.00 | 50.0 | 45.3 | 91 | 70-130 | |
| MTBE | <5.00 | 50.0 | 56.4 | 113 | 65-135 | |
| n-Butylbenzene | <5.00 | 50.0 | 52.8 | 106 | 75-125 | |
| Sec-Butylbenzene | <5.00 | 50.0 | 55.1 | 110 | 75-125 | |
| tert-Butylbenzene | <5.00 | 50.0 | 55.6 | 111 | 75-125 | |
| Carbon Tetrachloride | <5.00 | 50.0 | 53.8 | 108 | 62-125 | |
| Chlorobenzene | <5.00 | 50.0 | 54.1 | 108 | 60-133 | |
| Chloroethane | <10.0 | 50.0 | 47.5 | 95 | 70-130 | |
| Chloroform | <5.00 | 50.0 | 53.1 | 106 | 74-125 | |
| Chloromethane | <10.0 | 50.0 | 48.8 | 98 | 70-130 | |
| 2-Chlorotoluene | <5.00 | 50.0 | 52.5 | 105 | 73-125 | |
| 4-Chlorotoluene | <5.00 | 50.0 | 51.9 | 104 | 74-125 | |
| p-Cymene (p-Isopropyltoluene) | <5.00 | 50.0 | 54.7 | 109 | 75-125 | |
| Dibromochloromethane | <5.00 | 50.0 | 59.9 | 120 | 73-125 | |
| 1,2-Dibromo-3-Chloropropane | <5.00 | 50.0 | 61.3 | 123 | 59-125 | |
| Dibromomethane | <5.00 | 50.0 | 52.2 | 104 | 69-127 | |
| 1,2-Dichlorobenzene | <5.00 | 50.0 | 52.4 | 105 | 75-125 | |
| 1,3-Dichlorobenzene | <5.00 | 50.0 | 53.3 | 107 | 75-125 | |
| 1,4-Dichlorobenzene | <5.00 | 50.0 | 51.5 | 103 | 75-125 | |
| Dichlorodifluoromethane | <5.00 | 50.0 | 52.5 | 105 | 70-130 | |
| 1,1-Dichloroethane | <5.00 | 50.0 | 55.0 | 110 | 72-125 | |
| 1,2-Dichloroethane | <5.00 | 50.0 | 51.7 | 103 | 68-127 | |
| 1,1-Dichloroethene | <5.00 | 50.0 | 49.8 | 100 | 59-172 | |
| cis-1,2-Dichloroethene | <5.00 | 50.0 | 50.6 | 101 | 75-125 | |
| trans-1,2-dichloroethene | <5.00 | 50.0 | 50.3 | 101 | 75-125 | |
| 1,2-Dichloropropane | <5.00 | 50.0 | 53.0 | 106 | 74-125 | |
| 1,3-Dichloropropane | <5.00 | 50.0 | 52.5 | 105 | 75-125 | |
| 2,2-Dichloropropane | <5.00 | 50.0 | 58.6 | 117 | 75-125 | |

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit



Shell/Motiva 0007811

XENCO Laboratories

# Blank Spike Recovery

## Project Name: 25 Paidge Avenue

**Work Order #:** 369409 **Project ID:** EQ24

**Lab Batch #:** 804536 **Sample:** 561998-1-BKS **Matrix:** Water

**Date Analyzed:** 04/28/2010 **Date Prepared:** 04/28/2010 **Analyst:** CYE

**Reporting Units:** ug/L **Batch #:** 1

| VOAs by SW-846 8260 Analytes | Blank Result [A] | BLANK /BLANK SPIKE RECOVERY STUDY Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | <5.00 | 50.0 | 45.6 | 91 | 75-125 | |
| cis-1,3-Dichloropropene | <5.00 | 50.0 | 58.4 | 117 | 74-125 | |
| trans-1,3-dichloropropene | <5.00 | 50.0 | 57.4 | 115 | 66-125 | |
| Ethylbenzene | <5.00 | 50.0 | 51.3 | 103 | 75-125 | |
| Hexachlorobutadiene | <5.00 | 50.0 | 57.1 | 114 | 75-125 | |
| isopropylbenzene | <5.00 | 50.0 | 52.9 | 106 | 75-125 | |
| Methylene Chloride | <5.00 | 50.0 | 61.9 | 124 | 75-125 | |
| Naphthalene | <10.0 | 50.0 | 57.1 | 114 | 75-125 | |
| n-Propylbenzene | <5.00 | 50.0 | 52.5 | 105 | 75-125 | |
| Styrene | <5.00 | 50.0 | 52.0 | 104 | 75-125 | |
| 1,1,1,2-Tetrachloroethane | <5.00 | 50.0 | 54.0 | 108 | 72-125 | |
| 1,1,2,2-Tetrachloroethane | <5.00 | 50.0 | 55.7 | 111 | 74-125 | |
| Tetrachloroethylene | <5.00 | 50.0 | 52.1 | 104 | 71-125 | |
| Toluene | <5.00 | 50.0 | 51.1 | 102 | 59-139 | |
| 1,2,3-Trichlorobenzene | <5.00 | 50.0 | 55.9 | 112 | 75-137 | |
| 1,2,4-Trichlorobenzene | <5.00 | 50.0 | 56.2 | 112 | 75-135 | |
| 1,1,1-Trichloroethane | <5.00 | 50.0 | 50.2 | 100 | 75-125 | |
| 1,1,2-Trichloroethane | <5.00 | 50.0 | 53.3 | 107 | 75-127 | |
| Trichloroethene | <5.00 | 50.0 | 49.2 | 98 | 62-137 | |
| Trichlorofluoromethane | <5.00 | 50.0 | 59.0 | 118 | 67-125 | |
| 1,2,3-Trichloropropane | <5.00 | 50.0 | 57.4 | 115 | 75-125 | |
| 1,2,4-Trimethylbenzene | <5.00 | 50.0 | 53.1 | 106 | 75-125 | |
| 1,3,5-Trimethylbenzene | <5.00 | 50.0 | 53.4 | 107 | 70-125 | |
| o-Xylene | <5.00 | 50.0 | 53.6 | 107 | 75-125 | |
| m,p-Xylenes | <10.0 | 100 | 104 | 104 | 75-125 | |
| Vinyl Chloride | <2.00 | 50.0 | 45.9 | 92 | 75-125 | |

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit



Shell/Motiva 0007812

XENCO Laboratories

# Form 3 - MS / MSD Recoveries

## Project Name: 25 Paidge Avenue

**Work Order # :** 369409 **Project ID:** EQ24

**Lab Batch ID:** 803446 **QC- Sample ID:** 369409-001 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 04/20/2010 **Date Prepared:** 04/20/2010 **Analyst:** CYE

**Reporting Units:** ug/L

| VOAs by SW-846 8260 Analytes | MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
| Benzene | <5.00 | 50.0 | 43.1 | 86 | 50.0 | 44.3 | 89 | 3 | 66-142 | 21 | |
| Bromobenzene | <5.00 | 50.0 | 46.0 | 92 | 50.0 | 44.9 | 90 | 2 | 75-125 | 20 | |
| Bromochloromethane | <5.00 | 50.0 | 45.0 | 90 | 50.0 | 48.0 | 96 | 6 | 73-125 | 20 | |
| Bromodichloromethane | <5.00 | 50.0 | 51.8 | 104 | 50.0 | 52.3 | 105 | 1 | 75-125 | 20 | |
| Bromoform | <5.00 | 50.0 | 45.9 | 92 | 50.0 | 47.0 | 94 | 2 | 75-125 | 20 | |
| Bromomethane | <5.00 | 50.0 | 59.4 | 119 | 50.0 | 63.4 | 127 | 7 | 70-130 | 20 | |
| MTBE | <5.00 | 50.0 | 50.5 | 101 | 50.0 | 55.5 | 111 | 9 | 65-135 | 20 | |
| n-Butylbenzene | <5.00 | 50.0 | 47.2 | 94 | 50.0 | 48.8 | 98 | 3 | 75-125 | 20 | |
| Sec-Butylbenzene | <5.00 | 50.0 | 48.6 | 97 | 50.0 | 48.5 | 97 | 0 | 75-125 | 20 | |
| tert-Butylbenzene | <5.00 | 50.0 | 49.6 | 99 | 50.0 | 48.1 | 96 | 3 | 75-125 | 20 | |
| Carbon Tetrachloride | <5.00 | 50.0 | 55.1 | 110 | 50.0 | 55.7 | 111 | 1 | 62-125 | 20 | |
| Chlorobenzene | <5.00 | 50.0 | 46.3 | 93 | 50.0 | 46.4 | 93 | 0 | 60-133 | 21 | |
| Chloroethane | <10.0 | 50.0 | 42.9 | 86 | 50.0 | 48.8 | 98 | 13 | 70-130 | 20 | |
| Chloroform | 7.96 | 50.0 | 59.9 | 104 | 50.0 | 63.4 | 111 | 6 | 74-125 | 20 | |
| Chloromethane | <10.0 | 50.0 | 42.0 | 84 | 50.0 | 44.8 | 90 | 6 | 70-130 | 20 | |
| 2-Chlorotoluene | <5.00 | 50.0 | 44.7 | 89 | 50.0 | 44.6 | 89 | 0 | 73-125 | 20 | |
| 4-Chlorotoluene | <5.00 | 50.0 | 49.7 | 99 | 50.0 | 49.5 | 99 | 0 | 74-125 | 20 | |
| p-Cymene (p-Isopropyltoluene) | <5.00 | 50.0 | 50.1 | 100 | 50.0 | 50.2 | 100 | 0 | 75-125 | 20 | |
| Dibromochloromethane | <5.00 | 50.0 | 48.8 | 98 | 50.0 | 48.5 | 97 | 1 | 73-125 | 20 | |
| 1,2-Dibromo-3-Chloropropane | <5.00 | 50.0 | 45.8 | 92 | 50.0 | 48.8 | 98 | 6 | 59-125 | 28 | |
| Dibromomethane | <5.00 | 50.0 | 47.0 | 94 | 50.0 | 45.8 | 92 | 3 | 69-127 | 23 | |
| 1,2-Dichlorobenzene | <5.00 | 50.0 | 45.8 | 92 | 50.0 | 47.6 | 95 | 4 | 75-125 | 20 | |
| 1,3-Dichlorobenzene | <5.00 | 50.0 | 47.6 | 95 | 50.0 | 47.5 | 95 | 0 | 75-125 | 20 | |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit





Shell/Motiva 0007813

XENCO Laboratories

# Form 3 - MS / MSD Recoveries

## Project Name: 25 Paidge Avenue

**Work Order # :** 369409 **Project ID:** EQ24

**Lab Batch ID:** 803446 **QC- Sample ID:** 369409-001 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 04/20/2010 **Date Prepared:** 04/20/2010 **Analyst:** CYE

**Reporting Units:** ug/L

| VOAs by SW-846 8260<br>Analytes | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dichlorobenzene | <5.00 | 50.0 | 45.8 | 92 | 50.0 | 45.6 | 91 | 0 | 75-125 | 20 | |
| Dichlorodifluoromethane | <5.00 | 50.0 | 50.2 | 100 | 50.0 | 53.8 | 108 | 7 | 70-130 | 23 | |
| 1,1-Dichloroethane | <5.00 | 50.0 | 50.1 | 100 | 50.0 | 53.7 | 107 | 7 | 72-125 | 20 | |
| 1,2-Dichloroethane | <5.00 | 50.0 | 55.1 | 110 | 50.0 | 57.3 | 115 | 4 | 68-127 | 20 | |
| 1,1-Dichloroethene | <5.00 | 50.0 | 40.9 | 82 | 50.0 | 45.4 | 91 | 10 | 59-172 | 22 | |
| cis-1,2-Dichloroethene | <5.00 | 50.0 | 42.1 | 84 | 50.0 | 44.0 | 88 | 4 | 75-125 | 20 | |
| trans-1,2-dichloroethene | <5.00 | 50.0 | 42.0 | 84 | 50.0 | 45.6 | 91 | 8 | 75-125 | 20 | |
| 1,2-Dichloropropane | <5.00 | 50.0 | 45.8 | 92 | 50.0 | 46.5 | 93 | 2 | 74-125 | 20 | |
| 1,3-Dichloropropane | <5.00 | 50.0 | 43.8 | 88 | 50.0 | 43.3 | 87 | 1 | 75-125 | 20 | |
| 2,2-Dichloropropane | <5.00 | 50.0 | 54.1 | 108 | 50.0 | 58.9 | 118 | 8 | 75-125 | 20 | |
| 1,1-Dichloropropene | <5.00 | 50.0 | 41.6 | 83 | 50.0 | 43.6 | 87 | 5 | 75-125 | 20 | |
| cis-1,3-Dichloropropene | <5.00 | 50.0 | 48.9 | 98 | 50.0 | 47.6 | 95 | 3 | 74-125 | 20 | |
| trans-1,3-dichloropropene | <5.00 | 50.0 | 49.9 | 100 | 50.0 | 47.8 | 96 | 4 | 66-125 | 20 | |
| Ethylbenzene | <5.00 | 50.0 | 46.6 | 93 | 50.0 | 47.2 | 94 | 1 | 75-125 | 20 | |
| Hexachlorobutadiene | <5.00 | 50.0 | 46.1 | 92 | 50.0 | 48.8 | 98 | 6 | 75-125 | 20 | |
| isopropylbenzene | <5.00 | 50.0 | 47.0 | 94 | 50.0 | 49.4 | 99 | 5 | 75-125 | 20 | |
| Methylene Chloride | <5.00 | 50.0 | 40.4 | 81 | 50.0 | 43.9 | 88 | 8 | 75-125 | 35 | |
| Naphthalene | <10.0 | 50.0 | 45.5 | 91 | 50.0 | 46.4 | 93 | 2 | 75-125 | 20 | |
| n-Propylbenzene | <5.00 | 50.0 | 47.5 | 95 | 50.0 | 47.1 | 94 | 1 | 75-125 | 20 | |
| Styrene | <5.00 | 50.0 | 46.3 | 93 | 50.0 | 47.5 | 95 | 3 | 75-125 | 51 | |
| 1,1,1,2-Tetrachloroethane | <5.00 | 50.0 | 48.7 | 97 | 50.0 | 50.5 | 101 | 4 | 72-125 | 20 | |
| 1,1,2,2-Tetrachloroethane | <5.00 | 50.0 | 43.1 | 86 | 50.0 | 43.2 | 86 | 0 | 74-125 | 31 | |
| Tetrachloroethylene | <5.00 | 50.0 | 42.6 | 85 | 50.0 | 44.3 | 89 | 4 | 71-125 | 20 | |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit



Shell/Motiva 0007814

XENCO Laboratories

# Form 3 - MS / MSD Recoveries

## Project Name: 25 Paidge Avenue

**Work Order # :** 369409 **Project ID:** EQ24

**Lab Batch ID:** 803446 **QC- Sample ID:** 369409-001 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 04/20/2010 **Date Prepared:** 04/20/2010 **Analyst:** CYE

**Reporting Units:** ug/L

| VOAs by SW-846 8260<br>Analytes | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | <5.00 | 50.0 | 42.3 | 85 | 50.0 | 42.7 | 85 | 1 | 59-139 | 21 | |
| 1,2,3-Trichlorobenzene | <5.00 | 50.0 | 44.6 | 89 | 50.0 | 44.2 | 88 | 1 | 75-137 | 20 | |
| 1,2,4-Trichlorobenzene | <5.00 | 50.0 | 44.5 | 89 | 50.0 | 46.4 | 93 | 4 | 75-135 | 20 | |
| 1,1,1-Trichloroethane | <5.00 | 50.0 | 51.3 | 103 | 50.0 | 56.3 | 113 | 9 | 75-125 | 20 | |
| 1,1,2-Trichloroethane | <5.00 | 50.0 | 44.1 | 88 | 50.0 | 43.5 | 87 | 1 | 75-127 | 20 | |
| Trichloroethene | <5.00 | 50.0 | 46.3 | 93 | 50.0 | 47.1 | 94 | 2 | 62-137 | 24 | |
| Trichlorofluoromethane | <5.00 | 50.0 | 56.8 | 114 | 50.0 | 62.1 | 124 | 9 | 67-125 | 20 | |
| 1,2,3-Trichloropropane | <5.00 | 50.0 | 49.4 | 99 | 50.0 | 48.7 | 97 | 1 | 75-125 | 20 | |
| 1,2,4-Trimethylbenzene | <5.00 | 50.0 | 50.2 | 100 | 50.0 | 50.6 | 101 | 1 | 75-125 | 20 | |
| 1,3,5-Trimethylbenzene | <5.00 | 50.0 | 50.0 | 100 | 50.0 | 50.1 | 100 | 0 | 70-125 | 20 | |
| o-Xylene | <5.00 | 50.0 | 45.9 | 92 | 50.0 | 47.1 | 94 | 3 | 75-125 | 20 | |
| m,p-Xylenes | <10.0 | 100 | 89.8 | 90 | 100 | 92.2 | 92 | 3 | 75-125 | 20 | |
| Vinyl Chloride | <2.00 | 50.0 | 46.2 | 92 | 50.0 | 49.8 | 100 | 8 | 75-125 | 20 | |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit





Shell/Motiva 0007815

XENCO Laboratories

# Form 3 - MS / MSD Recoveries

## Project Name: 25 Paidge Avenue

**Work Order # :** 369409 **Project ID:** EQ24

**Lab Batch ID:** 803645 **QC- Sample ID:** 369409-003 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 04/21/2010 **Date Prepared:** 04/21/2010 **Analyst:** CYE

**Reporting Units:** ug/L

| VOAs by SW-846 8260 Analytes | MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
| Benzene | 122 | 50.0 | 156 | 68 | 50.0 | 157 | 70 | 1 | 66-142 | 21 | |
| Bromobenzene | <5.00 | 50.0 | 46.1 | 92 | 50.0 | 45.5 | 91 | 1 | 75-125 | 20 | |
| Bromochloromethane | <5.00 | 50.0 | 43.9 | 88 | 50.0 | 43.9 | 88 | 0 | 73-125 | 20 | |
| Bromodichloromethane | <5.00 | 50.0 | 52.5 | 105 | 50.0 | 51.7 | 103 | 2 | 75-125 | 20 | |
| Bromoform | <5.00 | 50.0 | 46.2 | 92 | 50.0 | 47.1 | 94 | 2 | 75-125 | 20 | |
| Bromomethane | <5.00 | 50.0 | 50.7 | 101 | 50.0 | 51.8 | 104 | 2 | 70-130 | 20 | |
| MTBE | <5.00 | 50.0 | 52.4 | 105 | 50.0 | 52.7 | 105 | 1 | 65-135 | 20 | |
| n-Butylbenzene | 10.9 | 50.0 | 59.7 | 98 | 50.0 | 57.8 | 94 | 3 | 75-125 | 20 | |
| Sec-Butylbenzene | 7.19 | 50.0 | 56.1 | 98 | 50.0 | 54.2 | 94 | 3 | 75-125 | 20 | |
| tert-Butylbenzene | <5.00 | 50.0 | 50.7 | 101 | 50.0 | 50.1 | 100 | 1 | 75-125 | 20 | |
| Carbon Tetrachloride | <5.00 | 50.0 | 55.1 | 110 | 50.0 | 55.8 | 112 | 1 | 62-125 | 20 | |
| Chlorobenzene | <5.00 | 50.0 | 44.9 | 90 | 50.0 | 45.6 | 91 | 2 | 60-133 | 21 | |
| Chloroethane | <10.0 | 50.0 | 42.1 | 84 | 50.0 | 44.6 | 89 | 6 | 70-130 | 20 | |
| Chloroform | <5.00 | 50.0 | 52.6 | 105 | 50.0 | 52.0 | 104 | 1 | 74-125 | 20 | |
| Chloromethane | <10.0 | 50.0 | 35.9 | 72 | 50.0 | 36.5 | 73 | 2 | 70-130 | 20 | |
| 2-Chlorotoluene | <5.00 | 50.0 | 45.1 | 90 | 50.0 | 45.0 | 90 | 0 | 73-125 | 20 | |
| 4-Chlorotoluene | <5.00 | 50.0 | 50.4 | 101 | 50.0 | 49.8 | 100 | 1 | 74-125 | 20 | |
| p-Cymene (p-Isopropyltoluene) | <5.00 | 50.0 | 51.4 | 103 | 50.0 | 49.4 | 99 | 4 | 75-125 | 20 | |
| Dibromochloromethane | <5.00 | 50.0 | 49.1 | 98 | 50.0 | 50.0 | 100 | 2 | 73-125 | 20 | |
| 1,2-Dibromo-3-Chloropropane | <5.00 | 50.0 | 51.4 | 103 | 50.0 | 53.4 | 107 | 4 | 59-125 | 28 | |
| Dibromomethane | <5.00 | 50.0 | 45.0 | 90 | 50.0 | 45.9 | 92 | 2 | 69-127 | 23 | |
| 1,2-Dichlorobenzene | <5.00 | 50.0 | 46.4 | 93 | 50.0 | 45.8 | 92 | 1 | 75-125 | 20 | |
| 1,3-Dichlorobenzene | <5.00 | 50.0 | 47.0 | 94 | 50.0 | 46.6 | 93 | 1 | 75-125 | 20 | |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit



Shell/Motiva 0007816

XENCO Laboratories

# Form 3 - MS / MSD Recoveries

## Project Name: 25 Paidge Avenue

**Work Order # :** 369409 **Project ID:** EQ24

**Lab Batch ID:** 803645 **QC- Sample ID:** 369409-003 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 04/21/2010 **Date Prepared:** 04/21/2010 **Analyst:** CYE

**Reporting Units:** ug/L

| VOAs by SW-846 8260<br>Analytes | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dichlorobenzene | <5.00 | 50.0 | 45.9 | 92 | 50.0 | 45.3 | 91 | 1 | 75-125 | 20 | |
| Dichlorodifluoromethane | <5.00 | 50.0 | 48.3 | 97 | 50.0 | 47.6 | 95 | 1 | 70-130 | 23 | |
| 1,1-Dichloroethane | <5.00 | 50.0 | 50.0 | 100 | 50.0 | 50.1 | 100 | 0 | 72-125 | 20 | |
| 1,2-Dichloroethane | <5.00 | 50.0 | 61.1 | 122 | 50.0 | 61.5 | 123 | 1 | 68-127 | 20 | |
| 1,1-Dichloroethene | <5.00 | 50.0 | 41.1 | 82 | 50.0 | 41.4 | 83 | 1 | 59-172 | 22 | |
| cis-1,2-Dichloroethene | <5.00 | 50.0 | 42.3 | 85 | 50.0 | 41.0 | 82 | 3 | 75-125 | 20 | |
| trans-1,2-dichloroethene | <5.00 | 50.0 | 40.6 | 81 | 50.0 | 42.5 | 85 | 5 | 75-125 | 20 | |
| 1,2-Dichloropropane | <5.00 | 50.0 | 46.1 | 92 | 50.0 | 46.1 | 92 | 0 | 74-125 | 20 | |
| 1,3-Dichloropropane | <5.00 | 50.0 | 43.2 | 86 | 50.0 | 44.1 | 88 | 2 | 75-125 | 20 | |
| 2,2-Dichloropropane | <5.00 | 50.0 | 54.6 | 109 | 50.0 | 55.8 | 112 | 2 | 75-125 | 20 | |
| 1,1-Dichloropropene | <5.00 | 50.0 | 42.0 | 84 | 50.0 | 40.2 | 80 | 4 | 75-125 | 20 | |
| cis-1,3-Dichloropropene | <5.00 | 50.0 | 48.6 | 97 | 50.0 | 47.5 | 95 | 2 | 74-125 | 20 | |
| trans-1,3-dichloropropene | <5.00 | 50.0 | 49.2 | 98 | 50.0 | 48.9 | 98 | 1 | 66-125 | 20 | |
| Ethylbenzene | <5.00 | 50.0 | 50.2 | 100 | 50.0 | 49.8 | 100 | 1 | 75-125 | 20 | |
| Hexachlorobutadiene | <5.00 | 50.0 | 51.2 | 102 | 50.0 | 47.9 | 96 | 7 | 75-125 | 20 | |
| isopropylbenzene | 63.1 | 50.0 | 106 | 86 | 50.0 | 106 | 86 | 0 | 75-125 | 20 | |
| Methylene Chloride | <5.00 | 50.0 | 40.3 | 81 | 50.0 | 41.6 | 83 | 3 | 75-125 | 35 | |
| Naphthalene | <10.0 | 50.0 | 50.6 | 101 | 50.0 | 50.0 | 100 | 1 | 75-125 | 20 | |
| n-Propylbenzene | 107 | 50.0 | 148 | 82 | 50.0 | 143 | 72 | 3 | 75-125 | 20 | X |
| Styrene | <5.00 | 50.0 | 45.1 | 90 | 50.0 | 45.4 | 91 | 1 | 75-125 | 51 | |
| 1,1,1,2-Tetrachloroethane | <5.00 | 50.0 | 49.7 | 99 | 50.0 | 50.4 | 101 | 1 | 72-125 | 20 | |
| 1,1,2,2-Tetrachloroethane | <5.00 | 50.0 | 45.5 | 91 | 50.0 | 44.5 | 89 | 2 | 74-125 | 31 | |
| Tetrachloroethylene | <5.00 | 50.0 | 43.0 | 86 | 50.0 | 43.6 | 87 | 1 | 71-125 | 20 | |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit





Shell/Motiva 0007817

XENCO Laboratories

# Form 3 - MS / MSD Recoveries

## Project Name: 25 Paidge Avenue

**Work Order # :** 369409 **Project ID:** EQ24

**Lab Batch ID:** 803645 **QC- Sample ID:** 369409-003 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 04/21/2010 **Date Prepared:** 04/21/2010 **Analyst:** CYE

**Reporting Units:** ug/L

| VOAs by SW-846 8260<br>Analytes | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | <5.00 | 50.0 | 43.7 | 87 | 50.0 | 44.0 | 88 | 1 | 59-139 | 21 | |
| 1,2,3-Trichlorobenzene | <5.00 | 50.0 | 45.8 | 92 | 50.0 | 46.3 | 93 | 1 | 75-137 | 20 | |
| 1,2,4-Trichlorobenzene | <5.00 | 50.0 | 47.0 | 94 | 50.0 | 45.7 | 91 | 3 | 75-135 | 20 | |
| 1,1,1-Trichloroethane | <5.00 | 50.0 | 52.7 | 105 | 50.0 | 52.5 | 105 | 0 | 75-125 | 20 | |
| 1,1,2-Trichloroethane | <5.00 | 50.0 | 45.0 | 90 | 50.0 | 45.5 | 91 | 1 | 75-127 | 20 | |
| Trichloroethene | <5.00 | 50.0 | 46.8 | 94 | 50.0 | 47.8 | 96 | 2 | 62-137 | 24 | |
| Trichlorofluoromethane | <5.00 | 50.0 | 55.6 | 111 | 50.0 | 56.0 | 112 | 1 | 67-125 | 20 | |
| 1,2,3-Trichloropropane | <5.00 | 50.0 | 49.9 | 100 | 50.0 | 49.1 | 98 | 2 | 75-125 | 20 | |
| 1,2,4-Trimethylbenzene | <5.00 | 50.0 | 51.7 | 103 | 50.0 | 50.2 | 100 | 3 | 75-125 | 20 | |
| 1,3,5-Trimethylbenzene | <5.00 | 50.0 | 50.6 | 101 | 50.0 | 49.3 | 99 | 3 | 70-125 | 20 | |
| o-Xylene | <5.00 | 50.0 | 46.2 | 92 | 50.0 | 47.5 | 95 | 3 | 75-125 | 20 | |
| m,p-Xylenes | <10.0 | 100 | 93.5 | 94 | 100 | 94.5 | 95 | 1 | 75-125 | 20 | |
| Vinyl Chloride | <2.00 | 50.0 | 40.7 | 81 | 50.0 | 40.9 | 82 | 0 | 75-125 | 20 | |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit





Shell/Motiva 0007818

XENCO Laboratories

# Form 3 - MS / MSD Recoveries

## Project Name: 25 Paidge Avenue

**Work Order # :** 369409 **Project ID:** EQ24

**Lab Batch ID:** 803828 **QC- Sample ID:** 369409-004 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 04/22/2010 **Date Prepared:** 04/22/2010 **Analyst:** CYE

**Reporting Units:** ug/L

| VOAs by SW-846 8260 Analytes | MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
| Benzene | <5.00 | 50.0 | 52.1 | 104 | 50.0 | 49.7 | 99 | 5 | 66-142 | 21 | |
| Bromobenzene | <5.00 | 50.0 | 50.1 | 100 | 50.0 | 51.2 | 102 | 2 | 75-125 | 20 | |
| Bromochloromethane | <5.00 | 50.0 | 53.3 | 107 | 50.0 | 53.1 | 106 | 0 | 73-125 | 20 | |
| Bromodichloromethane | <5.00 | 50.0 | 53.4 | 107 | 50.0 | 53.1 | 106 | 1 | 75-125 | 20 | |
| Bromoform | <5.00 | 50.0 | 52.4 | 105 | 50.0 | 55.7 | 111 | 6 | 75-125 | 20 | |
| Bromomethane | <5.00 | 50.0 | 55.3 | 111 | 50.0 | 46.4 | 93 | 18 | 70-130 | 20 | |
| MTBE | <5.00 | 50.0 | 61.9 | 124 | 50.0 | 60.1 | 120 | 3 | 65-135 | 20 | |
| n-Butylbenzene | <5.00 | 50.0 | 52.0 | 104 | 50.0 | 50.1 | 100 | 4 | 75-125 | 20 | |
| Sec-Butylbenzene | <5.00 | 50.0 | 53.0 | 106 | 50.0 | 51.4 | 103 | 3 | 75-125 | 20 | |
| tert-Butylbenzene | <5.00 | 50.0 | 53.0 | 106 | 50.0 | 53.6 | 107 | 1 | 75-125 | 20 | |
| Carbon Tetrachloride | <5.00 | 50.0 | 50.4 | 101 | 50.0 | 48.9 | 98 | 3 | 62-125 | 20 | |
| Chlorobenzene | <5.00 | 50.0 | 53.1 | 106 | 50.0 | 52.4 | 105 | 1 | 60-133 | 21 | |
| Chloroethane | <10.0 | 50.0 | 54.8 | 110 | 50.0 | 48.2 | 96 | 13 | 70-130 | 20 | |
| Chloroform | <5.00 | 50.0 | 53.3 | 107 | 50.0 | 51.9 | 104 | 3 | 74-125 | 20 | |
| Chloromethane | <10.0 | 50.0 | 59.7 | 119 | 50.0 | 53.1 | 106 | 12 | 70-130 | 20 | |
| 2-Chlorotoluene | <5.00 | 50.0 | 51.0 | 102 | 50.0 | 50.7 | 101 | 1 | 73-125 | 20 | |
| 4-Chlorotoluene | <5.00 | 50.0 | 53.4 | 107 | 50.0 | 51.7 | 103 | 3 | 74-125 | 20 | |
| p-Cymene (p-Isopropyltoluene) | <5.00 | 50.0 | 54.3 | 109 | 50.0 | 52.3 | 105 | 4 | 75-125 | 20 | |
| Dibromochloromethane | <5.00 | 50.0 | 52.5 | 105 | 50.0 | 55.0 | 110 | 5 | 73-125 | 20 | |
| 1,2-Dibromo-3-Chloropropane | <5.00 | 50.0 | 48.3 | 97 | 50.0 | 53.9 | 108 | 11 | 59-125 | 28 | |
| Dibromomethane | <5.00 | 50.0 | 51.0 | 102 | 50.0 | 51.5 | 103 | 1 | 69-127 | 23 | |
| 1,2-Dichlorobenzene | <5.00 | 50.0 | 52.7 | 105 | 50.0 | 51.6 | 103 | 2 | 75-125 | 20 | |
| 1,3-Dichlorobenzene | <5.00 | 50.0 | 51.4 | 103 | 50.0 | 51.1 | 102 | 1 | 75-125 | 20 | |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit





Shell/Motiva 0007819

XENCO Laboratories

# Form 3 - MS / MSD Recoveries

## Project Name: 25 Paidge Avenue

**Work Order # :** 369409 **Project ID:** EQ24

**Lab Batch ID:** 803828 **QC- Sample ID:** 369409-004 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 04/22/2010 **Date Prepared:** 04/22/2010 **Analyst:** CYE

**Reporting Units:** ug/L

| VOAs by SW-846 8260<br>Analytes | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dichlorobenzene | <5.00 | 50.0 | 51.1 | 102 | 50.0 | 51.6 | 103 | 1 | 75-125 | 20 | |
| Dichlorodifluoromethane | <5.00 | 50.0 | 58.2 | 116 | 50.0 | 52.8 | 106 | 10 | 70-130 | 23 | |
| 1,1-Dichloroethane | <5.00 | 50.0 | 57.7 | 115 | 50.0 | 55.0 | 110 | 5 | 72-125 | 20 | |
| 1,2-Dichloroethane | <5.00 | 50.0 | 53.7 | 107 | 50.0 | 53.1 | 106 | 1 | 68-127 | 20 | |
| 1,1-Dichloroethene | <5.00 | 50.0 | 50.1 | 100 | 50.0 | 50.0 | 100 | 0 | 59-172 | 22 | |
| cis-1,2-Dichloroethene | <5.00 | 50.0 | 53.0 | 106 | 50.0 | 52.3 | 105 | 1 | 75-125 | 20 | |
| trans-1,2-dichloroethene | <5.00 | 50.0 | 54.2 | 108 | 50.0 | 51.2 | 102 | 6 | 75-125 | 20 | |
| 1,2-Dichloropropane | <5.00 | 50.0 | 53.5 | 107 | 50.0 | 54.9 | 110 | 3 | 74-125 | 20 | |
| 1,3-Dichloropropane | <5.00 | 50.0 | 49.6 | 99 | 50.0 | 53.8 | 108 | 8 | 75-125 | 20 | |
| 2,2-Dichloropropane | <5.00 | 50.0 | 57.3 | 115 | 50.0 | 50.6 | 101 | 12 | 75-125 | 20 | |
| 1,1-Dichloropropene | <5.00 | 50.0 | 47.4 | 95 | 50.0 | 45.6 | 91 | 4 | 75-125 | 20 | |
| cis-1,3-Dichloropropene | <5.00 | 50.0 | 53.1 | 106 | 50.0 | 55.5 | 111 | 4 | 74-125 | 20 | |
| trans-1,3-dichloropropene | <5.00 | 50.0 | 53.3 | 107 | 50.0 | 56.2 | 112 | 5 | 66-125 | 20 | |
| Ethylbenzene | <5.00 | 50.0 | 52.1 | 104 | 50.0 | 50.0 | 100 | 4 | 75-125 | 20 | |
| Hexachlorobutadiene | <5.00 | 50.0 | 49.9 | 100 | 50.0 | 48.0 | 96 | 4 | 75-125 | 20 | |
| isopropylbenzene | <5.00 | 50.0 | 53.6 | 107 | 50.0 | 50.7 | 101 | 6 | 75-125 | 20 | |
| Methylene Chloride | <5.00 | 50.0 | 52.2 | 104 | 50.0 | 51.5 | 103 | 1 | 75-125 | 35 | |
| Naphthalene | <10.0 | 50.0 | 55.8 | 112 | 50.0 | 57.0 | 114 | 2 | 75-125 | 20 | |
| n-Propylbenzene | <5.00 | 50.0 | 51.6 | 103 | 50.0 | 53.3 | 107 | 3 | 75-125 | 20 | |
| Styrene | <5.00 | 50.0 | 53.8 | 108 | 50.0 | 53.2 | 106 | 1 | 75-125 | 51 | |
| 1,1,1,2-Tetrachloroethane | <5.00 | 50.0 | 53.4 | 107 | 50.0 | 52.4 | 105 | 2 | 72-125 | 20 | |
| 1,1,2,2-Tetrachloroethane | <5.00 | 50.0 | 50.2 | 100 | 50.0 | 54.9 | 110 | 9 | 74-125 | 31 | |
| Tetrachloroethylene | <5.00 | 50.0 | 53.7 | 107 | 50.0 | 52.2 | 104 | 3 | 71-125 | 20 | |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit





Shell/Motiva 0007820

XENCO Laboratories

# Form 3 - MS / MSD Recoveries

## Project Name: 25 Paidge Avenue

**Work Order # :** 369409 **Project ID:** EQ24

**Lab Batch ID:** 803828 **QC- Sample ID:** 369409-004 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 04/22/2010 **Date Prepared:** 04/22/2010 **Analyst:** CYE

**Reporting Units:** ug/L

| VOAs by SW-846 8260<br>Analytes | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | <5.00 | 50.0 | 49.6 | 99 | 50.0 | 48.9 | 98 | 1 | 59-139 | 21 | |
| 1,2,3-Trichlorobenzene | <5.00 | 50.0 | 55.3 | 111 | 50.0 | 52.2 | 104 | 6 | 75-137 | 20 | |
| 1,2,4-Trichlorobenzene | <5.00 | 50.0 | 55.4 | 111 | 50.0 | 51.1 | 102 | 8 | 75-135 | 20 | |
| 1,1,1-Trichloroethane | <5.00 | 50.0 | 49.9 | 100 | 50.0 | 46.9 | 94 | 6 | 75-125 | 20 | |
| 1,1,2-Trichloroethane | <5.00 | 50.0 | 51.2 | 102 | 50.0 | 54.0 | 108 | 5 | 75-127 | 20 | |
| Trichloroethene | <5.00 | 50.0 | 50.1 | 100 | 50.0 | 50.2 | 100 | 0 | 62-137 | 24 | |
| Trichlorofluoromethane | <5.00 | 50.0 | 61.4 | 123 | 50.0 | 52.7 | 105 | 15 | 67-125 | 20 | |
| 1,2,3-Trichloropropane | <5.00 | 50.0 | 51.8 | 104 | 50.0 | 59.6 | 119 | 14 | 75-125 | 20 | |
| 1,2,4-Trimethylbenzene | <5.00 | 50.0 | 54.2 | 108 | 50.0 | 51.7 | 103 | 5 | 75-125 | 20 | |
| 1,3,5-Trimethylbenzene | <5.00 | 50.0 | 50.8 | 102 | 50.0 | 50.7 | 101 | 0 | 70-125 | 20 | |
| o-Xylene | <5.00 | 50.0 | 54.4 | 109 | 50.0 | 51.9 | 104 | 5 | 75-125 | 20 | |
| m,p-Xylenes | <10.0 | 100 | 106 | 106 | 100 | 104 | 104 | 2 | 75-125 | 20 | |
| Vinyl Chloride | <2.00 | 50.0 | 49.3 | 99 | 50.0 | 44.2 | 88 | 11 | 75-125 | 20 | |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit





Shell/Motiva 0007821

XENCO Laboratories

# Form 3 - MS / MSD Recoveries

## Project Name: 25 Paidge Avenue

**Work Order # :** 369409 **Project ID:** EQ24

**Lab Batch ID:** 804058 **QC- Sample ID:** 369409-025 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 04/26/2010 **Date Prepared:** 04/26/2010 **Analyst:** CYE

**Reporting Units:** ug/L

| VOAs by SW-846 8260 Analytes | MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
| Benzene | 37.6 | 50.0 | 85.5 | 96 | 50.0 | 90.4 | 106 | 6 | 66-142 | 21 | |
| Bromobenzene | <5.00 | 50.0 | 50.0 | 100 | 50.0 | 52.7 | 105 | 5 | 75-125 | 20 | |
| Bromochloromethane | <5.00 | 50.0 | 47.5 | 95 | 50.0 | 51.3 | 103 | 8 | 73-125 | 20 | |
| Bromodichloromethane | <5.00 | 50.0 | 55.0 | 110 | 50.0 | 57.9 | 116 | 5 | 75-125 | 20 | |
| Bromoform | <5.00 | 50.0 | 59.1 | 118 | 50.0 | 59.8 | 120 | 1 | 75-125 | 20 | |
| Bromomethane | <5.00 | 50.0 | 35.6 | 71 | 50.0 | 36.6 | 73 | 3 | 70-130 | 20 | |
| MTBE | 14.6 | 50.0 | 70.3 | 111 | 50.0 | 72.3 | 115 | 3 | 65-135 | 20 | |
| n-Butylbenzene | <5.00 | 50.0 | 53.0 | 106 | 50.0 | 56.0 | 112 | 6 | 75-125 | 20 | |
| Sec-Butylbenzene | <5.00 | 50.0 | 55.9 | 112 | 50.0 | 58.9 | 118 | 5 | 75-125 | 20 | |
| tert-Butylbenzene | <5.00 | 50.0 | 54.3 | 109 | 50.0 | 58.1 | 116 | 7 | 75-125 | 20 | |
| Carbon Tetrachloride | <5.00 | 50.0 | 47.0 | 94 | 50.0 | 50.9 | 102 | 8 | 62-125 | 20 | |
| Chlorobenzene | <5.00 | 50.0 | 51.9 | 104 | 50.0 | 54.4 | 109 | 5 | 60-133 | 21 | |
| Chloroethane | <10.0 | 50.0 | 40.2 | 80 | 50.0 | 40.4 | 81 | 0 | 70-130 | 20 | |
| Chloroform | <5.00 | 50.0 | 49.6 | 99 | 50.0 | 53.0 | 106 | 7 | 74-125 | 20 | |
| Chloromethane | <10.0 | 50.0 | 37.3 | 75 | 50.0 | 38.3 | 77 | 3 | 70-130 | 20 | |
| 2-Chlorotoluene | <5.00 | 50.0 | 49.0 | 98 | 50.0 | 52.6 | 105 | 7 | 73-125 | 20 | |
| 4-Chlorotoluene | <5.00 | 50.0 | 49.1 | 98 | 50.0 | 51.6 | 103 | 5 | 74-125 | 20 | |
| p-Cymene (p-Isopropyltoluene) | <5.00 | 50.0 | 49.6 | 99 | 50.0 | 52.1 | 104 | 5 | 75-125 | 20 | |
| Dibromochloromethane | <5.00 | 50.0 | 58.1 | 116 | 50.0 | 60.2 | 120 | 4 | 73-125 | 20 | |
| 1,2-Dibromo-3-Chloropropane | <5.00 | 50.0 | 58.5 | 117 | 50.0 | 57.1 | 114 | 2 | 59-125 | 28 | |
| Dibromomethane | <5.00 | 50.0 | 49.5 | 99 | 50.0 | 52.3 | 105 | 6 | 69-127 | 23 | |
| 1,2-Dichlorobenzene | <5.00 | 50.0 | 51.7 | 103 | 50.0 | 54.4 | 109 | 5 | 75-125 | 20 | |
| 1,3-Dichlorobenzene | <5.00 | 50.0 | 53.0 | 106 | 50.0 | 55.1 | 110 | 4 | 75-125 | 20 | |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit





Shell/Motiva 0007822

XENCO Laboratories

# Form 3 - MS / MSD Recoveries

## Project Name: 25 Paidge Avenue

**Work Order # :** 369409 **Project ID:** EQ24

**Lab Batch ID:** 804058 **QC- Sample ID:** 369409-025 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 04/26/2010 **Date Prepared:** 04/26/2010 **Analyst:** CYE

**Reporting Units:** ug/L

| VOAs by SW-846 8260<br>Analytes | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dichlorobenzene | <5.00 | 50.0 | 50.1 | 100 | 50.0 | 52.8 | 106 | 5 | 75-125 | 20 | |
| Dichlorodifluoromethane | <5.00 | 50.0 | 44.1 | 88 | 50.0 | 45.8 | 92 | 4 | 70-130 | 23 | |
| 1,1-Dichloroethane | <5.00 | 50.0 | 50.2 | 100 | 50.0 | 52.7 | 105 | 5 | 72-125 | 20 | |
| 1,2-Dichloroethane | <5.00 | 50.0 | 49.4 | 99 | 50.0 | 51.9 | 104 | 5 | 68-127 | 20 | |
| 1,1-Dichloroethene | <5.00 | 50.0 | 42.1 | 84 | 50.0 | 44.6 | 89 | 6 | 59-172 | 22 | |
| cis-1,2-Dichloroethene | <5.00 | 50.0 | 46.0 | 92 | 50.0 | 48.8 | 98 | 6 | 75-125 | 20 | |
| trans-1,2-dichloroethene | <5.00 | 50.0 | 41.4 | 83 | 50.0 | 44.6 | 89 | 7 | 75-125 | 20 | |
| 1,2-Dichloropropane | <5.00 | 50.0 | 53.0 | 106 | 50.0 | 54.6 | 109 | 3 | 74-125 | 20 | |
| 1,3-Dichloropropane | <5.00 | 50.0 | 50.8 | 102 | 50.0 | 52.4 | 105 | 3 | 75-125 | 20 | |
| 2,2-Dichloropropane | <5.00 | 50.0 | 51.5 | 103 | 50.0 | 52.5 | 105 | 2 | 75-125 | 20 | |
| 1,1-Dichloropropene | <5.00 | 50.0 | 38.2 | 76 | 50.0 | 41.8 | 84 | 9 | 75-125 | 20 | |
| cis-1,3-Dichloropropene | <5.00 | 50.0 | 52.7 | 105 | 50.0 | 56.9 | 114 | 8 | 74-125 | 20 | |
| trans-1,3-dichloropropene | <5.00 | 50.0 | 52.9 | 106 | 50.0 | 55.7 | 111 | 5 | 66-125 | 20 | |
| Ethylbenzene | <5.00 | 50.0 | 49.9 | 100 | 50.0 | 52.6 | 105 | 5 | 75-125 | 20 | |
| Hexachlorobutadiene | <5.00 | 50.0 | 52.7 | 105 | 50.0 | 54.6 | 109 | 4 | 75-125 | 20 | |
| isopropylbenzene | 53.4 | 50.0 | 105 | 103 | 50.0 | 108 | 109 | 3 | 75-125 | 20 | |
| Methylene Chloride | <5.00 | 50.0 | 44.8 | 90 | 50.0 | 47.4 | 95 | 6 | 75-125 | 35 | |
| Naphthalene | <10.0 | 50.0 | 54.9 | 110 | 50.0 | 55.6 | 111 | 1 | 75-125 | 20 | |
| n-Propylbenzene | 51.3 | 50.0 | 101 | 99 | 50.0 | 104 | 105 | 3 | 75-125 | 20 | |
| Styrene | <5.00 | 50.0 | 44.2 | 88 | 50.0 | 43.1 | 86 | 3 | 75-125 | 51 | |
| 1,1,1,2-Tetrachloroethane | <5.00 | 50.0 | 53.8 | 108 | 50.0 | 55.2 | 110 | 3 | 72-125 | 20 | |
| 1,1,2,2-Tetrachloroethane | <5.00 | 50.0 | 57.7 | 115 | 50.0 | 59.6 | 119 | 3 | 74-125 | 31 | |
| Tetrachloroethylene | <5.00 | 50.0 | 47.3 | 95 | 50.0 | 49.6 | 99 | 5 | 71-125 | 20 | |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit



Shell/Motiva 0007823

XENCO Laboratories

# Form 3 - MS / MSD Recoveries

## Project Name: 25 Paidge Avenue

**Work Order # :** 369409 **Project ID:** EQ24

**Lab Batch ID:** 804058 **QC- Sample ID:** 369409-025 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 04/26/2010 **Date Prepared:** 04/26/2010 **Analyst:** CYE

**Reporting Units:** ug/L

| VOAs by SW-846 8260<br>Analytes | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | <5.00 | 50.0 | 48.2 | 96 | 50.0 | 50.9 | 102 | 5 | 59-139 | 21 | |
| 1,2,3-Trichlorobenzene | <5.00 | 50.0 | 52.8 | 106 | 50.0 | 54.8 | 110 | 4 | 75-137 | 20 | |
| 1,2,4-Trichlorobenzene | <5.00 | 50.0 | 52.0 | 104 | 50.0 | 54.3 | 109 | 4 | 75-135 | 20 | |
| 1,1,1-Trichloroethane | <5.00 | 50.0 | 44.3 | 89 | 50.0 | 47.2 | 94 | 6 | 75-125 | 20 | |
| 1,1,2-Trichloroethane | <5.00 | 50.0 | 56.3 | 113 | 50.0 | 56.6 | 113 | 1 | 75-127 | 20 | |
| Trichloroethene | <5.00 | 50.0 | 46.6 | 93 | 50.0 | 50.4 | 101 | 8 | 62-137 | 24 | |
| Trichlorofluoromethane | <5.00 | 50.0 | 47.4 | 95 | 50.0 | 48.9 | 98 | 3 | 67-125 | 20 | |
| 1,2,3-Trichloropropane | <5.00 | 50.0 | 56.4 | 113 | 50.0 | 58.6 | 117 | 4 | 75-125 | 20 | |
| 1,2,4-Trimethylbenzene | <5.00 | 50.0 | 47.3 | 95 | 50.0 | 47.5 | 95 | 0 | 75-125 | 20 | |
| 1,3,5-Trimethylbenzene | 51.6 | 50.0 | 102 | 101 | 50.0 | 106 | 109 | 4 | 70-125 | 20 | |
| o-Xylene | 5.22 | 50.0 | 55.7 | 101 | 50.0 | 57.5 | 105 | 3 | 75-125 | 20 | |
| m,p-Xylenes | <10.0 | 100 | 104 | 104 | 100 | 108 | 108 | 4 | 75-125 | 20 | |
| Vinyl Chloride | <2.00 | 50.0 | 37.0 | 74 | 50.0 | 38.3 | 77 | 3 | 75-125 | 20 | X |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit





Shell/Motiva 0007824

XENCO Laboratories

# Form 3 - MS / MSD Recoveries

## Project Name: 25 Paidge Avenue

**Work Order # :** 369409 **Project ID:** EQ24

**Lab Batch ID:** 804067 **QC- Sample ID:** 369409-017 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 04/23/2010 **Date Prepared:** 04/23/2010 **Analyst:** CYE

**Reporting Units:** ug/L

| VOAs by SW-846 8260 Analytes | MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
| Benzene | <5.00 | 50.0 | 46.9 | 94 | 50.0 | 48.2 | 96 | 3 | 66-142 | 21 | |
| Bromobenzene | <5.00 | 50.0 | 49.5 | 99 | 50.0 | 49.9 | 100 | 1 | 75-125 | 20 | |
| Bromochloromethane | <5.00 | 50.0 | 48.5 | 97 | 50.0 | 49.2 | 98 | 1 | 73-125 | 20 | |
| Bromodichloromethane | <5.00 | 50.0 | 51.1 | 102 | 50.0 | 52.4 | 105 | 3 | 75-125 | 20 | |
| Bromoform | <5.00 | 50.0 | 49.1 | 98 | 50.0 | 49.3 | 99 | 0 | 75-125 | 20 | |
| Bromomethane | <5.00 | 50.0 | 41.9 | 84 | 50.0 | 44.7 | 89 | 6 | 70-130 | 20 | |
| MTBE | 17.5 | 50.0 | 65.1 | 95 | 50.0 | 69.5 | 104 | 7 | 65-135 | 20 | |
| n-Butylbenzene | <5.00 | 50.0 | 49.8 | 100 | 50.0 | 50.0 | 100 | 0 | 75-125 | 20 | |
| Sec-Butylbenzene | <5.00 | 50.0 | 52.4 | 105 | 50.0 | 51.7 | 103 | 1 | 75-125 | 20 | |
| tert-Butylbenzene | <5.00 | 50.0 | 51.9 | 104 | 50.0 | 52.1 | 104 | 0 | 75-125 | 20 | |
| Carbon Tetrachloride | <5.00 | 50.0 | 48.0 | 96 | 50.0 | 49.9 | 100 | 4 | 62-125 | 20 | |
| Chlorobenzene | <5.00 | 50.0 | 50.0 | 100 | 50.0 | 51.3 | 103 | 3 | 60-133 | 21 | |
| Chloroethane | <10.0 | 50.0 | 42.7 | 85 | 50.0 | 44.9 | 90 | 5 | 70-130 | 20 | |
| Chloroform | <5.00 | 50.0 | 48.6 | 97 | 50.0 | 49.4 | 99 | 2 | 74-125 | 20 | |
| Chloromethane | <10.0 | 50.0 | 43.1 | 86 | 50.0 | 42.6 | 85 | 1 | 70-130 | 20 | |
| 2-Chlorotoluene | <5.00 | 50.0 | 49.2 | 98 | 50.0 | 50.3 | 101 | 2 | 73-125 | 20 | |
| 4-Chlorotoluene | <5.00 | 50.0 | 49.6 | 99 | 50.0 | 50.2 | 100 | 1 | 74-125 | 20 | |
| p-Cymene (p-Isopropyltoluene) | <5.00 | 50.0 | 51.1 | 102 | 50.0 | 51.5 | 103 | 1 | 75-125 | 20 | |
| Dibromochloromethane | <5.00 | 50.0 | 52.3 | 105 | 50.0 | 53.4 | 107 | 2 | 73-125 | 20 | |
| 1,2-Dibromo-3-Chloropropane | <5.00 | 50.0 | 44.7 | 89 | 50.0 | 46.3 | 93 | 4 | 59-125 | 28 | |
| Dibromomethane | <5.00 | 50.0 | 46.4 | 93 | 50.0 | 47.9 | 96 | 3 | 69-127 | 23 | |
| 1,2-Dichlorobenzene | <5.00 | 50.0 | 49.8 | 100 | 50.0 | 50.1 | 100 | 1 | 75-125 | 20 | |
| 1,3-Dichlorobenzene | <5.00 | 50.0 | 51.1 | 102 | 50.0 | 51.0 | 102 | 0 | 75-125 | 20 | |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit





Shell/Motiva 0007825

XENCO Laboratories

# Form 3 - MS / MSD Recoveries

## Project Name: 25 Paidge Avenue

**Work Order # :** 369409 **Project ID:** EQ24

**Lab Batch ID:** 804067 **QC- Sample ID:** 369409-017 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 04/23/2010 **Date Prepared:** 04/23/2010 **Analyst:** CYE

**Reporting Units:** ug/L

| VOAs by SW-846 8260 Analytes | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dichlorobenzene | <5.00 | 50.0 | 49.4 | 99 | 50.0 | 50.0 | 100 | 1 | 75-125 | 20 | |
| Dichlorodifluoromethane | <5.00 | 50.0 | 49.3 | 99 | 50.0 | 48.3 | 97 | 2 | 70-130 | 23 | |
| 1,1-Dichloroethane | <5.00 | 50.0 | 50.3 | 101 | 50.0 | 51.7 | 103 | 3 | 72-125 | 20 | |
| 1,2-Dichloroethane | <5.00 | 50.0 | 47.2 | 94 | 50.0 | 47.3 | 95 | 0 | 68-127 | 20 | |
| 1,1-Dichloroethene | <5.00 | 50.0 | 47.2 | 94 | 50.0 | 47.6 | 95 | 1 | 59-172 | 22 | |
| cis-1,2-Dichloroethene | <5.00 | 50.0 | 46.1 | 92 | 50.0 | 47.6 | 95 | 3 | 75-125 | 20 | |
| trans-1,2-dichloroethene | <5.00 | 50.0 | 47.0 | 94 | 50.0 | 47.0 | 94 | 0 | 75-125 | 20 | |
| 1,2-Dichloropropane | <5.00 | 50.0 | 50.1 | 100 | 50.0 | 51.0 | 102 | 2 | 74-125 | 20 | |
| 1,3-Dichloropropane | <5.00 | 50.0 | 46.7 | 93 | 50.0 | 48.4 | 97 | 4 | 75-125 | 20 | |
| 2,2-Dichloropropane | <5.00 | 50.0 | 49.2 | 98 | 50.0 | 51.9 | 104 | 5 | 75-125 | 20 | |
| 1,1-Dichloropropene | <5.00 | 50.0 | 41.7 | 83 | 50.0 | 42.9 | 86 | 3 | 75-125 | 20 | |
| cis-1,3-Dichloropropene | <5.00 | 50.0 | 50.7 | 101 | 50.0 | 51.7 | 103 | 2 | 74-125 | 20 | |
| trans-1,3-dichloropropene | <5.00 | 50.0 | 48.5 | 97 | 50.0 | 49.5 | 99 | 2 | 66-125 | 20 | |
| Ethylbenzene | <5.00 | 50.0 | 47.1 | 94 | 50.0 | 48.8 | 98 | 4 | 75-125 | 20 | |
| Hexachlorobutadiene | <5.00 | 50.0 | 52.0 | 104 | 50.0 | 53.4 | 107 | 3 | 75-125 | 20 | |
| isopropylbenzene | <5.00 | 50.0 | 48.2 | 96 | 50.0 | 50.3 | 101 | 4 | 75-125 | 20 | |
| Methylene Chloride | <5.00 | 50.0 | 47.8 | 96 | 50.0 | 49.7 | 99 | 4 | 75-125 | 35 | |
| Naphthalene | <10.0 | 50.0 | 50.2 | 100 | 50.0 | 52.7 | 105 | 5 | 75-125 | 20 | |
| n-Propylbenzene | <5.00 | 50.0 | 51.1 | 102 | 50.0 | 50.2 | 100 | 2 | 75-125 | 20 | |
| Styrene | <5.00 | 50.0 | 47.7 | 95 | 50.0 | 49.2 | 98 | 3 | 75-125 | 51 | |
| 1,1,1,2-Tetrachloroethane | <5.00 | 50.0 | 47.8 | 96 | 50.0 | 51.2 | 102 | 7 | 72-125 | 20 | |
| 1,1,2,2-Tetrachloroethane | <5.00 | 50.0 | 49.7 | 99 | 50.0 | 50.3 | 101 | 1 | 74-125 | 31 | |
| Tetrachloroethylene | <5.00 | 50.0 | 49.1 | 98 | 50.0 | 49.6 | 99 | 1 | 71-125 | 20 | |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit





Shell/Motiva 0007826

XENCO Laboratories

# Form 3 - MS / MSD Recoveries

## Project Name: 25 Paidge Avenue

**Work Order # :** 369409 **Project ID:** EQ24

**Lab Batch ID:** 804067 **QC- Sample ID:** 369409-017 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 04/23/2010 **Date Prepared:** 04/23/2010 **Analyst:** CYE

**Reporting Units:** ug/L

| VOAs by SW-846 8260<br>Analytes | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | <5.00 | 50.0 | 46.8 | 94 | 50.0 | 47.2 | 94 | 1 | 59-139 | 21 | |
| 1,2,3-Trichlorobenzene | <5.00 | 50.0 | 52.9 | 106 | 50.0 | 55.0 | 110 | 4 | 75-137 | 20 | |
| 1,2,4-Trichlorobenzene | <5.00 | 50.0 | 52.5 | 105 | 50.0 | 53.6 | 107 | 2 | 75-135 | 20 | |
| 1,1,1-Trichloroethane | <5.00 | 50.0 | 44.8 | 90 | 50.0 | 46.0 | 92 | 3 | 75-125 | 20 | |
| 1,1,2-Trichloroethane | <5.00 | 50.0 | 46.9 | 94 | 50.0 | 49.0 | 98 | 4 | 75-127 | 20 | |
| Trichloroethene | <5.00 | 50.0 | 47.5 | 95 | 50.0 | 48.6 | 97 | 2 | 62-137 | 24 | |
| Trichlorofluoromethane | <5.00 | 50.0 | 50.6 | 101 | 50.0 | 53.2 | 106 | 5 | 67-125 | 20 | |
| 1,2,3-Trichloropropane | <5.00 | 50.0 | 48.3 | 97 | 50.0 | 49.7 | 99 | 3 | 75-125 | 20 | |
| 1,2,4-Trimethylbenzene | <5.00 | 50.0 | 49.6 | 99 | 50.0 | 50.0 | 100 | 1 | 75-125 | 20 | |
| 1,3,5-Trimethylbenzene | <5.00 | 50.0 | 49.6 | 99 | 50.0 | 49.5 | 99 | 0 | 70-125 | 20 | |
| o-Xylene | <5.00 | 50.0 | 48.9 | 98 | 50.0 | 50.2 | 100 | 3 | 75-125 | 20 | |
| m,p-Xylenes | <10.0 | 100 | 97.4 | 97 | 100 | 100 | 100 | 3 | 75-125 | 20 | |
| Vinyl Chloride | <2.00 | 50.0 | 42.5 | 85 | 50.0 | 41.9 | 84 | 1 | 75-125 | 20 | |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit





Shell/Motiva 0007827

XENCO Laboratories

# Form 3 - MS / MSD Recoveries

## Project Name: 25 Paidge Avenue

**Work Order # :** 369409 **Project ID:** EQ24

**Lab Batch ID:** 804536 **QC- Sample ID:** 370094-006 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 04/28/2010 **Date Prepared:** 04/28/2010 **Analyst:** CYE

**Reporting Units:** ug/L

| VOAs by SW-846 8260 Analytes | MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
| Benzene | <5.00 | 50.0 | 50.3 | 101 | 50.0 | 48.8 | 98 | 3 | 66-142 | 21 | |
| Bromobenzene | <0.000 | 50.0 | 48.8 | 98 | 50.0 | 50.6 | 101 | 4 | 75-125 | 20 | |
| Bromochloromethane | <0.000 | 50.0 | 50.1 | 100 | 50.0 | 50.0 | 100 | 0 | 73-125 | 20 | |
| Bromodichloromethane | <0.000 | 50.0 | 54.0 | 108 | 50.0 | 52.7 | 105 | 2 | 75-125 | 20 | |
| Bromoform | <0.000 | 50.0 | 48.9 | 98 | 50.0 | 52.7 | 105 | 7 | 75-125 | 20 | |
| Bromomethane | <0.000 | 50.0 | 42.6 | 85 | 50.0 | 42.3 | 85 | 1 | 70-130 | 20 | |
| MTBE | <0.000 | 50.0 | 51.6 | 103 | 50.0 | 49.9 | 100 | 3 | 65-135 | 20 | |
| n-Butylbenzene | <0.000 | 50.0 | 50.0 | 100 | 50.0 | 50.3 | 101 | 1 | 75-125 | 20 | |
| Sec-Butylbenzene | <0.000 | 50.0 | 53.2 | 106 | 50.0 | 53.4 | 107 | 0 | 75-125 | 20 | |
| tert-Butylbenzene | <0.000 | 50.0 | 53.7 | 107 | 50.0 | 53.1 | 106 | 1 | 75-125 | 20 | |
| Carbon Tetrachloride | <0.000 | 50.0 | 50.5 | 101 | 50.0 | 49.3 | 99 | 2 | 62-125 | 20 | |
| Chlorobenzene | <5.00 | 50.0 | 51.6 | 103 | 50.0 | 52.0 | 104 | 1 | 60-133 | 21 | |
| Chloroethane | <0.000 | 50.0 | 42.1 | 84 | 50.0 | 41.8 | 84 | 1 | 70-130 | 20 | |
| Chloroform | <0.000 | 50.0 | 49.5 | 99 | 50.0 | 48.7 | 97 | 2 | 74-125 | 20 | |
| Chloromethane | 0.970 | 50.0 | 44.0 | 86 | 50.0 | 43.5 | 85 | 1 | 70-130 | 20 | |
| 2-Chlorotoluene | <0.000 | 50.0 | 50.5 | 101 | 50.0 | 50.5 | 101 | 0 | 73-125 | 20 | |
| 4-Chlorotoluene | <0.000 | 50.0 | 50.2 | 100 | 50.0 | 50.5 | 101 | 1 | 74-125 | 20 | |
| p-Cymene (p-Isopropyltoluene) | <0.000 | 50.0 | 52.7 | 105 | 50.0 | 51.7 | 103 | 2 | 75-125 | 20 | |
| Dibromochloromethane | <0.000 | 50.0 | 53.8 | 108 | 50.0 | 54.2 | 108 | 1 | 73-125 | 20 | |
| 1,2-Dibromo-3-Chloropropane | <0.000 | 50.0 | 46.8 | 94 | 50.0 | 47.3 | 95 | 1 | 59-125 | 28 | |
| Dibromomethane | <0.000 | 50.0 | 49.0 | 98 | 50.0 | 48.1 | 96 | 2 | 69-127 | 23 | |
| 1,2-Dichlorobenzene | <0.000 | 50.0 | 50.6 | 101 | 50.0 | 50.6 | 101 | 0 | 75-125 | 20 | |
| 1,3-Dichlorobenzene | <0.000 | 50.0 | 51.3 | 103 | 50.0 | 51.8 | 104 | 1 | 75-125 | 20 | |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit



Shell/Motiva 0007828

XENCO Laboratories

# Form 3 - MS / MSD Recoveries

## Project Name: 25 Paidge Avenue

**Work Order # :** 369409 **Project ID:** EQ24

**Lab Batch ID:** 804536 **QC- Sample ID:** 370094-006 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 04/28/2010 **Date Prepared:** 04/28/2010 **Analyst:** CYE

**Reporting Units:** ug/L

| VOAs by SW-846 8260<br>Analytes | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dichlorobenzene | <0.000 | 50.0 | 50.0 | 100 | 50.0 | 50.4 | 101 | 1 | 75-125 | 20 | |
| Dichlorodifluoromethane | <0.000 | 50.0 | 47.3 | 95 | 50.0 | 46.7 | 93 | 1 | 70-130 | 23 | |
| 1,1-Dichloroethane | <0.000 | 50.0 | 52.1 | 104 | 50.0 | 52.2 | 104 | 0 | 72-125 | 20 | |
| 1,2-Dichloroethane | <5.00 | 50.0 | 48.3 | 97 | 50.0 | 47.0 | 94 | 3 | 68-127 | 20 | |
| 1,1-Dichloroethene | <0.000 | 50.0 | 49.3 | 99 | 50.0 | 48.1 | 96 | 2 | 59-172 | 22 | |
| cis-1,2-Dichloroethene | <5.00 | 50.0 | 49.1 | 98 | 50.0 | 47.9 | 96 | 2 | 75-125 | 20 | |
| trans-1,2-dichloroethene | <0.000 | 50.0 | 48.5 | 97 | 50.0 | 48.0 | 96 | 1 | 75-125 | 20 | |
| 1,2-Dichloropropane | <0.000 | 50.0 | 50.7 | 101 | 50.0 | 50.7 | 101 | 0 | 74-125 | 20 | |
| 1,3-Dichloropropane | <0.000 | 50.0 | 47.4 | 95 | 50.0 | 49.1 | 98 | 4 | 75-125 | 20 | |
| 2,2-Dichloropropane | <0.000 | 50.0 | 53.1 | 106 | 50.0 | 52.0 | 104 | 2 | 75-125 | 20 | |
| 1,1-Dichloropropene | <0.000 | 50.0 | 43.3 | 87 | 50.0 | 43.7 | 87 | 1 | 75-125 | 20 | |
| cis-1,3-Dichloropropene | <0.000 | 50.0 | 53.1 | 106 | 50.0 | 54.5 | 109 | 3 | 74-125 | 20 | |
| trans-1,3-dichloropropene | <0.000 | 50.0 | 50.6 | 101 | 50.0 | 51.5 | 103 | 2 | 66-125 | 20 | |
| Ethylbenzene | <5.00 | 50.0 | 49.5 | 99 | 50.0 | 49.6 | 99 | 0 | 75-125 | 20 | |
| Hexachlorobutadiene | <0.000 | 50.0 | 54.3 | 109 | 50.0 | 53.3 | 107 | 2 | 75-125 | 20 | |
| isopropylbenzene | <5.00 | 50.0 | 50.2 | 100 | 50.0 | 50.6 | 101 | 1 | 75-125 | 20 | |
| Methylene Chloride | 1.89 | 50.0 | 51.1 | 98 | 50.0 | 49.9 | 96 | 2 | 75-125 | 35 | |
| Naphthalene | <0.000 | 50.0 | 50.1 | 100 | 50.0 | 49.4 | 99 | 1 | 75-125 | 20 | |
| n-Propylbenzene | <0.000 | 50.0 | 50.6 | 101 | 50.0 | 50.9 | 102 | 1 | 75-125 | 20 | |
| Styrene | <0.000 | 50.0 | 49.8 | 100 | 50.0 | 50.2 | 100 | 1 | 75-125 | 51 | |
| 1,1,1,2-Tetrachloroethane | <0.000 | 50.0 | 51.4 | 103 | 50.0 | 51.2 | 102 | 0 | 72-125 | 20 | |
| 1,1,2,2-Tetrachloroethane | <0.000 | 50.0 | 50.6 | 101 | 50.0 | 50.7 | 101 | 0 | 74-125 | 31 | |
| Tetrachloroethylene | <5.00 | 50.0 | 50.1 | 100 | 50.0 | 50.6 | 101 | 1 | 71-125 | 20 | |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit





Shell/Motiva 0007829

XENCO Laboratories

# Form 3 - MS / MSD Recoveries

## Project Name: 25 Paidge Avenue

**Work Order # :** 369409 **Project ID:** EQ24

**Lab Batch ID:** 804536 **QC- Sample ID:** 370094-006 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 04/28/2010 **Date Prepared:** 04/28/2010 **Analyst:** CYE

**Reporting Units:** ug/L

| VOAs by SW-846 8260<br>Analytes | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | 2.75 | 50.0 | 51.5 | 98 | 50.0 | 51.3 | 97 | 0 | 59-139 | 21 | |
| 1,2,3-Trichlorobenzene | <0.000 | 50.0 | 53.4 | 107 | 50.0 | 51.4 | 103 | 4 | 75-137 | 20 | |
| 1,2,4-Trichlorobenzene | <0.000 | 50.0 | 53.3 | 107 | 50.0 | 53.1 | 106 | 0 | 75-135 | 20 | |
| 1,1,1-Trichloroethane | <0.000 | 50.0 | 46.5 | 93 | 50.0 | 45.7 | 91 | 2 | 75-125 | 20 | |
| 1,1,2-Trichloroethane | <0.000 | 50.0 | 48.0 | 96 | 50.0 | 50.4 | 101 | 5 | 75-127 | 20 | |
| Trichloroethene | <5.00 | 50.0 | 49.4 | 99 | 50.0 | 48.3 | 97 | 2 | 62-137 | 24 | |
| Trichlorofluoromethane | <0.000 | 50.0 | 51.9 | 104 | 50.0 | 51.2 | 102 | 1 | 67-125 | 20 | |
| 1,2,3-Trichloropropane | <0.000 | 50.0 | 49.7 | 99 | 50.0 | 50.2 | 100 | 1 | 75-125 | 20 | |
| 1,2,4-Trimethylbenzene | <0.000 | 50.0 | 50.6 | 101 | 50.0 | 50.8 | 102 | 0 | 75-125 | 20 | |
| 1,3,5-Trimethylbenzene | <0.000 | 50.0 | 50.7 | 101 | 50.0 | 50.9 | 102 | 0 | 70-125 | 20 | |
| o-Xylene | <5.00 | 50.0 | 51.6 | 103 | 50.0 | 51.4 | 103 | 0 | 75-125 | 20 | |
| m,p-Xylenes | <10.0 | 100 | 99.2 | 99 | 100 | 101 | 101 | 2 | 75-125 | 20 | |
| Vinyl Chloride | <2.00 | 50.0 | 41.9 | 84 | 50.0 | 42.1 | 84 | 0 | 75-125 | 20 | |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit





Shell/Motiva 0007830

# Shell Oil Products Chain Of Custody Record

**LAB (LOCATION)**
- ☑ XENCO (_____)
- ☐ CALSCIENCE (_____)
- ☐ TEST AMERICA (_____)
- ☐ SPL (_____)
- ☐ OTHER (_____)

**Please Check Appropriate Box:**
☑ ENV. SERVICES | ☐ MOTIVA RETAIL | ☐ SHELL RETAIL
☐ MOTIVA SD&CM | ☐ CONSULTANT | ☐ LUBES
☐ SHELL PIPELINE | ☐ OTHER _____

Print Bill To Contact Name: Doug Weimer

INCIDENT # (ENV SERVICES): 9 7 0 9 4 9 8 1 ☐ CHECK IF NO INCIDENT # APPLIES

PO #:

SAP #: 1 0 0 6 2 3

DATE: 3/1/2010

PAGE: 1 of 4

CONSULTANT COMPANY: Sovereign Consulting Inc.

ADDRESS: 3104 Unionville Road, Suite 150

CITY: Cranberry Twp, PA 16066

TELEPHONE: 724-553-5084 | FAX: | E-MAIL: gbosiljcic@sovcon.com

SITE ADDRESS (Street, City and State): 25 Paidge Avenue, Brooklyn NY

CONSULTANT PROJECT CONTACT (Report to): Greg Bosiljcic - 724-553-5084

CONSULTANT PROJECT NO.: EQ24

SAMPLER NAME(S) (Print): Nick Zarcone - Longshore Environmental 631-472-1732

LAB USE ONLY: 369409-H

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

DELIVERABLES: ☑ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY)

TEMPERATURE ON RECEIPT C°: Cooler #1 2.0°C | Cooler #2 | Cooler #3

**SPECIAL INSTRUCTIONS OR NOTES :**

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ PROVIDE LEDD DISK

**REQUESTED ANALYSIS**

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | EPA 8260 (FULL LIST) | MTBE | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-1 | 4/15/10 | 7:00 | GW | X | | | | Ice | 3 | X | X | |
| | MW-3 | 4/15/10 | 7:15 | GW | X | | | | Ice | 3 | X | X | |
| | MW-29 | 4/15/10 | 7:30 | GW | X | | | | Ice | 3 | X | X | |
| | MW-5 | 4/15/10 | 7:45 | GW | X | | | | Ice | 3 | X | X | |
| | MW-28 | 4/15/10 | 7:55 | GW | X | | | | Ice | 3 | X | X | |
| | MW-27 | 4/15/10 | 8:00 | GW | X | | | | Ice | 3 | X | X | |
| | MW-6 | 4/15/10 | 8:10 | GW | X | | | | Ice | 3 | X | X | |
| | MW-7R | 4/15/10 | 8:20 | GW | X | | | | Ice | 3 | X | X | |
| | MW-8 | 4/15/10 | 8:30 | GW | X | | | | Ice | 3 | X | X | |
| | MW-9 | 4/15/10 | 8:40 | GW | X | | | | Ice | 3 | X | X | |

| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
|---|---|---|---|
| | | 04/15/10 | 1600 |
| | | | |
| FED EX | | 4/16/10 | 0900 |

06/2/06 Revision



Final Ver. 1.000

Shell/Motiva 0007831

# Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
- ☑ XENCO (_____)
- ☐ CALSCIENCE (_____)
- ☐ TEST AMERICA (_____)
- ☐ SPL (_____)
- ☐ OTHER (_____)

Please Check Appropriate Box:
- ☑ ENV. SERVICES
- ☐ MOTIVA RETAIL
- ☐ SHELL RETAIL
- ☐ MOTIVA SD&CM
- ☐ CONSULTANT
- ☐ LUBES
- ☐ SHELL PIPELINE
- ☐ OTHER

Print Bill To Contact Name: Doug Weimer

INCIDENT # (ENV SERVICES): 9 7 0 9 4 9 8 1 ☐ CHECK IF NO INCIDENT # APPLIES

DATE: 3/1/2010

PAGE: 2 of 4

PO #:

SAP #: 1 0 0 0 2 3

CONSULTANT COMPANY: Sovereign Consulting Inc.

ADDRESS: 3104 Unionville Road, Suite 150

CITY: Cranberry Twp, PA 16066

TELEPHONE: 724-553-5084 FAX: E-MAIL: gbosiljcic@sovcon.com

SITE ADDRESS (Street, City and State): 25 Paidge Avenue, Brooklyn NY

CONSULTANT PROJECT CONTACT (Report to): Greg Bosiljcic - 724-553-5084

CONSULTANT PROJECT NO.: EQ24

SAMPLER NAME(S) (Print): Nick Zarcone - Longshore Environmental 631-472-1732

LAB USE ONLY: 369409-H

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

DELIVERABLES: ☑ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY) _____

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :
- ☑ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMBURSEMENT RATE APPLIES
- ☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | EPA 8260 (FULL LIST) | MTBE | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-21R | 4/15/10 | 8:50 | GW | X | | | | Ice | 3 | X | X | |
| | MW-22R | 4/15/10 | 9:00 | GW | X | | | | Ice | 3 | X | X | |
| | MW-13 | 4/15/10 | 9:10 | GW | X | | | | Ice | 3 | X | X | |
| | MW-14 | 4/15/10 | 9:20 | GW | X | | | | Ice | 3 | X | X | |
| | MW-23 | 4/15/10 | 9:30 | GW | X | | | | Ice | 3 | X | X | |
| | MW-24 | 4/15/10 | 9:40 | GW | X | | | | Ice | 3 | X | X | |
| | MW-43 | 4/15/10 | 9:50 | GW | X | | | | Ice | 3 | X | X | |
| | MW-42 | 4/15/10 | 10:00 | GW | X | | | | Ice | 3 | X | X | |
| | MW-44 | 4/15/10 | 10:10 | GW | X | | | | Ice | 3 | X | X | |
| | MW-30 | 4/15/10 | 10:20 | GW | X | | | | Ice | 3 | X | X | |

| | | | |
|---|---|---|---|
| Relinquished by: (Signature) | Received by: (Signature) | Date: 04/15/10 | Time: 1600 |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
| Relinquished by: (Signature) | Received by: (Signature) | Date: 4/16/10 | Time: 0900 |

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Shell/Motiva 0007832

# Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
- ☑ XENCO (_____)
- ☐ CALSCIENCE (_____)
- ☐ TEST AMERICA (_____)
- ☐ SPL (_____)
- ☐ OTHER (_____)

Please Check Appropriate Box:
- ☑ ENV. SERVICES
- ☐ MOTIVA RETAIL
- ☐ SHELL RETAIL
- ☐ MOTIVA SD&CM
- ☐ CONSULTANT
- ☐ LUBES
- ☐ SHELL PIPELINE
- ☐ OTHER _____

Print Bill To Contact Name: Doug Weimer

INCIDENT # (ENV SERVICES): 9 7 0 9 4 9 8 1 ☐ CHECK IF NO INCIDENT # APPLIES

DATE: 3/1/2010

PAGE: 3 of 4

PO #:

SAP #: 1 0 0 6 2 3

CONSULTANT COMPANY: Sovereign Consulting Inc.

ADDRESS: 3104 Unionville Road, Suite 150

CITY: Cranberry Twp, PA 16066

TELEPHONE: 724-553-5084 FAX: E-MAIL: gbosilicic@sovcon.com

SITE ADDRESS (Street, City and State): 25 Paidge Avenue, Brooklyn NY

CONSULTANT PROJECT CONTACT (Report to): Greg Bosiljcic - 724-553-5084

CONSULTANT PROJECT NO.: EQ24

SAMPLER NAME(S) (Print): Nick Zarcone - Longshore Environmental 631-472-1732

LAB USE ONLY: 369409-H

TURNAROUND TIME (CALENDAR DAYS):
- ☑ STANDARD (14 DAY)
- ☐ 5 DAYS
- ☐ 3 DAYS
- ☐ 2 DAYS
- ☐ 24 HOURS
- ☐ RESULTS NEEDED ON WEEKEND

DELIVERABLES:
- ☑ LEVEL 1
- ☐ LEVEL 2
- ☐ LEVEL 3
- ☐ LEVEL 4
- ☐ OTHER (SPECIFY) _____

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :
- ☑ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMBURSEMENT RATE APPLIES
- ☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | EPA 8260 (FULL LIST) | MTBE | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-25 | 4/15/10 | 10:30 | GW | X | | | | Ice | 3 | X | X | |
| | TRW-2 | 4/15/10 | 10:40 | GW | X | | | | Ice | 3 | X | X | |
| | MW-20 | 4/15/10 | 10:50 | GW | X | | | | Ice | 3 | X | X | |
| | MW-15 | 4/15/10 | 11:00 | GW | X | | | | Ice | 3 | X | X | |
| | MW-16 | 4/15/10 | 11:10 | GW | X | | | | Ice | 3 | X | X | |
| | MW-17 | 4/15/10 | 11:20 | GW | X | | | | Ice | 3 | X | X | |
| | MW-19 | 4/15/10 | 11:30 | GW | X | | | | Ice | 3 | X | X | |
| | MW-32 | 4/15/10 | 11:40 | GW | X | | | | Ice | 3 | X | X | |
| | MW-33 | 4/15/10 | 11:50 | GW | X | | | | Ice | 3 | X | X | |
| | MW-39 | 4/15/10 | 12:00 | GW | X | | | | Ice | 3 | X | X | |

| | | | |
|---|---|---|---|
| Relinquished by: (Signature) | Received by: (Signature) | Date: 04/15/10 | Time: 1600 |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
| Relinquished by: (Signature) | Received by: (Signature) | Date: 4/16/10 | Time: 0900 |

05/2/06 Revision





Shell/Motiva 0007833

# Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
- ☑ XENCO (_____)
- ☐ CALSCIENCE (_____)
- ☐ TEST AMERICA (_____)
- ☐ SPL (_____)
- ☐ OTHER (_____)

Please Check Appropriate Box:
- ☑ ENV. SERVICES
- ☐ MOTIVA RETAIL
- ☐ SHELL RETAIL
- ☐ MOTIVA SD&CM
- ☐ CONSULTANT
- ☐ LUBES
- ☐ SHELL PIPELINE
- ☐ OTHER _____

Print Bill To Contact Name: Doug Weimer

INCIDENT # (ENV SERVICES): 9 7 0 9 4 9 8 1

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 3/1/2010

PAGE: 4 of 4

PO #

SAP #: 1 0 0 6 2 3

CONSULTANT COMPANY: Sovereign Consulting Inc.

ADDRESS: 3104 Unionville Road, Suite 150

CITY: Cranberry Twp, PA 16066

TELEPHONE: 724-553-5084 | FAX: | E-MAIL: gbosilicic@sovcon.com

SITE ADDRESS (Street, City and State): 25 Paidge Avenue, Brooklyn NY

CONSULTANT PROJECT CONTACT (Report to): Greg Bosiljcic - 724-553-5084

CONSULTANT PROJECT NO.: EQ24

SAMPLER NAME(S) (Print): Nick Zarcone - Longshore Environmental 631-472-1732

LAB USE ONLY: 369409-H

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

DELIVERABLES: ☑ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY) _____

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :
- ☑ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMBURSEMENT RATE APPLIES
- ☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | EPA 8260 (FULL LIST) | MTBE | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-35 | 4/15/10 | 12:10 | GW | X | | | | Ice | 3 | X | X | |
| | MW-38 | 4/15/10 | 12:20 | GW | X | | | | Ice | 3 | X | X | |
| | MW-18 | 4/15/10 | 12:30 | GW | X | | | | Ice | 3 | X | X | |
| | TRIP BLANK | 4/15/10 | 5:00 | GW | X | | | | Ice | 3 | X | X | |
| | FIELD BLANK | 4/15/10 | 7:00 | GW | X | | | | Ice | 3 | X | X | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

| | | | |
|---|---|---|---|
| Relinquished by: (Signature) | Received by: (Signature) | Date: 04/15/10 | Time: 1600 |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
| Relinquished by: (Signature) | Received by: (Signature) | Date: 4/16/10 | Time: 0900 |

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Shell/Motiva 0007834

XENCO Laboratories

# Prelogin / Nonconformance Report - Sample Log-In

Client: Sovereign Consulting

Date/Time: 4-16-10

Lab ID # : 369409

Initials: EM

## Sample Receipt Checklist

| | | | | |
|---|---|---|---|---|
| 1. Samples on ice? | Blue | Water | No | |
| 2. Shipping container in good condition? | Yes | No | None | |
| 3. Custody seals intact on shipping container (cooler) and bottles? | Yes | No | N/A | |
| 4. Chain of Custody present? | Yes | No | | |
| 5. Sample instructions complete on chain of custody? | Yes | No | | |
| 6. Any missing / extra samples? | Yes | No | | |
| 7. Chain of custody signed when relinquished / received? | Yes | No | | |
| 8. Chain of custody agrees with sample label(s)? | Yes | No | | |
| 9. Container labels legible and intact? | Yes | No | | |
| 10. Sample matrix / properties agree with chain of custody? | Yes | No | | |
| 11. Samples in proper container / bottle? | Yes | No | | |
| 12. Samples properly preserved? | Yes | No | N/A | |
| 13. Sample container intact? | Yes | No | | |
| 14. Sufficient sample amount for indicated test(s)? | Yes | No | | |
| 15. All samples received within sufficient hold time? | Yes | No | | |
| 16. Subcontract of sample(s)? | Yes | No | N/A | |
| 17. VOC sample have zero head space? | Yes | No | N/A | |

| 18. Cooler 1 No. 2581 | | Cooler 2 No. | | Cooler 3 No. | | Cooler 4 No. | | Cooler 5 No. | |
|---|---|---|---|---|---|---|---|---|---|
| 37 lbs | 2.0 °C | lbs | °C | lbs | °C | lbs | °C | lbs | °C |

## Nonconformance Documentation

Contact: _____ Contacted by: _____ Date/Time: _____

Regarding: _____

Corrective Action Taken: _____

Check all that apply:
- ☐ Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.
- ☐ Initial and Backup Temperature confirm out of temperature conditions
- ☐ Client understands and would like to proceed with analysis



Shell/Motiva 0007835

# Analytical Report 383295

## for

## Sovereign Consulting, Inc. (NY)

**Project Manager: Gregory Bosiljcic**

**25 Paidge Avenue**

**EQ24**

**02-AUG-10**

**4143 Greenbriar Dr., Stafford, TX 77477**
**Ph:(281) 240-4200 Fax:(281) 240-4280**

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)
Xenco-Boca Raton (EPA Lab Code: FL00449):
Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)
North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)



Shell/Motiva 0007836

02-AUG-10

Project Manager: **Gregory Bosiljcic**
**Sovereign Consulting, Inc. (NY)**
3104 Unionville Road, Suite 150
Cranberry Twp, PA 16066

Reference: XENCO Report No: **383295**
**25 Paidge Avenue**
Project Address: Brooklyn, NY

**Gregory Bosiljcic**:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 383295. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 383295 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

**Carlos Castro**
Managing Director, Texas

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***
*Certified and approved by numerous States and Agencies.*
*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*
Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America



Shell/Motiva 0007837

XENCO Laboratories

# Sample Cross Reference 383295

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|---|---|---|---|---|
| MW-7R | W | Jul-27-10 07:45 | | 383295-001 |
| MW-8 | W | Jul-27-10 07:55 | | 383295-002 |
| MW-9 | W | Jul-27-10 08:05 | | 383295-003 |
| MW-21R | W | Jul-27-10 08:15 | | 383295-004 |
| MW-22R | W | Jul-27-10 08:25 | | 383295-005 |
| Trip Blank | W | Jul-27-10 05:00 | | 383295-006 |
| Field Blank | W | Jul-27-10 07:30 | | 383295-007 |



Shell/Motiva 0007838

# CASE NARRATIVE

*Client Name: Sovereign Consulting, Inc. (NY)*
*Project Name: 25 Paidge Avenue*

*Project ID:* EQ24
*Work Order Number:* 383295

*Report Date:* 02-AUG-10
*Date Received:* 07/28/2010

***Sample receipt non conformances and Comments:***

None

***Sample receipt Non Conformances and Comments per Sample:***

None

***Analytical Non Conformances and Comments:***

Batch: LBA-816915 VOAs by SW-846 8260B
SW8260B

Batch 816915, Dichlorodifluoromethane recovered above QC limits in the Matrix Spike Duplicate.
Samples affected are: 383295-003, -001, -007, -006, -002, -005, -004.
The Laboratory Control Sample for Dichlorodifluoromethane is within laboratory Control Limits

SW8260B

Batch 816915, 4-Bromofluorobenzene recovered above QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 383295-001,383295-004.
Toluene-D8 recovered above QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 383295-004,383295-001.



Shell/Motiva 0007839

XENCO Laboratories

# Certificate of Analytical Results 383295

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-7R** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **383295-001** | Date Collected: **Jul-27-10 07:45** | |
| | Date Received: **Jul-28-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: EZB Date Prep: Jul-29-10 15:00 Tech: MLI

Seq Number: 816915

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| MTBE | 1634-04-4 | 25.6 | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| n-Butylbenzene | 104-51-8 | 44.3 | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| Sec-Butylbenzene | 135-98-8 | 19.2 | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| tert-Butylbenzene | 98-06-6 | 6.53 | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 07/29/10 15:46 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 07/29/10 15:46 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| isopropylbenzene | 98-82-8 | 17.3 | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |

Project: Standard List of Methods



Final 1.000

Shell/Motiva 0007840

XENCO Laboratories

# Certificate of Analytical Results 383295

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-7R** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **383295-001** | Date Collected: **Jul-27-10 07:45** | |
| | Date Received: **Jul-28-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: EZB Date Prep: Jul-29-10 15:00 Tech: MLI

Seq Number: 816915

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 07/29/10 15:46 | | 1 |
| n-Propylbenzene | 103-65-1 | 18.3 | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 5.09 | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | | ug/L | 07/29/10 15:46 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 07/29/10 15:46 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 07/29/10 15:46 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | | mg/L | 07/29/10 15:46 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007841

XENCO Laboratories

# Certificate of Analytical Results 383295

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-8** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **383295-002** | Date Collected: **Jul-27-10 07:55** | |
| | Date Received: **Jul-28-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: EZB Date Prep: Jul-29-10 15:02 Tech: MLI

Seq Number: 816915

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 24.3 | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| MTBE | 1634-04-4 | 39.5 | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 07/29/10 16:08 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 07/29/10 16:08 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| isopropylbenzene | 98-82-8 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007842

XENCO Laboratories

# Certificate of Analytical Results 383295

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-8** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **383295-002** | Date Collected: **Jul-27-10 07:55** | |
| | Date Received: **Jul-28-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: EZB Date Prep: Jul-29-10 15:02 Tech: MLI

Seq Number: 816915

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 07/29/10 16:08 | | 1 |
| n-Propylbenzene | 103-65-1 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 07/29/10 16:08 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 07/29/10 16:08 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | | ug/L | 07/29/10 16:08 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007843

XENCO Laboratories

# Certificate of Analytical Results 383295

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-9** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **383295-003** | Date Collected: **Jul-27-10 08:05** | |
| | Date Received: **Jul-28-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: EZB Date Prep: Jul-28-10 16:06 Tech: MLI

Seq Number: 816915

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| MTBE | 1634-04-4 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 07/29/10 13:08 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 07/29/10 13:08 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| isopropylbenzene | 98-82-8 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007844

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-9** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **383295-003** | Date Collected: **Jul-27-10 08:05** | |
| | Date Received: **Jul-28-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: EZB Date Prep: Jul-28-10 16:06 Tech: MLI

Seq Number: 816915

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 07/29/10 13:08 | | 1 |
| n-Propylbenzene | 103-65-1 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 07/29/10 13:08 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 07/29/10 13:08 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | | ug/L | 07/29/10 13:08 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007845

XENCO Laboratories

# Certificate of Analytical Results 383295

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-21R** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **383295-004** | Date Collected: **Jul-27-10 08:15** | |
| | Date Received: **Jul-28-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: EZB Date Prep: Jul-29-10 15:04 Tech: MLI

Seq Number: 816915

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 160 | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| MTBE | 1634-04-4 | 14.2 | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| n-Butylbenzene | 104-51-8 | 81.6 | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| Sec-Butylbenzene | 135-98-8 | 87.2 | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 07/29/10 16:31 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 07/29/10 16:31 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | 28.2 | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| Ethylbenzene | 100-41-4 | 52.3 | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| isopropylbenzene | 98-82-8 | 146 | 25.0 | | ug/L | 07/29/10 16:53 | D | 5 |

Project: Standard List of Methods



Shell/Motiva 0007846

XENCO Laboratories

# Certificate of Analytical Results 383295

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-21R** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **383295-004** | Date Collected: **Jul-27-10 08:15** | |
| | Date Received: **Jul-28-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: EZB Date Prep: Jul-29-10 15:04 Tech: MLI

Seq Number: 816915

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| Naphthalene | 91-20-3 | 64.9 | 10.0 | | ug/L | 07/29/10 16:31 | | 1 |
| n-Propylbenzene | 103-65-1 | 86.0 | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| Toluene | 108-88-3 | 20.0 | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 185 | 25.0 | | ug/L | 07/29/10 16:53 | D | 5 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 97.7 | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| o-Xylene | 95-47-6 | 19.2 | 5.00 | | ug/L | 07/29/10 16:31 | | 1 |
| m,p-Xylenes | 179601-23-1 | 52.3 | 10.0 | | ug/L | 07/29/10 16:31 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 07/29/10 16:31 | | 1 |
| Total Xylenes | 1330-20-7 | 71.5 | 5.00 | | mg/L | 07/29/10 16:31 | | 1 |

Project: Standard List of Methods

XENCO Laboratories

# Certificate of Analytical Results 383295

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-22R** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **383295-005** | Date Collected: **Jul-27-10 08:25** | |
| | Date Received: **Jul-28-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: EZB Date Prep: Jul-29-10 15:08 Tech: MLI

Seq Number: 816915

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 337 | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| Bromobenzene | 108-86-1 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| Bromochloromethane | 74-97-5 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| Bromodichloromethane | 75-27-4 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| Bromoform | 75-25-2 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| Bromomethane | 74-83-9 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| MTBE | 1634-04-4 | 31.4 | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| n-Butylbenzene | 104-51-8 | 72.4 | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| Sec-Butylbenzene | 135-98-8 | 28.0 | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| tert-Butylbenzene | 98-06-6 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| Carbon Tetrachloride | 56-23-5 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| Chlorobenzene | 108-90-7 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| Chloroethane | 75-00-3 | BRL | 50.0 | | ug/L | 07/29/10 17:16 | | 5 |
| Chloroform | 67-66-3 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| Chloromethane | 74-87-3 | BRL | 50.0 | | ug/L | 07/29/10 17:16 | | 5 |
| 2-Chlorotoluene | 95-49-8 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| 4-Chlorotoluene | 106-43-4 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| Dibromochloromethane | 124-48-1 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| Dibromomethane | 74-95-3 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| Ethylbenzene | 100-41-4 | 2070 | 250 | | ug/L | 07/29/10 14:38 | D | 50 |
| Hexachlorobutadiene | 87-68-3 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| isopropylbenzene | 98-82-8 | 247 | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |

Project: Standard List of Methods



Shell/Motiva 0007848

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **MW-22R** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **383295-005** | Date Collected: **Jul-27-10 08:25** | |
| | Date Received: **Jul-28-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: EZB Date Prep: Jul-29-10 15:08 Tech: MLI

Seq Number: 816915

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| Naphthalene | 91-20-3 | 481 | 50.0 | | ug/L | 07/29/10 17:16 | | 5 |
| n-Propylbenzene | 103-65-1 | 509 | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| Styrene | 100-42-5 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| Tetrachloroethylene | 127-18-4 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| Toluene | 108-88-3 | 63.6 | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| Trichloroethene | 79-01-6 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| Trichlorofluoromethane | 75-69-4 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 161 | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| o-Xylene | 95-47-6 | BRL | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |
| m,p-Xylenes | 179601-23-1 | 54.5 | 50.0 | | ug/L | 07/29/10 17:16 | | 5 |
| Vinyl Chloride | 75-01-4 | BRL | 10.0 | | ug/L | 07/29/10 17:16 | | 5 |
| Total Xylenes | 1330-20-7 | 54.5 | 25.0 | | ug/L | 07/29/10 17:16 | | 5 |

Project: Standard List of Methods

XENCO Laboratories

# Certificate of Analytical Results 383295

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

Sample Id: **Trip Blank** Matrix: **Water** % Moisture:
Lab Sample Id: **383295-006** Date Collected: **Jul-27-10 05:00**
Date Received: **Jul-28-10 09:00**

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: EZB Date Prep: Jul-28-10 16:08 Tech: MLI
Seq Number: 816915

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| MTBE | 1634-04-4 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 07/29/10 12:23 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 07/29/10 12:23 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| isopropylbenzene | 98-82-8 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |

Project: Standard List of Methods



Final 1.000

Shell/Motiva 0007850

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **Trip Blank** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **383295-006** | Date Collected: **Jul-27-10 05:00** | |
| | Date Received: **Jul-28-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: EZB Date Prep: Jul-28-10 16:08 Tech: MLI

Seq Number: 816915

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 07/29/10 12:23 | | 1 |
| n-Propylbenzene | 103-65-1 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 07/29/10 12:23 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 07/29/10 12:23 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | | ug/L | 07/29/10 12:23 | | 1 |

Project: Standard List of Methods

XENCO Laboratories

# Certificate of Analytical Results 383295

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **Field Blank** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **383295-007** | Date Collected: **Jul-27-10 07:30** | |
| | Date Received: **Jul-28-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: EZB Date Prep: Jul-28-10 16:10 Tech: MLI

Seq Number: 816915

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| MTBE | 1634-04-4 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | | ug/L | 07/29/10 12:46 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | | ug/L | 07/29/10 12:46 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| isopropylbenzene | 98-82-8 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |

Project: Standard List of Methods



Shell/Motiva 0007852

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Avenue

| | | |
|---|---|---|
| Sample Id: **Field Blank** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **383295-007** | Date Collected: **Jul-27-10 07:30** | |
| | Date Received: **Jul-28-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260** Prep Method: SW5030B

Analyst: EZB Date Prep: Jul-28-10 16:10 Tech: MLI

Seq Number: 816915

| Parameter | Cas Number | Result | PQL | MDL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | | ug/L | 07/29/10 12:46 | | 1 |
| n-Propylbenzene | 103-65-1 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | | ug/L | 07/29/10 12:46 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | | ug/L | 07/29/10 12:46 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | | ug/L | 07/29/10 12:46 | | 1 |

Project: Standard List of Methods

XENCO Laboratories

# XENCO Laboratories
# CHRONOLOGY OF HOLDING TIMES

Analytical Method : VOAs by SW-846 8260 Client : Sovereign Consulting, Inc. (N

Work Order #: 383295 Project ID: EQ24

| Field Sample ID | Date Collected | Date Received | Date Extracted | Max Holding Time Extracted (Days) | Time Held Extracted (Days) | Date Analyzed | Max Holding Time Analyzed (Days) | Time Held Analyzed (Days) | Q |
|---|---|---|---|---|---|---|---|---|---|
| MW-8 | Jul. 27, 2010 | Jul. 28, 2010 | | | | Jul.29, 2010 | 14 | 2 | P |
| MW-21R | Jul. 27, 2010 | Jul. 28, 2010 | | | | Jul.29, 2010 | 14 | 2 | P |
| Field Blank | Jul. 27, 2010 | Jul. 28, 2010 | | | | Jul.29, 2010 | 14 | 2 | P |
| MW-7R | Jul. 27, 2010 | Jul. 28, 2010 | | | | Jul.29, 2010 | 14 | 2 | P |
| MW-9 | Jul. 27, 2010 | Jul. 28, 2010 | | | | Jul.29, 2010 | 14 | 2 | P |
| MW-22R | Jul. 27, 2010 | Jul. 28, 2010 | | | | Jul.29, 2010 | 14 | 2 | P |
| Trip Blank | Jul. 27, 2010 | Jul. 28, 2010 | | | | Jul.29, 2010 | 14 | 2 | P |

F = These samples were analyzed outside the recommended holding time.
P = Samples analyzed within the recommended holding time.



Shell/Motiva 0007854

XENCO Laboratories

# Flagging Criteria

**X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

**B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

**D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

**E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

**F** RPD exceeded lab control limits.

**J** The target analyte was positively identified below the MQL and above the SQL.

**U** Analyte was not detected.

**L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

**H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

**K** Sample analyzed outside of recommended hold time.

**JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

**MDL** Method Detection Limit

**PQL** Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

# Form 2 - Surrogate Recoveries

## Project Name: 25 Paidge Avenue

**Work Orders :** 383295,

**Project ID:** EQ24

**Lab Batch #:** 816915 **Sample:** 569424-1-BLK / BLK **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 07/29/10 10:26

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0499 | 0.0500 | 100 | 74-124 | |
| Dibromofluoromethane | 0.0499 | 0.0500 | 100 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0499 | 0.0500 | 100 | 63-144 | |
| Toluene-D8 | 0.0496 | 0.0500 | 99 | 80-117 | |

**Lab Batch #:** 816915 **Sample:** 569424-1-BKS / BKS **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 07/29/10 10:49

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0519 | 0.0500 | 104 | 74-124 | |
| Dibromofluoromethane | 0.0493 | 0.0500 | 99 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0511 | 0.0500 | 102 | 63-144 | |
| Toluene-D8 | 0.0492 | 0.0500 | 98 | 80-117 | |

**Lab Batch #:** 816915 **Sample:** 383295-003 S / MS **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 07/29/10 11:15

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0502 | 0.0500 | 100 | 74-124 | |
| Dibromofluoromethane | 0.0491 | 0.0500 | 98 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0482 | 0.0500 | 96 | 63-144 | |
| Toluene-D8 | 0.0484 | 0.0500 | 97 | 80-117 | |

**Lab Batch #:** 816915 **Sample:** 383295-003 SD / MSD **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 07/29/10 11:38

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0491 | 0.0500 | 98 | 74-124 | |
| Dibromofluoromethane | 0.0499 | 0.0500 | 100 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0502 | 0.0500 | 100 | 63-144 | |
| Toluene-D8 | 0.0498 | 0.0500 | 100 | 80-117 | |

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.



Shell/Motiva 0007856

XENCO Laboratories

# Form 2 - Surrogate Recoveries

## Project Name: 25 Paidge Avenue

**Work Orders :** 383295,

**Project ID:** EQ24

**Lab Batch #:** 816915 **Sample:** 383295-006 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 07/29/10 12:23

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0485 | 0.0500 | 97 | 74-124 | |
| Dibromofluoromethane | 0.0500 | 0.0500 | 100 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0519 | 0.0500 | 104 | 63-144 | |
| Toluene-D8 | 0.0478 | 0.0500 | 96 | 80-117 | |

**Lab Batch #:** 816915 **Sample:** 383295-007 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 07/29/10 12:46

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0479 | 0.0500 | 96 | 74-124 | |
| Dibromofluoromethane | 0.0506 | 0.0500 | 101 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0543 | 0.0500 | 109 | 63-144 | |
| Toluene-D8 | 0.0475 | 0.0500 | 95 | 80-117 | |

**Lab Batch #:** 816915 **Sample:** 383295-003 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 07/29/10 13:08

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0483 | 0.0500 | 97 | 74-124 | |
| Dibromofluoromethane | 0.0509 | 0.0500 | 102 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0556 | 0.0500 | 111 | 63-144 | |
| Toluene-D8 | 0.0501 | 0.0500 | 100 | 80-117 | |

**Lab Batch #:** 816915 **Sample:** 383295-005 / DL **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 07/29/10 14:38

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0497 | 0.0500 | 99 | 74-124 | |
| Dibromofluoromethane | 0.0497 | 0.0500 | 99 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0500 | 0.0500 | 100 | 63-144 | |
| Toluene-D8 | 0.0507 | 0.0500 | 101 | 80-117 | |

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.



Shell/Motiva 0007857

XENCO Laboratories

# Form 2 - Surrogate Recoveries

## Project Name: 25 Paidge Avenue

**Work Orders :** 383295,

**Project ID:** EQ24

**Lab Batch #:** 816915 **Sample:** 383295-001 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 07/29/10 15:46

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.1097 | 0.0500 | 219 | 74-124 | ** |
| Dibromofluoromethane | 0.0466 | 0.0500 | 93 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0508 | 0.0500 | 102 | 63-144 | |
| Toluene-D8 | 0.0840 | 0.0500 | 168 | 80-117 | ** |

**Lab Batch #:** 816915 **Sample:** 383295-002 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 07/29/10 16:08

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.0492 | 0.0500 | 98 | 74-124 | |
| Dibromofluoromethane | 0.0492 | 0.0500 | 98 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0488 | 0.0500 | 98 | 63-144 | |
| Toluene-D8 | 0.0513 | 0.0500 | 103 | 80-117 | |

**Lab Batch #:** 816915 **Sample:** 383295-004 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 07/29/10 16:31

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.0807 | 0.0500 | 161 | 74-124 | ** |
| Dibromofluoromethane | 0.0462 | 0.0500 | 92 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0468 | 0.0500 | 94 | 63-144 | |
| Toluene-D8 | 0.0753 | 0.0500 | 151 | 80-117 | ** |

**Lab Batch #:** 816915 **Sample:** 383295-004 / DL **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 07/29/10 16:53

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.0512 | 0.0500 | 102 | 74-124 | |
| Dibromofluoromethane | 0.0497 | 0.0500 | 99 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0502 | 0.0500 | 100 | 63-144 | |
| Toluene-D8 | 0.0518 | 0.0500 | 104 | 80-117 | |

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.



Shell/Motiva 0007858

XENCO Laboratories

# Form 2 - Surrogate Recoveries

## Project Name: 25 Paidge Avenue

**Work Orders :** 383295,

**Project ID:** EQ24

**Lab Batch #:** 816915 **Sample:** 383295-005 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 07/29/10 17:16

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.0499 | 0.0500 | 100 | 74-124 | |
| Dibromofluoromethane | 0.0496 | 0.0500 | 99 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0498 | 0.0500 | 100 | 63-144 | |
| Toluene-D8 | 0.0509 | 0.0500 | 102 | 80-117 | |

**Lab Batch #:** 816915 **Sample:** 383295-001 / DL **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 07/29/10 17:38

| VOAs by SW-846 8260 Analytes | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.0530 | 0.0500 | 106 | 74-124 | |
| Dibromofluoromethane | 0.0493 | 0.0500 | 99 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0506 | 0.0500 | 101 | 63-144 | |
| Toluene-D8 | 0.0522 | 0.0500 | 104 | 80-117 | |

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

# Blank Spike Recovery

## Project Name: 25 Paidge Avenue

**Work Order #:** 383295 **Project ID:** EQ24

**Lab Batch #:** 816915 **Sample:** 569424-1-BKS **Matrix:** Water

**Date Analyzed:** 07/29/2010 **Date Prepared:** 07/29/2010 **Analyst:** EZB

**Reporting Units:** ug/L **Batch #:** 1

| VOAs by SW-846 8260 Analytes | Blank Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|---|
| | | | BLANK /BLANK SPIKE RECOVERY STUDY | | | |
| Benzene | <5.00 | 50.0 | 47.8 | 96 | 66-142 | |
| Bromobenzene | <5.00 | 50.0 | 55.9 | 112 | 75-125 | |
| Bromochloromethane | <5.00 | 50.0 | 46.8 | 94 | 73-125 | |
| Bromodichloromethane | <5.00 | 50.0 | 50.3 | 101 | 75-125 | |
| Bromoform | <5.00 | 50.0 | 55.7 | 111 | 75-125 | |
| Bromomethane | <5.00 | 50.0 | 48.1 | 96 | 70-130 | |
| MTBE | <5.00 | 50.0 | 44.4 | 89 | 65-135 | |
| n-Butylbenzene | <5.00 | 50.0 | 57.2 | 114 | 75-125 | |
| Sec-Butylbenzene | <5.00 | 50.0 | 59.1 | 118 | 75-125 | |
| tert-Butylbenzene | <5.00 | 50.0 | 59.5 | 119 | 75-125 | |
| Carbon Tetrachloride | <5.00 | 50.0 | 49.4 | 99 | 62-125 | |
| Chlorobenzene | <5.00 | 50.0 | 53.1 | 106 | 60-133 | |
| Chloroethane | <10.0 | 50.0 | 50.8 | 102 | 70-130 | |
| Chloroform | <5.00 | 50.0 | 47.4 | 95 | 74-125 | |
| Chloromethane | <10.0 | 50.0 | 54.5 | 109 | 70-130 | |
| 2-Chlorotoluene | <5.00 | 50.0 | 58.0 | 116 | 73-125 | |
| 4-Chlorotoluene | <5.00 | 50.0 | 56.7 | 113 | 74-125 | |
| p-Cymene (p-Isopropyltoluene) | <5.00 | 50.0 | 60.4 | 121 | 75-125 | |
| Dibromochloromethane | <5.00 | 50.0 | 55.3 | 111 | 73-125 | |
| 1,2-Dibromo-3-Chloropropane | <5.00 | 50.0 | 56.8 | 114 | 59-125 | |
| Dibromomethane | <5.00 | 50.0 | 49.0 | 98 | 69-127 | |
| 1,2-Dichlorobenzene | <5.00 | 50.0 | 54.9 | 110 | 75-125 | |
| 1,3-Dichlorobenzene | <5.00 | 50.0 | 54.7 | 109 | 75-125 | |
| 1,4-Dichlorobenzene | <5.00 | 50.0 | 52.1 | 104 | 75-125 | |
| Dichlorodifluoromethane | <5.00 | 50.0 | 58.2 | 116 | 70-130 | |
| 1,1-Dichloroethane | <5.00 | 50.0 | 50.8 | 102 | 72-125 | |
| 1,2-Dichloroethane | <5.00 | 50.0 | 46.1 | 92 | 68-127 | |
| 1,1-Dichloroethene | <5.00 | 50.0 | 48.9 | 98 | 59-172 | |
| cis-1,2-Dichloroethene | <5.00 | 50.0 | 48.0 | 96 | 75-125 | |
| trans-1,2-dichloroethene | <5.00 | 50.0 | 46.1 | 92 | 75-125 | |
| 1,2-Dichloropropane | <5.00 | 50.0 | 50.5 | 101 | 74-125 | |
| 1,3-Dichloropropane | <5.00 | 50.0 | 55.6 | 111 | 75-125 | |
| 2,2-Dichloropropane | <5.00 | 50.0 | 48.0 | 96 | 75-125 | |

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit



Shell/Motiva 0007860

XENCO Laboratories

# Blank Spike Recovery

## Project Name: 25 Paidge Avenue

**Work Order #:** 383295 **Project ID:** EQ24

**Lab Batch #:** 816915 **Sample:** 569424-1-BKS **Matrix:** Water

**Date Analyzed:** 07/29/2010 **Date Prepared:** 07/29/2010 **Analyst:** EZB

**Reporting Units:** ug/L **Batch #:** 1

| VOAs by SW-846 8260 Analytes | Blank Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|---|
| | | BLANK /BLANK SPIKE RECOVERY STUDY | | | | |
| 1,1-Dichloropropene | <5.00 | 50.0 | 43.2 | 86 | 75-125 | |
| cis-1,3-Dichloropropene | <5.00 | 50.0 | 52.1 | 104 | 74-125 | |
| trans-1,3-dichloropropene | <5.00 | 50.0 | 49.1 | 98 | 66-125 | |
| Ethylbenzene | <5.00 | 50.0 | 55.6 | 111 | 75-125 | |
| Hexachlorobutadiene | <5.00 | 50.0 | 57.6 | 115 | 75-125 | |
| isopropylbenzene | <5.00 | 50.0 | 57.7 | 115 | 75-125 | |
| Methylene Chloride | 5.84 | 50.0 | 48.3 | 97 | 75-125 | |
| Naphthalene | <10.0 | 50.0 | 53.1 | 106 | 75-125 | |
| n-Propylbenzene | <5.00 | 50.0 | 58.8 | 118 | 75-125 | |
| Styrene | <5.00 | 50.0 | 57.0 | 114 | 75-125 | |
| 1,1,1,2-Tetrachloroethane | <5.00 | 50.0 | 54.9 | 110 | 72-125 | |
| 1,1,2,2-Tetrachloroethane | <5.00 | 50.0 | 60.4 | 121 | 74-125 | |
| Tetrachloroethylene | <5.00 | 50.0 | 55.8 | 112 | 71-125 | |
| Toluene | <5.00 | 50.0 | 46.4 | 93 | 59-139 | |
| 1,2,3-Trichlorobenzene | <5.00 | 50.0 | 50.1 | 100 | 75-137 | |
| 1,2,4-Trichlorobenzene | <5.00 | 50.0 | 54.4 | 109 | 75-135 | |
| 1,1,1-Trichloroethane | <5.00 | 50.0 | 45.3 | 91 | 75-125 | |
| 1,1,2-Trichloroethane | <5.00 | 50.0 | 47.8 | 96 | 75-127 | |
| Trichloroethene | <5.00 | 50.0 | 48.1 | 96 | 62-137 | |
| Trichlorofluoromethane | <5.00 | 50.0 | 50.4 | 101 | 67-125 | |
| 1,2,3-Trichloropropane | <5.00 | 50.0 | 60.5 | 121 | 75-125 | |
| 1,2,4-Trimethylbenzene | <5.00 | 50.0 | 58.2 | 116 | 75-125 | |
| 1,3,5-Trimethylbenzene | <5.00 | 50.0 | 59.1 | 118 | 70-125 | |
| o-Xylene | <5.00 | 50.0 | 56.6 | 113 | 75-125 | |
| m,p-Xylenes | <10.0 | 100 | 112 | 112 | 75-125 | |
| Vinyl Chloride | <2.00 | 50.0 | 52.6 | 105 | 75-125 | |

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit



Shell/Motiva 0007861

XENCO Laboratories

# Form 3 - MS / MSD Recoveries

## Project Name: 25 Paidge Avenue

**Work Order # :** 383295 **Project ID:** EQ24

**Lab Batch ID:** 816915 **QC- Sample ID:** 383295-003 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 07/29/2010 **Date Prepared:** 07/28/2010 **Analyst:** EZB

**Reporting Units:** ug/L

| VOAs by SW-846 8260 Analytes | MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
| Benzene | <5.00 | 50.0 | 46.1 | 92 | 50.0 | 46.2 | 92 | 0 | 66-142 | 21 | |
| Bromobenzene | <5.00 | 50.0 | 52.9 | 106 | 50.0 | 50.4 | 101 | 5 | 75-125 | 20 | |
| Bromochloromethane | <5.00 | 50.0 | 44.4 | 89 | 50.0 | 46.7 | 93 | 5 | 73-125 | 20 | |
| Bromodichloromethane | <5.00 | 50.0 | 48.1 | 96 | 50.0 | 48.9 | 98 | 2 | 75-125 | 20 | |
| Bromoform | <5.00 | 50.0 | 51.7 | 103 | 50.0 | 51.4 | 103 | 1 | 75-125 | 20 | |
| Bromomethane | <5.00 | 50.0 | 49.2 | 98 | 50.0 | 51.3 | 103 | 4 | 70-130 | 20 | |
| MTBE | <5.00 | 50.0 | 46.6 | 93 | 50.0 | 48.9 | 98 | 5 | 65-135 | 20 | |
| n-Butylbenzene | <5.00 | 50.0 | 58.4 | 117 | 50.0 | 56.8 | 114 | 3 | 75-125 | 20 | |
| Sec-Butylbenzene | <5.00 | 50.0 | 57.6 | 115 | 50.0 | 56.5 | 113 | 2 | 75-125 | 20 | |
| tert-Butylbenzene | <5.00 | 50.0 | 58.0 | 116 | 50.0 | 57.6 | 115 | 1 | 75-125 | 20 | |
| Carbon Tetrachloride | <5.00 | 50.0 | 49.0 | 98 | 50.0 | 51.6 | 103 | 5 | 62-125 | 20 | |
| Chlorobenzene | <5.00 | 50.0 | 50.9 | 102 | 50.0 | 50.2 | 100 | 1 | 60-133 | 21 | |
| Chloroethane | <10.0 | 50.0 | 52.6 | 105 | 50.0 | 55.4 | 111 | 5 | 70-130 | 20 | |
| Chloroform | <5.00 | 50.0 | 46.2 | 92 | 50.0 | 47.9 | 96 | 4 | 74-125 | 20 | |
| Chloromethane | <10.0 | 50.0 | 56.7 | 113 | 50.0 | 57.7 | 115 | 2 | 70-130 | 20 | |
| 2-Chlorotoluene | <5.00 | 50.0 | 55.1 | 110 | 50.0 | 53.4 | 107 | 3 | 73-125 | 20 | |
| 4-Chlorotoluene | <5.00 | 50.0 | 54.3 | 109 | 50.0 | 52.8 | 106 | 3 | 74-125 | 20 | |
| p-Cymene (p-Isopropyltoluene) | <5.00 | 50.0 | 59.0 | 118 | 50.0 | 58.0 | 116 | 2 | 75-125 | 20 | |
| Dibromochloromethane | <5.00 | 50.0 | 51.6 | 103 | 50.0 | 51.9 | 104 | 1 | 73-125 | 20 | |
| 1,2-Dibromo-3-Chloropropane | <5.00 | 50.0 | 55.9 | 112 | 50.0 | 55.9 | 112 | 0 | 59-125 | 28 | |
| Dibromomethane | <5.00 | 50.0 | 45.5 | 91 | 50.0 | 46.2 | 92 | 2 | 69-127 | 23 | |
| 1,2-Dichlorobenzene | <5.00 | 50.0 | 54.2 | 108 | 50.0 | 51.9 | 104 | 4 | 75-125 | 20 | |
| 1,3-Dichlorobenzene | <5.00 | 50.0 | 53.0 | 106 | 50.0 | 51.8 | 104 | 2 | 75-125 | 20 | |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit



Final 1.000

Shell/Motiva 0007862

XENCO Laboratories

# Form 3 - MS / MSD Recoveries

## Project Name: 25 Paidge Avenue

**Work Order # :** 383295 **Project ID:** EQ24

**Lab Batch ID:** 816915 **QC- Sample ID:** 383295-003 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 07/29/2010 **Date Prepared:** 07/28/2010 **Analyst:** EZB

**Reporting Units:** ug/L

| VOAs by SW-846 8260<br>Analytes | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dichlorobenzene | <5.00 | 50.0 | 51.0 | 102 | 50.0 | 49.8 | 100 | 2 | 75-125 | 20 | |
| Dichlorodifluoromethane | <5.00 | 50.0 | 64.2 | 128 | 50.0 | 65.7 | 131 | 2 | 70-130 | 23 | X |
| 1,1-Dichloroethane | <5.00 | 50.0 | 50.3 | 101 | 50.0 | 51.7 | 103 | 3 | 72-125 | 20 | |
| 1,2-Dichloroethane | <5.00 | 50.0 | 41.9 | 84 | 50.0 | 43.4 | 87 | 4 | 68-127 | 20 | |
| 1,1-Dichloroethene | <5.00 | 50.0 | 47.7 | 95 | 50.0 | 50.0 | 100 | 5 | 59-172 | 22 | |
| cis-1,2-Dichloroethene | <5.00 | 50.0 | 47.5 | 95 | 50.0 | 49.3 | 99 | 4 | 75-125 | 20 | |
| trans-1,2-dichloroethene | <5.00 | 50.0 | 45.6 | 91 | 50.0 | 46.2 | 92 | 1 | 75-125 | 20 | |
| 1,2-Dichloropropane | <5.00 | 50.0 | 48.9 | 98 | 50.0 | 49.7 | 99 | 2 | 74-125 | 20 | |
| 1,3-Dichloropropane | <5.00 | 50.0 | 50.4 | 101 | 50.0 | 50.0 | 100 | 1 | 75-125 | 20 | |
| 2,2-Dichloropropane | <5.00 | 50.0 | 49.0 | 98 | 50.0 | 51.6 | 103 | 5 | 75-125 | 20 | |
| 1,1-Dichloropropene | <5.00 | 50.0 | 40.6 | 81 | 50.0 | 40.7 | 81 | 0 | 75-125 | 20 | |
| cis-1,3-Dichloropropene | <5.00 | 50.0 | 48.4 | 97 | 50.0 | 49.2 | 98 | 2 | 74-125 | 20 | |
| trans-1,3-dichloropropene | <5.00 | 50.0 | 45.2 | 90 | 50.0 | 46.8 | 94 | 3 | 66-125 | 20 | |
| Ethylbenzene | <5.00 | 50.0 | 53.3 | 107 | 50.0 | 52.8 | 106 | 1 | 75-125 | 20 | |
| Hexachlorobutadiene | <5.00 | 50.0 | 59.5 | 119 | 50.0 | 57.1 | 114 | 4 | 75-125 | 20 | |
| isopropylbenzene | <5.00 | 50.0 | 55.5 | 111 | 50.0 | 54.0 | 108 | 3 | 75-125 | 20 | |
| Methylene Chloride | <5.00 | 50.0 | 46.5 | 93 | 50.0 | 48.2 | 96 | 4 | 75-125 | 35 | |
| Naphthalene | <10.0 | 50.0 | 56.1 | 112 | 50.0 | 52.5 | 105 | 7 | 75-125 | 20 | |
| n-Propylbenzene | <5.00 | 50.0 | 57.0 | 114 | 50.0 | 55.3 | 111 | 3 | 75-125 | 20 | |
| Styrene | <5.00 | 50.0 | 53.7 | 107 | 50.0 | 53.2 | 106 | 1 | 75-125 | 51 | |
| 1,1,1,2-Tetrachloroethane | <5.00 | 50.0 | 53.6 | 107 | 50.0 | 54.2 | 108 | 1 | 72-125 | 20 | |
| 1,1,2,2-Tetrachloroethane | <5.00 | 50.0 | 53.9 | 108 | 50.0 | 54.5 | 109 | 1 | 74-125 | 31 | |
| Tetrachloroethylene | <5.00 | 50.0 | 51.7 | 103 | 50.0 | 50.0 | 100 | 3 | 71-125 | 20 | |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit





Shell/Motiva 0007863

XENCO Laboratories

# Form 3 - MS / MSD Recoveries

## Project Name: 25 Paidge Avenue

**Work Order # :** 383295 **Project ID:** EQ24

**Lab Batch ID:** 816915 **QC- Sample ID:** 383295-003 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 07/29/2010 **Date Prepared:** 07/28/2010 **Analyst:** EZB

**Reporting Units:** ug/L

| VOAs by SW-846 8260<br>Analytes | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | <5.00 | 50.0 | 44.7 | 89 | 50.0 | 45.4 | 91 | 2 | 59-139 | 21 | |
| 1,2,3-Trichlorobenzene | <5.00 | 50.0 | 53.5 | 107 | 50.0 | 50.2 | 100 | 6 | 75-137 | 20 | |
| 1,2,4-Trichlorobenzene | <5.00 | 50.0 | 58.7 | 117 | 50.0 | 54.8 | 110 | 7 | 75-135 | 20 | |
| 1,1,1-Trichloroethane | <5.00 | 50.0 | 45.4 | 91 | 50.0 | 47.3 | 95 | 4 | 75-125 | 20 | |
| 1,1,2-Trichloroethane | <5.00 | 50.0 | 44.7 | 89 | 50.0 | 45.6 | 91 | 2 | 75-127 | 20 | |
| Trichloroethene | <5.00 | 50.0 | 46.5 | 93 | 50.0 | 46.1 | 92 | 1 | 62-137 | 24 | |
| Trichlorofluoromethane | <5.00 | 50.0 | 53.0 | 106 | 50.0 | 54.6 | 109 | 3 | 67-125 | 20 | |
| 1,2,3-Trichloropropane | <5.00 | 50.0 | 55.7 | 111 | 50.0 | 54.7 | 109 | 2 | 75-125 | 20 | |
| 1,2,4-Trimethylbenzene | <5.00 | 50.0 | 56.6 | 113 | 50.0 | 55.1 | 110 | 3 | 75-125 | 20 | |
| 1,3,5-Trimethylbenzene | <5.00 | 50.0 | 57.1 | 114 | 50.0 | 56.5 | 113 | 1 | 70-125 | 20 | |
| o-Xylene | <5.00 | 50.0 | 54.6 | 109 | 50.0 | 54.5 | 109 | 0 | 75-125 | 20 | |
| m,p-Xylenes | <10.0 | 100 | 107 | 107 | 100 | 106 | 106 | 1 | 75-125 | 20 | |
| Vinyl Chloride | <2.00 | 50.0 | 54.8 | 110 | 50.0 | 56.4 | 113 | 3 | 75-125 | 20 | |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit



Final 1.000

Shell/Motiva 0007864

tracking # - 871520343310

# Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
- ☑ XENCO (_____)
- ☐ CALSCIENCE (_____)
- ☐ TEST AMERICA (_____)
- ☐ SPL (_____)
- ☐ OTHER (_____)

Please Check Appropriate Box:
- ☑ ENV. SERVICES
- ☐ MOTIVA RETAIL
- ☐ SHELL RETAIL
- ☐ MOTIVA SD&CM
- ☐ CONSULTANT
- ☐ LUBES
- ☐ SHELL PIPELINE
- ☐ OTHER

Print Bill To Contact Name: Doug Weimer

INCIDENT # (ENV SERVICES): 9 7 0 9 4 9 8 1

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 7/27/2010

PAGE: 1 of 1

PO #

SAP #: 1 0 0 6 2 3

CONSULTANT COMPANY: Sovereign Consulting Inc.

ADDRESS: 290 Executive Dr, Suite 300

CITY: Cranberry Twp, PA 16066

TELEPHONE: 724-553-5084 FAX: E-MAIL: gbosiljcic@sovcon.com

SITE ADDRESS (Street, City and State): 25 Paidge Avenue, Brooklyn NY

CONSULTANT PROJECT CONTACT (Report to): Greg Bosiljcic - 724-553-5084

CONSULTANT PROJECT NO.: EQ24

SAMPLER NAME(S) (Print): Matthew Abbott - Longshore Environmental 631-472-1732

LAB USE ONLY: 383295-H

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

DELIVERABLES: ☑ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY) _____

TEMPERATURE ON RECEIPT C°: Cooler #1 6.0°C | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :

- ☑ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMBURSEMENT RATE APPLIES
- ☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | EPA 8260 (FULL LIST) | MTBE | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-7R | 7/27/10 | 7:45 | GW | X | | | | Ice | 3 | X | X | |
| | MW-8 | 7/27/10 | 7:55 | GW | X | | | | Ice | 3 | X | X | |
| | MW-9 | 7/27/10 | 8:05 | GW | X | | | | Ice | 3 | X | X | |
| | MW-21R | 7/27/10 | 8:15 | GW | X | | | | Ice | 3 | X | X | |
| | MW-22R | 7/27/10 | 8:25 | GW | X | | | | Ice | 3 | X | X | |
| | TRIP BLANK | 7/27/10 | 5:00 | GW | X | | | | Ice | 3 | X | X | |
| | FIELD BLANK | 7/27/10 | 7:30 | GW | X | | | | Ice | 3 | X | X | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

| | Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
|---|---|---|---|---|
| 1 | | | 07/27/10 | 1700 |
| 2 | | | | |
| 3 | FEDEX | | 7/28/10 | 0900 |

05/2/08 Revision

Page 30 of 31

Final 1.000

Shell/Motiva 0007865

| XENCO Laboratories | XENCO Laboratories<br>Atlanta, Corpus Christi, Dallas, Houston, Miami, Midland, Philadelphia, San Antonio, Tampa |
|---|---|

| | |
|---|---|
| Document Title: | Sample Receipt Checklist |
| Document No.: | SYS - SRC |
| Revision/Date : | No.00 , 05/18/10 |
| Effective Date: | 05/20/10 |
| Page No.: | 1 of 1 |

**Prelogin / Nonconformance Report – Sample Log-In**

Client: Sovereign Consulting

Date/Time: 7/28/10

Lab ID #: 383295

Initials: JC

**Sample Receipt Checklist**

| | | | | |
|---|---|---|---|---|
| 1. Sample on ice? | Blue | (Water) | No | |
| 2. Shipping container in good condition? | (Yes) | No | None | |
| 3. Custody seals intact on shipping container (cooler) and bottles? | Yes | No | (N/A) | |
| 4. Chain of Custody present? | (Yes) | No | | |
| 5. Sample instructions complete on chain of custody? | (Yes) | No | | |
| 6. Any missing / extra samples? | Yes | (No) | | |
| 7. Chain of custody signed when relinquished / received? | (Yes) | No | | |
| 8. Chain of custody agrees with sample lable(s)? | (Yes) | No | | |
| 9. Container labels legible legible and intact? | (Yes) | No | | |
| 10. Sample matrix / properties agree with chain of custody? | (Yes) | No | | |
| 11. Samples in proper container / bottle? | (Yes) | No | | |
| 12. Samples properly preserved? | (Yes) | No | N/A | |
| 13. Sample container intact? | (Yes) | No | | |
| 14. Sufficient sample amount for indicated test(s)? | (Yes) | No | | |
| 15. All samples received within sufficient hold time? | (Yes) | No | | |
| 16. Subcontract of sample(s)? | Yes | No | N/A | |
| 17. Voc sample have zero head space? | (Yes) | No | N/A | |

| 18. Cooler 1 No. 1662 | | Cooler 2 No. | | Cooler 3 No. | | Cooler 4 No. | | Cooler 5 No. | |
|---|---|---|---|---|---|---|---|---|---|
| 42 lbs | 6.0 °C | lbs | °C | lbs | °C | lbs | °C | lbs | °C |

**Nonconformance Documentation**

Contact: _____ Contacted by: _____ Date/Time: _____

Regarding: _____

_____

Corrective ActionTaken: _____

_____

_____

Check all that apply:
- ☐ Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.
- ☐ Initial and Backup Temperature confirm out of temperature conditions
- ☐ Client understands and would like to proceed with analysis



Shell/Motiva 0007866

# Analytical Report 393130

## for

## Sovereign Consulting, Inc. (NY)

**Project Manager: Gregory Bosiljcic**

**25 Paidge Ave.**

**EQ017**

**20-OCT-10**

**Celebrating 20 Years of commitment to excellence in Environmental Testing Services**

**4143 Greenbriar Dr., Stafford, TX 77477**
**Ph:(281) 240-4200 Fax:(281) 240-4280**

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)
Xenco-Boca Raton (EPA Lab Code: FL01273):
Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)
North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)

Xenco Phoenix (EPA Lab Code: AZ00901):
Arizona(AZ0757), California(06244CA), Texas(104704435-10-2), Nevada(NAC-445A), DoD(65816)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



Shell/Motiva 0007867

XENCO Laboratories

20-OCT-10

Project Manager: **Gregory Bosiljcic**
**Sovereign Consulting, Inc. (NY)**
3104 Unionville Road, Suite 150
Cranberry Twp, PA 16066

Reference: XENCO Report No: **393130**
**25 Paidge Ave.**
Project Address: Brooklyn, New York

**Gregory Bosiljcic**:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 393130. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 393130 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Michelle Williams

**Michelle B. Williams**
Project Manager

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***
*Certified and approved by numerous States and Agencies.*
*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*
Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America



Shell/Motiva 0007868

XENCO Laboratories

# Sample Cross Reference 393130

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Ave.

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|---|---|---|---|---|
| MW-7R | W | Oct-08-10 11:30 | | 393130-001 |
| MW-8 | W | Oct-08-10 11:45 | | 393130-002 |
| MW-9 | W | Oct-08-10 12:00 | | 393130-003 |
| MW-21R | W | Oct-08-10 10:45 | | 393130-004 |
| MW-22R | W | Oct-08-10 11:00 | | 393130-005 |
| Field Blank | W | Oct-08-10 11:20 | | 393130-006 |
| Trip Blank | W | Oct-08-10 00:00 | | 393130-007 |

# CASE NARRATIVE

*Client Name: Sovereign Consulting, Inc. (NY)*
*Project Name: 25 Paidge Ave.*

| | | | |
|---|---|---|---|
| *Project ID:* | *EQ017* | *Report Date:* | *20-OCT-10* |
| *Work Order Number:* | *393130* | *Date Received:* | *10/09/2010* |

***Sample receipt non conformances and Comments:***

*None*

***Sample receipt Non Conformances and Comments per Sample:***

*None*

***Analytical Non Conformances and Comments:***

*Batch: LBA-827463 VOAs by SW-846 8260B*
*SW8260B*

*Batch 827463, 1,1-Dichloropropene recovered below QC limits in the Matrix Spike. MTBE recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Naphthalene recovered above QC limits in the Matrix Spike Duplicate.*
*Samples affected are: 393130-002.*
*The Laboratory Control Sample for MTBE, Naphthalene, 1,1-Dichloropropene is within laboratory Control Limits*

XENCO Laboratories

# Certificate of Analytical Results 393130

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Ave.

| | | |
|---|---|---|
| Sample Id: **MW-7R** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **393130-001** | Date Collected: **Oct-08-10 11:30** | |
| | Date Received: **Oct-09-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260B** Prep Method: SW5030B

Analyst: CYE Date Prep: Oct-13-10 17:20 Tech: KHM

Seq Number: 827463

| Parameter | Cas Number | Result | PQL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| MTBE | 1634-04-4 | 36.9 | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | ug/L | 10/13/10 20:06 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | ug/L | 10/13/10 20:06 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| isopropylbenzene | 98-82-8 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |

Project: Shell - Farmingdale NY



Final 1.000

Shell/Motiva 0007871

XENCO Laboratories

# Certificate of Analytical Results 393130

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Ave.

| | | |
|---|---|---|
| Sample Id: **MW-7R** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **393130-001** | Date Collected: **Oct-08-10 11:30** | |
| | Date Received: **Oct-09-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260B** Prep Method: SW5030B

Analyst: CYE Date Prep: Oct-13-10 17:20 Tech: KHM

Seq Number: 827463

| Parameter | Cas Number | Result | PQL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | ug/L | 10/13/10 20:06 | | 1 |
| n-Propylbenzene | 103-65-1 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | ug/L | 10/13/10 20:06 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | ug/L | 10/13/10 20:06 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | ug/L | 10/13/10 20:06 | | 1 |

Project: Shell - Farmingdale NY



Shell/Motiva 0007872

XENCO Laboratories

# Certificate of Analytical Results 393130

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Ave.

| | | |
|---|---|---|
| Sample Id: **MW-8** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **393130-002** | Date Collected: **Oct-08-10 11:45** | |
| | Date Received: **Oct-09-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260B** Prep Method: SW5030B

Analyst: CYE Date Prep: Oct-13-10 11:15 Tech: KHM

Seq Number: 827463

| Parameter | Cas Number | Result | PQL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| MTBE | 1634-04-4 | 21.8 | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | ug/L | 10/13/10 14:44 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | ug/L | 10/13/10 14:44 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| isopropylbenzene | 98-82-8 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |

Project: Shell - Farmingdale NY



Final 1.000

Shell/Motiva 0007873

XENCO Laboratories

# Certificate of Analytical Results 393130

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Ave.

| | | |
|---|---|---|
| Sample Id: **MW-8** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **393130-002** | Date Collected: **Oct-08-10 11:45** | |
| | Date Received: **Oct-09-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260B** Prep Method: SW5030B

Analyst: CYE Date Prep: Oct-13-10 11:15 Tech: KHM

Seq Number: 827463

| Parameter | Cas Number | Result | PQL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | ug/L | 10/13/10 14:44 | | 1 |
| n-Propylbenzene | 103-65-1 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | ug/L | 10/13/10 14:44 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | ug/L | 10/13/10 14:44 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | ug/L | 10/13/10 14:44 | | 1 |

Project: Shell - Farmingdale NY



Shell/Motiva 0007874

XENCO Laboratories

# Certificate of Analytical Results 393130

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Ave.

| | | |
|---|---|---|
| Sample Id: **MW-9** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **393130-003** | Date Collected: **Oct-08-10 12:00** | |
| | Date Received: **Oct-09-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260B** Prep Method: SW5030B

Analyst: CYE Date Prep: Oct-13-10 11:35 Tech: KHM

Seq Number: 827463

| Parameter | Cas Number | Result | PQL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| MTBE | 1634-04-4 | 7.26 | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | ug/L | 10/13/10 18:17 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | ug/L | 10/13/10 18:17 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| isopropylbenzene | 98-82-8 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |

Project: Shell - Farmingdale NY



Shell/Motiva 0007875

XENCO Laboratories

# Certificate of Analytical Results 393130

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Ave.

| | | |
|---|---|---|
| Sample Id: **MW-9** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **393130-003** | Date Collected: **Oct-08-10 12:00** | |
| | Date Received: **Oct-09-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260B** Prep Method: SW5030B

Analyst: CYE Date Prep: Oct-13-10 11:35 Tech: KHM

Seq Number: 827463

| Parameter | Cas Number | Result | PQL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | ug/L | 10/13/10 18:17 | | 1 |
| n-Propylbenzene | 103-65-1 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | ug/L | 10/13/10 18:17 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | ug/L | 10/13/10 18:17 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | ug/L | 10/13/10 18:17 | | 1 |

Project: Shell - Farmingdale NY

XENCO Laboratories

# Certificate of Analytical Results 393130

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Ave.

| | | |
|---|---|---|
| Sample Id: **MW-21R** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **393130-004** | Date Collected: **Oct-08-10 10:45** | |
| | Date Received: **Oct-09-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260B** Prep Method: SW5030B

Analyst: CYE Date Prep: Oct-13-10 17:22 Tech: KHM

Seq Number: 827463

| Parameter | Cas Number | Result | PQL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 239 | 25.0 | ug/L | 10/13/10 20:49 | D | 5 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| MTBE | 1634-04-4 | 28.4 | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| n-Butylbenzene | 104-51-8 | 15.4 | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| Sec-Butylbenzene | 135-98-8 | 42.2 | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | ug/L | 10/13/10 20:27 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | ug/L | 10/13/10 20:27 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | 11.4 | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| Ethylbenzene | 100-41-4 | 80.5 | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| isopropylbenzene | 98-82-8 | 154 | 25.0 | ug/L | 10/13/10 20:49 | D | 5 |

Project: Shell - Farmingdale NY



Shell/Motiva 0007877

XENCO Laboratories

# Certificate of Analytical Results 393130

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Ave.

| | | |
|---|---|---|
| Sample Id: **MW-21R** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **393130-004** | Date Collected: **Oct-08-10 10:45** | |
| | Date Received: **Oct-09-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260B** Prep Method: SW5030B

Analyst: CYE Date Prep: Oct-13-10 17:22 Tech: KHM

Seq Number: 827463

| Parameter | Cas Number | Result | PQL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| Naphthalene | 91-20-3 | 64.7 | 10.0 | ug/L | 10/13/10 20:27 | | 1 |
| n-Propylbenzene | 103-65-1 | 59.0 | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| Toluene | 108-88-3 | 26.9 | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 197 | 25.0 | ug/L | 10/13/10 20:49 | D | 5 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| o-Xylene | 95-47-6 | 32.1 | 5.00 | ug/L | 10/13/10 20:27 | | 1 |
| m,p-Xylenes | 179601-23-1 | 76.3 | 10.0 | ug/L | 10/13/10 20:27 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | ug/L | 10/13/10 20:27 | | 1 |
| Total Xylenes | 1330-20-7 | 108.4 | 5.00 | ug/L | 10/13/10 20:27 | | 1 |

Project: Shell - Farmingdale NY



Shell/Motiva 0007878

XENCO Laboratories

# Certificate of Analytical Results 393130

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Ave.

| | | |
|---|---|---|
| Sample Id: **MW-22R** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **393130-005** | Date Collected: **Oct-08-10 11:00** | |
| | Date Received: **Oct-09-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260B** Prep Method: SW5030B

Analyst: CYE Date Prep: Oct-13-10 17:26 Tech: KHM

Seq Number: 827463

| Parameter | Cas Number | Result | PQL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 193 | 25.0 | ug/L | 10/13/10 21:32 | D | 5 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| MTBE | 1634-04-4 | 25.2 | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| n-Butylbenzene | 104-51-8 | 27.7 | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| Sec-Butylbenzene | 135-98-8 | 12.4 | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | ug/L | 10/13/10 21:11 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | ug/L | 10/13/10 21:11 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| Ethylbenzene | 100-41-4 | 678 | 25.0 | ug/L | 10/13/10 21:32 | D | 5 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| isopropylbenzene | 98-82-8 | 109 | 5.00 | ug/L | 10/13/10 21:11 | | 1 |

Project: Shell - Farmingdale NY



Final 1.000

Shell/Motiva 0007879

XENCO Laboratories

# Certificate of Analytical Results 393130

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Ave.

| | | |
|---|---|---|
| Sample Id: **MW-22R** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **393130-005** | Date Collected: **Oct-08-10 11:00** | |
| | Date Received: **Oct-09-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260B** Prep Method: SW5030B

Analyst: CYE Date Prep: Oct-13-10 17:26 Tech: KHM

Seq Number: 827463

| Parameter | Cas Number | Result | PQL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| Naphthalene | 91-20-3 | 229 | 50.0 | ug/L | 10/13/10 21:32 | D | 5 |
| n-Propylbenzene | 103-65-1 | 185 | 25.0 | ug/L | 10/13/10 21:32 | D | 5 |
| Styrene | 100-42-5 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| Toluene | 108-88-3 | 30.1 | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 6.57 | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 37.1 | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| o-Xylene | 95-47-6 | 12.2 | 5.00 | ug/L | 10/13/10 21:11 | | 1 |
| m,p-Xylenes | 179601-23-1 | 21.4 | 10.0 | ug/L | 10/13/10 21:11 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | ug/L | 10/13/10 21:11 | | 1 |
| Total Xylenes | 1330-20-7 | 33.6 | 5.00 | ug/L | 10/13/10 21:11 | | 1 |

Project: Shell - Farmingdale NY



Shell/Motiva 0007880

XENCO Laboratories

# Certificate of Analytical Results 393130

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Ave.

| | | |
|---|---|---|
| Sample Id: **Field Blank** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **393130-006** | Date Collected: **Oct-08-10 11:20** | |
| | Date Received: **Oct-09-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260B** Prep Method: SW5030B

Analyst: CYE Date Prep: Oct-13-10 11:37 Tech: KHM

Seq Number: 827463

| Parameter | Cas Number | Result | PQL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| MTBE | 1634-04-4 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | ug/L | 10/13/10 18:39 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | ug/L | 10/13/10 18:39 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| isopropylbenzene | 98-82-8 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |

Project: Shell - Farmingdale NY



Shell/Motiva 0007881

XENCO Laboratories

# Certificate of Analytical Results 393130

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Ave.

| | | |
|---|---|---|
| Sample Id: **Field Blank** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **393130-006** | Date Collected: **Oct-08-10 11:20** | |
| | Date Received: **Oct-09-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260B** Prep Method: SW5030B

Analyst: CYE Date Prep: Oct-13-10 11:37 Tech: KHM

Seq Number: 827463

| Parameter | Cas Number | Result | PQL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | ug/L | 10/13/10 18:39 | | 1 |
| n-Propylbenzene | 103-65-1 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | ug/L | 10/13/10 18:39 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | ug/L | 10/13/10 18:39 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | ug/L | 10/13/10 18:39 | | 1 |

Project: Shell - Farmingdale NY

XENCO Laboratories

# Certificate of Analytical Results 393130

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Ave.

| | | |
|---|---|---|
| Sample Id: **Trip Blank** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **393130-007** | Date Collected: **Oct-08-10 00:00** | |
| | Date Received: **Oct-09-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260B** Prep Method: SW5030B

Analyst: CYE Date Prep: Oct-13-10 11:39 Tech: KHM

Seq Number: 827463

| Parameter | Cas Number | Result | PQL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| Bromobenzene | 108-86-1 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| Bromochloromethane | 74-97-5 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| Bromodichloromethane | 75-27-4 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| Bromoform | 75-25-2 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| Bromomethane | 74-83-9 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| MTBE | 1634-04-4 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| n-Butylbenzene | 104-51-8 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| Sec-Butylbenzene | 135-98-8 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| tert-Butylbenzene | 98-06-6 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| Carbon Tetrachloride | 56-23-5 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| Chlorobenzene | 108-90-7 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| Chloroethane | 75-00-3 | BRL | 10.0 | ug/L | 10/13/10 19:01 | | 1 |
| Chloroform | 67-66-3 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| Chloromethane | 74-87-3 | BRL | 10.0 | ug/L | 10/13/10 19:01 | | 1 |
| 2-Chlorotoluene | 95-49-8 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| 4-Chlorotoluene | 106-43-4 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| p-Cymene (p-Isopropyltoluene) | 99-87-6 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| Dibromochloromethane | 124-48-1 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| 1,2-Dibromo-3-Chloropropane | 96-12-8 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| Dibromomethane | 74-95-3 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| 1,2-Dichlorobenzene | 95-50-1 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| 1,3-Dichlorobenzene | 541-73-1 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| 1,4-Dichlorobenzene | 106-46-7 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| Dichlorodifluoromethane | 75-71-8 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| 1,1-Dichloroethane | 75-34-3 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| 1,2-Dichloroethane | 107-06-2 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| 1,1-Dichloroethene | 75-35-4 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| cis-1,2-Dichloroethene | 156-59-2 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| trans-1,2-dichloroethene | 156-60-5 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| 1,2-Dichloropropane | 78-87-5 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| 1,3-Dichloropropane | 142-28-9 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| 2,2-Dichloropropane | 594-20-7 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| 1,1-Dichloropropene | 563-58-6 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| cis-1,3-Dichloropropene | 10061-01-5 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| trans-1,3-dichloropropene | 10061-02-6 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| Ethylbenzene | 100-41-4 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| Hexachlorobutadiene | 87-68-3 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| isopropylbenzene | 98-82-8 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |

Project: Shell - Farmingdale NY



Shell/Motiva 0007883

XENCO Laboratories

# Certificate of Analytical Results 393130

## Sovereign Consulting, Inc. (NY), Cranberry Twp, PA

25 Paidge Ave.

| | | |
|---|---|---|
| Sample Id: **Trip Blank** | Matrix: **Water** | % Moisture: |
| Lab Sample Id: **393130-007** | Date Collected: **Oct-08-10 00:00** | |
| | Date Received: **Oct-09-10 09:00** | |

**Analytical Method: VOAs by SW-846 8260B** Prep Method: SW5030B

Analyst: CYE Date Prep: Oct-13-10 11:39 Tech: KHM

Seq Number: 827463

| Parameter | Cas Number | Result | PQL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| Naphthalene | 91-20-3 | BRL | 10.0 | ug/L | 10/13/10 19:01 | | 1 |
| n-Propylbenzene | 103-65-1 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| Styrene | 100-42-5 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| Tetrachloroethylene | 127-18-4 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| Toluene | 108-88-3 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| 1,1,1-Trichloroethane | 71-55-6 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| 1,1,2-Trichloroethane | 79-00-5 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| Trichloroethene | 79-01-6 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| Trichlorofluoromethane | 75-69-4 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| 1,2,3-Trichloropropane | 96-18-4 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| o-Xylene | 95-47-6 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |
| m,p-Xylenes | 179601-23-1 | BRL | 10.0 | ug/L | 10/13/10 19:01 | | 1 |
| Vinyl Chloride | 75-01-4 | BRL | 2.00 | ug/L | 10/13/10 19:01 | | 1 |
| Total Xylenes | 1330-20-7 | BRL | 5.00 | ug/L | 10/13/10 19:01 | | 1 |

Project: Shell - Farmingdale NY

XENCO Laboratories

# XENCO Laboratories
# CHRONOLOGY OF HOLDING TIMES

Analytical Method : VOAs by SW-846 8260B

Client : Sovereign Consulting, Inc. (N

Work Order #: 393130

Project ID: EQ017

| Field Sample ID | Date Collected | Date Received | Date Extracted | Max Holding Time Extracted (Days) | Time Held Extracted (Days) | Date Analyzed | Max Holding Time Analyzed (Days) | Time Held Analyzed (Days) | Q |
|---|---|---|---|---|---|---|---|---|---|
| MW-9 | Oct. 8, 2010 | Oct. 9, 2010 | | | | Oct.13, 2010 | 14 | 5 | P |
| Field Blank | Oct. 8, 2010 | Oct. 9, 2010 | | | | Oct.13, 2010 | 14 | 5 | P |
| MW-21R | Oct. 8, 2010 | Oct. 9, 2010 | | | | Oct.13, 2010 | 14 | 5 | P |
| MW-22R | Oct. 8, 2010 | Oct. 9, 2010 | | | | Oct.13, 2010 | 14 | 5 | P |
| MW-7R | Oct. 8, 2010 | Oct. 9, 2010 | | | | Oct.13, 2010 | 14 | 5 | P |
| MW-8 | Oct. 8, 2010 | Oct. 9, 2010 | | | | Oct.13, 2010 | 14 | 5 | P |
| Trip Blank | Oct. 8, 2010 | Oct. 9, 2010 | | | | Oct.13, 2010 | 14 | 5 | P |

F = These samples were analyzed outside the recommended holding time.
P = Samples analyzed within the recommended holding time.



Shell/Motiva 0007885

XENCO Laboratories

# Flagging Criteria

**X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

**B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

**D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

**E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

**F** RPD exceeded lab control limits.

**J** The target analyte was positively identified below the MQL and above the SQL.

**U** Analyte was not detected.

**L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

**H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

**K** Sample analyzed outside of recommended hold time.

**JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

**MDL** Method Detection Limit

**PQL** Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.



Shell/Motiva 0007886

XENCO Laboratories

# Form 2 - Surrogate Recoveries

## Project Name: 25 Paidge Ave.

**Work Orders :** 393130, **Project ID:** EQ017

**Lab Batch #:** 827463 **Sample:** 576026-1-BKS / BKS **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 10/13/10 13:40

| VOAs by SW-846 8260B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0479 | 0.0500 | 96 | 74-124 | |
| Dibromofluoromethane | 0.0444 | 0.0500 | 89 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0446 | 0.0500 | 89 | 63-144 | |
| Toluene-D8 | 0.0490 | 0.0500 | 98 | 80-117 | |

**Lab Batch #:** 827463 **Sample:** 576026-1-BLK / BLK **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 10/13/10 14:22

| VOAs by SW-846 8260B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0469 | 0.0500 | 94 | 74-124 | |
| Dibromofluoromethane | 0.0470 | 0.0500 | 94 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0492 | 0.0500 | 98 | 63-144 | |
| Toluene-D8 | 0.0469 | 0.0500 | 94 | 80-117 | |

**Lab Batch #:** 827463 **Sample:** 393130-002 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 10/13/10 14:44

| VOAs by SW-846 8260B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0475 | 0.0500 | 95 | 74-124 | |
| Dibromofluoromethane | 0.0483 | 0.0500 | 97 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0503 | 0.0500 | 101 | 63-144 | |
| Toluene-D8 | 0.0472 | 0.0500 | 94 | 80-117 | |

**Lab Batch #:** 827463 **Sample:** 393130-002 S / MS **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 10/13/10 15:05

| VOAs by SW-846 8260B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0476 | 0.0500 | 95 | 74-124 | |
| Dibromofluoromethane | 0.0486 | 0.0500 | 97 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0484 | 0.0500 | 97 | 63-144 | |
| Toluene-D8 | 0.0471 | 0.0500 | 94 | 80-117 | |

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

XENCO Laboratories

# Form 2 - Surrogate Recoveries

**Project Name: 25 Paidge Ave.**

**Work Orders :** 393130,

**Project ID:** EQ017

**Lab Batch #:** 827463 **Sample:** 393130-002 SD / MSD **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 10/13/10 15:27

| VOAs by SW-846 8260B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0480 | 0.0500 | 96 | 74-124 | |
| Dibromofluoromethane | 0.0485 | 0.0500 | 97 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0491 | 0.0500 | 98 | 63-144 | |
| Toluene-D8 | 0.0476 | 0.0500 | 95 | 80-117 | |

**Lab Batch #:** 827463 **Sample:** 393130-003 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 10/13/10 18:17

| VOAs by SW-846 8260B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0474 | 0.0500 | 95 | 74-124 | |
| Dibromofluoromethane | 0.0485 | 0.0500 | 97 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0509 | 0.0500 | 102 | 63-144 | |
| Toluene-D8 | 0.0460 | 0.0500 | 92 | 80-117 | |

**Lab Batch #:** 827463 **Sample:** 393130-006 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 10/13/10 18:39

| VOAs by SW-846 8260B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0474 | 0.0500 | 95 | 74-124 | |
| Dibromofluoromethane | 0.0493 | 0.0500 | 99 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0497 | 0.0500 | 99 | 63-144 | |
| Toluene-D8 | 0.0463 | 0.0500 | 93 | 80-117 | |

**Lab Batch #:** 827463 **Sample:** 393130-007 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 10/13/10 19:01

| VOAs by SW-846 8260B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0471 | 0.0500 | 94 | 74-124 | |
| Dibromofluoromethane | 0.0491 | 0.0500 | 98 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0486 | 0.0500 | 97 | 63-144 | |
| Toluene-D8 | 0.0473 | 0.0500 | 95 | 80-117 | |

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.



Shell/Motiva 0007888

XENCO Laboratories

# Form 2 - Surrogate Recoveries

**Project Name: 25 Paidge Ave.**

**Work Orders :** 393130,

**Project ID:** EQ017

**Lab Batch #:** 827463 **Sample:** 393130-001 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 10/13/10 20:06

| VOAs by SW-846 8260B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0471 | 0.0500 | 94 | 74-124 | |
| Dibromofluoromethane | 0.0482 | 0.0500 | 96 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0490 | 0.0500 | 98 | 63-144 | |
| Toluene-D8 | 0.0467 | 0.0500 | 93 | 80-117 | |

**Lab Batch #:** 827463 **Sample:** 393130-004 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 10/13/10 20:27

| VOAs by SW-846 8260B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0560 | 0.0500 | 112 | 74-124 | |
| Dibromofluoromethane | 0.0463 | 0.0500 | 93 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0493 | 0.0500 | 99 | 63-144 | |
| Toluene-D8 | 0.0529 | 0.0500 | 106 | 80-117 | |

**Lab Batch #:** 827463 **Sample:** 393130-004 / DL **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 10/13/10 20:49

| VOAs by SW-846 8260B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0483 | 0.0500 | 97 | 74-124 | |
| Dibromofluoromethane | 0.0467 | 0.0500 | 93 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0488 | 0.0500 | 98 | 63-144 | |
| Toluene-D8 | 0.0470 | 0.0500 | 94 | 80-117 | |

**Lab Batch #:** 827463 **Sample:** 393130-005 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 10/13/10 21:11

| VOAs by SW-846 8260B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0520 | 0.0500 | 104 | 74-124 | |
| Dibromofluoromethane | 0.0472 | 0.0500 | 94 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0480 | 0.0500 | 96 | 63-144 | |
| Toluene-D8 | 0.0481 | 0.0500 | 96 | 80-117 | |

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.



Shell/Motiva 0007889

XENCO Laboratories

# Form 2 - Surrogate Recoveries

**Project Name: 25 Paidge Ave.**

**Work Orders :** 393130,

**Project ID:** EQ017

**Lab Batch #:** 827463 **Sample:** 393130-005 / DL **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 10/13/10 21:32

| VOAs by SW-846 8260B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0497 | 0.0500 | 99 | 74-124 | |
| Dibromofluoromethane | 0.0472 | 0.0500 | 94 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0485 | 0.0500 | 97 | 63-144 | |
| Toluene-D8 | 0.0467 | 0.0500 | 93 | 80-117 | |

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

# Blank Spike Recovery

## Project Name: 25 Paidge Ave.

**Work Order #:** 393130 **Project ID:** EQ017

**Lab Batch #:** 827463 **Sample:** 576026-1-BKS **Matrix:** Water

**Date Analyzed:** 10/13/2010 **Date Prepared:** 10/13/2010 **Analyst:** CYE

**Reporting Units:** ug/L **Batch #:** 1

| VOAs by SW-846 8260B<br>Analytes | Blank Result [A] | BLANK /BLANK SPIKE RECOVERY STUDY<br>Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|---|
| Benzene | <5.00 | 50.0 | 51.7 | 103 | 66-142 | |
| Bromobenzene | <5.00 | 50.0 | 53.0 | 106 | 75-125 | |
| Bromochloromethane | <5.00 | 50.0 | 46.5 | 93 | 73-125 | |
| Bromodichloromethane | <5.00 | 50.0 | 47.1 | 94 | 75-125 | |
| Bromoform | <5.00 | 50.0 | 42.6 | 85 | 75-125 | |
| Bromomethane | <5.00 | 50.0 | 48.1 | 96 | 70-130 | |
| MTBE | <5.00 | 50.0 | 48.7 | 97 | 65-135 | |
| n-Butylbenzene | <5.00 | 50.0 | 60.7 | 121 | 75-125 | |
| Sec-Butylbenzene | <5.00 | 50.0 | 60.5 | 121 | 75-125 | |
| tert-Butylbenzene | <5.00 | 50.0 | 60.3 | 121 | 75-125 | |
| Carbon Tetrachloride | <5.00 | 50.0 | 48.4 | 97 | 62-125 | |
| Chlorobenzene | <5.00 | 50.0 | 54.1 | 108 | 60-133 | |
| Chloroethane | <10.0 | 50.0 | 46.4 | 93 | 70-130 | |
| Chloroform | <5.00 | 50.0 | 47.6 | 95 | 74-125 | |
| Chloromethane | <10.0 | 50.0 | 50.4 | 101 | 70-130 | |
| 2-Chlorotoluene | <5.00 | 50.0 | 57.6 | 115 | 73-125 | |
| 4-Chlorotoluene | <5.00 | 50.0 | 55.8 | 112 | 74-125 | |
| p-Cymene (p-Isopropyltoluene) | <5.00 | 50.0 | 55.2 | 110 | 75-125 | |
| Dibromochloromethane | <5.00 | 50.0 | 46.3 | 93 | 73-125 | |
| 1,2-Dibromo-3-Chloropropane | <5.00 | 50.0 | 46.8 | 94 | 59-125 | |
| Dibromomethane | <5.00 | 50.0 | 51.4 | 103 | 69-127 | |
| 1,2-Dichlorobenzene | <5.00 | 50.0 | 53.7 | 107 | 75-125 | |
| 1,3-Dichlorobenzene | <5.00 | 50.0 | 56.0 | 112 | 75-125 | |
| 1,4-Dichlorobenzene | <5.00 | 50.0 | 53.1 | 106 | 75-125 | |
| Dichlorodifluoromethane | <5.00 | 50.0 | 59.4 | 119 | 70-130 | |
| 1,1-Dichloroethane | <5.00 | 50.0 | 50.9 | 102 | 72-125 | |
| 1,2-Dichloroethane | <5.00 | 50.0 | 48.1 | 96 | 68-127 | |
| 1,1-Dichloroethene | <5.00 | 50.0 | 50.9 | 102 | 59-172 | |
| cis-1,2-Dichloroethene | <5.00 | 50.0 | 50.5 | 101 | 75-125 | |
| trans-1,2-dichloroethene | <5.00 | 50.0 | 49.3 | 99 | 75-125 | |
| 1,2-Dichloropropane | <5.00 | 50.0 | 50.0 | 100 | 74-125 | |
| 1,3-Dichloropropane | <5.00 | 50.0 | 52.2 | 104 | 75-125 | |
| 2,2-Dichloropropane | <5.00 | 50.0 | 52.4 | 105 | 75-125 | |

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit



Final 1.000

Shell/Motiva 0007891

XENCO Laboratories

# Blank Spike Recovery

## Project Name: 25 Paidge Ave.

**Work Order #:** 393130 **Project ID:** EQ017

**Lab Batch #:** 827463 **Sample:** 576026-1-BKS **Matrix:** Water

**Date Analyzed:** 10/13/2010 **Date Prepared:** 10/13/2010 **Analyst:** CYE

**Reporting Units:** ug/L **Batch #:** 1

| | | BLANK /BLANK SPIKE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|---|
| **VOAs by SW-846 8260B**<br>**Analytes** | **Blank Result [A]** | **Spike Added [B]** | **Blank Spike Result [C]** | **Blank Spike %R [D]** | **Control Limits %R** | **Flags** |
| 1,1-Dichloropropene | <5.00 | 50.0 | 43.8 | 88 | 75-125 | |
| cis-1,3-Dichloropropene | <5.00 | 50.0 | 52.4 | 105 | 74-125 | |
| trans-1,3-dichloropropene | <5.00 | 50.0 | 51.2 | 102 | 66-125 | |
| Ethylbenzene | <5.00 | 50.0 | 56.7 | 113 | 75-125 | |
| Hexachlorobutadiene | <5.00 | 50.0 | 56.5 | 113 | 75-125 | |
| isopropylbenzene | <5.00 | 50.0 | 57.8 | 116 | 75-125 | |
| Methylene Chloride | <5.00 | 50.0 | 45.5 | 91 | 75-125 | |
| Naphthalene | <10.0 | 50.0 | 60.5 | 121 | 75-125 | |
| n-Propylbenzene | <5.00 | 50.0 | 58.1 | 116 | 75-125 | |
| Styrene | <5.00 | 50.0 | 57.7 | 115 | 75-125 | |
| 1,1,1,2-Tetrachloroethane | <5.00 | 50.0 | 50.8 | 102 | 72-125 | |
| 1,1,2,2-Tetrachloroethane | <5.00 | 50.0 | 51.3 | 103 | 74-125 | |
| Tetrachloroethylene | <5.00 | 50.0 | 57.9 | 116 | 71-125 | |
| Toluene | <5.00 | 50.0 | 54.1 | 108 | 59-139 | |
| 1,2,3-Trichlorobenzene | <5.00 | 50.0 | 55.4 | 111 | 75-137 | |
| 1,2,4-Trichlorobenzene | <5.00 | 50.0 | 57.4 | 115 | 75-135 | |
| 1,1,1-Trichloroethane | <5.00 | 50.0 | 48.7 | 97 | 75-125 | |
| 1,1,2-Trichloroethane | <5.00 | 50.0 | 52.9 | 106 | 75-127 | |
| Trichloroethene | <5.00 | 50.0 | 53.7 | 107 | 62-137 | |
| Trichlorofluoromethane | <5.00 | 50.0 | 52.1 | 104 | 67-125 | |
| 1,2,3-Trichloropropane | <5.00 | 50.0 | 53.3 | 107 | 75-125 | |
| 1,2,4-Trimethylbenzene | <5.00 | 50.0 | 59.0 | 118 | 75-125 | |
| 1,3,5-Trimethylbenzene | <5.00 | 50.0 | 59.1 | 118 | 70-125 | |
| o-Xylene | <5.00 | 50.0 | 58.9 | 118 | 75-125 | |
| m,p-Xylenes | <10.0 | 100 | 114 | 114 | 75-125 | |
| Vinyl Chloride | <2.00 | 50.0 | 54.4 | 109 | 75-125 | |

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit



Shell/Motiva 0007892

XENCO Laboratories

# Form 3 - MS / MSD Recoveries

## Project Name: 25 Paidge Ave.

**Work Order # :** 393130 **Project ID:** EQ017

**Lab Batch ID:** 827463 **QC- Sample ID:** 393130-002 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 10/13/2010 **Date Prepared:** 10/13/2010 **Analyst:** CYE

**Reporting Units:** ug/L

| VOAs by SW-846 8260B Analytes | MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
| Benzene | <5.00 | 50.0 | 43.1 | 86 | 50.0 | 47.1 | 94 | 9 | 66-142 | 21 | |
| Bromobenzene | <5.00 | 50.0 | 46.6 | 93 | 50.0 | 51.2 | 102 | 9 | 75-125 | 20 | |
| Bromochloromethane | <5.00 | 50.0 | 45.5 | 91 | 50.0 | 48.2 | 96 | 6 | 73-125 | 20 | |
| Bromodichloromethane | <5.00 | 50.0 | 44.8 | 90 | 50.0 | 49.0 | 98 | 9 | 75-125 | 20 | |
| Bromoform | <5.00 | 50.0 | 42.2 | 84 | 50.0 | 44.0 | 88 | 4 | 75-125 | 20 | |
| Bromomethane | <5.00 | 50.0 | 40.5 | 81 | 50.0 | 42.7 | 85 | 5 | 70-130 | 20 | |
| MTBE | 21.8 | 50.0 | 93.8 | 144 | 50.0 | 97.6 | 152 | 4 | 65-135 | 20 | X |
| n-Butylbenzene | <5.00 | 50.0 | 49.0 | 98 | 50.0 | 53.2 | 106 | 8 | 75-125 | 20 | |
| Sec-Butylbenzene | <5.00 | 50.0 | 49.3 | 99 | 50.0 | 54.7 | 109 | 10 | 75-125 | 20 | |
| tert-Butylbenzene | <5.00 | 50.0 | 51.0 | 102 | 50.0 | 56.3 | 113 | 10 | 75-125 | 20 | |
| Carbon Tetrachloride | <5.00 | 50.0 | 42.4 | 85 | 50.0 | 46.2 | 92 | 9 | 62-125 | 20 | |
| Chlorobenzene | <5.00 | 50.0 | 46.3 | 93 | 50.0 | 50.1 | 100 | 8 | 60-133 | 21 | |
| Chloroethane | <10.0 | 50.0 | 45.3 | 91 | 50.0 | 46.5 | 93 | 3 | 70-130 | 20 | |
| Chloroform | <5.00 | 50.0 | 47.0 | 94 | 50.0 | 50.2 | 100 | 7 | 74-125 | 20 | |
| Chloromethane | <10.0 | 50.0 | 40.7 | 81 | 50.0 | 42.7 | 85 | 5 | 70-130 | 20 | |
| 2-Chlorotoluene | <5.00 | 50.0 | 48.4 | 97 | 50.0 | 51.7 | 103 | 7 | 73-125 | 20 | |
| 4-Chlorotoluene | <5.00 | 50.0 | 47.2 | 94 | 50.0 | 51.8 | 104 | 9 | 74-125 | 20 | |
| p-Cymene (p-Isopropyltoluene) | <5.00 | 50.0 | 51.1 | 102 | 50.0 | 55.6 | 111 | 8 | 75-125 | 20 | |
| Dibromochloromethane | <5.00 | 50.0 | 43.1 | 86 | 50.0 | 46.2 | 92 | 7 | 73-125 | 20 | |
| 1,2-Dibromo-3-Chloropropane | <5.00 | 50.0 | 48.8 | 98 | 50.0 | 45.6 | 91 | 7 | 59-125 | 28 | |
| Dibromomethane | <5.00 | 50.0 | 47.3 | 95 | 50.0 | 50.3 | 101 | 6 | 69-127 | 23 | |
| 1,2-Dichlorobenzene | <5.00 | 50.0 | 48.8 | 98 | 50.0 | 52.8 | 106 | 8 | 75-125 | 20 | |
| 1,3-Dichlorobenzene | <5.00 | 50.0 | 48.2 | 96 | 50.0 | 51.7 | 103 | 7 | 75-125 | 20 | |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit



Final 1.000

Shell/Motiva 0007893

# Form 3 - MS / MSD Recoveries

## Project Name: 25 Paidge Ave.

**Work Order # :** 393130 **Project ID:** EQ017

**Lab Batch ID:** 827463 **QC- Sample ID:** 393130-002 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 10/13/2010 **Date Prepared:** 10/13/2010 **Analyst:** CYE

**Reporting Units:** ug/L

| VOAs by SW-846 8260B<br>Analytes | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dichlorobenzene | <5.00 | 50.0 | 46.3 | 93 | 50.0 | 51.0 | 102 | 10 | 75-125 | 20 | |
| Dichlorodifluoromethane | <5.00 | 50.0 | 51.7 | 103 | 50.0 | 52.7 | 105 | 2 | 70-130 | 23 | |
| 1,1-Dichloroethane | <5.00 | 50.0 | 47.7 | 95 | 50.0 | 52.0 | 104 | 9 | 72-125 | 20 | |
| 1,2-Dichloroethane | <5.00 | 50.0 | 43.8 | 88 | 50.0 | 48.0 | 96 | 9 | 68-127 | 20 | |
| 1,1-Dichloroethene | <5.00 | 50.0 | 41.9 | 84 | 50.0 | 45.7 | 91 | 9 | 59-172 | 22 | |
| cis-1,2-Dichloroethene | <5.00 | 50.0 | 46.9 | 94 | 50.0 | 50.1 | 100 | 7 | 75-125 | 20 | |
| trans-1,2-dichloroethene | <5.00 | 50.0 | 41.4 | 83 | 50.0 | 44.5 | 89 | 7 | 75-125 | 20 | |
| 1,2-Dichloropropane | <5.00 | 50.0 | 46.0 | 92 | 50.0 | 50.1 | 100 | 9 | 74-125 | 20 | |
| 1,3-Dichloropropane | <5.00 | 50.0 | 47.2 | 94 | 50.0 | 50.5 | 101 | 7 | 75-125 | 20 | |
| 2,2-Dichloropropane | <5.00 | 50.0 | 44.4 | 89 | 50.0 | 49.2 | 98 | 10 | 75-125 | 20 | |
| 1,1-Dichloropropene | <5.00 | 50.0 | 36.3 | 73 | 50.0 | 39.7 | 79 | 9 | 75-125 | 20 | X |
| cis-1,3-Dichloropropene | <5.00 | 50.0 | 46.5 | 93 | 50.0 | 50.5 | 101 | 8 | 74-125 | 20 | |
| trans-1,3-dichloropropene | <5.00 | 50.0 | 44.8 | 90 | 50.0 | 48.1 | 96 | 7 | 66-125 | 20 | |
| Ethylbenzene | <5.00 | 50.0 | 47.6 | 95 | 50.0 | 51.2 | 102 | 7 | 75-125 | 20 | |
| Hexachlorobutadiene | <5.00 | 50.0 | 45.4 | 91 | 50.0 | 50.4 | 101 | 10 | 75-125 | 20 | |
| isopropylbenzene | <5.00 | 50.0 | 49.0 | 98 | 50.0 | 53.0 | 106 | 8 | 75-125 | 20 | |
| Methylene Chloride | <5.00 | 50.0 | 42.6 | 85 | 50.0 | 46.0 | 92 | 8 | 75-125 | 35 | |
| Naphthalene | <10.0 | 50.0 | 61.0 | 122 | 50.0 | 62.9 | 126 | 3 | 75-125 | 20 | X |
| n-Propylbenzene | <5.00 | 50.0 | 48.7 | 97 | 50.0 | 52.3 | 105 | 7 | 75-125 | 20 | |
| Styrene | <5.00 | 50.0 | 50.6 | 101 | 50.0 | 53.9 | 108 | 6 | 75-125 | 51 | |
| 1,1,1,2-Tetrachloroethane | <5.00 | 50.0 | 45.6 | 91 | 50.0 | 50.1 | 100 | 9 | 72-125 | 20 | |
| 1,1,2,2-Tetrachloroethane | <5.00 | 50.0 | 50.7 | 101 | 50.0 | 53.4 | 107 | 5 | 74-125 | 31 | |
| Tetrachloroethylene | <5.00 | 50.0 | 44.0 | 88 | 50.0 | 46.7 | 93 | 6 | 71-125 | 20 | |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit



Final 1.000

Shell/Motiva 0007894

XENCO Laboratories

# Form 3 - MS / MSD Recoveries

## Project Name: 25 Paidge Ave.

**Work Order # :** 393130 **Project ID:** EQ017

**Lab Batch ID:** 827463 **QC- Sample ID:** 393130-002 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 10/13/2010 **Date Prepared:** 10/13/2010 **Analyst:** CYE

**Reporting Units:** ug/L

| VOAs by SW-846 8260B<br>Analytes | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | <5.00 | 50.0 | 42.9 | 86 | 50.0 | 46.7 | 93 | 8 | 59-139 | 21 | |
| 1,2,3-Trichlorobenzene | <5.00 | 50.0 | 51.1 | 102 | 50.0 | 54.2 | 108 | 6 | 75-137 | 20 | |
| 1,2,4-Trichlorobenzene | <5.00 | 50.0 | 52.5 | 105 | 50.0 | 55.7 | 111 | 6 | 75-135 | 20 | |
| 1,1,1-Trichloroethane | <5.00 | 50.0 | 44.7 | 89 | 50.0 | 48.9 | 98 | 9 | 75-125 | 20 | |
| 1,1,2-Trichloroethane | <5.00 | 50.0 | 49.3 | 99 | 50.0 | 50.3 | 101 | 2 | 75-127 | 20 | |
| Trichloroethene | <5.00 | 50.0 | 44.0 | 88 | 50.0 | 47.9 | 96 | 8 | 62-137 | 24 | |
| Trichlorofluoromethane | <5.00 | 50.0 | 48.1 | 96 | 50.0 | 49.7 | 99 | 3 | 67-125 | 20 | |
| 1,2,3-Trichloropropane | <5.00 | 50.0 | 50.7 | 101 | 50,0 | 52.9 | 106 | 4 | 75-125 | 20 | |
| 1,2,4-Trimethylbenzene | <5.00 | 50.0 | 49.5 | 99 | 50.0 | 54.0 | 108 | 9 | 75-125 | 20 | |
| 1,3,5-Trimethylbenzene | <5.00 | 50.0 | 48.9 | 98 | 50.0 | 53.8 | 108 | 10 | 70-125 | 20 | |
| o-Xylene | <5.00 | 50.0 | 50.0 | 100 | 50.0 | 53.5 | 107 | 7 | 75-125 | 20 | |
| m,p-Xylenes | <10.0 | 100 | 93.9 | 94 | 100 | 102 | 102 | 8 | 75-125 | 20 | |
| Vinyl Chloride | <2.00 | 50.0 | 43.8 | 88 | 50.0 | 47.5 | 95 | 8 | 75-125 | 20 | |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit



Final 1.000

Shell/Motiva 0007895

# Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
- ☑ XENCO (Houston,TX)
- ☐ CALSCIENCE ( )
- ☐ TEST AMERICA ( )
- ☐ SPL ( )
- ☐ OTHER ( )

Please Check Appropriate Box:
- ☐ ENV. SERVICES
- ☐ MOTIVA RETAIL
- ☐ SHELL RETAIL
- ☐ MOTIVA SD&CM
- ☑ CONSULTANT
- ☐ LUBES
- ☐ SHELL PIPELINE
- ☐ OTHER

Print Bill To Contact Name: Gregory Bosiljcic

INCIDENT # (ENV SERVICES): 9 7 6 0 5 4 9 2 ☐ CHECK IF NO INCIDENT # APPLIES

DATE: 10/8/2010

PAGE: 1 of 1

PO #

SAP #: 1 7 1 1 9 9

CONSULTANT COMPANY: Sovereign Consulting Inc.

ADDRESS: 290 Executive Drive, Suite 300

CITY: Cranberry Twp., PA 16066

TELEPHONE: (724)553-5084 FAX: (724)553-5089 E-MAIL: gbosiljcic@sovcon.com

SITE ADDRESS (Street, City and State): 25 Paidge Ave., Brooklyn, New York

CONSULTANT PROJECT CONTACT (Report to): Gregory Bosiljcic

CONSULTANT PROJECT NO.: EQ017

SAMPLER NAME(S) (Print): Justin King and Nick Zarcone

LAB USE ONLY: 393130-H

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

DELIVERABLES: ☑ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY)

TEMPERATURE ON RECEIPT C° Cooler #1 3.0°C Cooler #2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :

email copy to: jmccollums@sovcon.com

- ☑ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMBURSEMENT RATE APPLIES
- ☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | EPA 8260 (Full List) | MTBE (8260) | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-7R | 10/8/10 | 11:30 | GW | X | | | | | 3 | X | X | |
| | MW-8 | 10/8/10 | 11:45 | GW | X | | | | | 3 | X | X | |
| | MW-9 | 10/8/10 | 12:00 | GW | X | | | | | 3 | X | X | |
| | MW-21R | 10/8/10 | 10:45 | GW | X | | | | | 3 | X | X | |
| | MW-22R | 10/8/10 | 11:00 | GW | X | | | | | 3 | X | X | |
| | Field Blank | 10/8/10 | 11:20 | GW | X | | | | | 3 | X | X | |
| | Trip Blank | 10/8/10 | 0:00 | TB | X | | | | | 2 | X | X | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

| | | | |
|---|---|---|---|
| Relinquished by: (Signature) | Received by: (Signature) | Date: 10/8/10 | Time: 2:30 PM |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
| Relinquished by: (Signature) FEDEX | Received by: (Signature) | Date: 10/9/10 | Time: 0900 |

05/2/06 Revision

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Final 1.000

Shell/Motiva 0007896

XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In

Client: Stanley

Date/ Time Received: 10/09/10

WO ID # : 393130

Initials of Sample Receipt Person:

Checklist completed by, date/time:

Checklist reviewed by, date/time:

**Acceptable Temperature Range:** 2-6° C

**Acceptable pH Range(s):**

<2 for samples preserved with HNO3, HCL, H2SO4

>10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH

Temperature Measuring device used:

### Sample Receipt Checklist

Cooler Number: / / / /

Weight of Cooler: 18 / / / /

| | | | | | |
|---|---|---|---|---|---|
| #1 | ***Temperature of cooler(s)?** | 3.0 / / / / °C | | | |
| #2 | ***Shipping container in good condition?** | YES | No | None | |
| #3 | ***Samples received on ice?** | YES | No | N/A | Blue/Water |
| #4 | ***Custody Seals intact on shipping container/ cooler?** | YES | No | **N/A** | |
| #5 | Custody Seals intact on sample bottles/ container? | ~~YES~~ | No | **N/A** | |
| #6 | ***Custody Seals Signed and dated for Containers/coolers** | YES | No | **N/A** | |
| #7 | ***Chain of Custody present?** | YES | No | | |
| #8 | Sample instructions complete on Chain of Custody? | YES | No | | |
| #9 | Any missing/extra samples? | Yes | NO | | |
| #10 | Chain of Custody signed when relinquished/ received? | YES | No | | |
| #11 | Chain of Custody agrees with sample label(s)? | YES | No | | |
| #12 | Container label(s) legible and intact? | YES | No | | |
| #13 | Sample matrix/ properties agree with Chain of Custody? | YES | No | | |
| #14 | Samples in proper container/ bottle? | YES | No | | |
| #15 | Samples properly preserved? | YES | No | N/A | See Notes below |
| #16 | Sample container(s) intact? | YES | No | | |
| #17 | Sufficient sample amount for indicated test(s)? | YES | No | | |
| #18 | All samples received within hold time? | YES | No | | |
| #19 | Subcontract of sample(s)? | Yes | NO | | |
| #20 | VOC samples have zero headspace (less than 1/4 inch bubble)? | YES | No | N/A | |

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Notes on pH check:

### Nonconformance Documentation

Contact: Contacted by: Date/ Time:

Regarding: Received 393130-06, broken one of three VOA broken

Corrective Action Taken:



Shell/Motiva 0007897

Shell/Motiva 0007898

Page 33 of 33
fedex.com 1.800.GoFedEx 1.800.463.3339
Final 1.000
Shell/Motiva 0007899

**FedEx** US Airbill
Express

FedEx Tracking Number 8708 8418 1499

**Recipient's Copy**

**1 From**
Date 10/8/10
Sender's Name Justin King Phone 631 753-8380
Company Sovereign Consulting
Address 1855 New Highway Suite C
Dept./Floor/Suite/Room
City Farmingdale State NY ZIP 11735

**2 Your Internal Billing Reference**

**3 To**
Recipient's Name Sample Receiving Phone 281 240-4200
Company Xenco Labs
HOLD Weekday Print FedEx location address below. NOT available for FedEx First Overnight.
HOLD Saturday Print FedEx location address below. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.
Address 4143 Green Briar Dr.
We cannot deliver to P.O. boxes or P.O. ZIP codes.
Dept./Floor/Suite/Room
Address
Print FedEx location address here if a HOLD option is selected.
City Stafford State TX ZIP 77477

**4a Express Package Service** * To most locations. *Packages up to 150 lbs.*

- [X] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

**4b Express Freight Service** ** To most locations. *Packages over 150 lbs.*

- [ ] FedEx 1Day Freight — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected. FedEx 1Day Freight Booking No.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

**5 Packaging** * Declared value limit $500.

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [X] Other

**6 Special Handling and Delivery Signature Options**

- [X] SATURDAY Delivery — NOT available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. Fee applies.
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.

**Does this shipment contain dangerous goods?** One box must be checked.

- [X] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

- [ ] Cargo Aircraft Only

**7 Payment** *Bill to:* Obtain Recip. Acct. No. [ ]

Enter FedEx Acct. No. or Credit Card No. below.

- [ ] Sender — Acct. No. in Section 1 will be billed.
- [X] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

| Total Packages | Total Weight | Total Declared Value† | Credit Card Auth. |
|---|---|---|---|
| | lbs. | $ .00 | |

†Our liability is limited to $100 unless you declare a higher value. See the current FedEx Service Guide for details.

554

8708 8418 1499

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New Jersey
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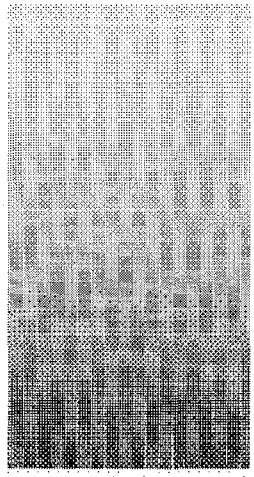
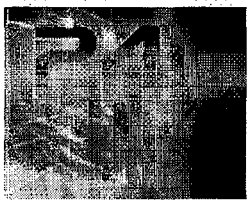
02/09/11





## Technical Report for

Shell Oil Products US

SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY

PO#SE017-140 SAP#171199

Accutest Job Number: JA66864

Sampling Date: 01/25/11

Report to:

Sovereign Consulting
290 Executive Drive Suite 300
Cranberry Township, PA 16066
DStatzer@sovcon.com; jmccollums@sovcon.com;
djakim@sovcon.com; bbecker@sovcon.com
ATTN: Douglas Jakim

Total number of pages in report: **23**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

David N. Speis
VP, Laboratory Director

Client Service contact: Marty Vitanza 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, PA, RI, SC, TN, VA, WV

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Test results relate only to samples analyzed.



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Shell/Motiva 0007900

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Shell/Motiva 0007901

Accutest Laboratories

# Sample Summary

Shell Oil Products US

Job No: JA66864

SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY
Project No: PO#SE017-140 SAP#171199

| Sample Number | Collected Date | Time | By | Received | Matrix Code | Matrix Type | Client Sample ID |
|---|---|---|---|---|---|---|---|
| JA66864-1 | 01/25/11 | 10:40 | JK | 01/26/11 | AQ | Ground Water | MW-7R |
| JA66864-2 | 01/25/11 | 10:50 | JK | 01/26/11 | AQ | Ground Water | MW-8 |
| JA66864-3 | 01/25/11 | 11:00 | JK | 01/26/11 | AQ | Ground Water | MW-9 |
| JA66864-4 | 01/25/11 | 11:15 | JK | 01/26/11 | AQ | Ground Water | MW-21R |
| JA66864-5 | 01/25/11 | 11:30 | JK | 01/26/11 | AQ | Ground Water | MW-22R |
| JA66864-6 | 01/25/11 | 10:30 | JK | 01/26/11 | AQ | Field Blank Water | FIELD BLANK |
| JA66864-7 | 01/25/11 | 11:30 | JK | 01/26/11 | AQ | Trip Blank Water | TRIP BLANK |



Shell/Motiva 0007902

## Sample Results

Report of Analysis

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-7R | | |
| **Lab Sample ID:** | JA66864-1 | **Date Sampled:** | 01/25/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 01/26/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 2E61280.D | 1 | 01/29/11 | JRL | n/a | n/a | V2E2746 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA 8260 List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 67-64-1 | Acetone | ND | 10 | ug/l | |
| 71-43-2 | Benzene | 2.4 | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 78-93-3 | 2-Butanone (MEK) | ND | 10 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007904

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-7R | | |
| **Lab Sample ID:** | JA66864-1 | **Date Sampled:** | 01/25/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 01/26/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA 8260 List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 39.2 | 1.0 | ug/l | |
| 108-10-1 | 4-Methyl-2-pentanone(MIBK) | ND | 5.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 99% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 97% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 103% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 99% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007905

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-8 | | |
| **Lab Sample ID:** | JA66864-2 | **Date Sampled:** | 01/25/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 01/26/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 2E61292.D | 1 | 01/30/11 | JRL | n/a | n/a | V2E2747 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA 8260 List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 67-64-1 | Acetone | ND | 10 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 78-93-3 | 2-Butanone (MEK) | ND | 10 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007906

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-8 | | |
| **Lab Sample ID:** | JA66864-2 | **Date Sampled:** | 01/25/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 01/26/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA 8260 List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 22.5 | 1.0 | ug/l | |
| 108-10-1 | 4-Methyl-2-pentanone(MIBK) | ND | 5.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 97% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 96% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 103% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 100% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007907

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-9 | | |
| **Lab Sample ID:** | JA66864-3 | **Date Sampled:** | 01/25/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 01/26/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 2E61293.D | 1 | 01/30/11 | JRL | n/a | n/a | V2E2747 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA 8260 List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 67-64-1 | Acetone | ND | 10 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 78-93-3 | 2-Butanone (MEK) | ND | 10 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007908

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-9 | | |
| **Lab Sample ID:** | JA66864-3 | **Date Sampled:** | 01/25/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 01/26/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA 8260 List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 1.6 | 1.0 | ug/l | |
| 108-10-1 | 4-Methyl-2-pentanone(MIBK) | ND | 5.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 99% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 99% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 101% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 99% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007909

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-21R | | |
| **Lab Sample ID:** | JA66864-4 | **Date Sampled:** | 01/25/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 01/26/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 2E61326.D | 1 | 01/31/11 | JRL | n/a | n/a | V2E2748 |
| Run #2 | 2E61291.D | 10 | 01/30/11 | JRL | n/a | n/a | V2E2747 |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | 5.0 ml |

**VOA 8260 List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 67-64-1 | Acetone | 23.0 | 10 | ug/l | |
| 71-43-2 | Benzene | 292 [a] | 10 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 78-93-3 | 2-Butanone (MEK) | ND | 10 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | 33.4 | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007910

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-21R | | |
| **Lab Sample ID:** | JA66864-4 | **Date Sampled:** | 01/25/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 01/26/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA 8260 List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | 112 | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | 147 | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | 8.2 | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 24.6 | 1.0 | ug/l | |
| 108-10-1 | 4-Methyl-2-pentanone(MIBK) | ND | 5.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | 76.9 | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | 85.4 | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | 34.0 | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | 316 [a] | 50 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | 9.1 | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | 86.7 | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | 26.6 | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 113 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 92% | 96% | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 96% | 95% | 64-135% |
| 2037-26-5 | Toluene-D8 | 102% | 103% | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 98% | 101% | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007911

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-21R | | |
| **Lab Sample ID:** | JA66864-4 | **Date Sampled:** | 01/25/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 01/26/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA 8260 List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-22R | | |
| **Lab Sample ID:** | JA66864-5 | **Date Sampled:** | 01/25/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 01/26/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 2E61325.D | 5 | 01/31/11 | JRL | n/a | n/a | V2E2748 |
| Run #2 | 2E61290.D | 50 | 01/30/11 | JRL | n/a | n/a | V2E2747 |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | 5.0 ml |

**VOA 8260 List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 67-64-1 | Acetone | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 483 | 5.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 25 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 25 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 5.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 20 | ug/l | |
| 74-83-9 | Bromomethane | ND | 10 | ug/l | |
| 78-93-3 | 2-Butanone (MEK) | ND | 50 | ug/l | |
| 104-51-8 | n-Butylbenzene | 61.9 | 25 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 25 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 25 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 5.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 5.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 5.0 | ug/l | |
| 67-66-3 | Chloroform | ND | 5.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 5.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 25 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 25 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 50 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 5.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 10 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 5.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 5.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 5.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 25 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 5.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 5.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 5.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 5.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 5.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 5.0 | ug/l | |
| 142-28-9 | 1,3-Dichloropropane | ND | 25 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007913

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-22R | | |
| **Lab Sample ID:** | JA66864-5 | **Date Sampled:** | 01/25/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 01/26/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA 8260 List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 594-20-7 | 2,2-Dichloropropane | ND | 25 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 25 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 5.0 | ug/l | |
| 100-41-4 | Ethylbenzene | 1410 [a] | 50 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 25 | ug/l | |
| 98-82-8 | Isopropylbenzene | 269 | 10 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 25 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 57.2 | 5.0 | ug/l | |
| 108-10-1 | 4-Methyl-2-pentanone(MIBK) | ND | 25 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 25 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 10 | ug/l | |
| 91-20-3 | Naphthalene | 453 | 25 | ug/l | |
| 103-65-1 | n-Propylbenzene | 564 | 25 | ug/l | |
| 100-42-5 | Styrene | ND | 25 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 25 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 5.0 | ug/l | |
| 108-88-3 | Toluene | 72.0 | 5.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 25 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 25 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 5.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 5.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 5.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 25 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 25 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 25 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | 97.8 | 25 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 5.0 | ug/l | |
| | m,p-Xylene | 55.1 | 5.0 | ug/l | |
| 95-47-6 | o-Xylene | 24.5 | 5.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 79.6 | 5.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 92% | 97% | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 90% | 95% | 64-135% |
| 2037-26-5 | Toluene-D8 | 101% | 103% | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 104% | 106% | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007914

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-22R | | |
| **Lab Sample ID:** | JA66864-5 | **Date Sampled:** | 01/25/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 01/26/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA 8260 List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | FIELD BLANK | | |
| **Lab Sample ID:** | JA66864-6 | **Date Sampled:** | 01/25/11 |
| **Matrix:** | AQ - Field Blank Water | **Date Received:** | 01/26/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 2E61294.D | 1 | 01/30/11 | JRL | n/a | n/a | V2E2747 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA 8260 List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 67-64-1 | Acetone | ND | 10 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 78-93-3 | 2-Butanone (MEK) | ND | 10 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007916

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | FIELD BLANK | | |
| **Lab Sample ID:** | JA66864-6 | **Date Sampled:** | 01/25/11 |
| **Matrix:** | AQ - Field Blank Water | **Date Received:** | 01/26/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA 8260 List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 108-10-1 | 4-Methyl-2-pentanone(MIBK) | ND | 5.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 100% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 96% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 101% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 101% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007917

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | TRIP BLANK | | |
| **Lab Sample ID:** | JA66864-7 | **Date Sampled:** | 01/25/11 |
| **Matrix:** | AQ - Trip Blank Water | **Date Received:** | 01/26/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 2E61295.D | 1 | 01/30/11 | JRL | n/a | n/a | V2E2747 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA 8260 List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 67-64-1 | Acetone | ND | 10 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 78-93-3 | 2-Butanone (MEK) | ND | 10 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007918

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | TRIP BLANK | | |
| **Lab Sample ID:** | JA66864-7 | **Date Sampled:** | 01/25/11 |
| **Matrix:** | AQ - Trip Blank Water | **Date Received:** | 01/26/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA 8260 List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 108-10-1 | 4-Methyl-2-pentanone(MIBK) | ND | 5.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 100% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 96% | | 64-135% |
| 2037-26-5 | Toluene-D8 | 101% | | 76-117% |
| 460-00-4 | 4-Bromofluorobenzene | 100% | | 72-122% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007919

## Misc. Forms

# Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

Fedex# 8708 8418 1801

N

# Shell Oil Products Chain Of Custody Record

LAB (LOCATION) GW FD WTB

- [ ] XENCO (Houston, TX)
- [ ] CALSCIENCE ( )
- [ ] TEST AMERICA ( )
- [ ] SPL ( )
- [x] OTHER (Accutest, NJ)

Please Check Appropriate Box:

- [ ] ENV. SERVICES
- [ ] MOTIVA RETAIL
- [ ] SHELL RETAIL
- [ ] MOTIVA SD&CM
- [x] CONSULTANT
- [ ] LUBES
- [ ] SHELL PIPELINE
- [ ] OTHER

Print Bill To Contact Name: Doug Jakim

PO # 5E017.140

INCIDENT # (ENV SERVICES) 9 7 094981

SAP # 171199

- [ ] CHECK IF NO INCIDENT # APPLIES

DATE: 1/25/2011

PAGE: 1 of 1

CONSULTANT COMPANY: Sovereign Consulting Inc.

ADDRESS: 290 Executive Drive, Suite 300

CITY: Cranberry Twp., PA 16066

TELEPHONE: 724-553-5084 FAX: 724-553-5089 E-MAIL: djakim@sovcon.com

SITE ADDRESS (Street, City and State): 25 Paidge Ave., Brooklyn, NY

CONSULTANT PROJECT CONTACT (Report to): Doug Jakim

CONSULTANT PROJECT NO: 5E017.140

SAMPLER NAME(S) (Print): Justin King and Nick Zarcone

LAB USE ONLY: JA66864

TURNAROUND TIME (CALENDAR DAYS): [x] STANDARD (14 DAY) [ ] 5 DAYS [ ] 3 DAYS [ ] 2 DAYS [ ] 24 HOURS [ ] RESULTS NEEDED ON WEEKEND

DELIVERABLES: [x] LEVEL 1 [ ] LEVEL 2 [ ] LEVEL 3 [ ] LEVEL 4 [ ] OTHER (SPECIFY)

TEMPERATURE ON RECEIPT C° Cooler #1 Cooler #2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES: *PER DWAYNE STATURE 1-26-11-MO

email copy to: jmccollums@sovcon.com

seal # 572 intact

- [x] SHELL CONTRACT RATE APPLIES
- [x] STATE REIMBURSEMENT RATE APPLIES
- [ ] PROVIDE LEDD DISK

REQUESTED ANALYSIS

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | 8260 -VOCs | 8260 - MTBE | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -1 | MW-7R | 1/25/11 | 10:40 | GW | X | | | | | 3 | x | x | |
| -2 | MW-8 | 1/25/11 | 10:50 | GW | X | | | | | 3 | x | x | |
| -3 | MW-9 | 1/25/11 | 11:00 | GW | X | | | | | 3 | x | x | 837 |
| -4 | MW-21R | 1/25/11 | 11:15 | GW | X | | | | | 3 | x | x | |
| -5 | MW-22R | 1/25/11 | 11:30 | GW | X | | | | | 3 | x | x | |
| -6 | Field Blank | 1/25/11 | 10:30 | GW | X | | | | | 3 | x | x | |
| -7 | Trip Blank | 1/4/11 | 8:00 | TB | X | | | | | 2 | x | x | |

| Relinquished by: (Signature) | Received by: (Signature) | Date | Time |
|---|---|---|---|
| [signature] | Fedex | 1/25/11 | 3:00 PM |
| Fedex | [signature] | 1/26/11 | 10:45 |
| | | | |

05/2/08 Revision

1B

2.8°C

3.1

3

**JA66864: Chain of Custody**
**Page 1 of 2**

ACCUTEST LABORATORIES

# Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA66864 Client: Immediate Client Services Action Required: No

Date / Time Received: 1/26/2011 Delivery Method: Client Service Action Required at Login: No

Project: No. Coolers: 1 Airbill #'s:

| Cooler Security | Y or N | | Y or N |
|---|---|---|---|
| 1. Custody Seals Present: | ☑ ☐ | 3. COC Present: | ☑ ☐ |
| 2. Custody Seals Intact: | ☑ ☐ | 4. Smpl Dates/Time OK | ☑ ☐ |

| Cooler Temperature | Y or N |
|---|---|
| 1. Temp criteria achieved: | ☑ ☐ |
| 2. Cooler temp verification: | Infared gun |
| 3. Cooler media: | Ice (bag) |

| Quality Control Preservatio | Y or N | N/A |
|---|---|---|
| 1. Trip Blank present / cooler: | ☑ ☐ | ☐ |
| 2. Trip Blank listed on COC: | ☑ ☐ | ☐ |
| 3. Samples preserved properly: | ☑ ☐ | |
| 4. VOCs headspace free: | ☑ ☐ | ☐ |

| Sample Integrity - Documentation | Y or N |
|---|---|
| 1. Sample labels present on bottles: | ☑ ☐ |
| 2. Container labeling complete: | ☑ ☐ |
| 3. Sample container label / COC agree: | ☑ ☐ |

| Sample Integrity - Condition | Y or N |
|---|---|
| 1. Sample recvd within HT: | ☑ ☐ |
| 2. All containers accounted for: | ☑ ☐ |
| 3. Condition of sample: | Intact |

| Sample Integrity - Instructions | Y or N | N/A |
|---|---|---|
| 1. Analysis requested is clear: | ☑ ☐ | |
| 2. Bottles received for unspecified tests | ☐ ☑ | |
| 3. Sufficient volume recvd for analysis: | ☑ ☐ | |
| 4. Compositing instructions clear: | ☐ ☐ | ☑ |
| 5. Filtering instructions clear: | ☐ ☐ | ☑ |

Comments

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Dayton, New Jersey
www/accutest.com

3.1

3

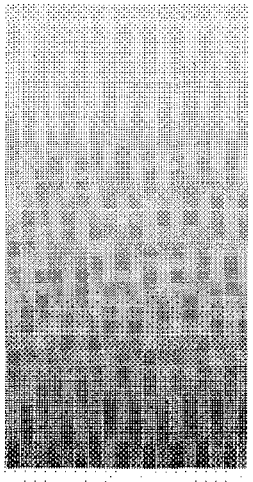
**JA66864: Chain of Custody**
**Page 2 of 2**

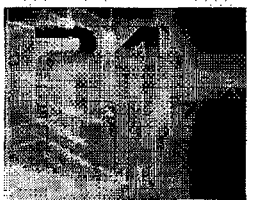


Shell/Motiva 0007922

New Jersey ACCUTEST LABORATORIES

05/13/11





Technical Report for

Shell Oil Products US

SCPAC: 97094981, 25 Paidge Avenue, Brooklyn, NY

SAP#100623 5E017.140

Accutest Job Number: JA74493

Sampling Date: 04/28/11

Report to:

Sovereign Consulting
290 Executive Drive Suite 300
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djakim@sovcon.com; bbecker@sovcon.com
ATTN: Douglas Jakim

Total number of pages in report: **26**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

David N. Speis
VP, Laboratory Director

Client Service contact: Kristin Beebe 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, PA, RI, SC, TN, VA, WV

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Test results relate only to samples analyzed.



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Shell/Motiva 0007923

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Shell/Motiva 0007924

# Sample Summary

Shell Oil Products US

**Job No:** JA74493

SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY
Project No: SAP#100623 5E017.140

| Sample Number | Collected Date | Time | By | Received | Matrix Code | Matrix Type | Client Sample ID |
|---|---|---|---|---|---|---|---|
| JA74493-1 | 04/28/11 | 08:15 | JK | 04/29/11 | AQ | Ground Water | MW-3 |
| JA74493-2 | 04/28/11 | 09:40 | JK | 04/29/11 | AQ | Ground Water | MW-27 |
| JA74493-3 | 04/28/11 | 10:30 | JK | 04/29/11 | AQ | Ground Water | MW-7R |
| JA74493-4 | 04/28/11 | 10:57 | JK | 04/29/11 | AQ | Ground Water | MW-8 |
| JA74493-5 | 04/28/11 | 11:24 | JK | 04/29/11 | AQ | Ground Water | MW-9 |
| JA74493-6 | 04/28/11 | 11:45 | JK | 04/29/11 | AQ | Ground Water | MW-21R |
| JA74493-7 | 04/28/11 | 12:08 | JK | 04/29/11 | AQ | Ground Water | MW-22R |
| JA74493-8 | 04/28/11 | 12:26 | JK | 04/29/11 | AQ | Ground Water | MW-13 |
| JA74493-9 | 04/28/11 | 13:16 | JK | 04/29/11 | AQ | Ground Water | MW-24 |
| JA74493-10 | 04/28/11 | 13:16 | JK | 04/29/11 | AQ | Trip Blank Water | TRIP BLANK |



Shell/Motiva 0007925

## Sample Results

Report of Analysis

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# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-3 | | |
| **Lab Sample ID:** | JA74493-1 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 2E64610.D | 1 | 05/06/11 | MH | n/a | n/a | V2E2896 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 64-17-5 | Ethanol | ND | 100 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 105% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 100% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 98% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 95% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007927

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# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-3 | | |
| **Lab Sample ID:** | JA74493-1 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8015B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | UV88916.D | 1 | 05/03/11 | PT | n/a | n/a | GUV3527 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| | TPH-GRO (C6-C10) | ND | 0.20 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 98-08-8 | aaa-Trifluorotoluene | 81% | | 68-114% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007928

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# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-27 | | |
| **Lab Sample ID:** | JA74493-2 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 2E64611.D | 1 | 05/06/11 | MH | n/a | n/a | V2E2896 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 64-17-5 | Ethanol | ND | 100 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 106% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 102% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 97% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 95% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007929

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-27 | | |
| **Lab Sample ID:** | JA74493-2 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8015B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | UV88917.D | 1 | 05/03/11 | PT | n/a | n/a | GUV3527 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| | TPH-GRO (C6-C10) | ND | 0.20 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 98-08-8 | aaa-Trifluorotoluene | 81% | | 68-114% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007930

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# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-7R | | |
| **Lab Sample ID:** | JA74493-3 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 2E64612.D | 1 | 05/07/11 | MH | n/a | n/a | V2E2896 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 64-17-5 | Ethanol | ND | 100 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 102% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 99% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 101% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 102% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007931

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-7R | | |
| **Lab Sample ID:** | JA74493-3 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8015B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | UV88918.D | 1 | 05/03/11 | PT | n/a | n/a | GUV3527 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| | TPH-GRO (C6-C10) | 0.568 | 0.20 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 98-08-8 | aaa-Trifluorotoluene | 83% | | 68-114% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-8 | | |
| **Lab Sample ID:** | JA74493-4 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 2E64613.D | 1 | 05/07/11 | MH | n/a | n/a | V2E2896 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 64-17-5 | Ethanol | ND | 100 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 103% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 99% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 100% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 98% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007933

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-8 | | |
| **Lab Sample ID:** | JA74493-4 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8015B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | UV88919.D | 1 | 05/03/11 | PT | n/a | n/a | GUV3527 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| | TPH-GRO (C6-C10) | 0.351 | 0.20 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 98-08-8 | aaa-Trifluorotoluene | 82% | | 68-114% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-9 | | |
| **Lab Sample ID:** | JA74493-5 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 2E64614.D | 1 | 05/07/11 | MH | n/a | n/a | V2E2896 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 64-17-5 | Ethanol | ND | 100 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 105% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 101% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 98% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 95% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007935

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-9 | | |
| **Lab Sample ID:** | JA74493-5 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8015B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | UV88920.D | 1 | 05/03/11 | PT | n/a | n/a | GUV3527 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| | TPH-GRO (C6-C10) | ND | 0.20 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 98-08-8 | aaa-Trifluorotoluene | 81% | | 68-114% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007936

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-21R | | |
| **Lab Sample ID:** | JA74493-6 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 2E64618.D | 1 | 05/07/11 | MH | n/a | n/a | V2E2896 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 64-17-5 | Ethanol | ND | 100 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 99% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 101% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 103% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 90% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007937

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-21R | | |
| **Lab Sample ID:** | JA74493-6 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8015B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | UV88921.D | 1 | 05/03/11 | PT | n/a | n/a | GUV3527 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| | TPH-GRO (C6-C10) | 5.98 | 0.20 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 98-08-8 | aaa-Trifluorotoluene | 94% | | 68-114% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007938

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-22R | | |
| **Lab Sample ID:** | JA74493-7 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 [a] | 2E64619.D | 10 | 05/07/11 | MH | n/a | n/a | V2E2896 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 64-17-5 | Ethanol | ND | 1000 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 97% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 96% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 102% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 93% | | 76-118% |

(a) Diluted due to high concentration of non-target compound and matrix interference.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007939

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-22R | | |
| **Lab Sample ID:** | JA74493-7 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8015B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | UV88953.D | 1 | 05/04/11 | TDN | n/a | n/a | GUV3528 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| | TPH-GRO (C6-C10) | 13.6 | 0.20 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 98-08-8 | aaa-Trifluorotoluene | 92% | | 68-114% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007940

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-13 | | |
| **Lab Sample ID:** | JA74493-8 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 2E64620.D | 1 | 05/07/11 | MH | n/a | n/a | V2E2896 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 64-17-5 | Ethanol | ND | 100 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 100% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 92% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 100% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 94% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007941

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-13 | | |
| **Lab Sample ID:** | JA74493-8 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8015B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | UV88961.D | 1 | 05/05/11 | TDN | n/a | n/a | GUV3529 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| | TPH-GRO (C6-C10) | ND | 0.20 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 98-08-8 | aaa-Trifluorotoluene | 82% | | 68-114% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007942

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-24 | | |
| **Lab Sample ID:** | JA74493-9 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 2E64621.D | 1 | 05/07/11 | MH | n/a | n/a | V2E2896 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 64-17-5 | Ethanol | ND | 100 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 99% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 93% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 101% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 97% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007943

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-24 | | |
| **Lab Sample ID:** | JA74493-9 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8015B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | UV88952.D | 1 | 05/04/11 | TDN | n/a | n/a | GUV3528 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| | TPH-GRO (C6-C10) | 0.562 | 0.20 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 98-08-8 | aaa-Trifluorotoluene | 84% | | 68-114% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007944

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | TRIP BLANK | | |
| **Lab Sample ID:** | JA74493-10 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Trip Blank Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 2E64622.D | 1 | 05/07/11 | MH | n/a | n/a | V2E2896 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**Purgeable Aromatics, MTBE**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 102% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 92% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 98% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 94% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007945

## Misc. Forms

# Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

LAB (LOCATION) GW JTD

☑ ACCUTEST ( )
☐ CALSCIENCE ( )
☐ TESTAMERICA ( )
☐ Other ( )
Lab Vendor # 1613940 (Accutest)

# Shell Oil Products Chain Of Custody Record

**Please Check Appropriate Box:**
☐ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA SO&CM ☑ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER

**Print Bill To Contact Name:** Douglas Jakim

**INCIDENT # (ENV SERVICES)** 9 7 0 9 4 9 8 1
☐ CHECK IF NO INCIDENT # APPLIES
DATE: 4/28/2011
PAGE: 1 of 1

**PO #**
**SAP #** 1 0 0 6 2 3

SAMPLING COMPANY: Sovereign Consulting Inc.
LOG CODE:
SITE ADDRESS: Street and City: 25 Paidge Avenue, Brooklyn
State: NY
GLOBAL ID NO.:
ADDRESS: 290 Executive Drive, Suite 300, Cranberry Township, PA 16066
EDF DELIVERABLE TO (Name, Company, Office Location):
PHONE NO.:
E-MAIL:
CONSULTANT PROJECT NO.: 5E017.140
PROJECT CONTACT (Hardcopy or PDF Report to): John McCollums / Douglas Jakim
TELEPHONE: (724) 553-5084
FAX: (724) 553-5089
Bill To Contact E-MAIL: djakim@sovcon.com
SAMPLER NAME(S) (Print): Justin King and Nick Zarcone
LAB USE ONLY: JA74493

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

DELIVERABLES: ☑ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY)

TEMPERATURE ON RECEIPT C° Cooler #1 4.1°C Cooler #2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
Report to WPA email list.
☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☐ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS — UNIT COST / NON-UNIT COST

FIELD NOTES:
TEMPERATURE ON RECEIPT C°: 2AL 478 Intact

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | TPH GRO | Ethanol | 8260B - BTEX/MTBE | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -1 | MW-3 | 4/28/11 | 8:15 | GW | 5 | | | | | 5 | X | X | | 805 |
| -2 | MW-27 | 4/28/11 | 9:40 | GW | 5 | | | | | 5 | X | X | | |
| -3 | MW-7R | 4/28/11 | 10:30 | GW | 5 | | | | | 5 | X | X | | |
| -4 | MW-8 | 4/28/11 | 10:57 | GW | 5 | | | | | 5 | X | X | | |
| -5 | MW-9 | 4/28/11 | 11:24 | GW | 5 | | | | | 5 | X | X | | |
| -6 | MW-21R | 4/28/11 | 11:45 | GW | 5 | | | | | 5 | X | X | | |
| -7 | MW-22R | 4/28/11 | 12:08 | GW | 5 | | | | | 5 | X | X | | |
| -8 | MW-13 | 4/28/11 | 12:26 | GW | 5 | | | | | 5 | X | X | | |
| -9 | MW-24 | 4/28/11 | 1:16 | GW | 5 | | | | | 5 | X | X | | |
| -10 | TRIP BLANK | 4/25/11 | 5:00 | TB | 2 | | | | | 2 | | | X | [illegible] 4-25-11 1200 4-29-11 |

| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
|---|---|---|---|
| [signature] | FEDEX # 8708 8445 7518 | 4/28/11 | 3:30 pm |
| FEDEX | [signature] | 4-29-11 | 930 |
| | | | |

05/2/06 Revision

3.1

**JA74493: Chain of Custody**
**Page 1 of 2**

ACCUTEST LABORATORIES

# Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA74493 Client: Immediate Client Services Action Required: No

Date / Time Received: 4/29/2011 Delivery Method: Client Service Action Required at Login: No

Project: No. Coolers: 1 Airbill #'s:

| Cooler Security | Y or N | | Y or N |
|---|---|---|---|
| 1. Custody Seals Present: | ☑ ☐ | 3. COC Present: | ☑ ☐ |
| 2. Custody Seals Intact: | ☑ ☐ | 4. Smpl Dates/Time OK | ☑ ☐ |

| Cooler Temperature | Y or N |
|---|---|
| 1. Temp criteria achieved: | ☑ ☐ |
| 2. Cooler temp verification: | Infared gun |
| 3. Cooler media: | Ice (bag) |

| Quality Control Preservatio | Y or N | N/A |
|---|---|---|
| 1. Trip Blank present / cooler: | ☑ ☐ | ☐ |
| 2. Trip Blank listed on COC: | ☑ ☐ | ☐ |
| 3. Samples preserved properly: | ☑ ☐ | |
| 4. VOCs headspace free: | ☑ ☐ | ☐ |

| Sample Integrity - Documentation | Y or N |
|---|---|
| 1. Sample labels present on bottles: | ☑ ☐ |
| 2. Container labeling complete: | ☑ ☐ |
| 3. Sample container label / COC agree: | ☑ ☐ |

| Sample Integrity - Condition | Y or N |
|---|---|
| 1. Sample recvd within HT: | ☑ ☐ |
| 2. All containers accounted for: | ☑ ☐ |
| 3. Condition of sample: | Intact |

| Sample Integrity - Instructions | Y or N | N/A |
|---|---|---|
| 1. Analysis requested is clear: | ☑ ☐ | |
| 2. Bottles received for unspecified tests | ☐ ☑ | |
| 3. Sufficient volume recvd for analysis: | ☑ ☐ | |
| 4. Compositing instructions clear: | ☐ ☐ | ☑ |
| 5. Filtering instructions clear: | ☐ ☐ | ☑ |

Comments

Accutest Laboratories
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2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

3.1

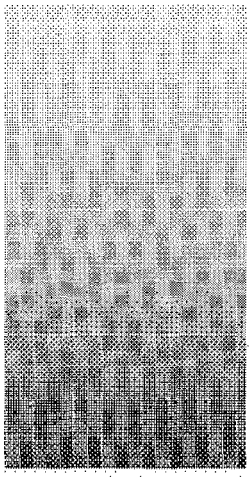
**JA74493: Chain of Custody**
**Page 2 of 2**

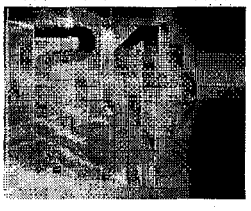


Shell/Motiva 0007948

New Jersey ACCUTEST LABORATORIES

05/18/11





Technical Report for

Shell Oil Products US

SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY

SAP#100623 5E017.140

Accutest Job Number: JA74495

Sampling Date: 04/28/11

Report to:

Sovereign Consulting
290 Executive Drive Suite 300
Cranberry Township, PA 16066
DStatzer@sovcon.com; jmccollums@sovcon.com;
djakim@sovcon.com; bbecker@sovcon.com
ATTN: Douglas Jakim

Total number of pages in report: **47**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

David N. Speis
VP, Laboratory Director

Client Service contact: Kristin Beebe 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, PA, RI, SC, TN, VA, WV

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Test results relate only to samples analyzed.



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Shell/Motiva 0007949

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Shell/Motiva 0007950

# Sample Summary

Shell Oil Products US

**Job No:** JA74495

SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY
Project No: SAP#100623 5E017.140

| Sample Number | Collected Date | Time | By | Received | Matrix Code | Matrix Type | Client Sample ID |
|---|---|---|---|---|---|---|---|
| JA74495-1 | 04/28/11 | 08:15 | JK | 04/29/11 | AQ | Ground Water | MW-3 |
| JA74495-2 | 04/28/11 | 08:33 | JK | 04/29/11 | AQ | Ground Water | MW-29 |
| JA74495-3 | 04/28/11 | 08:48 | JK | 04/29/11 | AQ | Ground Water | MW-30 |
| JA74495-4 | 04/28/11 | 09:02 | JK | 04/29/11 | AQ | Ground Water | MW-5 |
| JA74495-5 | 04/28/11 | 09:17 | JK | 04/29/11 | AQ | Ground Water | MW-28 |
| JA74495-6 | 04/28/11 | 09:40 | JK | 04/29/11 | AQ | Ground Water | MW-27 |
| JA74495-7 | 04/28/11 | 09:55 | JK | 04/29/11 | AQ | Ground Water | MW-6 |
| JA74495-8 | 04/28/11 | 10:30 | JK | 04/29/11 | AQ | Ground Water | MW-7R |
| JA74495-9 | 04/28/11 | 10:57 | JK | 04/29/11 | AQ | Ground Water | MW-8 |
| JA74495-10 | 04/28/11 | 11:24 | JK | 04/29/11 | AQ | Ground Water | MW-9 |
| JA74495-11 | 04/28/11 | 11:45 | JK | 04/29/11 | AQ | Ground Water | MW-21R |
| JA74495-12 | 04/28/11 | 12:08 | JK | 04/29/11 | AQ | Ground Water | MW-22R |
| JA74495-13 | 04/28/11 | 12:26 | JK | 04/29/11 | AQ | Ground Water | MW-13 |



Shell/Motiva 0007951

# Sample Summary
(continued)

Shell Oil Products US

**Job No:** JA74495

SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY
Project No: SAP#100623 5E017.140

| Sample Number | Collected Date | Time | By | Received | Matrix Code | Matrix Type | Client Sample ID |
|---|---|---|---|---|---|---|---|
| JA74495-14 | 04/28/11 | 12:40 | JK | 04/29/11 | AQ | Ground Water | MW-14 |
| JA74495-15 | 04/28/11 | 12:55 | JK | 04/29/11 | AQ | Ground Water | MW-23 |
| JA74495-16 | 04/28/11 | 13:16 | JK | 04/29/11 | AQ | Ground Water | MW-24 |
| JA74495-17 | 04/28/11 | 13:30 | JK | 04/29/11 | AQ | Ground Water | MW-43 |
| JA74495-18 | 04/28/11 | 13:45 | JK | 04/29/11 | AQ | Ground Water | MW-42 |
| JA74495-19 | 04/28/11 | 10:45 | JK | 04/29/11 | AQ | Field Blank Water | FIELD BLANK |
| JA74495-20 | 04/28/11 | 13:45 | JK | 04/29/11 | AQ | Trip Blank Water | TRIP BLANK |



Shell/Motiva 0007952

## Sample Results

Report of Analysis

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-3 | | |
| **Lab Sample ID:** | JA74495-1 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 4D10342.D | 1 | 05/11/11 | TYG | n/a | n/a | V4D461 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007954

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-3 | | |
| **Lab Sample ID:** | JA74495-1 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 105% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 107% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 103% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 100% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007955

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-29 | | |
| **Lab Sample ID:** | JA74495-2 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 4D10347.D | 1 | 05/12/11 | TYG | n/a | n/a | V4D461 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 83.0 | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | 12.5 | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | 10.7 | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007956

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-29 | | |
| **Lab Sample ID:** | JA74495-2 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | 2.7 | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | 61.9 | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | 109 | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | 1.2 | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | 3.6 | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | 1.4 | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 4.9 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 106% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 108% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 102% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 98% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007957

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-30 | | |
| **Lab Sample ID:** | JA74495-3 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 4D10343.D | 1 | 05/12/11 | TYG | n/a | n/a | V4D461 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007958

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-30 | | |
| **Lab Sample ID:** | JA74495-3 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 104% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 107% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 101% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 102% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007959

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-5 | | |
| **Lab Sample ID:** | JA74495-4 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 4D10344.D | 1 | 05/12/11 | TYG | n/a | n/a | V4D461 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007960

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-5 | | |
| **Lab Sample ID:** | JA74495-4 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | 3.8 | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 106% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 108% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 103% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 100% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007961

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-28 | | |
| **Lab Sample ID:** | JA74495-5 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 4D10348.D | 1 | 05/12/11 | TYG | n/a | n/a | V4D461 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007962

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-28 | | |
| **Lab Sample ID:** | JA74495-5 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | 2.2 | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 2.1 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 105% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 105% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 103% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 100% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007963

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-27 | | |
| **Lab Sample ID:** | JA74495-6 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 4D10345.D | 1 | 05/12/11 | TYG | n/a | n/a | V4D461 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007964

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-27 | | |
| **Lab Sample ID:** | JA74495-6 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 105% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 108% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 102% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 99% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007965

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-6 | | |
| **Lab Sample ID:** | JA74495-7 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 4D10346.D | 1 | 05/12/11 | TYG | n/a | n/a | V4D461 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007966

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-6 | | |
| **Lab Sample ID:** | JA74495-7 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 105% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 109% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 103% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 99% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007967

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-7R | | |
| **Lab Sample ID:** | JA74495-8 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 4D10349.D | 1 | 05/12/11 | TYG | n/a | n/a | V4D461 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 31.3 | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007968

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-7R | | |
| **Lab Sample ID:** | JA74495-8 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | 2.0 | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 38.0 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 104% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 104% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 103% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 102% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007969

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-8 | | |
| **Lab Sample ID:** | JA74495-9 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D59375.D | 1 | 05/11/11 | NT | n/a | n/a | V3D2569 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 87.6 | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007970

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-8 | | |
| **Lab Sample ID:** | JA74495-9 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 31.6 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 107% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 94% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 109% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 99% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007971

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-9 | | |
| **Lab Sample ID:** | JA74495-10 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D59377.D | 1 | 05/11/11 | NT | n/a | n/a | V3D2569 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 11.5 | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007972

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-9 | | |
| **Lab Sample ID:** | JA74495-10 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 7.6 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 106% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 95% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 110% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 98% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007973

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-21R | | |
| **Lab Sample ID:** | JA74495-11 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D59400.D | 2 | 05/11/11 | NT | n/a | n/a | V3D2570 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 100 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 100 | ug/l | |
| 71-43-2 | Benzene | 217 | 2.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 10 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 10 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 2.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 8.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 4.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | 10.2 | 10 | ug/l | |
| 135-98-8 | sec-Butylbenzene | 28.1 | 10 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 10 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 2.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 2.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 2.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 20 | ug/l | |
| 67-66-3 | Chloroform | ND | 2.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 2.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 10 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 10 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 20 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 2.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 4.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 2.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 2.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 2.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 10 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 2.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 2.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 2.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 2.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 2.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 2.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007974

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-21R | | |
| **Lab Sample ID:** | JA74495-11 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 10 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 10 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 10 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 2.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 2.0 | ug/l | |
| 100-41-4 | Ethylbenzene | 97.0 | 2.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 10 | ug/l | |
| 98-82-8 | Isopropylbenzene | 112 | 4.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 10 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 7.7 | 2.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 10 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 4.0 | ug/l | |
| 91-20-3 | Naphthalene | 60.6 | 10 | ug/l | |
| 103-65-1 | n-Propylbenzene | 59.6 | 10 | ug/l | |
| 100-42-5 | Styrene | ND | 10 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 10 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 2.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 2.0 | ug/l | |
| 108-88-3 | Toluene | 29.9 | 2.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 10 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 10 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 2.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 2.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 2.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 10 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 10 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | 258 | 10 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 10 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 2.0 | ug/l | |
| | m,p-Xylene | 65.6 | 2.0 | ug/l | |
| 95-47-6 | o-Xylene | 22.3 | 2.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 87.9 | 2.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 108% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 98% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 107% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 96% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007975

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-22R | | |
| **Lab Sample ID:** | JA74495-12 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D59371.D | 10 | 05/11/11 | NT | n/a | n/a | V3D2569 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 500 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 500 | ug/l | |
| 71-43-2 | Benzene | 792 | 10 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 50 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 50 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 10 | ug/l | |
| 75-25-2 | Bromoform | ND | 40 | ug/l | |
| 74-83-9 | Bromomethane | ND | 20 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 50 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 50 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 50 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 10 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 10 | ug/l | |
| 75-00-3 | Chloroethane | ND | 10 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 100 | ug/l | |
| 67-66-3 | Chloroform | ND | 10 | ug/l | |
| 74-87-3 | Chloromethane | ND | 10 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 50 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 50 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 100 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 10 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 20 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 10 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 10 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 10 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 50 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 10 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 10 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 10 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 10 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 10 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 10 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007976

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-22R | | |
| **Lab Sample ID:** | JA74495-12 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 50 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 50 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 50 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 10 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 10 | ug/l | |
| 100-41-4 | Ethylbenzene | 1330 | 10 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 50 | ug/l | |
| 98-82-8 | Isopropylbenzene | 207 | 20 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 50 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 32.2 | 10 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 50 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 20 | ug/l | |
| 91-20-3 | Naphthalene | 398 | 50 | ug/l | |
| 103-65-1 | n-Propylbenzene | 430 | 50 | ug/l | |
| 100-42-5 | Styrene | ND | 50 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 50 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 10 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 10 | ug/l | |
| 108-88-3 | Toluene | 57.6 | 10 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 50 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 50 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 10 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 10 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 10 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 50 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 50 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 50 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | 63.3 | 50 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 10 | ug/l | |
| | m,p-Xylene | 48.4 | 10 | ug/l | |
| 95-47-6 | o-Xylene | 19.0 | 10 | ug/l | |
| 1330-20-7 | Xylene (total) | 67.4 | 10 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 105% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 95% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 108% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 99% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007977

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-13 | | |
| **Lab Sample ID:** | JA74495-13 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D59378.D | 1 | 05/11/11 | NT | n/a | n/a | V3D2569 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007978

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-13 | | |
| **Lab Sample ID:** | JA74495-13 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 106% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 93% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 111% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 97% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007979

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-14 | | |
| **Lab Sample ID:** | JA74495-14 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D59379.D | 1 | 05/11/11 | NT | n/a | n/a | V3D2569 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007980

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-14 | | |
| **Lab Sample ID:** | JA74495-14 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 108% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 93% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 108% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 98% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007981

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-23 | | |
| **Lab Sample ID:** | JA74495-15 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D59396.D | 1 | 05/11/11 | NT | n/a | n/a | V3D2570 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007982

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-23 | | |
| **Lab Sample ID:** | JA74495-15 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | 6.8 | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 1.1 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | 1.9 | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 2.3 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 108% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 97% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 108% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 97% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007983

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-24 | | |
| **Lab Sample ID:** | JA74495-16 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D59376.D | 1 | 05/11/11 | NT | n/a | n/a | V3D2569 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 9.5 | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007984

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-24 | | |
| **Lab Sample ID:** | JA74495-16 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | 4.0 | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 37.5 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | 2.1 | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 2.7 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 106% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 94% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 108% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 100% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007985

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-43 | | |
| **Lab Sample ID:** | JA74495-17 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D59380.D | 1 | 05/11/11 | NT | n/a | n/a | V3D2569 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007986

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-43 | | |
| **Lab Sample ID:** | JA74495-17 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 3.0 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 109% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 96% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 108% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 97% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007987

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-42 | | |
| **Lab Sample ID:** | JA74495-18 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D59381.D | 1 | 05/11/11 | NT | n/a | n/a | V3D2569 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007988

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-42 | | |
| **Lab Sample ID:** | JA74495-18 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 109% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 95% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 108% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 97% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007989

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | FIELD BLANK | | |
| **Lab Sample ID:** | JA74495-19 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Field Blank Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D59397.D | 1 | 05/11/11 | NT | n/a | n/a | V3D2570 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**Purgeable Aromatics, MTBE**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 110% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 97% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 108% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 95% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007990

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | TRIP BLANK | | |
| **Lab Sample ID:** | JA74495-20 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Trip Blank Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | S144687.D | 1 | 05/10/11 | NT | n/a | n/a | VS5954 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**Purgeable Aromatics, MTBE**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 95% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 82% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 103% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 93% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0007991

## Misc. Forms

# Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

GW
FD
JTB

LAB (LOCATION)

☑ ACCUTEST ( )
☐ CALSCIENCE ( )
☐ TESTAMERICA ( )
☐ Other ( )

Lab Vendor # 1813640 (Accutest)

# Shell Oil Products Chain Of Custody Record

**Please Check Appropriate Box:**

☐ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA SD&CM ☑ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER

**Print Bill To Contact Name:** Douglas Jakim

**PO #**

**INCIDENT # (ENV SERVICES)** 9 7 0 9 4 9 8 1

**SAP #** 1 0 0 6 2 3

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 4/28/2011

PAGE: 1 of 2

SAMPLING COMPANY: Sovereign Consulting Inc.

LOG CODE:

SITE ADDRESS: Street and City: 25 Paidge Avenue, Brooklyn

State: NY

GLOBAL ID NO.:

ADDRESS: 290 Executive Drive, Suite 300, Cranberry Township, PA 16066

EDF DELIVERABLE TO (Name, Company, Office Location):

PHONE NO.:

E-MAIL:

CONSULTANT PROJECT NO.: 5E017.140

PROJECT CONTACT (Hardcopy or PDF Report to): John McCollums / Douglas Jakim

TELEPHONE: (724) 553-5084

FAX: (724) 553-5089

Bill To Contact E-MAIL: djakim@sovcon.com

SAMPLER NAME(S) (Print): Justin King and Nick Zarcone

LAB USE ONLY: JA74495

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

DELIVERABLES: ☑ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY)

TEMPERATURE ON RECEIPT C° Cooler #1 2.1 Cooler #2 Cooler #3

**SPECIAL INSTRUCTIONS OR NOTES:**

Report to WPA email list.

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☐ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

**REQUESTED ANALYSIS**

UNIT COST | NON-UNIT COST

**FIELD NOTES:**

TEMPERATURE ON RECEIPT 2.1 C°

chart seal attached

Container PID Readings or Laboratory Notes

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | EPA 8260 (See attached list) | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -1 | MW-3 | 4/28/11 | 8:15 | GW | 3 | | | | | 3 | x | 806 |
| -2 | MW-29 | 4/28/11 | 8:33 | GW | 3 | | | | | 3 | x | |
| -3 | MW-30 | 4/28/11 | 8:48 | GW | 3 | | | | | 3 | x | |
| -4 | MW-5 | 4/28/11 | 9:02 | GW | 3 | | | | | 3 | x | |
| -5 | MW-28 | 4/28/11 | 9:17 | GW | 3 | | | | | 3 | x | |
| -6 | MW-27 | 4/28/11 | 9:40 | GW | 3 | | | | | 3 | x | |
| -7 | MW-6 | 4/28/11 | 9:55 | GW | 3 | | | | | 3 | x | |
| -8 | MW-7R | 4/28/11 | 10:30 | GW | 3 | | | | | 3 | x | |
| -9 | MW-8 | 4/28/11 | 10:57 | GW | 3 | | | | | 3 | x | |
| -10 | MW-9 | 4/28/11 | 11:24 | GW | 3 | | | | | 3 | x | |

| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
|---|---|---|---|
| [signature] | FED EX 8708 8445 7507 | 4/28/11 | 3:30pm |
| FED EX | [signature] | 4-29-11 | 930 |
| | | | |

05/2/06 Revision

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**JA74495: Chain of Custody**
**Page 1 of 3**

LAB (LOCATION)

☑ ACCUTEST ( )
☐ CALSCIENCE ( )
☐ TESTAMERICA ( )
☐ Other ( )
Lab Vendor # 1613640 (Accutest)

# Shell Oil Products Chain Of Custody Record

**Please Check Appropriate Box:**
☐ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA SD&CM ☑ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER

**Print Bill To Contact Name:** Douglas Jakim

**PO #**

**INCIDENT # (ENV SERVICES)** 9 7 0 9 4 9 8 1

**SAP #** 1 0 0 6 2 3

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 4/28/2011

PAGE: 2 of 2

3.1

SAMPLING COMPANY: Sovereign Consulting Inc.
LOG CODE:
SITE ADDRESS: Street and City: 25 Paidge Avenue, Brooklyn
State: NY
GLOBAL ID NO.:
ADDRESS: 290 Executive Drive, Suite 300, Cranberry Township, PA 16066
EDF DELIVERABLE TO (Name, Company, Office Location):
PHONE NO.:
E-MAIL:
CONSULTANT PROJECT NO.: 5E017.140
PROJECT CONTACT (Hardcopy or PDF Report to): John McCollums / Douglas Jakim
TELEPHONE: (724) 553-5084
FAX: (724) 553-5089
Bill To Contact E-MAIL: djakim@sovcon.com
SAMPLER NAME(S) (Print): Justin King and Nick Zarcone
LAB USE ONLY: JA74495

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

DELIVERABLES: ☑ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY)

TEMPERATURE ON RECEIPT C° Cooler #1 Cooler #2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :
Report to WPA email list.

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☐ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS — UNIT COST / NON-UNIT COST

FIELD NOTES:
TEMPERATURE ON RECEIPT C°
Container PID Readings or Laboratory Notes

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | EPA 8260 (See attached list) | 8260B - BTEX/MTBE | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -11 | MW-21R | 4/28/11 | 11:45 | GW | 3 | | | | | 3 | X | | |
| -12 | MW-22R | 4/28/11 | 12:08 | GW | 3 | | | | | 3 | X | | |
| -13 | MW-13 | 4/28/11 | 12:26 | GW | 3 | | | | | 3 | X | | |
| -14 | MW-14 | 4/28/11 | 12:40 | GW | 3 | | | | | 3 | X | | |
| -15 | MW-23 | 4/28/11 | 12:55 | GW | 3 | | | | | 3 | X | | |
| -16 | MW-24 | 4/28/11 | 1:16 | GW | 3 | | | | | 3 | X | | |
| -17 | MW-43 | 4/28/11 | 1:30 | GW | 3 | | | | | 3 | X | | |
| -18 | MW-42 | 4/28/11 | 1:45 | GW | 3 | | | | | 3 | X | | |
| -19 | FIELD BLANK | 4/28/11 | 10:45 | GW | 3 | | | | | 3 | | X | 4-29 |
| -20 | TRIP BLANK | 4/25/11 | 5:00 | TB | 2 | | | | | 2 | | X | 4-25 17:00 |

| Relinquished by: (Signature) | Received by: (Signature) | Date | Time |
|---|---|---|---|
| [signature] | FED EX | 4/28/11 | 3:30 PM |
| FED EX | [signature] | 4-29-11 | 930 |
| | | | |

05/2/06 Revision

**JA74495: Chain of Custody**
**Page 2 of 3**

ACCUTEST LABORATORIES

# Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA74495 Client: _____ Immediate Client Services Action Required: No

Date / Time Received: 4/29/2011 Delivery Method: _____ Client Service Action Required at Login: No

Project: _____ No. Coolers: 1 Airbill #'s: _____

| Cooler Security | Y or N | | Y or N |
|---|---|---|---|
| 1. Custody Seals Present: | ☑ ☐ | 3. COC Present: | ☑ ☐ |
| 2. Custody Seals Intact: | ☑ ☐ | 4. Smpl Dates/Time OK | ☑ ☐ |

| Cooler Temperature | Y or N |
|---|---|
| 1. Temp criteria achieved: | ☑ ☐ |
| 2. Cooler temp verification: | Infared gun |
| 3. Cooler media: | Ice (bag) |

| Quality Control Preservatio | Y or N | N/A |
|---|---|---|
| 1. Trip Blank present / cooler: | ☑ ☐ | ☐ |
| 2. Trip Blank listed on COC: | ☑ ☐ | ☐ |
| 3. Samples preserved properly: | ☑ ☐ | |
| 4. VOCs headspace free: | ☑ ☐ | ☐ |

| Sample Integrity - Documentation | Y or N |
|---|---|
| 1. Sample labels present on bottles: | ☑ ☐ |
| 2. Container labeling complete: | ☑ ☐ |
| 3. Sample container label / COC agree: | ☑ ☐ |

| Sample Integrity - Condition | Y or N |
|---|---|
| 1. Sample recvd within HT: | ☑ ☐ |
| 2. All containers accounted for: | ☑ ☐ |
| 3. Condition of sample: | Intact |

| Sample Integrity - Instructions | Y or N | N/A |
|---|---|---|
| 1. Analysis requested is clear: | ☑ ☐ | |
| 2. Bottles received for unspecified tests | ☐ ☑ | |
| 3. Sufficient volume recvd for analysis: | ☑ ☐ | |
| 4. Compositing instructions clear: | ☐ ☐ | ☑ |
| 5. Filtering instructions clear: | ☐ ☐ | ☑ |

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

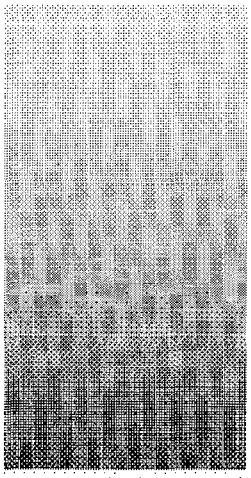
**JA74495: Chain of Custody**
**Page 3 of 3**

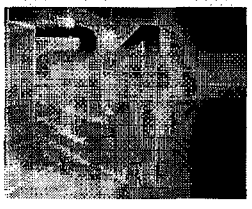


Shell/Motiva 0007995

New Jersey ACCUTEST LABORATORIES

05/13/11





Technical Report for

Shell Oil Products US

SCPAC: 97094981, 25 Paidge Avenue, Brooklyn, NY

SAP#100623 5E017.140

Accutest Job Number: JA74476

Sampling Date: 04/28/11

Report to:

Sovereign Consulting
290 Executive Drive Suite 300
Cranberry Township, PA 16066
DStatzer@sovcon.com; jmccollums@sovcon.com;
djakim@sovcon.com; bbecker@sovcon.com
ATTN: Douglas Jakim

Total number of pages in report: **13**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

David N. Speis
VP, Laboratory Director

Client Service contact: Kristin Beebe 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, PA, RI, SC, TN, VA, WV

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Test results relate only to samples analyzed.



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Shell/Motiva 0007996

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Shell/Motiva 0007997

Accutest Laboratories

# Sample Summary

Shell Oil Products US

**Job No:** JA74476

SCPAC: 97094981, 25 Paidge Avenue, Brooklyn, NY
Project No: SAP#100623 5E017.140

| Sample Number | Collected Date | Time | By | Received | Matrix Code | Type | Client Sample ID |
|---|---|---|---|---|---|---|---|
| JA74476-1 | 04/28/11 | 08:15 | JK | 04/29/11 | AQ | Ground Water | MW-3 |
| JA74476-2 | 04/28/11 | 09:40 | JK | 04/29/11 | AQ | Ground Water | MW-27 |
| JA74476-3 | 04/28/11 | 10:30 | JK | 04/29/11 | AQ | Ground Water | MW-7R |
| JA74476-4 | 04/28/11 | 10:57 | JK | 04/29/11 | AQ | Ground Water | MW-8 |
| JA74476-5 | 04/28/11 | 11:24 | JK | 04/29/11 | AQ | Ground Water | MW-9 |
| JA74476-6 | 04/28/11 | 11:24 | JK | 04/29/11 | AQ | Trip Blank Water | TRIP BLANK |



Shell/Motiva 0007998

## Sample Results

Report of Analysis

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-3 | | |
| **Lab Sample ID:** | JA74476-1 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846-8015 SW846 3510C | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3Z31407.D | 1 | 05/06/11 | VDT | 05/03/11 | OP49491 | G3Z968 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1000 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| | TPH-DRO (C10-C28) | ND | 0.10 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 82% | | 34-139% |
| 16416-32-3 | Tetracosane-d50 | 71% | | 34-141% |
| 438-22-2 | 5a-Androstane | 78% | | 26-140% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008000

Accutest Laboratories

# Report of Analysis



**Client Sample ID:** MW-27
**Lab Sample ID:** JA74476-2 **Date Sampled:** 04/28/11
**Matrix:** AQ - Ground Water **Date Received:** 04/29/11
**Method:** SW846-8015 SW846 3510C **Percent Solids:** n/a
**Project:** SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3Z31593.D | 1 | 05/12/11 | OPM | 05/03/11 | OP49491 | G3Z971 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1000 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| | TPH-DRO (C10-C28) | 0.228 | 0.10 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 90% | | 34-139% |
| 16416-32-3 | Tetracosane-d50 | 82% | | 34-141% |
| 438-22-2 | 5a-Androstane | 83% | | 26-140% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008001

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-7R | | |
| **Lab Sample ID:** | JA74476-3 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846-8015 SW846 3510C | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3Z31594.D | 1 | 05/12/11 | OPM | 05/03/11 | OP49491 | G3Z971 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1000 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| | TPH-DRO (C10-C28) | 3.13 | 0.10 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 101% | | 34-139% |
| 16416-32-3 | Tetracosane-d50 | 94% | | 34-141% |
| 438-22-2 | 5a-Androstane | 93% | | 26-140% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008002

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-8 | | |
| **Lab Sample ID:** | JA74476-4 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846-8015 SW846 3510C | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3Z31595.D | 1 | 05/12/11 | OPM | 05/03/11 | OP49491 | G3Z971 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1000 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| | TPH-DRO (C10-C28) | 3.63 | 0.10 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 96% | | 34-139% |
| 16416-32-3 | Tetracosane-d50 | 89% | | 34-141% |
| 438-22-2 | 5a-Androstane | 89% | | 26-140% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008003

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-9 | | |
| **Lab Sample ID:** | JA74476-5 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846-8015 SW846 3510C | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3Z31596.D | 1 | 05/12/11 | OPM | 05/03/11 | OP49491 | G3Z971 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1000 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| | TPH-DRO (C10-C28) | 7.91 | 0.10 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 115% | | 34-139% |
| 16416-32-3 | Tetracosane-d50 | 99% | | 34-141% |
| 438-22-2 | 5a-Androstane | 109% | | 26-140% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008004

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | TRIP BLANK | | |
| **Lab Sample ID:** | JA74476-6 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Trip Blank Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | C160468.D | 1 | 05/05/11 | MH | n/a | n/a | VC5709 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**Purgeable Aromatics, MTBE**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 112% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 112% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 111% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 102% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008005

## Misc. Forms

# Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

LAB (LOCATION) CW WTB

☑ ACCUTEST ( )
☐ CALSCIENCE ( )
☐ TESTAMERICA ( )
☐ Other ( )
Lab Vendor # 1813640 (Accutest)

# Shell Oil Products Chain Of Custody Record JA74476

**Please Check Appropriate Box:**
☐ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA SD&CM ☑ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER

**Print Bill To Contact Name:** Douglas Jakim

**PO #**

**INCIDENT # (ENV SERVICES)** 9 7 0 9 4 9 8 1

**SAP #** 1 0 0 6 2 3

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 4/28/2011

PAGE: 1 of 1

3.1

3

SAMPLING COMPANY: Sovereign Consulting Inc.
LOG CODE:
SITE ADDRESS: Street and City: 25 Paidge Avenue, Brooklyn
State: NY
GLOBAL ID NO.:
ADDRESS: 290 Executive Drive, Suite 300, Cranberry Township, PA 16066
EDF DELIVERABLE TO (Name, Company, Office Location):
PHONE NO.:
E-MAIL:
CONSULTANT PROJECT NO.: 5E017.140
PROJECT CONTACT (Hardcopy or PDF Report to): John McCollums / Douglas Jakim
SAMPLER NAME(S) (Print): Justin King and Nick Zarcone
LAB USE ONLY
TELEPHONE: (724) 553-5084
FAX: (724) 553-5089
Bill To Contact E-MAIL: djakim@sovcon.com

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

DELIVERABLES: ☑ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY)

TEMPERATURE ON RECEIPT C° Cooler #1 2.6° Cooler #2 Cooler #3

**SPECIAL INSTRUCTIONS OR NOTES :**
Report to WPA email list.

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☐ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

**REQUESTED ANALYSIS**
UNIT COST | NON-UNIT COST

**FIELD NOTES:**
TEMPERATURE ON RECEIPT C° 2.6°
chlorine sealed

Container PID Readings or Laboratory Notes
EX 90
800

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | TPH DRO | 8260B - BTEX/MTBE | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MW-3 | 4/28/11 | 8:15 | GW | 2 | | | | | 2 | X | | |
| 2 | MW-27 | 4/28/11 | 9:40 | GW | 2 | | | | | 2 | X | | |
| 3 | MW-7R | 4/28/11 | 10:30 | GW | 2 | | | | | 2 | X | | |
| 4 | MW-8 | 4/28/11 | 10:57 | GW | 2 | | | | | 2 | X | | |
| 5 | MW-9 | 4/28/11 | 11:24 | GW | 2 | | | | | 2 | X | | |
| 6 | TRIP BLANK | 4/25/11 | 5:00 | TB | 2 | | | | | 2 | | X | |

+ TPH DRO 4-25-11 1700
4-29-11

| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
|---|---|---|---|
| [signature] | FED EX #8708 8445 7530 | 4/28/11 | 3:30 pm |
| FED EX | [signature] | 4-29-11 | 9:30 |
| | | | |

05/2/06 Revision

[signature]

**JA74476: Chain of Custody**
**Page 1 of 2**

ACCUTEST LABORATORIES

# Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA74476 Client: Immediate Client Services Action Required: No

Date / Time Received: 4/29/2011 Delivery Method: Client Service Action Required at Login: No

Project: No. Coolers: 1 Airbill #'s:

| Cooler Security | Y or N | | Y or N |
|---|---|---|---|
| 1. Custody Seals Present: | ☑ ☐ | 3. COC Present: | ☑ ☐ |
| 2. Custody Seals Intact: | ☑ ☐ | 4. Smpl Dates/Time OK | ☑ ☐ |

| Cooler Temperature | Y or N |
|---|---|
| 1. Temp criteria achieved: | ☑ ☐ |
| 2. Cooler temp verification: | Infared gun |
| 3. Cooler media: | Ice (bag) |

| Quality Control Preservatio | Y or N | N/A |
|---|---|---|
| 1. Trip Blank present / cooler: | ☑ ☐ | ☐ |
| 2. Trip Blank listed on COC: | ☑ ☐ | ☐ |
| 3. Samples preserved properly: | ☑ ☐ | |
| 4. VOCs headspace free: | ☑ ☐ | ☐ |

| Sample Integrity - Documentation | Y or N |
|---|---|
| 1. Sample labels present on bottles: | ☑ ☐ |
| 2. Container labeling complete: | ☑ ☐ |
| 3. Sample container label / COC agree: | ☑ ☐ |

| Sample Integrity - Condition | Y or N |
|---|---|
| 1. Sample recvd within HT: | ☑ ☐ |
| 2. All containers accounted for: | ☑ ☐ |
| 3. Condition of sample: | Intact |

| Sample Integrity - Instructions | Y or N | N/A |
|---|---|---|
| 1. Analysis requested is clear: | ☑ ☐ | |
| 2. Bottles received for unspecified tests | ☐ ☑ | |
| 3. Sufficient volume recvd for analysis: | ☑ ☐ | |
| 4. Compositing instructions clear: | ☐ ☐ | ☑ |
| 5. Filtering instructions clear: | ☐ ☐ | ☑ |

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

3.1

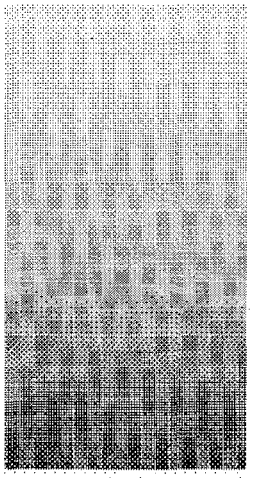
**JA74476: Chain of Custody**
**Page 2 of 2**

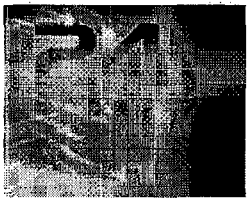


Shell/Motiva 0008008

New Jersey
ACCUTEST
LABORATORIES

05/13/11





Technical Report for

Shell Oil Products US

SCPAC: 97094981, 25 Paidge Avenue, Brooklyn, NY

SAP#100623 5E017.140

Accutest Job Number: JA74477

Sampling Date: 04/28/11

Report to:

Sovereign Consulting
290 Executive Drive Suite 300
Cranberry Township, PA 16066
DStatzer@sovcon.com; jmccollums@sovcon.com;
djakim@sovcon.com; bbecker@sovcon.com
ATTN: Douglas Jakim

Total number of pages in report: **14**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

David N. Speis
VP, Laboratory Director

Client Service contact: Kristin Beebe 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, PA, RI, SC, TN, VA, WV

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Test results relate only to samples analyzed.



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Shell/Motiva 0008009

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Shell/Motiva 0008010

# Sample Summary

Shell Oil Products US

**Job No:** JA74477

SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY
Project No: SAP#100623 5E017.140

| Sample Number | Collected Date | Time | By | Received | Matrix Code | Matrix Type | Client Sample ID |
|---|---|---|---|---|---|---|---|
| JA74477-1 | 04/28/11 | 11:45 | JK | 04/29/11 | AQ | Ground Water | MW-21R |
| JA74477-2 | 04/28/11 | 12:08 | JK | 04/29/11 | AQ | Ground Water | MW-22R |
| JA74477-3 | 04/28/11 | 12:26 | JK | 04/29/11 | AQ | Ground Water | MW-13 |
| JA74477-4 | 04/28/11 | 13:16 | JK | 04/29/11 | AQ | Ground Water | MW-24 |
| JA74477-5 | 04/28/11 | 13:16 | JK | 04/29/11 | AQ | Trip Blank Water | TRIP BLANK |



Shell/Motiva 0008011

## Sample Results

Report of Analysis

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-21R | | |
| **Lab Sample ID:** | JA74477-1 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846-8015 SW846 3510C | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3Z31598.D | 1 | 05/12/11 | OPM | 05/03/11 | OP49491 | G3Z971 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1000 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| | TPH-DRO (C10-C28) | 5.13 | 0.10 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 96% | | 34-139% |
| 16416-32-3 | Tetracosane-d50 | 86% | | 34-141% |
| 438-22-2 | 5a-Androstane | 89% | | 26-140% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-22R | | |
| **Lab Sample ID:** | JA74477-2 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846-8015 SW846 3510C | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3Z31597.D | 1 | 05/12/11 | OPM | 05/03/11 | OP49491 | G3Z971 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1000 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| | TPH-DRO (C10-C28) | 8.01 | 0.10 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 111% | | 34-139% |
| 16416-32-3 | Tetracosane-d50 | 96% | | 34-141% |
| 438-22-2 | 5a-Androstane | 100% | | 26-140% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-13 | | |
| **Lab Sample ID:** | JA74477-3 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846-8015 SW846 3510C | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3Z31602.D | 1 | 05/12/11 | OPM | 05/03/11 | OP49491 | G3Z972 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1000 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| | TPH-DRO (C10-C28) | 0.644 | 0.10 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 94% | | 34-139% |
| 16416-32-3 | Tetracosane-d50 | 88% | | 34-141% |
| 438-22-2 | 5a-Androstane | 91% | | 26-140% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-24 | | |
| **Lab Sample ID:** | JA74477-4 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846-8015 SW846 3510C | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3Z31603.D | 1 | 05/12/11 | OPM | 05/03/11 | OP49491 | G3Z972 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1000 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| | TPH-DRO (C10-C28) | 0.597 | 0.10 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 94% | | 34-139% |
| 16416-32-3 | Tetracosane-d50 | 87% | | 34-141% |
| 438-22-2 | 5a-Androstane | 87% | | 26-140% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008016

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | TRIP BLANK | | |
| **Lab Sample ID:** | JA74477-5 | **Date Sampled:** | 04/28/11 |
| **Matrix:** | AQ - Trip Blank Water | **Date Received:** | 04/29/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | C160469.D | 1 | 05/05/11 | MH | n/a | n/a | VC5709 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**Purgeable Aromatics, MTBE**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 111% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 113% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 109% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 102% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008017

## Misc. Forms

# Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

GW WTB

# Shell Oil Products Chain Of Custody Record

JA74477

LAB (LOCATION)
- [x] ACCUTEST ( )
- [ ] CALSCIENCE ( )
- [ ] TESTAMERICA ( )
- [ ] Other ( )

Lab Vendor # 1813640 (Accutest)

**Please Check Appropriate Box:**
- [ ] ENV. SERVICES
- [ ] MOTIVA RETAIL
- [ ] SHELL RETAIL
- [ ] MOTIVA SD&CM
- [x] CONSULTANT
- [ ] LUBES
- [ ] SHELL PIPELINE
- [ ] OTHER

**Print Bill To Contact Name:** Douglas Jakim

**PO #**

**INCIDENT # (ENV SERVICES)** 9 7 0 9 4 9 8 1

**SAP #** 1 0 0 6 2 3

- [ ] CHECK IF NO INCIDENT # APPLIES

DATE: 4/28/2011

PAGE: 1 of 1

3.1

3

SAMPLING COMPANY: Sovereign Consulting Inc.

LOG CODE:

SITE ADDRESS: Street and City: 25 Paidge Avenue, Brooklyn

State: NY

GLOBAL ID NO.:

ADDRESS: 290 Executive Drive, Suite 300, Cranberry Township, PA 16066

EDF DELIVERABLE TO (Name, Company, Office Location):

PHONE NO.:

E-MAIL:

CONSULTANT PROJECT NO.: 5E017.140

PROJECT CONTACT (Hardcopy or PDF Report to): John McCollums / Douglas Jakim

TELEPHONE: (724) 553-5084

FAX: (724) 553-5089

Bill To Contact E-MAIL: djakim@sovcon.com

SAMPLER NAME(S) (Print): Justin King and Nick Zarcone

LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS):
- [x] STANDARD (14 DAY)
- [ ] 5 DAYS
- [ ] 3 DAYS
- [ ] 2 DAYS
- [ ] 24 HOURS
- [ ] RESULTS NEEDED ON WEEKEND

- [ ] LA - RWQCB REPORT FORMAT
- [ ] UST AGENCY:

DELIVERABLES: [x] LEVEL 1 [ ] LEVEL 2 [ ] LEVEL 3 [ ] LEVEL 4 [ ] OTHER (SPECIFY)

TEMPERATURE ON RECEIPT C° Cooler #1 3.3 Cooler #2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:

Report to WPA email list.

- [x] SHELL CONTRACT RATE APPLIES
- [ ] STATE REIMBURSEMENT RATE APPLIES
- [ ] EDD NOT NEEDED
- [ ] RECEIPT VERIFICATION REQUESTED
- [ ] PROVIDE LEDD DISK

REQUESTED ANALYSIS — UNIT COST / NON-UNIT COST

FIELD NOTES:

TEMPERATURE ON RECEIPT c: 3.3°C

SEAL 200 Intact

Container P/D Readings or Laboratory Notes: EX 86 / 800

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | TPH DRO | 8260B - BTEX/MTBE | Container P/D Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MW-21R | 4/28/11 | 11:45 | GW | X | | | | | 2 | X | | |
| 2 | MW-22R | 4/28/11 | 12:08 | GW | X | | | | | 2 | X | | |
| 3 | MW-13 | 4/28/11 | 12:28 | GW | X | | | | | 2 | X | | |
| 4 | MW-24 | 4/28/11 | 1:16 | GW | X | | | | | 2 | X | | |
| 5 | TRIP BLANK | 4/25/11 | 5:00 | TB | X | | | | | 2 | | X | |

Relinquished by: (Signature) [signature] FEDEX

Received by: (Signature) FED EX #8708 5445 7529

Date: 4/28/11

Time: 3:30 pm

Relinquished by: (Signature) [signature]

Received by: (Signature) [signature]

Date: 4-29-11

Time: 930

Relinquished by: (Signature)

Received by: (Signature)

Date:

Time:

0522/06 Revision

ALL SAMPLES RECEIVED PRESERVED AS APPLICABLE

**JA74477: Chain of Custody**
**Page 1 of 4**

ACCUTEST Laboratories

☐ Immediate Action Required
Scanned as Problem Note
☐ Action Required at Login
Not Scanned

3.1
3

Issue Date: _____

# Sample Receipt Issues Summary

To: Client Services / Login
From: Sample Management  Sample Management Technicians Initials: _____

Client: _____  Project: _____  Job #: _____

| | |
|---|---|
| ☐ Trip Blank Not Received | ☐ Times on Chain Don't Match Label |
| ☐ Trip Blank Not on Chain of Custody | ☐ ID's on Chain Don't Match Label |
| ☐ Temperature Criteria (0-6 C) Not Met | ☐ Sample Labels Not Present on all Bottles |
| ☐ Ice Present | ☐ Analysis Requested is Unclear or Missing |
| ☐ No Ice Present | ☐ VOC Vials Have Headspace (Macro-bubbles) |
| ☐ Frozen | ☐ Bottles Rcv'd, Analysis Not Requested on COC |
| ☐ Sample Received Out of Holding Time | ☐ No Bottles Received for Analysis Requested |
| ☐ Encore received outside of Holding Time | ☐ Unclear Filtering Instructions |
| ☐ Soil VOA vials in DI water to be frozen rec'd outside of 48 hr Holding Time | ☐ Unclear Compositing Instructions |
| ☐ Sample Received Broken | ☐ % Solids Jar Not Received |
| ☐ Insufficient Volume For Analysis | ☐ No Chain of Custody Received |
| ☐ Sample Received Improperly Preserved | ☐ Sample Dates or Times Unclear or Missing |

Description of Problem:

-4 "MW4" 1of2 DRO bottles no's broken

JA74477 Chain of Custody
Page 2 of 4

Form: SM65-02
Rev. Date: 11/06/08



Shell/Motiva 0008020

# Accutest Laboratories Sample Receipt Summary

**Accutest Job Number:** JA74477 **Client:** SOVEREIGN **Immediate Client Services Action Required:** No

**Date / Time Received:** 4/29/2011 **Delivery Method:** FedEx **Client Service Action Required at Login:** Yes

**Project:** SHELL 5EO17.140 **No. Coolers:** **Airbill #'s:** 8708-8445-7529

| Cooler Security | Y or N | | Y or N |
|---|---|---|---|
| 1. Custody Seals Present: | ☑ ☐ | 3. COC Present: | ☑ ☐ |
| 2. Custody Seals Intact: | ☑ ☐ | 4. Smpl Dates/Time OK | ☑ ☐ |

| Cooler Temperature | Y or N |
|---|---|
| 1. Temp criteria achieved: | ☑ ☐ |
| 2. Cooler temp verification: | Infared gun |
| 3. Cooler media: | Ice (bag) |

| Quality Control Preservatio | Y | N | N/A |
|---|---|---|---|
| 1. Trip Blank present / cooler: | ☑ | ☐ | ☐ |
| 2. Trip Blank listed on COC: | ☑ | ☐ | ☐ |
| 3. Samples preserved properly: | ☑ | ☐ | |
| 4. VOCs headspace free: | ☑ | ☐ | ☐ |

| Sample Integrity - Documentation | Y or N |
|---|---|
| 1. Sample labels present on bottles: | ☑ ☐ |
| 2. Container labeling complete: | ☑ ☐ |
| 3. Sample container label / COC agree: | ☑ ☐ |

| Sample Integrity - Condition | Y or N |
|---|---|
| 1. Sample recvd within HT: | ☑ ☐ |
| 2. All containers accounted for: | ☑ ☐ |
| 3. Condition of sample: | Broken / Leaking |

| Sample Integrity - Instructions | Y | N | N/A |
|---|---|---|---|
| 1. Analysis requested is clear: | ☑ | ☐ | |
| 2. Bottles received for unspecified tests | ☐ | ☑ | |
| 3. Sufficient volume recvd for analysis: | ☑ | ☐ | |
| 4. Compositing instructions clear: | ☐ | ☐ | ☑ |
| 5. Filtering instructions clear: | ☐ | ☐ | ☑ |

Comments

-4 MW-24 1 OF 2 DRO VOLUMES REC'D BROKEN.

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

**JA74477: Chain of Custody**
**Page 3 of 4**

ACCUTEST LABORATORIES

## Sample Receipt Summary - Problem Resolution

**Accutest Job Number:** JA74477

**CSR:** Kristin B **Response Date** 5/2/2011

**Response:** OK to proceed. Sufficient volume.

3.1

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

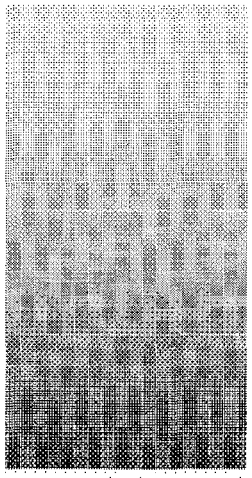
**JA74477: Chain of Custody**
**Page 4 of 4**

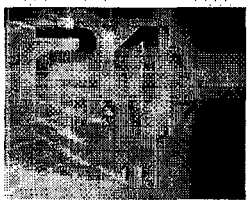


Shell/Motiva 0008022

New Jersey
ACCUTEST
LABORATORIES

05/18/11





Technical Report for

Shell Oil Products US

SCPAC: 97094981, 25 Paidge Avenue, Brooklyn, NY

SAP#100623 5E017.140

Accutest Job Number: JA74647

Sampling Date: 04/29/11

Report to:

Sovereign Consulting
290 Executive Drive Suite 300
Cranberry Township, PA 16066
DStatzer@sovcon.com; jmccollums@sovcon.com;
djakim@sovcon.com; bbecker@sovcon.com
ATTN: Douglas Jakim

Total number of pages in report: **43**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

David N. Speis
VP, Laboratory Director

Client Service contact: Kristin Beebe 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, PA, RI, SC, TN, VA, WV

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Test results relate only to samples analyzed.



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Shell/Motiva 0008023

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Shell/Motiva 0008024

# Sample Summary

Shell Oil Products US

**Job No:** JA74647

SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY
Project No: SAP#100623 5E017.140

| Sample Number | Collected Date | Time | By | Received | Matrix Code | Matrix Type | Client Sample ID |
|---|---|---|---|---|---|---|---|
| JA74647-1 | 04/29/11 | 08:30 | JK | 04/30/11 | AQ | Ground Water | MW-1 |
| JA74647-2 | 04/29/11 | 08:45 | JK | 04/30/11 | AQ | Ground Water | MW-44 |
| JA74647-3 | 04/29/11 | 10:15 | JK | 04/30/11 | AQ | Ground Water | MW-25 |
| JA74647-4 | 04/29/11 | 10:45 | JK | 04/30/11 | AQ | Ground Water | TW-2 |
| JA74647-5 | 04/29/11 | 09:00 | JK | 04/30/11 | AQ | Ground Water | MW-20 |
| JA74647-6 | 04/29/11 | 09:15 | JK | 04/30/11 | AQ | Ground Water | MW-15 |
| JA74647-7 | 04/29/11 | 09:30 | JK | 04/30/11 | AQ | Ground Water | MW-16 |
| JA74647-8 | 04/29/11 | 09:45 | JK | 04/30/11 | AQ | Ground Water | MW-17 |
| JA74647-9 | 04/29/11 | 10:00 | JK | 04/30/11 | AQ | Ground Water | MW-18 |
| JA74647-10 | 04/29/11 | 10:30 | JK | 04/30/11 | AQ | Ground Water | MW-32 |
| JA74647-11 | 04/29/11 | 11:15 | JK | 04/30/11 | AQ | Ground Water | MW-33 |
| JA74647-12 | 04/29/11 | 11:30 | JK | 04/30/11 | AQ | Ground Water | MW-39 |
| JA74647-13 | 04/29/11 | 11:45 | JK | 04/30/11 | AQ | Ground Water | MW-35 |



Shell/Motiva 0008025

# Sample Summary
(continued)

Shell Oil Products US

**Job No:** JA74647

SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY
Project No: SAP#100623 5E017.140

| Sample Number | Collected Date | Time | By | Received | Matrix Code | Type | Client Sample ID |
|---|---|---|---|---|---|---|---|
| JA74647-14 | 04/29/11 | 12:00 | JK | 04/30/11 | AQ | Ground Water | MW-38 |
| JA74647-15 | 04/29/11 | 09:38 | JK | 04/30/11 | AQ | Field Blank Water | FIELD BLANK |
| JA74647-16 | 04/29/11 | 12:00 | JK | 04/30/11 | AQ | Trip Blank Water | TRIP BLANK |



Shell/Motiva 0008026

## Sample Results

Report of Analysis

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-1 | | |
| **Lab Sample ID:** | JA74647-1 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1C90327.D | 1 | 05/04/11 | NT | n/a | n/a | V1C3982 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008028

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-1 | | |
| **Lab Sample ID:** | JA74647-1 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 95% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 90% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 92% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 89% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008029

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-44 | | |
| **Lab Sample ID:** | JA74647-2 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1C90328.D | 1 | 05/04/11 | NT | n/a | n/a | V1C3982 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008030

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-44 | | |
| **Lab Sample ID:** | JA74647-2 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 95% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 89% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 90% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 89% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008031

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-25 | | |
| **Lab Sample ID:** | JA74647-3 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1C90339.D | 1 | 05/04/11 | NT | n/a | n/a | V1C3983 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008032

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-25 | | |
| **Lab Sample ID:** | JA74647-3 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 1.5 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 93% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 87% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 90% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 87% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008033

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | TW-2 | | |
| **Lab Sample ID:** | JA74647-4 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1C90458.D | 1 | 05/07/11 | NT | n/a | n/a | V1C3988 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 19.2 | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | 5.7 | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008034

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | TW-2 | | |
| **Lab Sample ID:** | JA74647-4 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | 23.3 | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 1.3 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | 31.3 | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | 1.5 | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | 2.9 | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 3.6 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 88% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 91% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 89% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 87% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008035

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-20 | | |
| **Lab Sample ID:** | JA74647-5 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1C90512.D | 1 | 05/09/11 | NT | n/a | n/a | V1C3990 |
| Run #2 | 1C90336.D | 5 | 05/04/11 | NT | n/a | n/a | V1C3983 |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | 5.0 ml |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 205 [a] | 5.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | 8.1 | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008036

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-20 | | |
| **Lab Sample ID:** | JA74647-5 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | 8.6 | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | 11.6 | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 57.7 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | 11.8 | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | 15.4 | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | 102 | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | 34.8 | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | 26.2 | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | 182 | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | 180 [a] | 5.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 333 [a] | 5.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 89% | 93% | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 94% | 87% | 70-127% |
| 2037-26-5 | Toluene-D8 | 91% | 90% | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 86% | 87% | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008037

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-20 | | |
| **Lab Sample ID:** | JA74647-5 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008038

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-15 | | |
| **Lab Sample ID:** | JA74647-6 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1C90514.D | 1 | 05/09/11 | NT | n/a | n/a | V1C3990 |
| Run #2 | 1C90337.D | 10 | 05/04/11 | NT | n/a | n/a | V1C3983 |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | 5.0 ml |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 183 [a] | 10 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | 28.0 | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | 16.4 | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008039

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-15 | | |
| **Lab Sample ID:** | JA74647-6 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | 33.4 | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | 95.6 | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 13.4 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | 27.1 | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | 122 | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | 8.3 | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | 223 [a] | 50 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | 54.6 | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | 379 | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | 157 | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 536 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 88% | 92% | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 95% | 87% | 70-127% |
| 2037-26-5 | Toluene-D8 | 91% | 92% | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 84% | 87% | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008040

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-15 | | |
| **Lab Sample ID:** | JA74647-6 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-16 | | |
| **Lab Sample ID:** | JA74647-7 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1C90329.D | 1 | 05/04/11 | NT | n/a | n/a | V1C3982 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 7.2 | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008042

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-16 | | |
| **Lab Sample ID:** | JA74647-7 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | 23.2 | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 11.4 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | 22.3 | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 1.4 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 95% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 92% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 91% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 85% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008043

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-17 | | |
| **Lab Sample ID:** | JA74647-8 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1C90330.D | 1 | 05/04/11 | NT | n/a | n/a | V1C3982 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 1.1 | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008044

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-17 | | |
| **Lab Sample ID:** | JA74647-8 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 5.0 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 95% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 90% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 91% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 88% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008045

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-18 | | |
| **Lab Sample ID:** | JA74647-9 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1C90331.D | 1 | 05/04/11 | NT | n/a | n/a | V1C3982 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 2.6 | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008046

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-18 | | |
| **Lab Sample ID:** | JA74647-9 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 1.3 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | 2.1 | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | 1.6 | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 3.7 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 95% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 89% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 90% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 88% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008047

Accutest Laboratories

# Report of Analysis



**Client Sample ID:** MW-32
**Lab Sample ID:** JA74647-10 **Date Sampled:** 04/29/11
**Matrix:** AQ - Ground Water **Date Received:** 04/30/11
**Method:** SW846 8260B **Percent Solids:** n/a
**Project:** SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1C90513.D | 1 | 05/09/11 | NT | n/a | n/a | V1C3990 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | 5.1 | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008048

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-32 | | |
| **Lab Sample ID:** | JA74647-10 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | 5.2 | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 2.6 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | 2.0 | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 2.8 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 88% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 92% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 88% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 89% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008049

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-33 | | |
| **Lab Sample ID:** | JA74647-11 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1C90462.D | 1 | 05/07/11 | NT | n/a | n/a | V1C3988 |
| Run #2 | 1C90319.D | 5 | 05/04/11 | NT | n/a | n/a | V1C3982 |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | 5.0 ml |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 227 [a] | 5.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | 9.6 | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008050

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-33 | | |
| **Lab Sample ID:** | JA74647-11 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | 2.9 | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | 14.6 | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 51.4 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | 12.9 | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | 3.4 | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | 4.5 | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | 3.9 | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 8.4 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 89% | 94% | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 92% | 88% | 70-127% |
| 2037-26-5 | Toluene-D8 | 92% | 90% | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 85% | 86% | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008051

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-33 | | |
| **Lab Sample ID:** | JA74647-11 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-39 | | |
| **Lab Sample ID:** | JA74647-12 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1C90515.D | 1 | 05/09/11 | NT | n/a | n/a | V1C3990 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 90.3 | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | 17.2 | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | 6.8 | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008053

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-39 | | |
| **Lab Sample ID:** | JA74647-12 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | 2.2 | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | 18.7 | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 33.8 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | 35.5 | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | 2.9 | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | 5.8 | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | 2.2 | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 8.1 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 88% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 95% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 90% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 85% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008054

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-35 | | |
| **Lab Sample ID:** | JA74647-13 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1C90454.D | 1 | 05/07/11 | NT | n/a | n/a | V1C3988 |
| Run #2 | 1C90338.D | 10 | 05/04/11 | NT | n/a | n/a | V1C3983 |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | 5.0 ml |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | 857 [a] | 10 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008055

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-35 | | |
| **Lab Sample ID:** | JA74647-13 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | 2.1 | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | 4.9 | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | 117 | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | 6.9 | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | 12.1 | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | 5.5 | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | 3.4 | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | 8.9 | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 89% | 93% | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 95% | 87% | 70-127% |
| 2037-26-5 | Toluene-D8 | 90% | 90% | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 85% | 84% | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008056

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-35 | | |
| **Lab Sample ID:** | JA74647-13 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008057

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-38 | | |
| **Lab Sample ID:** | JA74647-14 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1C90340.D | 1 | 05/04/11 | NT | n/a | n/a | V1C3983 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 107-02-8 | Acrolein | ND | 50 | ug/l | |
| 107-13-1 | Acrylonitrile | ND | 50 | ug/l | |
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-86-1 | Bromobenzene | ND | 5.0 | ug/l | |
| 74-97-5 | Bromochloromethane | ND | 5.0 | ug/l | |
| 75-27-4 | Bromodichloromethane | ND | 1.0 | ug/l | |
| 75-25-2 | Bromoform | ND | 4.0 | ug/l | |
| 74-83-9 | Bromomethane | ND | 2.0 | ug/l | |
| 104-51-8 | n-Butylbenzene | ND | 5.0 | ug/l | |
| 135-98-8 | sec-Butylbenzene | ND | 5.0 | ug/l | |
| 98-06-6 | tert-Butylbenzene | ND | 5.0 | ug/l | |
| 56-23-5 | Carbon tetrachloride | ND | 1.0 | ug/l | |
| 108-90-7 | Chlorobenzene | ND | 1.0 | ug/l | |
| 75-00-3 | Chloroethane | ND | 1.0 | ug/l | |
| 110-75-8 | 2-Chloroethyl vinyl ether | ND | 10 | ug/l | |
| 67-66-3 | Chloroform | ND | 1.0 | ug/l | |
| 74-87-3 | Chloromethane | ND | 1.0 | ug/l | |
| 95-49-8 | o-Chlorotoluene | ND | 5.0 | ug/l | |
| 106-43-4 | p-Chlorotoluene | ND | 5.0 | ug/l | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 10 | ug/l | |
| 124-48-1 | Dibromochloromethane | ND | 1.0 | ug/l | |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | ug/l | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.0 | ug/l | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.0 | ug/l | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.0 | ug/l | |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | ug/l | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | ug/l | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | ug/l | |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008058

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | MW-38 | | |
| **Lab Sample ID:** | JA74647-14 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

**VOA Specila List**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 142-28-9 | 1,3-Dichloropropane | ND | 5.0 | ug/l | |
| 594-20-7 | 2,2-Dichloropropane | ND | 5.0 | ug/l | |
| 563-58-6 | 1,1-Dichloropropene | ND | 5.0 | ug/l | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 87-68-3 | Hexachlorobutadiene | ND | 5.0 | ug/l | |
| 98-82-8 | Isopropylbenzene | ND | 2.0 | ug/l | |
| 99-87-6 | p-Isopropyltoluene | ND | 5.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |
| 74-95-3 | Methylene bromide | ND | 5.0 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | ug/l | |
| 91-20-3 | Naphthalene | ND | 5.0 | ug/l | |
| 103-65-1 | n-Propylbenzene | ND | 5.0 | ug/l | |
| 100-42-5 | Styrene | ND | 5.0 | ug/l | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 5.0 | ug/l | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 5.0 | ug/l | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 5.0 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | ug/l | |
| 75-69-4 | Trichlorofluoromethane | ND | 5.0 | ug/l | |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 5.0 | ug/l | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 5.0 | ug/l | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 5.0 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | ug/l | |
| | m,p-Xylene | ND | 1.0 | ug/l | |
| 95-47-6 | o-Xylene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 94% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 88% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 91% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 86% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008059

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | FIELD BLANK | | |
| **Lab Sample ID:** | JA74647-15 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Field Blank Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1C90317.D | 1 | 05/03/11 | NT | n/a | n/a | V1C3982 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**Purgeable Aromatics, MTBE**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 94% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 87% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 91% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 89% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008060

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | TRIP BLANK | | |
| **Lab Sample ID:** | JA74647-16 | **Date Sampled:** | 04/29/11 |
| **Matrix:** | AQ - Trip Blank Water | **Date Received:** | 04/30/11 |
| **Method:** | SW846 8260B | **Percent Solids:** | n/a |
| **Project:** | SCPAC:97094981, 25 Paidge Avenue, Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 1C90318.D | 1 | 05/04/11 | NT | n/a | n/a | V1C3982 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**Purgeable Aromatics, MTBE**

| CAS No. | Compound | Result | RL | Units | Q |
|---|---|---|---|---|---|
| 71-43-2 | Benzene | ND | 1.0 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | ug/l | |
| 1330-20-7 | Xylene (total) | ND | 1.0 | ug/l | |
| 1634-04-4 | Methyl Tert Butyl Ether | ND | 1.0 | ug/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 94% | | 77-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 88% | | 70-127% |
| 2037-26-5 | Toluene-D8 | 92% | | 79-120% |
| 460-00-4 | 4-Bromofluorobenzene | 89% | | 76-118% |

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008061

## Misc. Forms

# Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

FEDEX # 8708 8445 7540

# Shell Oil Products Chain Of Custody Record

**LAB (LOCATION)**
- [x] ACCUTEST ( )
- [ ] CALSCIENCE ( )
- [ ] TESTAMERICA ( )
- [ ] Other ( )

Lab Vendor # 1819640 (Accutest)

**Please Check Appropriate Box:**
- [ ] ENV. SERVICES
- [ ] MOTIVA RETAIL
- [ ] SHELL RETAIL
- [ ] MOTIVA SD&CM
- [x] CONSULTANT
- [ ] LUBES
- [ ] SHELL PIPELINE
- [ ] OTHER

**Print Bill To Contact Name:** Douglas Jakim

**PO #**

**INCIDENT # (ENV SERVICES)** 9 7 0 9 4 9 8 1

**SAP #** 1 0 0 6 2 3

- [ ] CHECK IF NO INCIDENT # APPLIES

DATE: 4/29/2011

PAGE: 1 of 2

3.1

3

SAMPLING COMPANY: Sovereign Consulting Inc.

LOG CODE:

SITE ADDRESS: Street and City: 25 Paidge Avenue, Brooklyn

State: NY

GLOBAL ID NO.:

ADDRESS: 290 Executive Drive, Suite 300, Cranberry Township, PA 16066

EDF DELIVERABLE TO (Name, Company, Office Location):

PHONE NO.:

E-MAIL:

CONSULTANT PROJECT NO.: 5E017.140

PROJECT CONTACT (Hardcopy or PDF Report to): John McCollums / Douglas Jakim

TELEPHONE: (724) 553-5084

FAX: (724) 553-5089

Bill To Contact E-MAIL: djakim@sovcon.com

SAMPLER NAME(S) (Print): Justin King and Nick Zarcone

LAB USE ONLY: JA74647

TURNAROUND TIME (CALENDAR DAYS):
- [x] STANDARD (14 DAY)
- [ ] 5 DAYS
- [ ] 3 DAYS
- [ ] 2 DAYS
- [ ] 24 HOURS
- [ ] RESULTS NEEDED ON WEEKEND

- [ ] LA - RWQCB REPORT FORMAT
- [ ] UST AGENCY:

DELIVERABLES: [x] LEVEL 1 [ ] LEVEL 2 [ ] LEVEL 3 [ ] LEVEL 4 [ ] OTHER (SPECIFY)

TEMPERATURE ON RECEIPT C° Cooler #1 | Cooler #2 | Cooler #3

**SPECIAL INSTRUCTIONS OR NOTES :**

Report to WPA email list.

- [x] SHELL CONTRACT RATE APPLIES
- [ ] STATE REIMBURSEMENT RATE APPLIES
- [ ] EDD NOT NEEDED
- [ ] RECEIPT VERIFICATION REQUESTED
- [ ] PROVIDE LEDD DISK

**REQUESTED ANALYSIS**

UNIT COST | NON-UNIT COST

**FIELD NOTES:**

TEMPERATURE ON RECEIPT C°: 2.3°C

Container PID Readings or Laboratory Notes: 843

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | EPA 8260 (See attached list) | UNIT COST | NON-UNIT COST | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MW-1 | 4/29/11 | 8:30 | GW | 3 | | | | | 3 | X | | | |
| 2 | MW-44 | 4/29/11 | 8:45 | GW | 3 | | | | | 3 | X | | | |
| 3 | MW-25 | 4/29/11 | 10:15 | GW | 3 | | | | | 3 | X | | | |
| 4 | TW-2 | 4/29/11 | 10:45 | GW | 3 | | | | | 3 | X | | | |
| 5 | MW-20 | 4/29/11 | 9:00 | GW | 3 | | | | | 3 | X | | | |
| 6 | MW-15 | 4/29/11 | 9:15 | GW | 3 | | | | | 3 | X | | | |
| 7 | MW-16 | 4/29/11 | 9:30 | GW | 3 | | | | | 3 | X | | | |
| 8 | MW-17 | 4/29/11 | 9:45 | GW | 3 | | | | | 3 | X | | | |
| 9 | MW-18 | 4/29/11 | 10:00 | GW | 3 | | | | | 3 | X | | | |
| 10 | MW-32 | 4/29/11 | 10:30 | GW | 3 | | | | | 3 | X | | | |

| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
|---|---|---|---|
| [signature] | FED EX | 4/29/11 | 2:00 pm |
| FEDEX 4/30/11 1130 | [signature] | 4/30/11 | 1130 |
| | | | |

05/2/06 Revision

1B

AS

**JA74647: Chain of Custody**
**Page 1 of 3**

FEDEX # 8708 8445 7540

SW
FB
WTB

LAB (LOCATION)
☑ ACCUTEST (_____)
☐ CALSCIENCE (_____)
☐ TESTAMERICA (_____)
☐ Other (_____)
Lab Vendor # 1813640 (Accutest)

# Shell Oil Products Chain Of Custody Record

Please Check Appropriate Box:
☐ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA SD&CH ☑ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER

Print Bill To Contact Name: Douglas Jakim
PO #

INCIDENT # (ENV SERVICES): 9 7 0 9 4 9 8 1
SAP #: 1 0 0 6 2 3
☐ CHECK IF NO INCIDENT # APPLIES
DATE: 4/29/2011
PAGE: 2 of 2

SAMPLING COMPANY: Sovereign Consulting Inc.
LOG CODE:
ADDRESS: 290 Executive Drive, Suite 300, Cranberry Township, PA 16066
PROJECT CONTACT (Hardcopy or PDF Report to): John McCollums / Douglas Jakim
TELEPHONE: (724) 553-5084
FAX: (724) 553-5089
Bill To Contact E-MAIL: djakim@sovcon.com

SITE ADDRESS: Street and City: 25 Paidge Avenue, Brooklyn
State: NY
GLOBAL ID NO.:
EDF DELIVERABLE TO (Name, Company, Office Location):
PHONE NO.:
E-MAIL:
CONSULTANT PROJECT NO.: 5E017.140
SAMPLER NAME(S) (Print): Justin King and Nick Zarcone
LAB USE ONLY: JA74647

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND
☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:
DELIVERABLES: ☑ LEVEL 1 ☐ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY)
TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
Report to WPA email list.
☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☐ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS
UNIT COST | NON-UNIT COST

FIELD NOTES:
TEMPERATURE ON RECEIPT C°: 2.3.2
Container PID Readings or Laboratory Notes

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | EPA 8260 (See attached list) | 8260B + BTEX/MTBE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | MW-33 | 4/29/11 | 11:15 | GW | 3 | | | | | 3 | X | |
| 12 | MW-39 | 4/29/11 | 11:30 | GW | 3 | | | | | 3 | X | |
| 13 | MW-35 | 4/29/11 | 11:45 | GW | 3 | | | | | 3 | X | |
| 14 | MW-38 | 4/29/11 | 12:00 | GW | 3 | | | | | 3 | X | |
| 15 | FIELD BLANK | 4/29/11 | 9:38 | GW | 3 | | | | | 3 | | X |
| 16 | TRIP BLANK 0 | 4/25/11 | 5:00 | TB | 2 | | | | | 2 | | X |

| Relinquished by: (Signature) | Received by: (Signature) | Date | Time |
|---|---|---|---|
| | FEDEX | 4/29/11 | 2:00 PM |
| FEDEX 4/30/11 1170 | | 4/30/11 | 1130 |
| | | | |

05/2/06 Revision

TB FILED 4/25/11 @ 0800 (AS) 4/30/11

(AS)

**JA74647: Chain of Custody**
**Page 2 of 3**



Shell/Motiva 0008064

ACCUTEST LABORATORIES

# Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA74647 Client: Immediate Client Services Action Required: No

Date / Time Received: 4/30/2011 Delivery Method: Client Service Action Required at Login: No

Project: No. Coolers: 1 Airbill #'s:

| Cooler Security | Y or N | | Y or N |
|---|---|---|---|
| 1. Custody Seals Present: | ☑ ☐ | 3. COC Present: | ☑ ☐ |
| 2. Custody Seals Intact: | ☑ ☐ | 4. Smpl Dates/Time OK | ☑ ☐ |

| Cooler Temperature | Y or N |
|---|---|
| 1. Temp criteria achieved: | ☑ ☐ |
| 2. Cooler temp verification: | Infared gun |
| 3. Cooler media: | Ice (bag) |

| Quality Control Preservatio | Y or N | N/A |
|---|---|---|
| 1. Trip Blank present / cooler: | ☑ ☐ | ☐ |
| 2. Trip Blank listed on COC: | ☑ ☐ | ☐ |
| 3. Samples preserved properly: | ☑ ☐ | |
| 4. VOCs headspace free: | ☑ ☐ | ☐ |

| Sample Integrity - Documentation | Y or N |
|---|---|
| 1. Sample labels present on bottles: | ☑ ☐ |
| 2. Container labeling complete: | ☑ ☐ |
| 3. Sample container label / COC agree: | ☑ ☐ |

| Sample Integrity - Condition | Y or N |
|---|---|
| 1. Sample recvd within HT: | ☑ ☐ |
| 2. All containers accounted for: | ☑ ☐ |
| 3. Condition of sample: | Intact |

| Sample Integrity - Instructions | Y or N | N/A |
|---|---|---|
| 1. Analysis requested is clear: | ☑ ☐ | |
| 2. Bottles received for unspecified tests | ☐ ☑ | |
| 3. Sufficient volume recvd for analysis: | ☑ ☐ | |
| 4. Compositing instructions clear: | ☐ ☐ | ☑ |
| 5. Filtering instructions clear: | ☐ ☐ | ☑ |

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

3.1

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**JA74647: Chain of Custody**
**Page 3 of 3**



Shell/Motiva 0008065

# DOCUMENT INFO

15

DocID: 00000457

Filename: 58603-2011-09-30-OTH-01 (Quarterly Site Summary - Shell).pdf

# SHELL OIL PRODUCTS US
# QUARTERLY ENVIRONMENTAL SITE SUMMARY FOR
# MOTIVA ENTERPRISES LLC HSE STANDARD 325
# BROOKLYN TERMINAL
# 3rd QUARTER 2011

**EXPENSE BUDGET INFORMATION:**

Current Year Budget: $55,000
Expenses Incurred: $24,754
5-Year Forecast: 2012 - $46,500
Monthly well gauging / product recovery via hand bailing.
Annual groundwater monitoring of all wells.

| Question | Response (Y / N) | Explanation |
|---|---|---|
| **Does our plume migrate off-site?** | **Y** | **Low levels of MTBE and Benzene are detected above the standard at site perimeter wells. Updated groundwater elevation contours indicate groundwater is migrating off-site.** |
| **Are there down gradient receptors?** | **Y** | **Surface water (Newtown Creek) immediately adjacent to Terminal.** |
| **Does a Third Party plume encroach on our property?** | **N** | |
| **Is our Plume commingled with one or more other plumes?** | **N** | |
| **Plume delineated to regulatory standards on-site?** | **Y** | **Results above standards for Benzene and MTBE near property line. However, regulators have not required any additional delineation.** |
| **Plume delineated to regulatory standards off-site?** | **NA** | **No off-site wells.** |

**SITE DRIVERS:**
Liquid Phase Hydrocarbons (LPH or product) was detected in interior site monitoring wells during this period.

**CURRENT ACTIVITIES:**
1. Monthly well gauging / product recovery via hand bailing.
2. Annual groundwater monitoring of wells.

**PROJECTED WORK:**
1. Perform monthly well gauging and product recovery.
2. Remediate LNAPL near ASTs with short-term, periodic EFR events in conjunction with abandoned UST removal activities scheduled for 1Q 2012 under a new Stipulation Agreement with NYSDEC.
3. Prepare Tank Excavation Assessment and LNAPL Remedial Progress Reports - LNAPL Remedial Progress reports to demonstrate effectiveness and LNAPL remediation to the extent practical.
4. Conduct an exposure assessment evaluation for any residual LNAPL to demonstrate no risk.

**OTHER RECOMMENDATIONS/COMMENTS:**
1. Repair monitoring wells as needed to maintain them as valid data points.
2. Fill in data gaps regarding well construction (total depths and screen intervals) and internally survey missing top-of-casing elevations so ongoing monitoring data can be properly evaluated to develop a LNAPL RAP.

**PATH TO CLOSURE:**
Remove previously abandoned USTs, remediate LNAPL to the extent practical, conduct an exposure assessment evaluation to demonstrate no risk with residual LNAPL and request Spill # Closure.



Shell/Motiva 0008067

**SITE LOCATION INFORMATION**
Incident No.: 97094981
Address: 25 Paidge Ave., Brooklyn, NY

## RECENT ONSITE GROUNDWATER CONCENTRATIONS:

(Include last four sampling events. List each perimeter well and a representative sample of source wells.)

| Well Number | Perimeter or Source | Date | Benzene (ppb) | BTEX (ppb) | MTBE (ppb) |
|---|---|---|---|---|---|
| **1** | **Perimeter** | 05/12/08 | <1.0 | <4.0 | <1.0 |
| | | 04/29/09 | <1.0 | <4.0 | <1.0 |
| | | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | 04/29/11 | <1.0 | <1.0 | <1.0 |
| | | | | | |
| **3** | **Perimeter** | 05/12/08 | <1.0 | <4.0 | <1.0 |
| | | 04/29/09 | <1.0 | <4.0 | <1.0 |
| | | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | 04/28/11 | <1.0 | <1.0 | <1.0 |
| | | | | | |
| **6** | **Perimeter** | 05/12/08 | <1.0 | <4.0 | <1.0 |
| | | 04/29/09 | <1.0 | <4.0 | <1.0 |
| | | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | 04/28/11 | <1.0 | <1.0 | <1.0 |
| | | | | | |
| **7** | **Perimeter** | | Well Abandoned during bulkhead construction | | |
| | | | | | |
| **7R** | **Perimeter** | 07/27/10 | <5.0 | <5.0 | **25.6** |
| | | 10/08/10 | <5.0 | <5.0 | **36.9** |
| | | 01/25/11 | **2.4** | 2.4 | **39.2** |
| | | 04/28/11 | **31.3** | 31.3 | **38.0** |
| | | | | | |
| **8** | **Perimeter** | 07/27/10 | **24.3** | 24.3 | **39.5** |
| | | 10/08/10 | <5.0 | <5.0 | **21.8** |
| | | 01/25/11 | <1.0 | <1.0 | **22.5** |
| | | 04/28/11 | **87.6** | 87.6 | **31.6** |
| | | | | | |
| **9** | **Perimeter** | 07/27/10 | <5.0 | <5.0 | <5.0 |
| | | 10/08/10 | <5.0 | <5.0 | 7.3 |
| | | 01/25/11 | <1.0 | <1.0 | 1.6 |
| | | 04/28/11 | **11.5** | 11.5 | 7.6 |
| | | | | | |
| **13** | **Perimeter** | 05/12/08 | <1.0 | <4.0 | <1.0 |
| | | 04/29/09 | <1.0 | <4.0 | <1.0 |
| | | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | 04/28/11 | <1.0 | <1.0 | <1.0 |
| | | | | | |
| **14** | **Perimeter** | 05/12/08 | <1.0 | <4.0 | <1.0 |
| | | 04/29/09 | <1.0 | <4.0 | <1.0 |
| | | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | 04/28/11 | <1.0 | <1.0 | <1.0 |
| | | | | | |
| **21** | **Perimeter** | 05/12/08 | Well Abandoned during bulkhead construction | | |
| | | | | | |
| **21R** | **Perimeter** | 07/27/10 | **160** | 304 | **14.2** |
| | | 10/08/10 | **239** | 455 | **28.4** |
| | | 01/25/11 | **292** | 551 | **24.6** |
| | | 04/28/11 | **217** | 431.1 | 7.7 |
| | | | | | |
| **22** | **Perimeter** | 05/12/08 | Well Abandoned during bulkhead construction | | |



Shell/Motiva 0008068

**SITE LOCATION INFORMATION**
Incident No.: 97094981
Address: 25 Paidge Ave., Brooklyn, NY

| Well Number | Perimeter or Source | Date | Benzene (ppb) | BTEX (ppb) | MTBE (ppb) |
|---|---|---|---|---|---|
| **22R** | **Perimeter** | 07/27/10 | **337** | 2,525 | **31.4** |
| | | 10/08/10 | **193** | 935 | **25.2** |
| | | 01/25/11 | **483** | 2,045 | **57.2** |
| | | 04/28/11 | **792** | 2,247 | **32.2** |
| | | | | | |
| **23** | **Perimeter** | 05/12/08 | <1.0 | <4.0 | 2.70 |
| | | 04/29/09 | <1.0 | <4.0 | 2.80 |
| | | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | 04/28/11 | <1.0 | 2.3 | 1.1 |
| | | | | | |
| **24** | **Perimeter** | 05/12/08 | **144** | 265 | **621** |
| | | 04/29/09 | **11.3** | 17.3 | **37.1** |
| | | 04/15/10 | <5.0 | <5.0 | 6.63 |
| | | 04/28/11 | **9.5** | 12.2 | **37.5** |
| | | | | | |
| **27** | **Perimeter** | 05/12/08 | <1.0 | <4.0 | <1.0 |
| | | 04/29/09 | <1.0 | <4.0 | <1.0 |
| | | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | 04/28/11 | <1.0 | <1.0 | <1.0 |
| | | | | | |
| **28** | **Perimeter** | 05/12/08 | <1.0 | 2.40 | 6.40 |
| | | 04/29/09 | <1.0 | <4.0 | 3.90 |
| | | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | 04/28/11 | <1.0 | <1.0 | 2.1 |
| | | | | | |
| **42** | **Perimeter** | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | 04/28/11 | <1.0 | <1.0 | <1.0 |
| | | | | | |
| **43** | **Perimeter** | 04/15/10 | <5.0 | <5.0 | **17.5** |
| | | 04/28/11 | <1.0 | <1.0 | 3.0 |
| | | | | | |
| **44** | **Perimeter** | 04/15/10 | <5.0 | <5.0 | <5.0 |
| | | 04/28/11 | <1.0 | <1.0 | <1.0 |
| | | | | | |
| **19** | **Source** | 05/12/08 | **11.4** | 13 | 4.20 |
| | | 04/29/09 | **7.5** | 11.9 | 7.70 |
| | | 04/15/10 | **11.2** | 62.4 | 5.59 |
| | | 04/28/11 | Well destroyed during canopy reconstruction | | |
| | | | | | |
| **18** | **Source** | 05/12/08 | **49.8** | 83.2 | 3.7 |
| | | 04/29/09 | **76.9** | 123 | 6.6 |
| | | 04/15/10 | **36.6** | 71.8 | <5.0 |
| | | 04/29/11 | **2.6** | 6.3 | 1.3 |
| | | | | | |
| **15** | **Source** | 05/12/08 | **264** | 381 | **40.9** |
| | | 04/29/09 | **165** | 320 | **45.9** |
| | | 04/15/10 | **839** | 9,266 | **38.8** |
| | | 04/28/11 | **183** | 760.7 | **13.4** |
| **Regulatory Standards** | | | **0.7** | **NA** | **10** |



Shell/Motiva 0008069

**SITE LOCATION INFORMATION**
Incident No.: 97094981
Address: 25 Paidge Ave., Brooklyn, NY

**RECENT OFFSITE GROUNDWATER CONCENTRATIONS:**
(Include last four sampling events. List representative sample of wells.)

| Well Number | Date | Benzene (ppb) | BTEX (ppb) | MTBE (ppb) |
|---|---|---|---|---|
| Not Applicable | | | | |

**FREE PRODUCT:**
(List the last four gauging events.)

| Well | Offsite or Onsite | Thickness | Date |
|---|---|---|---|
| **MW-2** | **Onsite** | 0.00 | 06/06/11 |
| | | 0.07 | 07/06/11 |
| | | 0.07 | 08/01/11 |
| | | 0.03 | 09/06/11 |
| | | | |
| **MW-4** | **Onsite** | 0.15 | 06/06/11 |
| | | 0.01 | 07/06/11 |
| | | 0.12 | 08/01/11 |
| | | 0.24 | 09/06/11 |
| | | | |
| **MW-26** | **Onsite** | 0.02 | 06/06/11 |
| | | 0.02 | 07/06/11 |
| | | 0.01 | 08/01/11 |
| | | NM | 09/06/11 |
| | | | |
| **MW-31** | **Onsite** | 0.11 | 06/06/11 |
| | | 0.04 | 07/06/11 |
| | | 0.01 | 08/01/11 |
| | | 0.01 | 09/06/11 |
| | | | |
| **RW-34** | **Onsite** | 0.04 | 06/06/11 |
| | | 0.05 | 07/06/11 |
| | | 0.05 | 08/01/11 |
| | | 0.04 | 09/06/11 |
| | | | |
| **RW-36** | **Onsite** | 0.26 | 06/06/11 |
| | | 0.08 | 07/06/11 |
| | | 0.05 | 08/01/11 |
| | | 0.10 | 09/06/11 |
| | | | |
| **RW-37** | **Onsite** | 0.00 | 06/06/11 |
| | | 0.01 | 07/06/11 |
| | | 0.02 | 08/01/11 |
| | | 0.03 | 09/06/11 |
| | | | |
| **RW-40** | **Onsite** | 2.30 | 06/06/11 |
| | | 0.45 | 07/06/11 |
| | | 0.02 | 08/01/11 |
| | | 0.11 | 09/06/11 |



Shell/Motiva 0008070

**SITE LOCATION INFORMATION**
Incident No.: 97094981
Address: 25 Paidge Ave., Brooklyn, NY

| Well | Offsite or Onsite | Thickness | Date |
|---|---|---|---|
| **MW-41** | **Onsite** | 0.06 | 06/06/11 |
| | | 0.07 | 07/06/11 |
| | | 0.04 | 08/01/11 |
| | | 0.01 | 09/06/11 |
| | | | |
| **TW-01** | **Onsite** | NM | 06/06/11 |
| | | NM | 07/06/11 |
| | | NM | 08/01/11 |
| | | NM | 09/06/11 |
| | | | |
| **TW-05** | **Onsite** | 0.00 | 06/06/11 |
| | | 0.06 | 07/06/11 |
| | | 0.04 | 08/01/11 |
| | | NM | 09/06/11 |
| | | | |

**Notes**:
NM = Not measured
NS = Not sampled
ND = Not detected

**CHEMICALS OF CONCERN:**
1. Benzene
2. MTBE

**SITE HISTORY:**
Chronological List of Major Events (Date-Event)
1. 1990 – UST closures and land farming soil remediation from installation of secondary containment.
2. 1999 – Began operation of LNAPL recovery system.
3. November 1995 – Investigative soil boring program.
4. June 1996 – SVE/Pump/SPG feasibility testing June 1996.
5. October 1999 – Product recovery system installation.
6. June 2003 –Annual groundwater sampling event is completed.
7. January 2008 – Upon receipt of approval letter from NYSDEC (1/3/2008), deactivated product recovery system operation and initiated product recovery via hand bailing.
8. October 2008 – Wells MW-21 and MW-22 were abandoned as part of the bulkhead construction project. During the construction, MW-7 was buried and lost (not accessible).
9. February 2010 – Wells MW-7, MW-21 and MW-22 replaced by MW-7R, MW-21R and MW-22R.
10. February 2010 – Wells MW-42, MW-43, and MW-44 were installed to monitor the Buckeye Pipeline corridor.
11. February 2010 – A 550-gallon AST was removed.
12. October 2010 – Quarterly groundwater sampling from perimeter wells is completed.
13. January 2011 – Quarterly groundwater sampling from perimeter wells is completed.
14. April 2011 – Quarterly groundwater sampling from perimeter wells is completed.
15. April 2011 – Annual groundwater sampling event is completed.

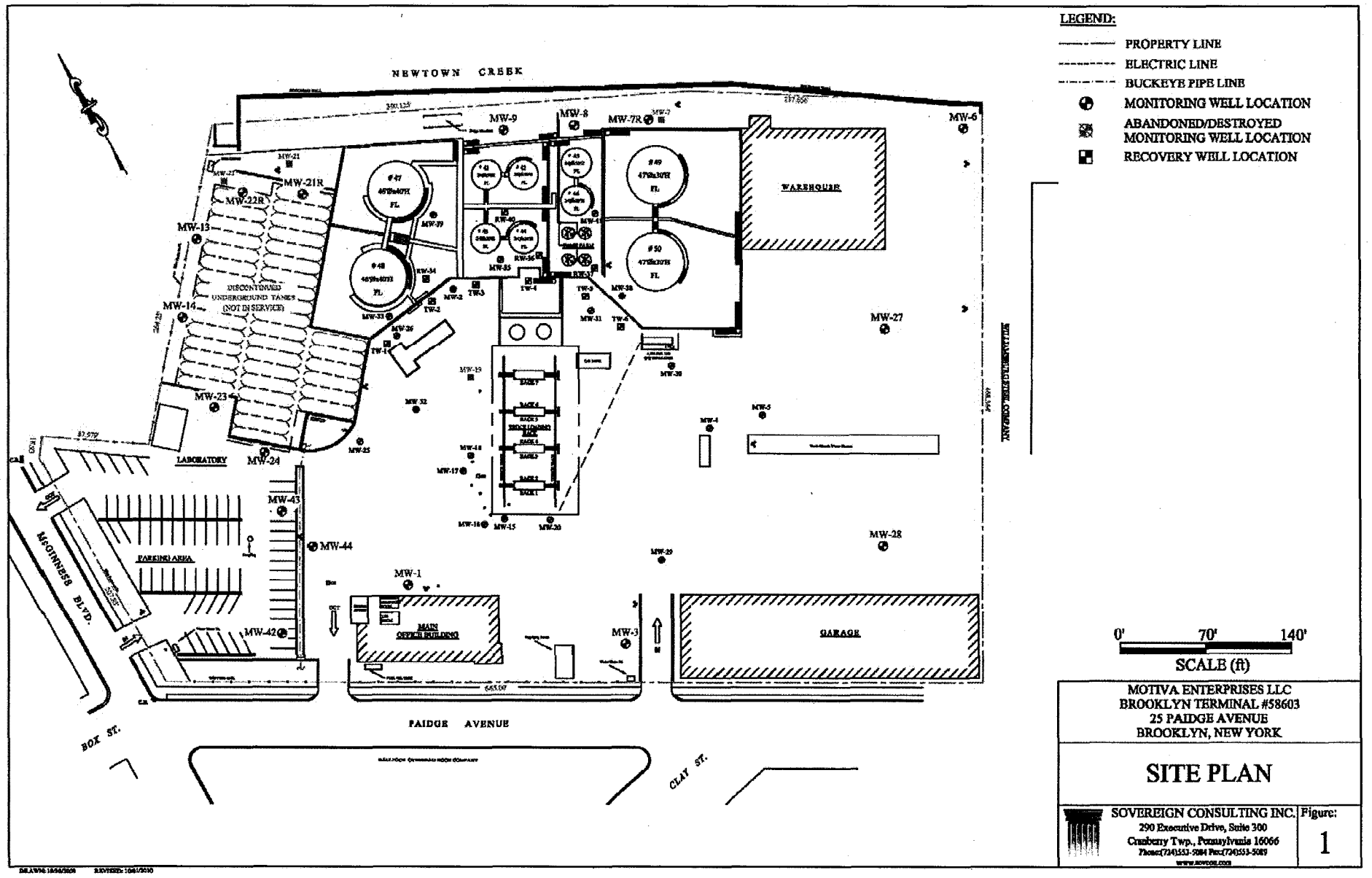
**REGULATORY COMPLIANCE:**
1. Major Onshore Storage Facility License #2-1540 Issued March 16, 2010 (Expires March 31, 2013)
   Special License Conditions Check-List:
   a. Annual testing of monitoring wells
   b. Monthly monitoring of wells
   c. Environmental Compliance Report (DER-11) due 12/31/2012
   d. Inspection / Certification of Secondary Containment Systems due 8/25/2013 (Every 5 yrs)
   e. Updated SPCC Plan / Facility Response Plan due 10/1/2014
   f. Site Assessment due upon facility closure



Shell/Motiva 0008071

**SITE LOCATION INFORMATION**
Incident No.: 97094981
Address: 25 Paidge Ave., Brooklyn, NY

## SITE PLAN
Motiva Enterprises, LLC
Brooklyn Terminal
25 Paidge Avenue, Brooklyn, NY




MOTIVA ENTERPRISES LLC
BROOKLYN TERMINAL #58603
25 PAIDGE AVENUE
BROOKLYN, NEW YORK

**SITE PLAN**

SOVEREIGN CONSULTING INC.
290 Executive Drive, Suite 300
Cranberry Twp., Pennsylvania 16066
Phone:(724)553-5084 Fax:(724)553-5089
www.sovcon.com

Figure: 1



Shell/Motiva 00008072

**SITE LOCATION INFORMATION**
Incident No.: 97094981
Address: 25 Paidge Ave., Brooklyn, NY

**Perimeter Well Gauging and Groundwater Sampling Summary**
Motiva Enterprises, LLC
Brooklyn Terminal
25 Paidge Avenue
Brooklyn, NY
(Updated Through 3rd Quarter 2011)

Brooklyn 3Q2011
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Shell/Motiva 0008073

#15

S8603-1993-06-22-cor-01

(bioremediation report review and

gravel cover request - signed. pdf

6-22-99

**New York State Department of Environmental Conservation**
**47-40 21st Street, Long Island City, New York 11101**

June 22, 1993

**Thomas C. Jorling**
**Commissioner**

Mr. Robert Wysocki
Shell Oil Company
P.O. Box 1703
Atlanta, Georgia 30371

EP BRO-01

Dear Mr. Wysocki:

RE: Shell Oil Company's Bioremediation Project at Brooklyn Plant/
Bio-Remediation Treatment of Petroleum Contaminated Soil.

Dear Mr. Wysocki:

I have reviewed the reports and laboratory analysis, dated March 30th, 1993, addressing the 1,500 $yd^3$ of petroleum contaminated soil treated at the Shell Oil Brooklyn Plant in 1991-92. This process was proposed to DEC on June 15, 1991 for the ex-situ bio-remediation of soils at the Brooklyn Plant. Furthermore, I have reviewed our guidance for handling and disposing petroleum contaminated soil, entitled, Spill Technology and Remediation Series (STARS) Memo #1, Petroleum-Contaminated Soil Guidance Policy, dated August 1992, which provided the conditions for this treatment and disposal option.

The final test results of the soil appear to comply with the recommendations for DEC's Petroleum Contaminated Soil Guidance. The data and recommendations indicates that the 1,500 $yd^3$ of treated soils meet with the DEC standards for volatile and semi-volatile aromatic hydrocarbons in drinking water, as determined from the applicable soil matrix tests. Furthermore, my inspection of the soil on May 10, 1993, with Mr. Jack Rogers of Shell Oil Company and Mr. Doug Lessing of Handex found no noticeable petroleum odor present in the treated soil. Therefore, I will accept Handex's proposed disposal option to place the treated soil to the existing 20,000 $ft^2$ containment area surrounded by groundwater monitoring wells # 13, 14, 21, 22, 23, 24, 25 & 26. However, I request that Shell promptly cover the treated soil with pavement, concrete, gravel or other suitable material to prevent unacceptable erosion of this loose material into adjoining areas and surface waters. By paving or reinforcing a cover over the loose soil, Shell will reduce the risk of re-contaminating the soil should a leak develop in the nearby pipeline system which crosses the treatment area.

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JUN 25 1993
E. D. A.

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As stated in my previous discussions with Shell, the Department and its designee assumes no liability when evaluating data for a responsible party with regard to the disposal of the soil in question. Please call me at (718) 482-4933, ext. 7110, if you have any questions concerning this project.

Thank you for time and cooperation.

Very Truly Yours,

Anthony J. Sigona
Environmental Engineer I
Div. of Spills Management

cc: Randall W. Austin, Regional Dir. of Spill Mgmt Programs.
Douglas S. Lessing, Handex
Project Manager/Senior Hydrologist.

#15

58603 -2011-06-20 -fig-01

(historical gw analytical data-sci).pdf

6-20-11

# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sample Location | Date | Benzene | Toluene | Ethylbenzene | Xylenes, Total | Total BTEX | MTBE |
| < GW Standard > | | < 0.7 > | < 5 > | < 5 > | < 5 > | --- | < 10 > |
| MW-01 | 8/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-01 | 11/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-01 | 2/13/1990 | ND | ND | ND | ND | ND | NA |
| MW-01 | 5/4/1990 | ND | ND | ND | ND | ND | NA |
| MW-01 | 5/8/1991 | ND | ND | ND | ND | ND | NA |
| MW-01 | 5/13/1992 | ND | ND | ND | ND | ND | NA |
| MW-01 | 5/12/1993 | ND | ND | ND | ND | ND | NA |
| MW-01 | 5/10/1994 | ND | ND | ND | ND | ND | NA |
| MW-01 | 5/22/1995 | ND | ND | ND | ND | ND | NA |
| MW-01 | 5/23/1996 | ND | ND | ND | ND | ND | NA |
| MW-01 | 6/18/1997 | ND | ND | ND | ND | ND | NA |
| MW-01 | 5/29/1998 | ND | ND | ND | ND | ND | NA |
| MW-01 | 5/11/1999 | ND | ND | ND | ND | ND | NA |
| MW-01 | 10/27/1999 | ND | ND | ND | ND | ND | 2 |
| MW-01 | 6/7/2000 | ND | ND | ND | ND | ND | ND |
| MW-01 | 5/29/2001 | ND | ND | ND | ND | ND | ND |
| MW-01 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | < 8.0 | < 1.0 |
| MW-01 | 6/30/2003 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-01 | 6/15/2004 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-01 | 6/7/2005 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-01 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <1.00 | <6.00 | <1.00 |
| MW-01 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-01 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-01 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-01 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-01 | 4/29/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-02 | 6/8/2005 | ***172*** | ***5.5*** | 3.2 | ***16.4*** | 197.1 | 6.3 |
| MW-02 | 5/12/2008 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-02 | 4/29/2009 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-02 | 4/15/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-02 | 4/28/2011 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-03 | 8/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-03 | 11/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-03 | 2/13/1990 | ND | ND | ND | ND | ND | NA |
| MW-03 | 5/4/1990 | ND | ND | ND | ND | ND | NA |
| MW-03 | 5/8/1991 | ND | ND | ND | ND | ND | NA |
| MW-03 | 5/13/1992 | ND | ND | ND | ND | ND | NA |
| MW-03 | 5/12/1993 | ND | ND | ND | ND | ND | NA |
| MW-03 | 5/10/1994 | ND | ND | ND | ND | ND | NA |
| MW-03 | 5/22/1995 | ND | ND | ND | ND | ND | NA |
| MW-03 | 5/23/1996 | ND | ND | ND | ND | ND | NA |
| MW-03 | 6/18/1997 | ND | ND | ND | ND | ND | NA |
| MW-03 | 5/29/1998 | ND | ND | ND | ND | ND | NA |
| MW-03 | 5/11/1999 | ND | ND | ND | ND | ND | NA |
| MW-03 | 10/27/1999 | ND | ND | ND | ND | ND | 1.2 |
| MW-03 | 6/7/2000 | ND | ND | ND | ND | ND | ND |
| MW-03 | 5/29/2001 | ND | ND | ND | ND | ND | 2.1 |
| MW-03 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | < 8.0 | < 1.0 |
| MW-03 | 6/30/2003 | ***0.97*** [J] | 0.70 [J] | <1.0 | <1.0 | 1.67 | <1.0 |
| MW-03 | 6/15/2004 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | <1.0 |
| MW-03 | 6/7/2005 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | <1.0 |
| MW-03 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-03 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-03 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-03 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-03 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-03 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |



Shell/Motiva 0008078

# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sample Location | Date | Benzene | Toluene | Ethylbenzene | Xylenes, Total | Total BTEX | MTBE |
| < GW Standard > | | < 0.7 > | < 5 > | < 5 > | < 5 > | --- | < 10 > |
| MW-04 | 5/12/1993 | ***1.8*** | ND | 2 | ***12*** | 15.8 | NA |
| MW-04 | 5/10/1994 | ND | ND | ND | ND | ND | NA |
| MW-04 | 6/18/1997 | ND | ND | 0.49 | ND | 0.49 | NA |
| MW-04 | 6/30/2003 | <2.5 | <2.5 | <2.5 | <2.5 | <10 | ***38.8*** |
| MW-04 | 6/15/2004 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | ***24.8*** |
| MW-04 | 6/7/2005 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | ***11.6*** |
| MW-04 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-04 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 3.1 |
| MW-04 | 4/15/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-04 | 4/28/2011 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-05 | 8/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-05 | 11/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-05 | 2/13/1990 | ***4.6*** | ND | ND | 2 | 6.6 | NA |
| MW-05 | 5/4/1990 | ***2.9*** | ND | ND | ND | 2.9 | NA |
| MW-05 | 5/8/1991 | ND | ND | ND | ND | ND | NA |
| MW-05 | 5/13/1992 | ND | ND | ND | ND | ND | NA |
| MW-05 | 5/12/1993 | ND | ND | ND | ND | ND | NA |
| MW-05 | 5/10/1994 | ND | ND | ND | ND | ND | NA |
| MW-05 | 5/22/1995 | ND | ND | ND | ND | ND | NA |
| MW-05 | 5/23/1996 | ND | ND | ND | ND | ND | NA |
| MW-05 | 6/18/1997 | ND | ND | 0.29 | ND | 0.29 | NA |
| MW-05 | 5/29/1998 | ND | ND | ND | ND | ND | NA |
| MW-05 | 5/11/1999 | ND | ND | ND | ND | ND | NA |
| MW-05 | 10/27/1999 | ND | ND | ND | ND | ND | ***228*** |
| MW-05 | 6/7/2000 | ND | ND | ND | ND | ND | ***19.7*** |
| MW-05 | 5/29/2001 | ND | ND | ND | ND | ND | ***18.5*** |
| MW-05 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | < 8.0 | ***17*** |
| MW-05 | 6/30/2003 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | ***17.1*** |
| MW-05 | 6/15/2004 | ***88.9*** | ***10*** | ***7.8*** | ***32.4*** | 139 | ***38.9*** |
| MW-05 | 6/7/2005 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-05 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-05 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-05 | 5/12/2008 | Not Accessible (Underwater/Flooded) | | | | | |
| MW-05 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-05 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-05 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |



Shell/Motiva 0008079

# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| **Sample Location** | **Date** | **Benzene** | **Toluene** | **Ethylbenzene** | **Xylenes, Total** | **Total BTEX** | **MTBE** |
| **< GW Standard >** | | **< 0.7 >** | **< 5 >** | **< 5 >** | **< 5 >** | **---** | **< 10 >** |
| MW-06 | 8/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-06 | 11/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-06 | 2/13/1990 | ND | ND | ND | ND | ND | NA |
| MW-06 | 5/4/1990 | ND | ND | ND | ND | ND | NA |
| MW-06 | 5/8/1991 | ND | ND | ND | ND | ND | NA |
| MW-06 | 5/13/1992 | ND | ND | ND | ND | ND | NA |
| MW-06 | 5/12/1993 | ND | ND | ND | ND | ND | NA |
| MW-06 | 5/10/1994 | ND | ND | ND | ND | ND | NA |
| MW-06 | 5/23/1996 | ND | ND | ND | ND | ND | NA |
| MW-06 | 5/29/1998 | ND | ND | ND | ND | ND | NA |
| MW-06 | 5/11/1999 | ND | ND | ND | ND | ND | NA |
| MW-06 | 10/27/1999 | ND | ND | ND | ND | ND | ***28.7*** |
| MW-06 | 6/7/2000 | ND | ND | ND | ND | ND | ***10.5*** |
| MW-06 | 5/29/2001 | ND | ND | ND | ND | ND | ND |
| MW-06 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | < 8.0 | < 1.0 |
| MW-06 | 6/30/2003 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | ***13.4*** |
| MW-06 | 6/15/2004 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | <1.0 |
| MW-06 | 6/7/2005 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | <1.0 |
| MW-06 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-06 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-06 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-06 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-06 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-06 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-07 | 8/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-07 | 11/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-07 | 2/13/1990 | ND | ND | ND | ND | ND | NA |
| MW-07 | 5/4/1990 | ND | ND | ND | ND | ND | NA |
| MW-07 | 5/8/1991 | ND | ND | ND | ND | ND | NA |
| MW-07 | 5/13/1992 | ND | ND | ND | ND | ND | NA |
| MW-07 | 5/12/1993 | ND | ND | ND | ND | ND | NA |
| MW-07 | 5/10/1994 | ND | ND | ND | ND | ND | NA |
| MW-07 | 5/22/1995 | ND | ND | ND | ND | ND | NA |
| MW-07 | 5/23/1996 | ND | ND | ND | ND | ND | NA |
| MW-07 | 6/18/1997 | ND | ND | ND | ND | ND | NA |
| MW-07 | 5/29/1998 | ND | ND | ND | ND | ND | NA |
| MW-07 | 5/11/1999 | ND | ND | ND | ND | ND | NA |
| MW-07 | 10/27/1999 | ND | ND | ND | ND | ND | 1.3 |
| MW-07 | 6/7/2000 | ND | ND | ND | ND | ND | ND |
| MW-07 | 5/29/2001 | ND | ND | ND | ND | ND | 4.0 |
| MW-07 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | < 8.0 | 1.4 |
| MW-07 | 6/30/2003 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | ***13.4*** |
| MW-07 | 6/15/2004 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | 1.8 |
| MW-07 | 6/7/2005 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | <1.0 |
| MW-07 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-07 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-07 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |



Shell/Motiva 0008080

# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sample Location | Date | Benzene | Toluene | Ethylbenzene | Xylenes, Total | Total BTEX | MTBE |
| < GW Standard > | | < 0.7 > | < 5 > | < 5 > | < 5 > | --- | < 10 > |
| MW-07R | 4/15/2010 | ***16.9*** | <5.00 | <5.00 | <5.00 | 16.9 | ***31.5*** |
| MW-07R | 7/27/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | ***25.6*** |
| MW-07R | 10/8/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | ***36.9*** |
| MW-07R | 1/25/2011 | ***2.4*** | <1.00 | <1.00 | <1.00 | 2.4 | ***39.2*** |
| MW-07R | 4/28/2011 | ***31.3*** | <1.0 | <1.0 | <1.0 | 31.3 | ***38.0*** |
| MW-08 | 8/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-08 | 11/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-08 | 2/13/1990 | ND | ND | ND | ND | ND | NA |
| MW-08 | 5/4/1990 | ND | ND | ND | ND | ND | NA |
| MW-08 | 5/8/1991 | ND | ND | ND | ND | ND | NA |
| MW-08 | 5/13/1992 | ND | ND | ND | ND | ND | NA |
| MW-08 | 5/12/1993 | ***9.5*** | ND | ND | ND | 9.5 | NA |
| MW-08 | 5/10/1994 | ***1.7*** | ND | ND | ND | 1.7 | NA |
| MW-08 | 5/22/1995 | ND | ND | ND | ND | ND | NA |
| MW-08 | 5/23/1996 | ND | ND | ND | ND | ND | NA |
| MW-08 | 6/18/1997 | ND | ND | ND | ND | ND | NA |
| MW-08 | 5/29/1998 | ND | ND | ND | ND | ND | NA |
| MW-08 | 5/11/1999 | ND | ND | ND | ND | ND | NA |
| MW-08 | 10/27/1999 | ND | ND | ND | ND | ND | 3.20 |
| MW-08 | 6/7/2000 | ND | ND | ND | ND | ND | ***21.0*** |
| MW-08 | 5/29/2001 | 0.43 | ND | ND | ND | 0.43 | ***39.0*** |
| MW-08 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | < 8.0 | 1.9 |
| MW-08 | 6/30/2003 | ***18.3*** | <1.0 | <1.0 | <1.0 | 18.3 | ***58.2*** |
| MW-08 | 6/15/2004 | ***1.5*** | <1.0 | <1.0 | <1.0 | 1.5 | 8.50 |
| MW-08 | 6/7/2005 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 5.80 |
| MW-08 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | 5.00 |
| MW-08 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 6.20 |
| MW-08 | 5/15/2009 | ***2.4*** | <1.0 | <1.0 | <1.0 | 2.4 | 6.6 |
| MW-08 | 4/15/2010 | ***44.9*** | <5.00 | <5.00 | <5.00 | 44.9 | ***37.6*** |
| MW-08 | 7/27/2010 | ***24.3*** | <5.00 | <5.00 | <5.00 | 24.3 | ***39.5*** |
| MW-08 | 10/8/2010 | ***<5.00*** | <5.00 | <5.00 | <5.00 | <5.00 | ***21.8*** |
| MW-08 | 1/25/2011 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | ***22.5*** |
| MW-08 | 4/28/2011 | ***87.6*** | <1.0 | <1.0 | <1.0 | 87.6 | ***31.6*** |
| MW-09 | 5/12/1993 | ND | ND | ND | ND | ND | NA |
| MW-09 | 5/10/1994 | ND | ND | ND | ND | ND | NA |
| MW-09 | 5/22/1995 | ND | ND | ND | ND | ND | NA |
| MW-09 | 5/23/1996 | ND | ND | ND | ND | ND | NA |
| MW-09 | 6/18/1997 | ND | ND | ND | ND | ND | NA |
| MW-09 | 5/29/1998 | ND | ND | ND | ND | ND | NA |
| MW-09 | 5/11/1999 | ND | ND | ND | ND | ND | NA |
| MW-09 | 10/27/1999 | ND | ND | ND | ND | ND | 6.5 |
| MW-09 | 6/7/2000 | ND | ND | ND | ND | ND | ND |
| MW-09 | 5/29/2001 | ND | ND | ND | ND | ND | 3.3 |
| MW-09 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | < 8.0 | < 1.0 |
| MW-09 | 6/30/2003 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | 9.2 |
| MW-09 | 6/15/2004 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | 0.79[J] |
| MW-09 | 6/7/2005 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | 5.0 |
| MW-09 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-09 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-09 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-09 | 5/15/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 4.7 |
| MW-09 | 4/15/2010 | ***12.5*** | <5.00 | <5.00 | <5.00 | 12.5 | ***15.2*** |
| MW-09 | 7/27/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-09 | 10/8/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | 7.26 |
| MW-09 | 1/25/2011 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | 1.6 |
| MW-09 | 4/28/2011 | ***11.5*** | <1.0 | <1.0 | <1.0 | 11.5 | 7.6 |



Shell/Motiva 0008081

# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sample Location | Date | Benzene | Toluene | Ethylbenzene | Xylenes, Total | Total BTEX | MTBE |
| < GW Standard > | | < 0.7 > | < 5 > | < 5 > | < 5 > | --- | < 10 > |
| MW-13 | 8/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-13 | 11/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-13 | 2/13/1990 | ND | ND | ND | ND | ND | NA |
| MW-13 | 5/4/1990 | ND | ND | ND | ND | ND | NA |
| MW-13 | 5/8/1991 | ND | ND | ND | ND | ND | NA |
| MW-13 | 5/13/1992 | ND | ND | ND | ND | ND | NA |
| MW-13 | 5/12/1993 | ***8.6*** | ND | ND | ND | 8.6 | NA |
| MW-13 | 5/10/1994 | ND | ND | ND | ND | ND | NA |
| MW-13 | 5/22/1995 | ND | ND | ND | ND | ND | NA |
| MW-13 | 6/18/1997 | ***1.4*** | ND | ND | 1.4 | 2.8 | NA |
| MW-13 | 5/29/1998 | ***1.2*** | ND | ND | ND | 1.2 | NA |
| MW-13 | 5/11/1999 | ND | ND | ND | ND | ND | NA |
| MW-13 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | < 8.0 | 7.4 |
| MW-13 | 6/30/2003 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | <4.0 | <1.0 |
| MW-13 | 6/15/2004 | 0.37[J] | <1.0 | <1.0 | <1.0 | 0.37[J] | 1.1 |
| MW-13 | 6/8/2005 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-13 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-13 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-13 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-13 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-13 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-13 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-14 | 8/14/1989 | ***2.5*** | 1.7 | 4.4 | 4.9 | 13.5 | NA |
| MW-14 | 11/14/1989 | ***6.7*** | ND | 1 | ND | 7.7 | NA |
| MW-14 | 2/13/1990 | ***60*** | ***5.4*** | ND | ***18*** | 83.4 | NA |
| MW-14 | 5/4/1990 | ***68*** | ***2.3*** | ***8.1*** | ***7.1*** | 85.5 | NA |
| MW-14 | 5/8/1991 | ***43*** | 2.6 | ***6.5*** | ***7.2*** | 59.3 | NA |
| MW-14 | 5/13/1992 | ***97*** | 4.8 | ***8.5*** | ***12*** | 122.3 | NA |
| MW-14 | 5/12/1993 | ***45*** | 2.1 | 4.9 | ***7.8*** | 59.8 | NA |
| MW-14 | 5/10/1994 | ***57*** | 2.1 | 2.7 | ***8.3*** | 70.1 | NA |
| MW-14 | 5/22/1995 | ***33*** | 1.8 | 1.1 | ***5.9*** | 41.8 | NA |
| MW-14 | 5/23/1996 | ***25.7*** | 1.6 | 1.3 | ***6.6*** | 35.2 | NA |
| MW-14 | 6/18/1997 | ***13.1*** | 1.1 | 0.98 | ***5.3*** | 20.48 | NA |
| MW-14 | 5/29/1998 | ***24.6*** | 2 | 2.2 | ***9.6*** | 38.4 | NA |
| MW-14 | 5/11/1999 | ***19*** | ND | 0.83 | 2.2 | 22.03 | NA |
| MW-14 | 10/27/1999 | ***24.4*** | 1.3 | ND | 4.8 | 30.5 | ND |
| MW-14 | 6/7/2000 | ***1.5*** | ND | ND | ND | 1.5 | ND |
| MW-14 | 5/29/2001 | ***16.1*** | 0.67 | ND | 3.2 | 19.97 | ND |
| MW-14 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | < 8.0 | < 1.0 |
| MW-14 | 6/30/2003 | ***1.9*** | < 1.0 | < 1.0 | < 1.0 | 1.9 | <1.0 |
| MW-14 | 6/15/2004 | ***5.8*** | <1.0 | <1.0 | 1.3 | 7 | <1.0 |
| MW-14 | 6/8/2005 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-14 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-14 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-14 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-14 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-14 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-14 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |



Shell/Motiva 0008082

## Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sample Location | Date | Benzene | Toluene | Ethylbenzene | Xylenes, Total | Total BTEX | MTBE |
| < GW Standard > | | < 0.7 > | < 5 > | < 5 > | < 5 > | --- | < 10 > |
| MW-15 | 5/10/1994 | ***1,200*** | ***48*** | ***130*** | ***130*** | 1,508 | NA |
| MW-15 | 6/18/1997 | ***1,600*** | ***624*** | ***686*** | ***3,300*** | 6,210 | NA |
| MW-15 | 5/11/1999 | ***162.0*** | ND | ***122*** | ***408.0*** | 692 | NA |
| MW-15 | 10/27/1999 | ***1,360*** | ***176*** | ***740*** | ***2,350*** | 4,626 | ***8,080*** |
| MW-15 | 6/7/2000 | ***1,050*** | ***143*** | ***584*** | ***1,330*** | 3,107 | ***2,120*** |
| MW-15 | 5/29/2001 | ***507*** | ***81.3*** | ***386*** | ***500*** | 1,474 | ***1,430*** |
| MW-15 | 6/30/2003 | ***281*** | ***21*** | ***158*** | ***250*** | 710 | ***52.7*** |
| MW-15 | 6/7/2005 | ***280*** | ***18.7*** | ***30.6*** | ***53.3*** | 383 | ***45.2*** |
| MW-15 | 6/28/2006 | ***361*** | ***28.0*** | ***22.7*** | ***44.9*** | 457 | ***47.3*** |
| MW-15 | 6/26/2007 | ***234*** | ***15.6*** | ***21.2*** | ***48.6*** | 319 | ***54.7*** |
| MW-15 | 5/12/2008 | ***264*** | ***19.4*** | ***26.2*** | ***71.2*** | 381 | ***40.9*** |
| MW-15 | 4/29/2009 | ***165*** | ***20.4*** | ***13.7*** | ***121*** | 320 | ***45.9*** |
| MW-15 | 4/15/2010 | ***839*** | ***4,350*** | ***556*** | ***3,521*** | 9,266 | ***38.8*** |
| MW-15 | 4/29/2011 | ***183*** | ***8.3*** | ***33.4*** | ***536*** | 760.7 | ***13.4*** |
| MW-16 | 8/14/1989 | ***300*** | ***310*** | ***43*** | ***240*** | 893 | NA |
| MW-16 | 11/14/1989 | ND | ND | ND | ND | ND | NA |
| MW-16 | 5/12/1993 | ***73*** | ND | ***10*** | ***17*** | 100 | NA |
| MW-16 | 5/10/1994 | ***46*** | ND | 1.6 | 4.1 | 51.7 | NA |
| MW-16 | 6/18/1997 | ***2,470*** | ***17,800*** | ***3,760*** | ***19,900*** | 43,930 | NA |
| MW-16 | 5/11/1999 | ***1,040*** | ***350*** | ***469*** | ***3,900*** | 5,759 | NA |
| MW-16 | 6/30/2003 | ***331*** | ***47.7*** | ***76.4*** | ***118*** | 573 | ***335*** |
| MW-16 | 6/15/2004 | ***218*** | ***12.1*** | ***107*** | ***118*** | 455 | ***197*** |
| MW-16 | 6/7/2005 | ***225*** | ***7.6*** | ***29.2*** | ***26.0*** | 288 | ***32.6*** |
| MW-16 | 6/28/2006 | ***52.6*** | 2.88 | ***6.59*** | ***8.90*** | 71.0 | 5.88 |
| MW-16 | 6/26/2007 | ***99.8*** | ***6.20*** | 4.93 | ***17.1*** | 128 | ***34.2*** |
| MW-16 | 5/12/2008 | ***83.8*** | 4.10 | 2.00 | ***20.7*** | 111 | ***13.4*** |
| MW-16 | 4/29/2009 | ***56.2*** | ***5.3*** | 2.2 | ***15.2*** | 78.9 | ***26.7*** |
| MW-16 | 4/15/2010 | ***37.6*** | <5.00 | <5.00 | ***5.22*** | 42.82 | ***14.6*** |
| MW-16 | 4/29/2011 | ***7.2*** | <1.0 | <1.0 | 1.4 | 8.6 | ***11.4*** |



Shell/Motiva 0008083

# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Sample Location | Date | (ug/L) Benzene | Toluene | Ethylbenzene | Xylenes, Total | Total BTEX | MTBE |
|---|---|---|---|---|---|---|---|
| < GW Standard > | | < 0.7 > | < 5 > | < 5 > | < 5 > | --- | < 10 > |
| MW-17 | 8/14/1989 | ***900*** | ***2,600*** | ***600*** | ***3,300*** | 7,400 | NA |
| MW-17 | 11/14/1989 | ***400*** | ***1,200*** | ***590*** | ***2,700*** | 4,890 | NA |
| MW-17 | 2/13/1990 | ***410*** | ***960*** | ND | ***3,100*** | 4,470 | NA |
| MW-17 | 5/12/1993 | ***290*** | ***24*** | ***70*** | ***130*** | 514 | NA |
| MW-17 | 5/10/1994 | ***82*** | ***10*** | ***30*** | ***48*** | 170 | NA |
| MW-17 | 5/29/1998 | ***347*** | ***435*** | ***797*** | ***5,220*** | 6,799 | NA |
| MW-17 | 5/11/1999 | ***133*** | ***42*** | ***162*** | ***370*** | 707 | NA |
| MW-17 | 10/27/1999 | ***213*** | ***161*** | ***615*** | ***2,150*** | 3,139 | ***96.4*** |
| MW-17 | 6/7/2000 | ***136*** | ***30.7*** | ***77.8*** | ***229*** | 474 | ***254*** |
| MW-17 | 5/29/2001 | ***70.9*** | ***16.5*** | ***78.7*** | ***170*** | 336 | ND |
| MW-17 | 5/30/2002 | ***53*** | ***7.1*** | ***12.9*** | ***14*** | 87 | ***13.4*** |
| MW-17 | 6/30/2003 | ***13.9*** | ***5.3*** | 3.9 | ***17.2*** | 40 | ***12.5*** |
| MW-17 | 6/15/2004 | ***13*** | 3.1 | 1.4 | ***8.7*** | 26 | 6.8 |
| MW-17 | 6/7/2005 | ***54.3*** | 4.0 | 1.9 | ***24.7*** | 85 | ***16.1*** |
| MW-17 | 6/28/2006 | ***3.37*** | <1.00 | <1.00 | <3.00 | 3.37 | 3.59 |
| MW-17 | 6/26/2007 | ***67.7*** | 4.44 | 1.54 | ***25.2*** | 98.9 | ***11.8*** |
| MW-17 | 5/12/2008 | ***44.2*** | 3.70 | <1.0 | ***27.9*** | 75.8 | 8.00 |
| MW-17 | 4/29/2009 | ***30.1*** | 2.8 | <1.0 | ***17.2*** | 50.1 | 4.6 |
| MW-17 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | 5.1 |
| MW-17 | 4/29/2011 | ***1.1*** | <1.0 | <1.0 | <1.0 | 1.1 | 5.0 |
| MW-18 | 8/14/1989 | ***1,100*** | ***2,500*** | ***580*** | ***2,900*** | 7,080 | NA |
| MW-18 | 11/14/1989 | ***680*** | ***770*** | ***590*** | ***2,900*** | 4,940 | NA |
| MW-18 | 2/13/1990 | ***630*** | ***570*** | ND | ***3,100*** | 4,300 | NA |
| MW-18 | 5/4/1990 | ***420*** | ***540*** | ***420*** | ***2,800*** | 4,180 | NA |
| MW-18 | 5/13/1992 | ***480*** | ***78*** | ***380*** | ***580*** | 1,518 | NA |
| MW-18 | 5/12/1993 | ***590*** | ***400*** | ***61*** | ***420*** | 1,471 | NA |
| MW-18 | 5/10/1994 | ***210*** | ***20*** | ***70*** | ***130*** | 430 | NA |
| MW-18 | 5/22/1995 | ***5,900*** | ***19,000*** | ***1,600*** | ***12,000*** | 38,500 | NA |
| MW-18 | 5/23/1996 | ***1,520*** | ***12,600*** | ***2,750*** | ***15,200*** | 32,070 | NA |
| MW-18 | 6/18/1997 | ***794*** | ***1,140*** | ***2,280*** | ***11,200*** | 15,414 | NA |
| MW-18 | 5/29/1998 | ***1,010*** | ***294*** | ***2,300*** | ***8,140*** | 11,744 | NA |
| MW-18 | 5/11/1999 | ***501*** | ***127*** | ***1,690*** | ***3,030*** | 5,348 | NA |
| MW-18 | 10/27/1999 | ***432*** | ***95.6*** | ***1,190*** | ***779*** | 2,497 | ***178*** |
| MW-18 | 6/7/2000 | ***378*** | ***85.2*** | ***1,240*** | ***1,080*** | 2,783 | ***704*** |
| MW-18 | 5/29/2001 | ***184*** | ***47*** | ***601*** | ***279*** | 1,111 | ***79*** |
| MW-18 | 5/30/2002 | ***104*** | ***19*** | ***424*** | ***48.5*** | 595.9 | ***22.8*** |
| MW-18 | 6/30/2003 | ***42.2*** | ***11*** | ***154*** | ***37.5*** | 245 | ***12.8*** |
| MW-18 | 6/15/2004 | ***71.7*** | ***10.4*** | ***39*** | ***19.9*** | 141 | ***14.9*** |
| MW-18 | 6/7/2005 | ***97*** | ***7.9*** | ***13.2*** | ***35.0*** | 153 | ***18.4*** |
| MW-18 | 6/28/2006 | ***31.8*** | 4.84 | ***29.3*** | ***15.4*** | 81.3 | 8.77 |
| MW-18 | 6/26/2007 | ***83.1*** | ***8.33*** | ***12.1*** | ***25.6*** | 129 | ***12.2*** |
| MW-18 | 5/12/2008 | ***49.8*** | 4.00 | ***7.50*** | ***21.9*** | 83.2 | 3.70 |
| MW-18 | 4/29/2009 | ***76.9*** | 4.8 | ***7.7*** | ***33.4*** | 123 | 6.6 |
| MW-18 | 4/15/2010 | ***36.6*** | ***5.08*** | ***13.3*** | ***16.9*** | 71.88 | <5.00 |
| MW-18 | 4/29/2011 | ***2.6*** | <1.0 | <1.0 | 3.7 | 6.3 | 1.3 |



Shell/Motiva 0008084

# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sample Location | Date | Benzene | Toluene | Ethylbenzene | Xylenes, Total | Total BTEX | MTBE |
| < GW Standard > | | < 0.7 > | < 5 > | < 5 > | < 5 > | --- | < 10 > |
| MW-19 | 5/30/2002 | ***165*** | 4.8 | 3.6 | ***10.3*** | 184 | ***56.9*** |
| MW-19 | 6/30/2003 | ***76.7*** | ***9.9*** | ***6.5*** | ***45.5*** | 139 | ***19.8*** |
| MW-19 | 6/15/2004 | ***179*** | ***15.8*** | ***6.1*** | ***37*** | 238 | ***20.4*** |
| MW-19 | 6/7/2005 | ***194*** | ***12.4*** | ***8.8*** | ***41.3*** | 257 | ***16.8*** |
| MW-19 | 6/28/2006 | ***49.5*** | 2.74 | <1.00 | 9.16 | 61.4 | ***11.9*** |
| MW-19 | 6/26/2007 | ***114*** | 4.91 | 2.27 | ***17.7*** | 139 | ***12.0*** |
| MW-19 | 5/12/2008 | ***11.4*** | <1.0 | <1.0 | 1.60 | 13.0 | 4.20 |
| MW-19 | 4/29/2009 | ***7.5*** | 1.5 | <1.0 | 2.9 | 11.9 | 7.7 |
| MW-19 | 4/15/2010 | ***11.2*** | ***6.34*** | <5.00 | ***44.9*** | 62.44 | 5.59 |
| MW-20 | 5/12/1993 | ***410*** | ND | ***180*** | ***62*** | 652 | NA |
| MW-20 | 6/30/2003 | ***525*** | ***103*** | ***34.9*** | ***178*** | 841 | ***3,440*** |
| MW-20 | 6/15/2004 | ***443*** | ***95.5*** | ***48.1*** | ***353*** | 940 | ***220*** |
| MW-20 | 6/7/2005 | ***861*** | ***25.1*** | ***38.9*** | ***90.1*** | 1,015 | ***230*** |
| MW-20 | 6/28/2006 | ***1,420*** | ***2,260*** | ***342*** | ***3,730*** | 7,752 | ***341*** |
| MW-20 | 6/26/2007 | ***1,320*** | ***263*** | ***98.7*** | ***1,420*** | 3,102 | ***188*** |
| MW-20 | 5/12/2008 | ***636*** | ***19.7*** | ***45.4*** | ***119*** | 820 | ***105*** |
| MW-20 | 4/29/2009 | ***59.7*** | 2.5 | ***7.3*** | ***5.9*** | 75.4 | ***56.6*** |
| MW-20 | 4/15/2010 | ***497*** | ***43.2*** | ***20.4*** | ***84.9*** | 645.5 | ***145*** |
| MW-20 | 4/29/2011 | ***205*** | ***102*** | ***8.6*** | ***333*** | 648.6 | ***57.7*** |
| MW-21 | 5/8/1991 | ***140*** | ***6.5*** | ***12.0*** | ***41*** | 199.5 | NA |
| MW-21 | 5/13/1992 | ***20*** | ***5.6*** | ***15.0*** | ***54*** | 94.6 | NA |
| MW-21 | 5/12/1993 | ***66*** | ***17*** | ***40*** | ***160*** | 283 | NA |
| MW-21 | 5/10/1994 | ***41*** | ***12*** | ***46*** | ***170*** | 269 | NA |
| MW-21 | 5/22/1995 | ***14*** | ***9.1*** | ***31*** | ***130*** | 184.1 | NA |
| MW-21 | 6/18/1997 | ***18.4*** | ND | ***32.7*** | ***122*** | 173.1 | NA |
| MW-21 | 5/29/1998 | ***3.4*** | 0.68 | 4.5 | ***15.1*** | 23.68 | NA |
| MW-21 | 5/11/1999 | ***56.9*** | ***10.8*** | ***61.5*** | ***201*** | 330.2 | NA |
| MW-21 | 10/27/1999 | ***13.4*** | ND | ***11.1*** | ***41.6*** | 66.1 | ***275*** |
| MW-21 | 6/7/2000 | ***6.6*** | 1.6 | ***6.6*** | ***24.4*** | 39.2 | ***214*** |
| MW-21 | 5/29/2001 | ***5.2*** | 1.4 | ***8.6*** | ***25.2*** | 40.4 | ***110*** |
| MW-21 | 5/30/2002 | ***1.6*** | < 1.0 | 1.5 | ***5.1*** | 8.2 | ***28.9*** |
| MW-21 | 6/30/2003 | ***10.5*** | 0.66[J] | 3.2 | ***11.4*** | 25 | ***156*** |
| MW-21 | 6/15/2004 | ***1.4*** | 0.36[J] | 0.79[J] | 2.8 | 5.4 | ***48.4*** |
| MW-21 | 6/8/2005 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | ***65.3*** |
| MW-21 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | ***50.0*** |
| MW-21 | 6/26/2007 | ***7.07*** | <1.00 | ***5.57*** | ***14.6*** | 27.2 | ***10.7*** |
| MW-21 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | ***93.2*** |



Shell/Motiva 0008085

# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sample Location | Date | Benzene | Toluene | Ethylbenzene | Xylenes, Total | Total BTEX | MTBE |
| < GW Standard > | | < 0.7 > | < 5 > | < 5 > | < 5 > | --- | < 10 > |
| MW-21R | 4/15/2010 | ***139*** | ***12.2*** | ***41.5*** | ***54.6*** | 247.3 | <5.00 |
| MW-21R | 7/27/2010 | ***160*** | ***20.0*** | ***52.3*** | ***71.5*** | 303.8 | ***14.2*** |
| MW-21R | 10/8/2010 | ***239*** | ***26.9*** | ***80.5*** | ***108.4*** | 455 | ***28.4*** |
| MW-21R | 1/25/2011 | ***292*** | ***34.0*** | ***112*** | ***113*** | 551 | ***24.6*** |
| MW-21R | 4/28/2011 | ***217*** | ***29.9*** | ***97.0*** | ***87.9*** | 431.8 | 7.7 |
| MW-22 | 5/12/1993 | ***2,300*** | ***24*** | ***620*** | ***210*** | 3,154 | NA |
| MW-22 | 5/10/1994 | ***2,500*** | ***49*** | ***720*** | ***390*** | 3,659 | NA |
| MW-22 | 6/18/1997 | ***819*** | ND | ***375*** | ***76.1*** | 1,270 | NA |
| MW-22 | 5/29/1998 | ***677*** | ***19.9*** | ***232*** | ***41.9*** | 971 | NA |
| MW-22 | 10/27/1999 | ***650*** | ***31.6*** | ***323*** | ***21.8*** | 1,026 | ***478*** |
| MW-22 | 6/30/2003 | ***646*** | ***91.2*** | ***1,240*** | ***86.4*** | 2,064 | ***19.3*** |
| MW-22 | 6/15/2004 | ***285*** | ***23.2*** | ***185*** | ***16.4*** | 510 | ***34.4*** |
| MW-22 | 6/8/2005 | ***346*** | ***24.8*** | ***434*** | ***12.1*** | 817 | ***29.5*** |
| MW-22 | 6/28/2006 | ***251*** | ***38.9*** | ***370*** | ***31.6*** | 692 | ***22.0*** |
| MW-22 | 6/26/2007 | ***444*** | ***38.0*** | ***344*** | ***23.7*** | 850 | ***13.8*** |
| MW-22 | 5/12/2008 | ***270*** | ***20.5*** | ***177*** | ***18.4*** | 486 | ***19.6*** |
| MW-22R | 4/15/2010 | ***386*** | ***68.4*** | ***2140*** | ***111.2*** | 2706 | ***42.8*** |
| MW-22R | 7/27/2010 | ***337*** | ***63.6*** | ***2070*** | ***54.5*** | 2525 | ***31.4*** |
| MW-22R | 10/8/2010 | ***193*** | ***30.1*** | ***678*** | ***33.6*** | 935 | ***25.2*** |
| MW-22R | 1/25/2011 | ***483*** | ***72.0*** | ***1410*** | ***79.6*** | 2045 | ***57.2*** |
| MW-22R | 4/28/2011 | ***792*** | ***57.6*** | ***1,330*** | ***67.4*** | 2,247 | ***32.2*** |
| MW-23 | 5/8/1991 | ***3.9*** | 3 | 1.4 | ***8.2*** | 16.5 | NA |
| MW-23 | 5/12/1993 | ***42*** | 4.1 | ND | 4.9 | 51 | NA |
| MW-23 | 5/10/1994 | ***26*** | 1.6 | ND | 3.3 | 30.9 | NA |
| MW-23 | 5/22/1995 | ***4.6*** | 1.5 | ND | 4.5 | 10.6 | NA |
| MW-23 | 5/23/1996 | ***9.2*** | 1.7 | ND | 3.4 | 14.3 | NA |
| MW-23 | 6/18/1997 | ***7.8*** | 1.4 | 0.55 | ***5.1*** | 14.85 | NA |
| MW-23 | 5/29/1998 | ***11.6*** | 1.8 | ND | ***6.1*** | 19.5 | NA |
| MW-23 | 5/11/1999 | ***6*** | 0.9 | ND | 3.7 | 10.6 | NA |
| MW-23 | 10/27/1999 | ***9.1*** | 2.1 | 0.53 | ***6.3*** | 18.03 | ***20.3*** |
| MW-23 | 6/7/2000 | ***8.5*** | 1.9 | ND | ***5.5*** | 15.9 | ***19.3*** |
| MW-23 | 5/29/2001 | ***4.7*** | 0.98 | ND | 3.3 | 8.98 | ***38.1*** |
| MW-23 | 5/30/2002 | ***1.7*** | 1.3 | < 1.0 | 2 | 5.0 | ***21.7*** |
| MW-23 | 6/30/2003 | ***1.4*** | 1.3 | <1.0 | 3.7 | 6.4 | ***12.9*** |
| MW-23 | 6/15/2004 | ***1.1*** | 1.6 | <1.0 | 3.5 | 6.2 | ***17.9*** |
| MW-23 | 6/8/2005 | <1.0 | <1.0 | <1.0 | 1.6 | 1.6 | ***11.9*** |
| MW-23 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | 7.05 |
| MW-23 | 6/26/2007 | <1.00 | 1.27 | <1.00 | 3.10 | 4.37 | 5.64 |
| MW-23 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 2.70 |
| MW-23 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 2.8 |
| MW-23 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-23 | 4/28/2011 | <1.0 | <1.0 | <1.0 | 2.3 | 2.3 | 1.1 |



Shell/Motiva 0008086

# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sample Location | Date | Benzene | Toluene | Ethylbenzene | Xylenes, Total | Total BTEX | MTBE |
| < GW Standard > | | < 0.7 > | < 5 > | < 5 > | < 5 > | --- | < 10 > |
| MW-24 | 5/8/1991 | ***230*** | ***180*** | ***83*** | ***270*** | 763 | NA |
| MW-24 | 5/13/1992 | ***240*** | ***64*** | ***200*** | ***300*** | 804 | NA |
| MW-24 | 5/12/1993 | ***31*** | ND | ND | ND | 31 | NA |
| MW-24 | 5/10/1994 | ***460*** | ***16*** | ***130*** | ***230*** | 836 | NA |
| MW-24 | 5/22/1995 | ***100*** | ND | ***86*** | ***7*** | 193 | NA |
| MW-24 | 5/23/1996 | ***168*** | 3.5 | ***50.3*** | ***42.2*** | 264 | NA |
| MW-24 | 6/18/1997 | ***126*** | ***5.7*** | ***17.7*** | ***169*** | 318.4 | NA |
| MW-24 | 5/29/1998 | ***54.6*** | 3.6 | ***10.2*** | ***61.8*** | 130.2 | NA |
| MW-24 | 5/11/1999 | ***78.2*** | 2 | 3.8 | ***10.5*** | 94.5 | NA |
| MW-24 | 10/27/1999 | ***1.3*** | ND | ND | 1.3 | 2.6 | ***26.4*** |
| MW-24 | 6/7/2000 | ***24*** | 1.9 | 3.9 | ***7.3*** | 37.1 | ***234*** |
| MW-24 | 5/29/2001 | ***75.6*** | ***12*** | ***5.6*** | ***37.2*** | 130.4 | ***1,380*** |
| MW-24 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | 4.1 | 4.1 | ***295*** |
| MW-24 | 6/30/2003 | ***99.9*** | 4.2 | ***11.6*** | ***85.9*** | 202 | ***543*** |
| MW-24 | 6/15/2004 | ***7.6*** | 0.67[J] | <1.0 | 2.2 | 9.8 | ***16.2*** |
| MW-24 | 6/8/2005 | ***15.3*** | 1.2 | <1.0 | 2.0 | 18.5 | ***78.3*** |
| MW-24 | 6/28/2006 | ***27.6*** | <1.00 | <1.00 | <3.00 | 27.6 | ***164*** |
| MW-24 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | 5.13 |
| MW-24 | 5/12/2008 | ***144*** | ***22.1*** | ***28.8*** | ***70.3*** | 265 | ***621*** |
| MW-24 | 4/29/2009 | ***11.3*** | <1.0 | <1.0 | ***6.0*** | 17.3 | ***37.1*** |
| MW-24 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | 6.63 |
| MW-24 | 4/28/2011 | ***9.5*** | <1.0 | <1.0 | 2.7 | 12.2 | ***37.5*** |
| MW-25 | 5/8/1991 | ***210*** | 4.4 | 1.9 | ND | 216.3 | NA |
| MW-25 | 5/13/1992 | ***28*** | ND | ND | 1.5 | 29.5 | NA |
| MW-25 | 5/12/1993 | ***30*** | ND | ND | 3.2 | 33.2 | NA |
| MW-25 | 5/10/1994 | ***4.6*** | ND | ND | 1.5 | 6.1 | NA |
| MW-25 | 5/22/1995 | ND | ND | ND | ND | ND | NA |
| MW-25 | 5/23/1996 | ***0.78*** | ND | ND | ND | 0.78 | NA |
| MW-25 | 6/18/1997 | ND | ND | ND | ND | ND | NA |
| MW-25 | 5/29/1998 | ND | ND | ND | 2.9 | 2.9 | NA |
| MW-25 | 5/11/1999 | ND | ND | ND | ND | ND | NA |
| MW-25 | 10/27/1999 | ND | ND | ND | 1.7 | 1.7 | ***28.2*** |
| MW-25 | 6/7/2000 | ND | ND | ND | ND | ND | ***74.4*** |
| MW-25 | 5/29/2001 | ND | ND | ND | ND | ND | ***25.8*** |
| MW-25 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | < 8.0 | ***18*** |
| MW-25 | 6/30/2003 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | ***12.6*** |
| MW-25 | 6/15/2004 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | ***42.9*** |
| MW-25 | 6/7/2005 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | ***13.6*** |
| MW-25 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | 7.18 |
| MW-25 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | ***12.5*** |
| MW-25 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-25 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 3.8 |
| MW-25 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-25 | 4/29/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 1.5 |
| MW-26 | 6/15/2004 | ***53.5*** | ***8.3*** | ***29.2*** | ***37.2*** | 128 | ***18.2*** |
| MW-26 | 6/8/2005 | ***6.6*** | 1.3 | 1.3 | ***8.6*** | 17.8 | 3.3 |
| MW-26 | 5/12/2008 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-26 | 4/29/2009 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-26 | 4/15/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-26 | 4/28/2011 | NOT SAMPLED (PRODUCT) | | | | | |



Shell/Motiva 0008087

# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| Sample Location | Date | (ug/L) Benzene | Toluene | Ethylbenzene | Xylenes, Total | Total BTEX | MTBE |
|---|---|---|---|---|---|---|---|
| < GW Standard > | | < 0.7 > | < 5 > | < 5 > | < 5 > | --- | < 10 > |
| MW-27 | 5/29/1998 | ***0.92*** | ND | ND | 1.8 | 2.72 | NA |
| MW-27 | 5/11/1999 | ND | ND | ND | 1 | 1 | NA |
| MW-27 | 10/27/1999 | ND | ND | ND | 1.9 | 1.9 | ***50.1*** |
| MW-27 | 6/7/2000 | ND | ND | ND | ND | ND | 1.7 |
| MW-27 | 5/29/2001 | ND | ND | ND | ND | ND | ***23.8*** |
| MW-27 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | < 5.0 | < 8.0 | ***28.3*** |
| MW-27 | 6/30/2003 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | ***13.1*** |
| MW-27 | 6/15/2004 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | ***18.6*** |
| MW-27 | 6/7/2005 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-27 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-27 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | 8.86 |
| MW-27 | 5/12/2008 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-27 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-27 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-27 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-28 | 5/29/1998 | ND | ND | ND | 1.9 | 1.9 | NA |
| MW-28 | 5/11/1999 | ND | ND | ND | 0.97 | 0.97 | NA |
| MW-28 | 10/27/1999 | ND | ND | ND | 1.4 | 1.4 | ***13.2*** |
| MW-28 | 6/7/2000 | ND | ND | ND | ND | ND | 9.5 |
| MW-28 | 5/29/2001 | ND | ND | ND | 1.5 | 1.5 | 8 |
| MW-28 | 5/30/2002 | < 1.0 | < 1.0 | < 1.0 | 1.5 | 1.5 | ***12.6*** |
| MW-28 | 6/30/2003 | ***1.3*** | <1.0 | <1.0 | 2.4 | 3.7 | ***20.4*** |
| MW-28 | 6/15/2004 | ***1.3*** | 0.61[J] | <1.0 | 3.8 | 5.7 | ***23.4*** |
| MW-28 | 6/7/2005 | <1.0 | <1.0 | <1.0 | 1.7 | 1.7 | ***10.1*** |
| MW-28 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | 3.96 |
| MW-28 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | 5.75 |
| MW-28 | 5/12/2008 | <1.0 | <1.0 | <1.0 | 2.40 | 2.4 | 6.40 |
| MW-28 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 3.9 |
| MW-28 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-28 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 2.1 |
| MW-29 | 5/29/1998 | ***1,250*** | ***17.2*** | ***62.9*** | ***79.2*** | 1409 | NA |
| MW-29 | 5/11/1999 | ***651*** | ***10.5*** | ***33.3*** | ***50.1*** | 745 | NA |
| MW-29 | 10/27/1999 | ***1,060*** | ***18.1*** | ***40.6*** | ***53.6*** | 1172 | ND |
| MW-29 | 6/7/2000 | ***173*** | 2.8 | 4.4 | ***5.7*** | 186 | ND |
| MW-29 | 5/29/2001 | ***267*** | 4.4 | ***6.3*** | ***9.2*** | 287 | ***11.7*** |
| MW-29 | 6/30/2003 | ***390*** | ***14*** | ***45*** | ***33*** | 482 | 7.5 |
| MW-29 | 6/15/2004 | ***250*** | ***10*** | ***23.6*** | ***30.1*** | 314 | 3.6 |
| MW-29 | 6/7/2005 | ***35.6*** | 1.3 | 4.2 | 3.8 | 44.9 | <1.0 |
| MW-29 | 6/28/2006 | ***184*** | 4.36 | ***12.6*** | ***15.0*** | 216 | <1.00 |
| MW-29 | 6/26/2007 | ***303*** | ***5.46*** | ***10.0*** | ***26.8*** | 345 | <1.00 |
| MW-29 | 5/12/2008 | ***335*** | 4.60 | ***12.5*** | ***22.9*** | 375 | 1.00 |
| MW-29 | 4/29/2009 | ***105*** | 1.9 | 3.9 | ***7.6*** | 118 | <1.0 |
| MW-29 | 4/15/2010 | ***122*** | <5.00 | <5.00 | <5.00 | 122 | <5.00 |
| MW-29 | 4/28/2011 | ***83.0*** | 1.2 | 2.7 | 4.9 | 91.8 | <1.0 |
| MW-30 | 6/30/2003 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 3.5 |
| MW-30 | 6/15/2004 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-30 | 6/7/2005 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-30 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-30 | 6/26/2007 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| MW-30 | 5/12/2008 | NOT ACCESSIBLE (FLOODED) | | | | | |
| MW-30 | 4/29/2009 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 |
| MW-30 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-30 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-31 | 5/12/2008 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-31 | 4/29/2009 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-31 | 4/15/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-31 | 4/28/2011 | NOT SAMPLED (PRODUCT) | | | | | |



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## Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sample Location | Date | Benzene | Toluene | Ethylbenzene | Xylenes, Total | Total BTEX | MTBE |
| < GW Standard > | | < 0.7 > | < 5 > | < 5 > | < 5 > | --- | < 10 > |
| MW-32 | 10/27/1999 | ***21.7*** | ***5.4*** | 3.2 | ***19.2*** | 49.5 | ***37*** |
| MW-32 | 5/30/2002 | ***7.2*** | 2.8 | 1.1 | ***10.9*** | 22 | ***28.6*** |
| MW-32 | 6/30/2003 | ***5.2*** | 2.3 | 1.8 | ***10.8*** | 20 | ***13.5*** |
| MW-32 | 6/15/2004 | ***3.5*** | 1.4 | 0.78[J] | ***5.6*** | 11.3 | ***18.1*** |
| MW-32 | 6/7/2005 | <1.0 | <1.0 | <1.0 | 3.0 | 4.8 | 4.7 |
| MW-32 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | 3.81 |
| MW-32 | 6/26/2007 | ***1.18*** | 1.02 | <1.00 | 4.16 | 4.16 | 4.50 |
| MW-32 | 5/12/2008 | <1.0 | <1.0 | <1.0 | 1.00 | 1.0 | 2.80 |
| MW-32 | 4/29/2009 | <1.0 | <1.0 | <1.0 | 1.6 | 1.6 | 3.2 |
| MW-32 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-32 | 4/29/2011 | <1.0 | <1.0 | <1.0 | 2.8 | 2.8 | 2.6 |
| MW-33 | 6/15/2004 | ***284*** | ***5.7*** | 4.1 | ***16*** | 310 | ***298*** |
| MW-33 | 6/8/2005 | ***212*** | 4.6 | ***9.2*** | ***13.2*** | 239 | ***138*** |
| MW-33 | 6/28/2006 | ***148*** | 1.70 | 4.74 | ***9.17*** | 164 | ***142*** |
| MW-33 | 6/26/2007 | ***240*** | 2.67 | <1.00 | ***5.93*** | 249 | ***89.9*** |
| MW-33 | 5/12/2008 | ***72.4*** | 4.30 | 2.20 | ***10.5*** | 89.4 | ***27.1*** |
| MW-33 | 4/29/2009 | ***13.7*** | <1.0 | <1.0 | ***5.6*** | 19.3 | 7.8 |
| MW-33 | 4/15/2010 | ***223*** | <5.00 | <5.00 | <5.00 | 223 | ***61.9*** |
| MW-33 | 4/29/2011 | ***227*** | 3.4 | 2.9 | ***8.4*** | 241.7 | ***51.4*** |
| MW-34 | 6/8/2005 | ***115*** | 3.8 | 4.4 | ***16.4*** | 140 | ***22.6*** |
| MW-34 | 6/28/2006 | ***83.7*** | 3.14 | 2.31 | ***7.42*** | 96.6 | ***22.2*** |
| MW-34 | 6/26/2007 | ***73.2*** | 3.41 | 1.41 | ***10.80*** | 88.8 | ***19.4*** |
| MW-34 | 5/12/2008 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-34 | 4/29/2009 | ***77.5*** | <1.0 | <1.0 | 4.0 | 81.5 | ***61.6*** |
| MW-34 | 4/15/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-34 | 4/28/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-35 | 6/15/2004 | ***1,180*** | ***22.2*** | ***18.6*** | ***33.3*** | 1,254 | ***472*** |
| MW-35 | 6/8/2005 | ***1,220*** | ***22.8*** | ***30.4*** | ***44.9*** | 1,318 | ***284*** |
| MW-35 | 6/28/2006 | ***693*** | ***7.43*** | 3.49 | ***17.3*** | 721 | ***189*** |
| MW-35 | 6/26/2007 | ***742*** | ***6.87*** | 2.68 | ***17.8*** | 769 | ***142*** |
| MW-35 | 5/12/2008 | ***518*** | ***10.4*** | ***6.50*** | ***28.6*** | 564 | ***79.9*** |
| MW-35 | 4/29/2009 | ***173*** | 4.3 | 2.0 | ***14.1*** | 193 | ***42.4*** |
| MW-35 | 4/15/2010 | ***765*** | ***9.78*** | <5.00 | <5.00 | 774.78 | ***97.4*** |
| MW-35 | 4/29/2011 | ***857*** | ***12.1*** | 2.1 | ***8.9*** | 880.1 | ***117*** |
| MW-36 | 5/12/2008 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-36 | 4/29/2009 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-36 | 4/15/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-36 | 4/28/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-37 | 6/15/2004 | ***259*** | ***8.7*** | 1.4 | ***18*** | 287 | ***64.3*** |
| MW-37 | 6/8/2005 | ***209*** | 4.2 | <1.0 | ***7.4*** | 221 | ***55.5*** |
| MW-37 | 6/28/2006 | ***133*** | 2.39 | <1.00 | 3.81 | 139 | ***49.4*** |
| MW-37 | 5/12/2008 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-37 | 4/29/2009 | ***162*** | 1.9 | <1.0 | 3.0 | 167 | ***36.4*** |
| MW-37 | 4/15/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-37 | 4/28/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-38 | 5/29/2001 | ***9.9*** | ND | 0.76 | ND | 10.7 | ***18.9*** |
| MW-38 | 5/30/2002 | ***5.4*** | 0.72 | < 1.0 | 1.4 | 7.52 | 6.9 |
| MW-38 | 6/30/2003 | ***17.2*** | 4.2 | 0.84[J] | 2.1 | 23.5 | ***29.5*** |
| MW-38 | 6/15/2004 | ***9.6*** | 1.8 | 0.55[J] | 2.1 | 13.5 | ***12.7*** |
| MW-38 | 6/8/2005 | ***5.5*** | <1.0 | <1.0 | <1.0 | 5.5 | 1.8 |
| MW-38 | 6/28/2006 | ***5.71*** | <1.00 | <1.00 | <3.00 | 5.71 | ***22.9*** |
| MW-38 | 6/26/2007 | ***2.33*** | <1.00 | <1.00 | <3.00 | 2.33 | 2.24 |
| MW-38 | 5/12/2008 | ***10.1*** | <1.0 | 3.80 | 1.60 | 15.5 | 3.80 |
| MW-38 | 4/29/2009 | ***2.9*** | <1.0 | <1.0 | <1.0 | 2.9 | 3.4 |
| MW-38 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-38 | 4/29/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |



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# Table 2
## Historical Groundwater Analytical Results Summary
(Sorted by Well)

**Motiva Enterprises LLC Terminal # 58603**
25 Paidge Avenue
Brooklyn, New York
NYSDEC SPILL NO. 87-09990

| | | (ug/L) | | | | | |
|---|---|---|---|---|---|---|---|
| Sample Location | Date | Benzene | Toluene | Ethylbenzene | Xylenes, Total | Total BTEX | MTBE |
| < GW Standard > | | < 0.7 > | < 5 > | < 5 > | < 5 > | --- | < 10 > |
| MW-39 | 6/15/2004 | ***296*** | ***21*** | ***19.2*** | ***42.4*** | 379 | ***125*** |
| MW-39 | 6/8/2005 | ***246*** | ***14.8*** | ***12.5*** | ***27.6*** | 301 | ***74.8*** |
| MW-39 | 6/28/2006 | ***119*** | ***7.29*** | 3.45 | ***14.1*** | 144 | ***60.9*** |
| MW-39 | 6/26/2007 | ***136*** | ***7.04*** | 3.21 | ***17.0*** | 163 | ***57.3*** |
| MW-39 | 5/12/2008 | ***225*** | ***13.8*** | 4.50 | ***19.3*** | 263 | ***69.9*** |
| MW-39 | 4/29/2009 | ***183*** | ***7.3*** | 4.9 | ***20.6*** | 216 | ***65.5*** |
| MW-39 | 4/15/2010 | ***65.9*** | <5.00 | <5.00 | <5.00 | 65.9 | ***36.7*** |
| MW-39 | 4/29/2011 | ***90.3*** | 2.9 | 2.2 | ***8.1*** | 103.5 | ***33.8*** |
| MW-40 | 5/12/2008 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-40 | 4/29/2009 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-40 | 4/15/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-40 | 4/28/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-41 | 6/8/2005 | ***347*** | ***10.7*** | 2.7 | ***22.1*** | 383 | ***68.2*** |
| MW-41 | 5/12/2008 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-41 | 4/29/2009 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-41 | 4/15/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-41 | 4/28/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| MW-42 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-42 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| MW-43 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | ***17.5*** |
| MW-43 | 4/28/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 3.0 |
| MW-44 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| MW-44 | 4/29/2011 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| TW-01 | 5/12/2008 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-01 | 4/29/2009 | NOT SAMPLED (PRODUCT) | | | | | |
| TW-01 | 4/15/2010 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-01 | 4/28/2010 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-02 | 6/28/2006 | ***41.9*** | 2.63 | 1.84 | 4.22 | 50.6 | 2.97 |
| TW-02 | 5/12/2008 | ***17.3*** | 1.0 | <1.0 | <1.0 | 18.3 | <1.0 |
| TW-02 | 4/29/2009 | ***3.4*** | <1.0 | <1.0 | <1.0 | 3.4 | <1.0 |
| TW-02 | 4/15/2010 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| TW-02 | 4/29/2011 | ***19.2*** | 1.5 | <1.0 | 3.6 | 24.3 | 1.3 |
| TW-03 | 6/28/2006 | <1.00 | <1.00 | <1.00 | <3.00 | <6.00 | <1.00 |
| TW-03 | 5/12/2008 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-03 | 4/29/2009 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-03 | 4/15/2010 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-03 | 4/29/2011 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-04 | 5/12/2008 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-04 | 4/29/2009 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-04 | 4/15/2010 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-04 | 4/29/2011 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-05 | 5/12/2008 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-05 | 4/29/2009 | NOT SAMPLED (PRODUCT) | | | | | |
| TW-05 | 4/15/2010 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-05 | 4/29/2011 | NOT SAMPLED (PRODUCT) | | | | | |
| TW-06 | 5/12/2008 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-06 | 4/29/2009 | NOT ACCESSIBLE (FLOODED) | | | | | |
| TW-06 | 4/15/2010 | NOT SAMPLED (PRODUCT) | | | | | |
| TW-06 | 4/29/2011 | NOT ACCESSIBLE (FLOODED) | | | | | |

**Notes:**

GW Standard = Values in ***bold and italic*** exceed the Groundwater Standard.

µg/L = micrograms per liter, or parts per billion (ppb)

NA = Sample not analyzed for target parameter.

NS = No sample collected from well.

ND(X) = Parameter not-detected at the reporting limit (or method detection limit if shown)(X).

<X = Parameter detected below the method limit of quantitation (X).

J = The target analyte was positively identified below the MQL and above the SQL.



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# Investigative Summary & Conceptual Remedial Options

**Shell Oil Terminal**
**25 Paidge Avenue**
**Brooklyn, New York 11222**

**Work performed from November 1995 through May 1996**

**Report Submittal - January 1997**

500 Campus Drive, P.O. Box 451, Morganville, New Jersey 07751-0451 (908) 536-8500 Fax (908) 536-7751

Shell/Motiva 0008092

**Investigative Summary & Conceptual Remedial Options**

**Shell Oil Terminal**
**25 Paidge Avenue**
**Brooklyn, New York 11222**

## *INTRODUCTION*

This report summarizes the investigative activities that were conducted at the Shell Oil Company (Shell) Brooklyn Terminal located on Paidge Avenue in Brooklyn New York. The investigative activities were conducted from November 1995 to May 1996 and included the following:

- o the advancement of 38 soil borings,
- o the installation of six monitoring wells,
- o the installation of three vent monitoring points,
- o the performance of one complete round of groundwater sampling,
- o the performance of a groundwater pumping test, and
- o the performance of an soil vapor extraction test / air sparging test.

Each of the investigative activities are discussed in detail below, including a data analyses and conceptual remedial options.

## *SOIL BORING INVESTIGATION*

On November 11, 1995, an earth probe was employed to advance 38 soil borings to the soil/water interface below the ground surface (bgs). The soil samples were inspected for visual signs of liquid phase hydrocarbons (LPH) using the soil/water agitation method, as well as being screened with an HNu photoionization detector (PID). The intent of the soil boring investigation was to determine the vertical and horizontal extent of LPH at the site. The results of the boring program were compiled on **Figure 1.**

Referring to **Figure 1,** LPH was encountered in the six borings which were advanced in the vicinity of the vapor recover unit (VRU). The existing and newly installed monitoring wells in the vicinity of the VRU and along the southern portion of the aboveground storage tanks (ASTs) secondary containment walls also revealed LPH in varying levels of thickness from January 1995 until present; specifically, MW-2 (0.2 to 1.3 feet), MW-26 (0.01 to 0.54 feet), MW-31 (0.17 to 2.16 feet), and MW-32 (<0.01 to 0.1 feet). This information appears to indicate that LPH has accumulated along the southern foundation/wall of the secondary containment structure encompassing the ASTs.

Based on the locations of two of the borings (specifically the borings at grid locations G-10 and G-11, which are approximately 60 and 90 feet south of the AST secondary containment, respectively) and the location of monitoring well MW-32 (which is approximately 90 feet



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south of the AST secondary containment walls), the aerial extent of LPH may surround the entire VRU system (refer to **Figure 1** for an assumed depiction of the aerial extent of LPH in the vicinity of the VRU).

Three soil borings in the southern corner of the facility (specifically at grid locations U-3, Y-4, and Z-4) also revealed LPH; although newly installed monitoring well MW-28 has not detected LPH. The areas with the lowest amount of noted LPH impact were located directly in the center of the facility, between the loading racks and the diesel USTs, and by the northern corner of the garage.

The advancement of approximately 6 soil borings south of the VRU and northwest of the truck loading rack was attempted, but due to the presence of a concrete slab directly beneath the asphalt cover, the earth probe met with refusal.

### *Photoionization Detector Readings*

Throughout the soil boring program, photoionization detector (PID) readings were obtained with an HNu PID (10.2 ev probe) to measure the presence of volatile organic compounds in the soil. The PID was calibrated prior to use with 58 ppm isobutylene span gas. Soil samples for field screening were collected from the split spoon samplers with stainless steel scoops, and placed in airtight glass jars. The samples were then allowed to equilibrate to ambient air temperature to induce volatilization before the PID headspace readings were taken. It should be noted that the PID provides a qualitative assessment of ionizable organic compounds that may be present in the sample, although the results are neither quantitative nor compound specific.

All of the 38 soil borings produced a response from the PID, which ranged from 5 units in boring P-1 to 180 units in borings C-12, F-11, F-12, F-13, Y-4, and Y-6. The majority of the borings also revealed a product sheen (noted as a multi colored coating on the soil particles or within the water covering the slit spoon sampler). PID responses are noted next to the boring locations depicted on **Figure 1**.

## *MONITORING, SPARGE, AND VENT WELL INSTALLATIONS*

On April 8, 1996, a B-47 drill rig was employed to install six additional monitoring wells (MW-27 through MW-32) at the site, as well as three vent points (V-1 through V-3) and one sparge point (SP-1) near the southern portion of the loading rack. The monitoring wells were installed to further investigate the aerial extent of LPH and soluble phase hydrocarbons which were detected during the soil boring program. The vent and sparge points were installed in preparation of an upcoming soil vapor extraction (SVE) test which is further discussed in a later section.





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*MONITORING WELL GAUGING AND SAMPLING*

On May 23, 1996, all 31 site wells were gauged in preparation for yearly compliance sampling as per the guidelines of the NYDEC Major Petroleum Facility License (refer to **Appendix A** for the Gauging and Monitoring Report.

During the May 1996 sampling episode, monitoring wells MW-2, MW-4, MW-26, MW-30, MW-31, and MW-32 had LPH thicknesses of 0.16, 0.02, 0.01, 0.1, 0.17, and 0.03 ft, respectively, and were not sampled.

Groundwater samples were obtained from 15 of the 31 monitoring wells, specifically, monitoring wells MW-1, MW-3, MW-6 through MW-9, MW-14, MW-18, MW-23, and MW-24 which were analyzed for benzene, toluene, ethylbenzene, and xylene (BTEX) using USEPA Method 602; monitoring well MW-5 was analyzed for BTEX using USEPA Method 602, plus base neutral extractables (BNs) using USEPA method 625; monitoring wells MW-25, MW-27, MW-28, and MW-29 were analyzed for total organic compounds plus the identification of 15 associated peaks (VO+15) using USEPA method 624. Analyses were completed by Accutest Laboratories of Dayton, New Jersey (N.Y. Certification #10983). **Table 1** presents a summary of the laboratory analytical results.

Referring to **Table 1**, BTEX concentrations ranged from 0.78 parts per billion (ppb) in monitoring wells MW-25, to 32,070 ppb in monitoring wells MW-18. In all, BTEX was detected (above method detection limits) in a total of eight monitoring wells, specifically, MW-14, MW-18, MW-23, MW-24, MW-25, MW-27, MW-28, and MW-29. Based on the locations of the aforementioned monitoring wells (which are positioned throughout the site) the presence of soluble phase hydrocarbon at the site cannot be attributed to one specific source area.

*GROUNDWATER PUMPING TEST*

A pumping test was conducted from monitoring well MW-15 on May 15 and 16, 1996, to determine the hydraulic characteristics of the aquifer underlying the site. The test was a constant-flow rate test, pumping at 0.35 gallons per minute for 13 hours, followed by 2.5 hours of water recovery. To account for the possible effects on the water table readings due to tidal fluctuations in the adjacent Newtown Creek, 24 hours of tidal trend data was collected from the Creek and MW-25 prior to, and during, the test. This data was used, as appropriate, to correct for tidally-induced water table fluctuations during the test. Fluctuations were noted in proximity wells MW-16 and MW-20, therefore, corrections to the data collected from these wells were made.

Water level measurements were collected during the test with an electronic data logger and manual interface probe. Data analysis followed the Cooper-Jacob method as outlined in



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Kruseman and deRidder (1992), with appropriate water levels corrected for tidal influence using water level readings in MW-25, which is 135 feet from the pumping well, as a reference. Transmissivity (T) values are summarized in **Table 2**, while the data graphs used in the analysis are included in **Attachment B**.

Referring to **Table 2**, the analysis results range from 61.6 gallons per day per foot (gpd/ft), or 8.24 $ft^2$/day (generated from data collected from monitoring well MW-15), to 369.6 gpd/ft, or 49.4 $ft^2$/day (generated from data collected from monitoring well MW-16). The disparity in the data generated from the three wells that were monitored during the pumping test (MW-15, MW-16, and MW-20) is due to the variation in the subsurface materials (i.e. sand, silt, pea gravel, crushed stone, etc.) and subsurface structures (i.e. concrete vaults, foundations, underground piping, etc.) know to be present at the site.

As noted on **Table 2**, monitoring well MW-20 had two distinct sets of data (early time and late time). This was due to the lack of drawdown within monitoring well MW-20 during the initial portion of the groundwater pumping test (approximately 15 minutes). This was probably caused by the close proximity of a more permeable subsurface material which could have resulted from recent excavation activities in the vicinity. Once this area was dewatered, drawdown in the well increased to a more consistent level as was observed within the other monitoring points; therefore, the early time data from monitoring well MW-20 was included within this report, but was not considered to be an accurate representation of the native aquifer characteristics.

Based on the occurrence of a clay layer at 12 feet below grade and a depth to water of 3 feet, the aquifer saturated thickness (b) is 9 feet. The hydraulic conductivity (K) can be calculated from the equation $K = T / b$, to be 6.8 to 93.3 gpd/$ft^2$, or 0.91 to 12.5 ft/day. These values are consistent with the low to mid range of literature values for the coarse to fine sand sediments observed while drilling.

## *SOIL VAPOR EXTRACTION / AIR SPARGING TEST*

On June 3, 1996, a soil vapor extraction (SVE) test was performed on monitoring well MW-20 to determine the effective radius of influence for SVE as a remedial option. In addition, an air sparging test was also performed within 15 feet of MW-20 (in conjunction with SVE) to determine if air sparging would assist in removing soluble phase hydrocarbons (SPH) from the groundwater. Monitoring well MW-20 was selected based on its location within a known source area of soluble phase hydrocarbons.

### *Soil Vapor Extraction Test*

A regenerative blower capable of creating a vacuum equal to 50 inches of water column with an air flow of 98 cubic feet per minute (cfm) was connected to the retrofitted manhole of monitoring well MW-20. Soil vapors were extracted from the monitoring well at various vacuums while the corresponding vacuum responses were measured in nearby monitoring wells with a vacuum gauge (magnehelic gauge). Soil vapors from the extraction well were



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monitored for total air flow in feet per minute [fpm], % LEL (lower explosive limit), and % LEL with carbon filtration (to determine % methane) at 15 minute intervals. Data from the SVE test are included in **Table 3.**

Referring to **Table 3**, the SVE test results for monitoring well MW-20 indicated a maximum vacuum of 46 inches of water column at the well head, with a corresponding maximum air flow of 1,350 fpm (or 11.7 cfm). Vacuum influences were noted in monitoring wells MW-15, MW-16, MW-17, vent wells V-1, V-2, and V-3; the largest influence of which (2.75 inches) was observed in vent well V-2. LEL readings ranged from 16% to >200% LEL. Methane concentrations were observed to constitute approximately 2% of the LEL reading.

The effective influence of the SVE test was determined by taking the vacuum observed in each monitoring point and dividing it by the vacuum induced at the extraction well. The effective radius of influence is that area which encompasses all monitoring points in which measured vacuum is greater than, or equal to, 1% of vacuum applied at the extraction well. In this case, the maximum applied vacuum of 42-inches of water was divided into the observed vacuum of 0.5-inches in monitoring well MW-16. Which results in 1.19% of the applied vacuum at the extraction well.

Upon analysis of the test data, the effective vacuum radius extended out to monitoring points as great as 53 feet away from the extraction well. However, other data points showed lower vacuum influence, suggesting varying air permeabilities caused by (as previously discussed) a diversity of subsurface materials and structures (i.e. sand, silt, pea gravel, crushed stone, concrete vaults, foundations, underground piping, etc.). A Vacuum Extraction Isobar Map depicting the projected vacuum influence in the surrounding subsurface is included as **Figure 2.**

*Soil Vapor Extraction with Air Sparging*

Following completion of the initial SVE testing, a combined air sparging and soil vapor extraction test was completed utilizing SP-1. During this portion of the test, air was extracted from the vadose zone from monitoring well MW-20, while compressed air was injected below the water table in sparge well SP-1. The following parameters were recorded during the combined test; injection pressure and air flow at SP-1, vacuum in inches of water, air flow, and percent LEL from monitoring well MW-20. Air pressure at the well head for SP-1 was approximately 10 psi and air flow was approximately 6 standard cubic feet per minute (SCFM). Data collected during the SVE/air sparging test are included in **Table 2.**

Sparge influence was observed through changes in water levels observed in the monitoring wells and temporary vent points, specifically in MW-15, MW-17, V-1, V-2, and V-3. Water level rise ranging from 0.07 feet in MW-17 to 0.51 feet in V-2. Bubbling was also observed in all seven observation points except MW-16 and MW-17. LEL readings from the extraction well were greater than 200%.





Shell/Motiva 0008097

*Soil Vapor Extraction / Air Sparging Analytical Results*

To determine the overall effectiveness and the hydrocarbon removal rates of the SVE/air sparge test, air bag samples were collected at the end of the SVE test, as well as from the combined SVE/ air sparging test. The samples were analyzed by Accutest laboratories of Dayton, New Jersey. **Table 4** presents the laboratory analytical results, the laboratory data package is included in **Appendix C**.

Referring to **Table 4**, the analytical results from the air bag samples collected from MW-20 during the SVE portion of the test indicated concentrations of 149,368 mg/m$^3$ total volatile petroleum hydrocarbons (TVPHC), or approximately 41,076 ppm. Note: the laboratory data for TVPHC was presented in values calibrated to methane and benzene, it was necessary to convert the data which was calibrated to benzene to the more commonly used values as calibrated to methane by multiplying the reported concentrations by 0.0084103.

The analytical data can be used along with an equation derived in the American Petroleum Institute (API) publication no. 4410, published in September 1985, to estimate the quantity of petroleum hydrocarbons that can potentially be removed from the subsurface via SVE. The data and subsequent calculations are summarized in **Attachment D**.

Referring to **Attachment D**, the estimated liquid phase hydrocarbon removal rate for the SVE portion of the test was 1.0641 gal/hour, or 25.538 gal/day. The estimated liquid phase hydrocarbon removal rate for the SVE/air sparging portion of the test was 0.8598 gal/hour, or 20.636 gal/day. It should be noted that the removal rates listed above are based on the vapor phase hydrocarbon concentrations detected during an eight hour SVE test performed in a known source area of LPH. The removal rates (over time) would decrease considerably as LPH is removed from the subsurface; the removal rates above are estimates for remedial assessments of SVE/air sparging and should be considered within that context.

## *CONCEPTUAL REMEDIAL OPTIONS*

### *Liquid Phase Hydrocarbons on the Groundwater*

Based on the presence of LPH in the area of the VRU and the AST containment walls (in thicknesses ranging from 0.03 feet to 2.16 feet), recovery of this product is the first priority. Adding recovery wells and/or an interceptor trench along the secondary containment walls should be evaluated. As long as LPH remains at the site in appreciable quantities, other remedial options to remediate the soils and groundwater (SVE/air sparging/pump and treat and/or risk based corrective action) would only address the attenuating results of the LPH in the subsurface (i.e. soluble phase hydrocarbons).

## *RECOMMENDATIONS*

In an effort to determine the aerial extent of LPH in the vicinity of the VRU, Handex proposes the advancement of approximately nine soil borings inside the secondary

containment of the aboveground storage tanks (ASTs). Refer to **Figure 1** for proposed soil boring locations. If LPH is detected within a soil boring, Handex (on the behalf of Shell) recommends the conversion of that boring into a groundwater monitoring / product recovery well. Following the conversion of the a boring, additional soil borings will be advanced in the direction of groundwater flow (to the northeast) to delineate LPH.

Once the aerial extent of the LPH has been determined, the evaluation of the installation of an interceptor trench along the southwest portion of the secondary containment walls (on the same side as the VRU) can be explored. In addition to the installation of the interceptor trench, the incorporation of the groundwater monitoring / product recovery wells (if any were installed) into a remedial system can also be evaluated.



Shell/Motiva 0008099

# TABLE 1

## Groundwater Analytical Results (May 23, 1996)

## SHELL OIL TERMINAL
## 25 Paidge Avenue
## Brooklyn, New York

| WELL # | BENZENE | TOLUENE | ETHYLBENZENE | XYLENE | BTEX (TOTAL) | BASE NEUTRALS (TOTAL) |
|---|---|---|---|---|---|---|
| MW-1 | ND | ND | ND | ND | ND | NA |
| MW-2 | NS | NS | NS | NS | NS | NS |
| MW-3 | ND | ND | ND | ND | ND | NA |
| MW-4 | NS | NS | NS | NS | NS | NS |
| MW-5 | ND | ND | ND | ND | ND | 1.52 |
| MW-6 | ND | ND | ND | ND | ND | NA |
| MW-7 | ND | ND | ND | ND | ND | NA |
| MW-8 | ND | ND | ND | ND | ND | NA |
| MW-9 | ND | ND | ND | ND | ND | NA |
| MW-14 | 25.7 | 1.6 | 1.3 | 6.6 | 34.9 | NA |
| MW-18 | 1,520 | 12,600 | 2,750 | 15,200 | 32,070 | NA |
| MW-23 | 9.2 | 1.7 | ND | 3.4 | 14.3 | NA |
| MW-24 | 168 | 3.5 | 50.3 | 42.2 | 264 | NA |
| MW-25 | 0.78 | ND | ND | ND | 0.78 | NA |
| MW-27** | 0.64 | ND | ND | 1.8 | 2.44 | NA |
| MW-28 | 0.66 | ND | ND | 3.1 | 3.76 | NA |
| MW-29 | 1,200 | 15 | 214 | 55.4 | 1,484.4 | NA |

NOTE: All concentrations in ug/l (ppb)
ND - Non-Detected
NA - Not Analyzed
NS - Not Sampled (Contained Liquid Phase Product-LPH)
** - bis(2-Ethylhexyl)phthalate detected @ a concentration 0.66 ppb

Shell/Motiva 0008100

**TABLE 2**

**Groundwater Pumping Test Data (May 15-16, 1996)**

**SHELL OIL TERMINAL**
**25 Paidge Avenue**
**Brooklyn, New York**

| MW-15 Pumping Test Results | | |
|---|---|---|
| | Transmissivity (gpd/ft) | Transmissivity ($ft^2$/day) |
| MW-15 | 61.6 | 8.24 |
| MW-16 | 369.6 | 49.4 |
| MW-20 (Early Time) | 840 | 112.3 |
| MW-20 (Late Time) | 298 | 39.8 |

Shell/Motiva 0008101

## Table 3

SITE - Shell, Brooklyn DATE - June 6, 1996 INVESTIGATOR - Greg Casabona

| SVE EXTRACTIONWELL - 20 | | | | | | | | | Vacuum Response in observation Well (inches of $H_20$) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Time (minutes) | Vacuum at Extraction Well | Depth to Water (Extraction Well) | Dilution Air Open? (Y/N) | Air Flow from Well (ft per min) | CGI Reading Without carbon % LEL from well | CGI Reading with carbon % LEL (methane only) from well | Total Hydrocarbons | Oxygen (%) | 15 | 16 | 17 | V-1 | V-2 | V-3 |
| | Distance to Extraction Well | | | | | | | | 24 | 40 | 50 | 9 | 15 | 24 |
| PRETEST | 6 | | | 10,500 | | | | | | | | | | |
| 15 | 25 | ** | 1/2 | 1,100 | 16 | 2 | 14 | 19.8 | 0.75 | 1.75 | 0.05 | 2.5 | 1 | 0.25 |
| 30 | 24 | ** | 1/2 | 1,000 | 17 | 2 | 15 | 19.7 | 0.75 | 0.5 | 0.1 | 2.5 | 0.95 | 0.4 |
| 45 | 46 | ** | Full | 1,350 | >200 | -- | -- | -- | 0.75 | 0.5 | 0.1 | 5.5 | 2.75 | 0.8 |
| 60 (Air Sample) | 46 | ** | Full | 1,350 | >200 | -- | -- | -- | 0.8 | 0.5 | 0.1 | 7 | 2.75 | 0.85 |
| 75 | 46 | ** | Full | 1,250 | >200 | -- | -- | -- | 0.0 | Positive Pressure | 0.1 | 1 | Positive Pressure | Positive Pressure |
| 90 (Air Sample) | 46 | ** | Full | 1,250 | >200 | -- | -- | -- | 0.0 | Positive Pressure | 0.1 | 1.5 | Positive Pressure | Positive Pressure |

Shell/Motiva 0008102

## TABLE 4

**SVE Air Bag Analytical Data**
**(June 6, 1996)**
**Utilizing Monitoring Well MW-20**

**SHELL OIL TERMINAL**
**25 Paidge Avenue York**

| Sample ID | Methane | TVPHC Range as Methane (C1 to C3) | TVPHC Range as Benzene (C4 to C10) | Total TVPHC (as Methane) |
|---|---|---|---|---|
| MW-20 SVE Only ($mg/m^3$) | 116,000 | 149,000 | 43,700 | 149,368 |
| MW-20 SVE with Sparging ($mg/m^3$) | 100,000 | 130,000 | 42,100 | 130,354 |

TVPHC - Total Volatile Petroleum Hydrocarbons
Note: a conversion factor of 0.0084103was used to convert the benzene calibrated data to the more commonly presented results calibrated to methane

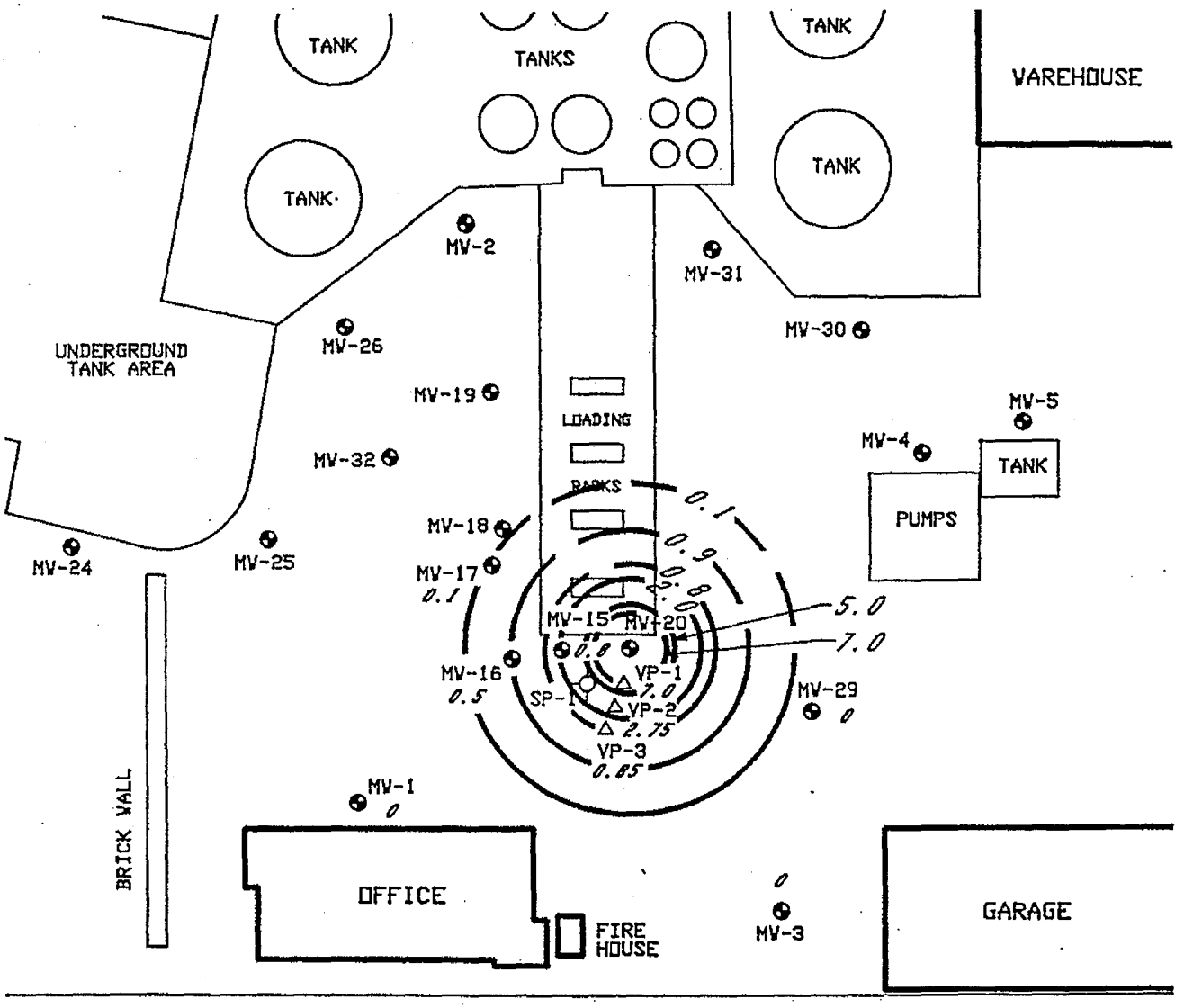
# FIGURE 2

## VACUUM INFLUENCED ISOBAR MAP

VACUUM EXTRACTION AT WELL MW-20
TEST PERFORMED ON JUNE 3, 1996

## SHELL OIL COMPANY

BROOKLYN TERMINAL
25 PAIDGE AVENUE
BROOKLYN, NEW YORK




- SPARGE POINT
- TEMPORARY VENT POINTS
- MONITOR WELL LOCATION
- ASHED WHERE INFERRED
- 0.85 - VACUUM IN INCHES OF WATER

35 70 100 200

SCALE IN FEET

Handex
K:\DRAFTING\TOM\100623

# Attachment A
# Gauging and Monitoring Report (May 23, 1996)

# WELL GAUGING SITE INSPECTION FIELD REPORT

HANDEX LOCATION CODE: 100623-00 CONTROL #: 7347
CLIENT: SHELL
STREET ADDRESS: RIDGE AVE
CITY: BROOKLYN STATE: NJ

Handex OF NEW JERSEY, INC.
500 CAMPUS DRIVE - P.O. BOX 451
MORGANVILLE, NEW JERSEY 07751-0451
(908) 536-8500 FAX (908) 536-7751

| * | REF. | WELL ID | DEPTH TO PRODUCT (ft) | DEPTH TO WATER (ft) | PRODUCT THICKNESS (ft) | FLOW RATE FROM WELL (gpm / fpm) | VACUUM AT WELL (" $H_2O$) |
|---|---|---|---|---|---|---|---|
| | C | MW-1 | | 3.51 | | | |
| | | 2 | 4.22 | 4.38 | .16 | | |
| | | 3 | | 2.58 | | | |
| | | 4 | 2.33 | 2.35 | .02 | | |
| | | 5 | | 1.79 | | | |
| | | 6 | | 4.92 | | | |
| | | 7 | | 4.70 | | | |
| | | 8 | | 5.91 | | | |
| | | 9 | | 5.75 | | | |
| | | 13 | | 7.07 | | | |
| | | 14 | | 6.38 | | | |
| | | 15 | | 3.24 | | | |
| | | 16 | | 3.12 | | | |
| | | 17 | | 3.24 | | | |
| | | 18 | | 3.22 | | | |
| | | 19 | | 3.97 | | | |
| | | 20 | | 3.02 | | | |
| | | 21 | | 5.33 | | | |
| W | | 22 | | 6.01 | | | |
| | | 23 | | 4.00 | | | |
| | | 24 | | 4.01 | | | |
| | | 25 | | 3.25 | | | |
| P | | 26 | 3.95 | 3.96 | .01 | | |

[*] P: PUMPING WELL W: WICK IN WELL
S: SPARGE WELL B: PASSIVE BAILER
V: SVE WELL

[REF] REFERENCE POINT: C: TOP OF CASING M: MANHOLE RIM

## SITE OBSERVATIONS

| | YES | NO |
|---|---|---|
| WERE ANY WELLS FOUND UNLOCKED UPON ARRIVAL? | ☐ | ☒ |
| PROBLEMS WITH THE WELLS' STRUCTURAL INTEGRITY? | ☐ | ☒ |
| WERE ANY UNUSUAL CONDITIONS OBSERVED? | ☐ | ☒ |
| IS THERE SOIL STOCKPILED ON SITE? 10'x5'x2' | ☒ | ☐ |
| ARE THERE ANY DRUMS ON SITE? | ☐ | ☐ |

EXPLAIN "YES" ANSWERS IN COMMENTS SECTION

## HOLDING TANK READINGS

| TANK #1 | SIZE: 275 | TANK #2 | SIZE: |
|---|---|---|---|

| ARRIVAL | | DEPARTURE | | ARRIVAL | | DEPARTURE | |
|---|---|---|---|---|---|---|---|
| TOTAL (inches) | WATER (inches) | TOTAL (inches) | WATER (inches) | TOTAL (inches) | WATER (inches) | TOTAL (inches) | WATER (inches) |
| | | 1.9 | 1.0 | | | | |

## PRODUCT RECOVERY

☐ PASSIVE BAILERS
☐ WICKS

| WELL ID | HT. IN BAILER (inches) | QUAN. (gal) |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |

HAND BAILING

| WELL ID | QUAN. (gal) | WELL ID | QUAN. (gal) |
|---|---|---|---|
| 31 | 2 BLACK | | |
| | 1 NICKISH | | |
| | | | |
| | | | |
| | | | |

PRODUCT DESCRIPTION: BLACK

## COMMENTS

GAUGED DTW, DTP ON ALL WELLS USED CLEAN BAILERS TO BAIL 3X VOLUME OF WATER IN WELL. PURGE WATER POURED INTO DRUMS, TO BE TREATED ONSITE. BAILERS DECONED IN DISTILLED WATER AND ALCONOX AND RINSED IN DI WATER BETWEEN EVERY WELL. IF PRODUCT DEVELOPED, DISCONTINUED PURGING. BAILED PRODUCT FROM MW-31, POURED INTO HOLDING

## DATA ANALYSIS / REVIEW

☐ SYSTEM/DATA REVIEW COMPLETE: Continue as is.
☐ PROBLEM NOTED. REMARKS:

REVIEWED BY:
HYDRO:
PROJ. MGR:
DATA ENTERED BY: JLG

DATE: 5/23/96
PAGE 1 OF 4

HYDROGEOLOGIST: GREG CASABONA
TECHNICIAN: MATT UPM JOHN SKURAT

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# WELL GAUGING SITE INSPECTION FIELD REPORT

HANDEX LOCATION CODE: 100023-00 CONTROL #: 7317
CLIENT: SHELL
STREET ADDRESS: PAIDGE AVE
CITY: BROOKLYN STATE: NY

Handex OF NEW JERSEY, INC.
500 CAMPUS DRIVE - P.O. BOX 451
MORGANVILLE, NEW JERSEY 07751-0451
(908) 536-8500 FAX (908) 536-7751

| * | REF. | WELL ID | DEPTH TO PRODUCT (ft) | DEPTH TO WATER (ft) | PRODUCT THICKNESS (ft) | FLOW RATE FROM WELL (gpm / lpm) | VACUUM AT WELL (" $H_2O$) |
|---|---|---|---|---|---|---|---|
| | C | MW-27 | | 2.31 | | | |
| | | 28 | | 1.62 | | | |
| | | 29 | | 1.62 | | | |
| | | 30 | 2.03 | 2.04 | THICK NASTY BLACK TAR | | |
| | | 31 | 3.93 | 4.10 | .17 | | |
| V | V | 32 | 4.52 | 4.55 | .03 | | |
| | C | TW-A | | 3.12 | | | |
| | | TW-B | | 2.98 | | | |

* P: PUMPING WELL S: SPARGE WELL V: SVE WELL W: WICK IN WELL B: PASSIVE BAILER

REF REFERENCE POINT: C: TOP OF CASING M: MANHOLE RIM

## SITE OBSERVATIONS

| | YES | NO |
|---|---|---|
| WERE ANY WELLS FOUND UNLOCKED UPON ARRIVAL? | ☐ | ☐ |
| PROBLEMS WITH THE WELLS' STRUCTURAL INTEGRITY? | ☐ | ☐ |
| WERE ANY UNUSUAL CONDITIONS OBSERVED? | ☐ | ☐ |
| IS THERE SOIL STOCKPILED ON SITE? | ☐ | ☐ |
| ARE THERE ANY DRUMS ON SITE? | ☐ | ☐ |

EXPLAIN "YES" ANSWERS IN COMMENTS SECTION

## HOLDING TANK READINGS

| TANK #1 | SIZE: | | | TANK #2 | SIZE: | | |
|---|---|---|---|---|---|---|---|
| ARRIVAL | | DEPARTURE | | ARRIVAL | | DEPARTURE | |
| TOTAL (inches) | WATER (inches) | TOTAL (inches) | WATER (inches) | TOTAL (inches) | WATER (inches) | TOTAL (inches) | WATER (inches) |
| | | | | | | | |

## PRODUCT RECOVERY

☐ PASSIVE BAILERS
☐ WICKS

| WELL ID | HT. IN BAILER (inches) | QUAN. (gal) |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |

HAND BAILING

| WELL ID | QUAN. (gal) | WELL ID | QUAN. (gal) |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

PRODUCT DESCRIPTION:

## COMMENTS

TANK. GAUGED HOLDING TANK. WHEN WELLS RECHARGED, SAMPLED USING TEFLON SAMPLERS FOR BTEX ON ALL WELLS SAMPLED, AND VOC+15 ON NEW WELLS MW-5 AND MW-27. LOCKED WELLS, DECONNED EQUIPMENT WROTE REPORTS FOR SHARE-IT TASK AND WELL MONITORING.

## DATA ANALYSIS / REVIEW

☐ SYSTEM/DATA REVIEW COMPLETE: Continue as is.

☐ PROBLEM NOTED. REMARKS:

REVIEWED BY:
HYDRO:
PROJ. MGR:
DATA ENTERED BY:

DATE: 5/23/96
PAGE 2 OF 4

HYDROGEOLOGIST: GREG CASABONA
TECHNICIAN: MATT UZM / JOHN SKUBAT

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# GROUNDWATER PURGING AND SAMPLING FIELD REPORT

HANDEX LOCATION CODE: 100623-00 CONTROL #: 07347
CLIENT: Shell
STREET ADDRESS: Paidge Ave
CITY: Brooklyn STATE: NY

Handex OF NEW JERSEY, INC.
500 CAMPUS DRIVE - P.O. BOX 451
MORGANVILLE, NEW JERSEY 07751-0451
(908) 536-8500 FAX (908) 536-7751

| | WELL ID | DO (mg/l) | TEMP (°C) | pH (SU) | COND (µs) | DEPTH TO WATER (ft) | TIME BEGIN | TIME END | EST. VOL. PURGED (gal) | PURGE RATE (gpm) | WELL DEPTH (ft) | WELL DIAM. (in) | NOTES | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BEFORE PURGING | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | Tot Vol | | | Rech | Misc |
| DURING PURGING | MW-1 | | | | | 11.95 | | | 13 | 3X | 12.0 | 4" | Good | Sheen |
| | 3 | | | | | 6.59 | | | 20 | | 12.0 | | | ND |
| | 5 | | | | | 4.60 | | | 22 | | 12.0 | | | Sheen |
| | 6 | | | | | 10.55 | | | 15 | | 12.0 | | | Film |
| | 7 | | | | | 8.02 | | | 11 | | 10.0 | | | odor |
| | 8 | | | | | 9.25 | | | 8 | | 10.0 | | | Odor |
| | 9 | | | | | 11.70 | | | 12 | | 12.0 | | | Film |
| | 13 | | | | | — | | | 8 | DEV. 01 | 14.1 | | — | — |
| | 14 | | | | | 9.20 | | | 16 | 3X | 14.1 | | Good | Odor |
| | 16 | | | | | — | | | 4 | DEV. 01 | 12.0 | | — | — |
| AT SAMPLING | MW-1 | | | | | 3.51 | 3:20 | | | | | | | |
| | 3 | | | | | 2.58 | 3:10 | | | | | | | |
| | 5 | | | | | 1.79 | 2:50 | | | | | | | |
| | 6 | | | | | 4.92 | 2:20 | | | | | | | |
| | 7 | | | | | 4.70 | 1:45 | | | | | | | |
| | 8 | | | | | 5.91 | 2:05 | | | | | | | |
| | 9 | | | | | 5.75 | 1:55 | | | | | | | |
| | 14 | | | | | 6.38 | 3:30 | | | | | | | |
| | 18 | | | | | 3.22 | 4:10 | | | | | | | |
| | 23 | | | | | 4.06 | 3:40 | | | | | | | |

METER NUMBERS
DO:
pH:
COND:

LAB CERTIFICATION #: [illegible]
LAB MANAGER: [signature]
DATE: 5-24-96

DATA ANALYSIS / REVIEW
☐ SYSTEM/DATA REVIEW COMPLETE: Continue as is.
☐ PROBLEM NOTED. See Page 1.

REVIEWED BY:
HYDRO:
PROJ. MGR:

DATE: 5/23/96
PAGE 1 OF 2

HYDROGEOLOGIST: Greg Casabone
TECHNICIAN: Matt Urm, John Skurcat

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# GROUNDWATER PURGING AND SAMPLING FIELD REPORT

HANDEX LOCATION CODE: 00023 -00 CONTROL #: 7342
CLIENT: Shell
STREET ADDRESS: RIDGE AVE
CITY: BROOKLYN STATE: NY

Handex OF NEW JERSEY, INC.
500 CAMPUS DRIVE - P.O. BOX 451
MORGANVILLE, NEW JERSEY 07751-0451
(908) 536-8500 FAX (908) 536-7751

| | WELL ID | DO (mg/l) | TEMP (°C) | pH (SU) | COND (µs) | DEPTH TO WATER (ft) | TIME BEGIN | TIME END | EST. VOL. PURGED (gal) | PURGE RATE (gpm) | WELL DEPTH (ft) | WELL DIAM. (in) | NOTES | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BEFORE PURGING | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | TOTAL | | | Rech | Mag |
| DURING PURGING | MW-17 | | | | | — | | | 8 | DEV. 01 | 12.0 | 4" | — | — |
| | 18 | | | | | 11.95 | | | 12 | 2X | 12.0 | | Poor | Sheen |
| | 19 | | | | | — | | | 4 | DEV. 01 | 12.0 | | — | — |
| | 20 | | | | | — | | | 8 | DEV-01 | 12.0 | | — | — |
| | 21 | | | | | — | | | 5 | DEV-01 | 12.0 | | — | — |
| | 22 | | | | | — | | | 10 | DEV-01 | 12.0 | | — | — |
| | 23 | | | | | 6.35 | | | 17 | 3X | 12.0 | | Good | Odor |
| | 24 | | | | | 8.19 | | | 18 | | 12.0 | | ↓ | ↓ |
| | 25 | | | | | 10.90 | | | 17 | | 12.0 | | Fair | |
| | 27 | | | | | 5.56 | | | 26 | | 14.9 | | Good | ↓ |
| AT SAMPLING | 28 | | | | | 3.75 | | | 21 | | 12.5 | | | Film |
| | 29 | | | | | 5.10 | | | 28 | ↓ | 10.3 | ↓ | ↓ | Sheen |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | MW-24 | | | | | 4.01 | 3:50 | | | | | | | |
| | 25 | | | | | 3.25 | 4:00 | | | | | | | |
| | 27 | | | | | 2.31 | 2:40 | | | | | | | |
| | 28 | | | | | 1.62 | 2:30 | | | | | | | |
| | 29 | | | | | 1.62 | 3:00 | | | | | | | |

METER NUMBERS
DO: _____
pH: _____
COND: _____

LAB CERTIFICATION # 13993
LAB MANAGER: [signature]
DATE: 5-24-96

DATA ANALYSIS / REVIEW
☐ SYSTEM/DATA REVIEW COMPLETE: Continue as is.
☐ PROBLEM NOTED. See Page 1.

REVIEWED BY:
HYDRO: _____
PROJ. MGR: _____

DATE: 5/23/96
PAGE 2 OF 2

HYDROGEOLOGIST: Greg Casabona
TECHNICIAN: Matt Urn / John Skurat

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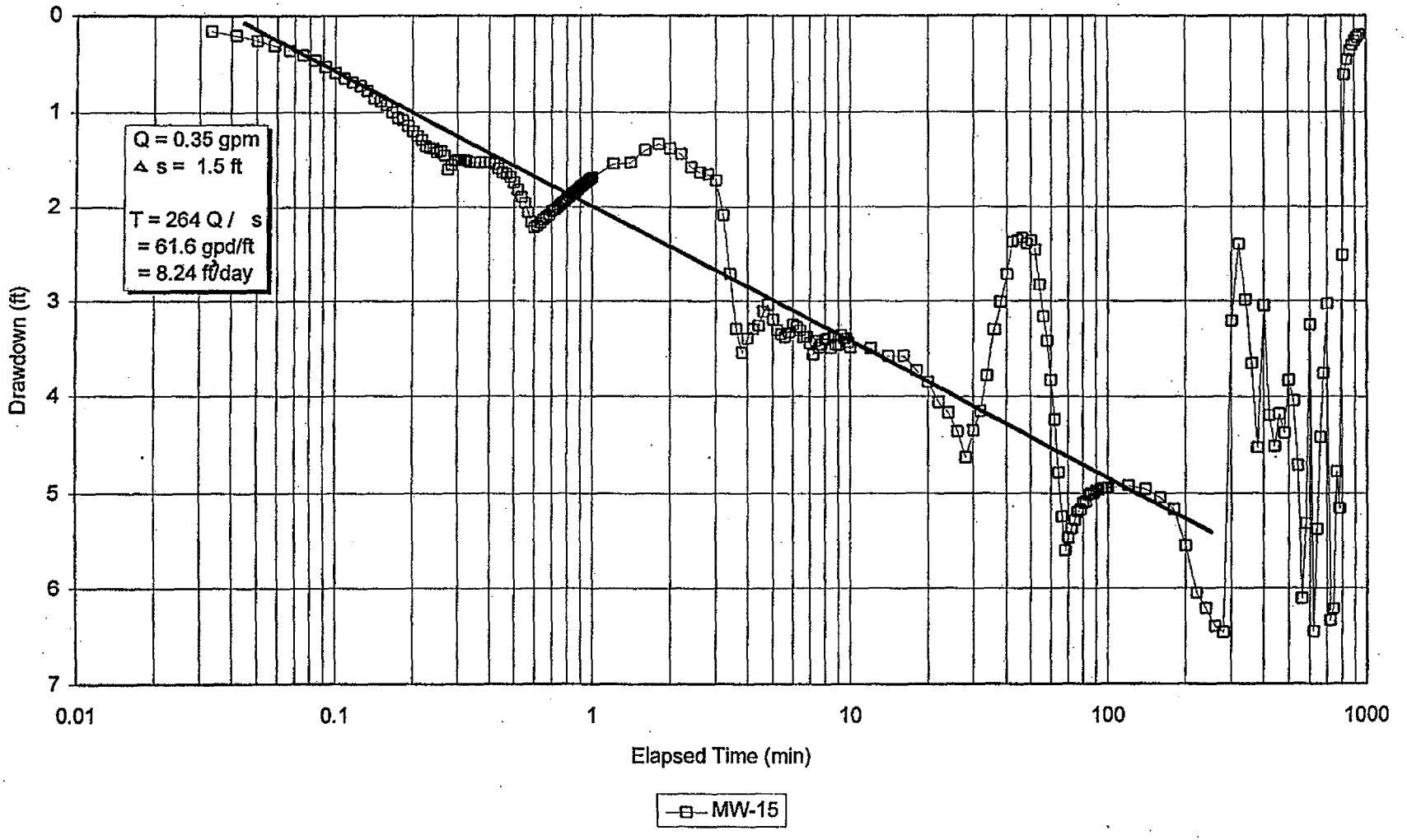
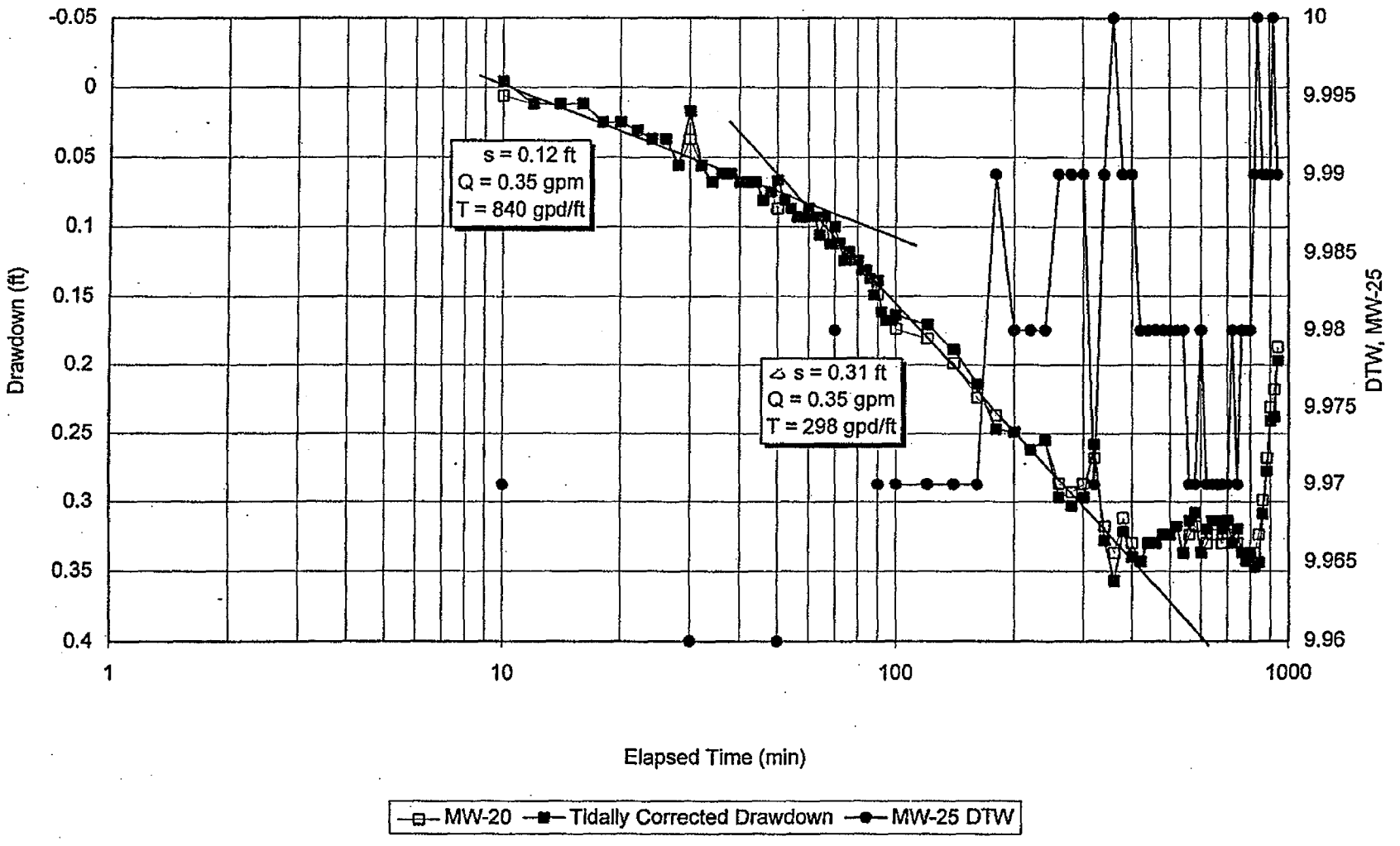
# Attachment B
# Groundwater Pumping Test Data Graphs

**Time-Drawdown Data, Pumping From MW-15**
Shell Brooklyn, NY, Terminal



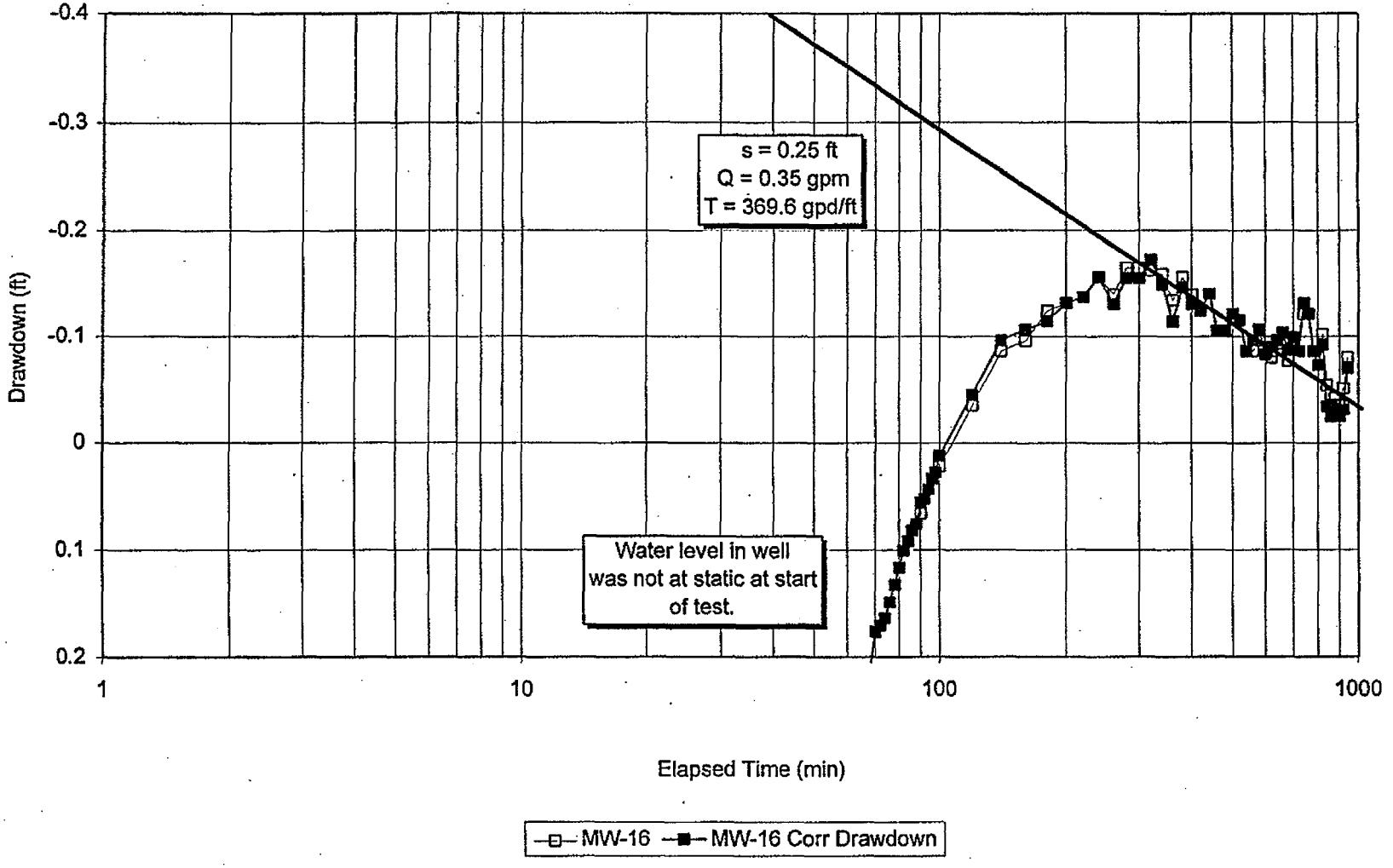

Shell/Motiva 0008111

Time-Drawdown Data, Pumping From MW-15
Shell Brooklyn Terminal




Shell/Motiva 0008112

**Time-Drawdown Data, Pumping From MW-15**
Shell Brooklyn Terminal




Shell/Motiva 0008113

# Attachment C
# Laboratory Air Bag Data

ACCUTEST.

06/13/96

## Technical Report for

Shell Oil Company

HANDX:131-0995-9026 25 Paidge Ave., Brooklyn, NY

4453-100623-01

Accutest Job Number: E12066

---

Report to:

Handex Corporation
500 Campus Drive
Morganville, NJ 07751

ATTN: Kevin McAuley

Total number of pages in report: 4

JUN 13 1996
MS

Vincent J. Pugliese
President

Results relate only to the items tested.

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.



Shell/Motiva 0008115

ACCUTEST

# Sample Summary

Shell Oil Company

**Date:** 06/13/96
**Job No:** E12066

HANDX:131-0995-9026 25 Paidge Ave., Brooklyn, NY
Project No: 4453-100623-01

| Sample Number | Collected Date | Time | By | Received | Matrix Code | Type | Client Sample ID |
|---|---|---|---|---|---|---|---|
| E12066-1 | 06/03/96 | 13:45 | GC | 06/04/96 | AIR | Air | W-20 |
| E12066-2 | 06/03/96 | 14:15 | GC | 06/04/96 | AIR | Air | W-20 WITH SPARGE |



Shell/Motiva 0008116

ACCUTEST

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | W-20 | | |
| **Lab Sample ID:** | E12066-1 | **Date Sampled:** | 06/03/96 |
| **Matrix:** | AIR - Air | **Date Received:** | 06/04/96 |
| **Method:** | TO 3/SW846 8010/8015 | **Percent Solids:** | n/a |
| **Project:** | HANDX:131-0995-9026 25 Paidge Ave., Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | QR3235.D | 1 | 06/05/96 | WDS | n/a | n/a | GQR276 |
| Run #2 | | | | | | | |

**TPH Fraction with Methane**

| CAS No. | MW | Compound | Result | RDL | Units | Q | Result | RDL | Units |
|---|---|---|---|---|---|---|---|---|---|
| 74-82-8 | 16 | Methane | 116000 | 1.0 | ppmv | E | 75900 | 0.65 | mg/m3 |
| | 16 | TPH range A as Methane [a] | 149000 | 1.0 | ppmv | | 97500 | 0.65 | mg/m3 |
| | 78 | TPH range B as Benzene [b] | 43700 | 1.0 | ppmv | | 139000 | 3.2 | mg/m3 |

(a) Report Hydrocarbon range from C1 to C3.
(b) Report Hydrocarbon range from C4 to C10.

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008117

ACCUTEST.

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | W-20 WITH SPARGE | | |
| **Lab Sample ID:** | E12066-2 | **Date Sampled:** | 06/03/96 |
| **Matrix:** | AIR - Air | **Date Received:** | 06/04/96 |
| **Method:** | TO 3/SW846 8010/8015 | **Percent Solids:** | n/a |
| **Project:** | HANDX:131-0995-9026 25 Paidge Ave., Brooklyn, NY | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | QR3236.D | 1 | 06/05/96 | WDS | n/a | n/a | GQR276 |
| Run #2 | | | | | | | |

**TPH Fraction with Methane**

| CAS No. | MW | Compound | Result | RDL | Units | Q | Result | RDL | Units |
|---|---|---|---|---|---|---|---|---|---|
| 74-82-8 | 16 | Methane | 100000 | 1.0 | ppmv | E | 65400 | 0.65 | mg/m3 |
| | 16 | TPH range A as Methane [a] | 130000 | 1.0 | ppmv | | 85100 | 0.65 | mg/m3 |
| | 78 | TPH range B as Benzene [b] | 42100 | 1.0 | ppmv | | 134000 | 3.2 | mg/m3 |

(a) Report Hydrocarbon range from C1 to C3_.
(b) Report Hydrocarbon range from C4 to C10.

ND = Not detected
RDL = Reported Detection Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates that analyte is found in associated method blank
N = Indicates presumptive evidence of a compound



Shell/Motiva 0008118

AIR

Handex®

# CHAIN OF CUSTODY

CLIENT: Shell Terminal

ADDRESS: Paidge Ave

CITY: Brooklyn STATE/ZIP: NY

ATTENTION: Greg Casabona EXT 282

TELEPHONE #

BILL TO: Handex

| | |
|---|---|
| JOB NO. | |
| PROJECT NO. | 100623-01 |
| FACILITY NAME: | Terminal |
| | 4453 |

REQUESTED TURN AROUND TIME:

☐ 24 HOURS ☐ 2-7 DAYS ☐ 8-13 DAYS ☑ NORMAL (14 DAYS) ☐ DISCHARGE (7 DAYS) SPECIFIC DATE: _____

APPROVED: _____

| ACCUTEST ID | DATE SAMPLED | TIME SAMPLED | SMPL BY | MATRIX | NO CONT | PRES | pH | FIELD ID/POINT OF COLLECTION | ANALYSIS REQUESTED |
|---|---|---|---|---|---|---|---|---|---|
| E12066-1 | 6-3-96 | 1415 | GC | Air | 2 | | | W-20 | TVOC (C4-C10) w/ methane backed out |
| -2 | ↓ | 2135 | GC | ↓ | 2 | | | W-20 with Sparge | |

GC

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. RELINQUISHED BY: | DATE/TIME: 6-3-96 1730 | 1. RECEIVED BY: | 3. RELINQUISHED BY: | DATE/TIME: 6/4/96 14:30 | 3. RECEIVED BY: 6-4-96 5 1430 | SAMPLE LOCATION | |
| 2. RELINQUISHED BY: | DATE/TIME 6/4/96 12:20 | 2. RECEIVED BY: | 4. RELINQUISHED BY: | DATE/TIME: | 4. RECEIVED BY: | B.S. | |

DELIVERABLE PACKAGE (CHECK ONE)

☑ NORMAL QC/COMMERCIAL A ☐ REDUCED TIER II ☐ OTHER

COMMENTS:

Shell/Motiva 0008119

# Attachment D
# Hydrocarbon Removal Rate Calculations

SOIL VAPOR EXTRACTION SYSTEM
EMISSION RATE CALCULATIONS

Site: Shell
Brooklyn Terminal

The test was conducted from extraction point MW-20 (SVE Only). A sample of the extracted vapors was collected during the test for later laboratory analysis. Data used for the following calculations was:

The laboratory-determined Total Volatile Petroleum Hydrocarbon concentration was 149,368 mg/m3 after the laboratory removed any methane present. Air velocity of 1350 ft/min was measured in a 1.25 inch diameter pipe (actual diameter is 1.38 inches) with a Kurz Meter.

CALCULATED VALUES

Air flow was 11.7 scfm (at 60 degrees F).
The laboratory TVPH results can be converted to expected readings on field instruments by the following formula:

$$Vc\ (ppm\text{-}v) = (Vc\ (mg/m3) / MW) \times Vm$$

$$\%\ LEL = Vc\ (ppm\text{-}v) / 140$$

Where: MW = molecular weight in g/mole (N-hexane = 86.18)
Vm = Volume of 1 mole of gas in liters/mole
= 23.7 liters/mole at 60 degrees F
140 = Conversion factor when 100% LEL = 14,000 ppm-v

Using these equations, approximately 41,076 ppm-v hydrocarbons were present. This converts to: 293% LEL.

HYDROCARBON EMISSION RATES

The following equation was adapted from API Publication #4410 (1985):

$$Vr\ (lb/hr) = (Vc\ (ppm\text{-}v) / (1{,}000{,}000\ ppm\text{-}v)) \times (86.18\ lb/lb\text{-}mole) \times (1\ lb\text{-}mole/379.5\ scf\ at\ 60\ degrees\ F) \times (Q\ (scfm)) \times (60\ min/hr)$$

Where: Vr = Vapor removal rate in lb/hr
Vc = Vapor concentration in ppm-v
Q = Air flow rate in standard cubic feet per minute
86.18 = molecular weight of N-hexane

This simplifies to:

$$Vr\ (lb/hr) = Vc\ (ppm\text{-}v) \times Q\ (scfm) \times (0.0000136)$$

Note: In the API publication, conversion from lb-moles to scf was 385.36 scf/lb-mole. Since that publication was released, the conversion factor was found to be 379.5 scf/lb-mole at 60 degrees F. The above equation and subsequent simplifications use the revised number.

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Site: Shell
Brooklyn Terminal

The estimated hydrocarbon removal rate calculated from this equation is:

Vr = 6.5653 lb/hour total hydrocarbons.

## LIQUID REMOVAL RATE ESTIMATION

The following formula for estimating liquid removal rates was also adapted from API publication 4410:

LPr (gal/hr) = (Vr (lb/hr)) / (Pd (lbs/gal))

Where: LPr = Liquid recovery rate in gal/hour
Vr = Vapor removal rate in lb/hour
Pd = Hydrocarbon density (6.17 lbs/gal for gasoline)
(assumes specific gravity of gasoline to be 0.75)

For this site, the estimated liquid removal rate from these extraction points is:

LPr = 1.0641 gal/hour, or
= 25.538 gal/day.

Reference: Subsurface Venting of Hydrocarbon Vapors from an Underground Aquifer, API Publication #4410, September 1985.

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SOIL VAPOR EXTRACTION SYSTEM
EMISSION RATE CALCULATIONS

Site: Shell
Brooklyn Terminal

The test was conducted from extraction point MW-20 (SVE with Sparging). A sample of the extracted vapors was collected during the test for later laboratory analysis. Data used for the following calculations was:

The laboratory-determined Total Volatile Petroleum Hydrocarbon concentration was 130,354 mg/m3 after the laboratory removed any methane present. Air velocity of 1250 ft/min was measured in a 1.25 inch diameter pipe (actual diameter is 1.38 inches) with a Kurz Meter.

CALCULATED VALUES

Air flow was 10.9 scfm (at 60 degrees F).
The laboratory TVPH results can be converted to expected readings on field instruments by the following formula:

$$Vc\ (ppm\text{-}v) = (Vc\ (mg/m3) / MW) \times Vm$$

$$\%\ LEL = Vc\ (ppm\text{-}v) / 140$$

Where: MW = molecular weight in g/mole (N-hexane = 86.18)
Vm = Volume of 1 mole of gas in liters/mole
= 23.7 liters/mole at 60 degrees F
140 = Conversion factor when 100% LEL = 14,000 ppm-v

Using these equations, approximately 35,847 ppm-v hydrocarbons were present. This converts to: 256% LEL.

HYDROCARBON EMISSION RATES

The following equation was adapted from API Publication #4410 (1985):

$$Vr\ (lb/hr) = (Vc\ (ppm\text{-}v) / (1{,}000{,}000\ ppm\text{-}v)) \times (86.18\ lb/lb\text{-}mole) \times (1\ lb\text{-}mole/379.5\ scf\ at\ 60\ degrees\ F) \times (Q\ (scfm)) \times (60\ min/hr)$$

Where: Vr = Vapor removal rate in lb/hr
Vc = Vapor concentration in ppm-v
Q = Air flow rate in standard cubic feet per minute
86.18 = molecular weight of N-hexane

This simplifies to:

$$Vr\ (lb/hr) = Vc\ (ppm\text{-}v) \times Q\ (scfm) \times (0.0000136)$$

Note: In the API publication, conversion from lb-moles to scf was 385.36 scf/lb-mole. Since that publication was released, the conversion factor was found to be 379.5 scf/lb-mole at 60 degrees F. The above equation and subsequent simplifications use the revised number.

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Site: Shell
Brooklyn Terminal

The estimated hydrocarbon removal rate calculated from this equation is:

Vr = 5.3052 lb/hour total hydrocarbons.

## LIQUID REMOVAL RATE ESTIMATION

The following formula for estimating liquid removal rates was also adapted from API publication 4410:

LPr (gal/hr) = (Vr (lb/hr)) / (Pd (lbs/gal))

Where: LPr = Liquid recovery rate in gal/hour
Vr = Vapor removal rate in lb/hour
Pd = Hydrocarbon density (6.17 lbs/gal for gasoline)
(assumes specific gravity of gasoline to be 0.75)

For this site, the estimated liquid removal rate from these extraction points is:

LPr = 0.8598 gal/hour, or
= 20.636 gal/day.

Reference: Subsurface Venting of Hydrocarbon Vapors from an Underground Aquifer, API Publication #4410, September 1985.

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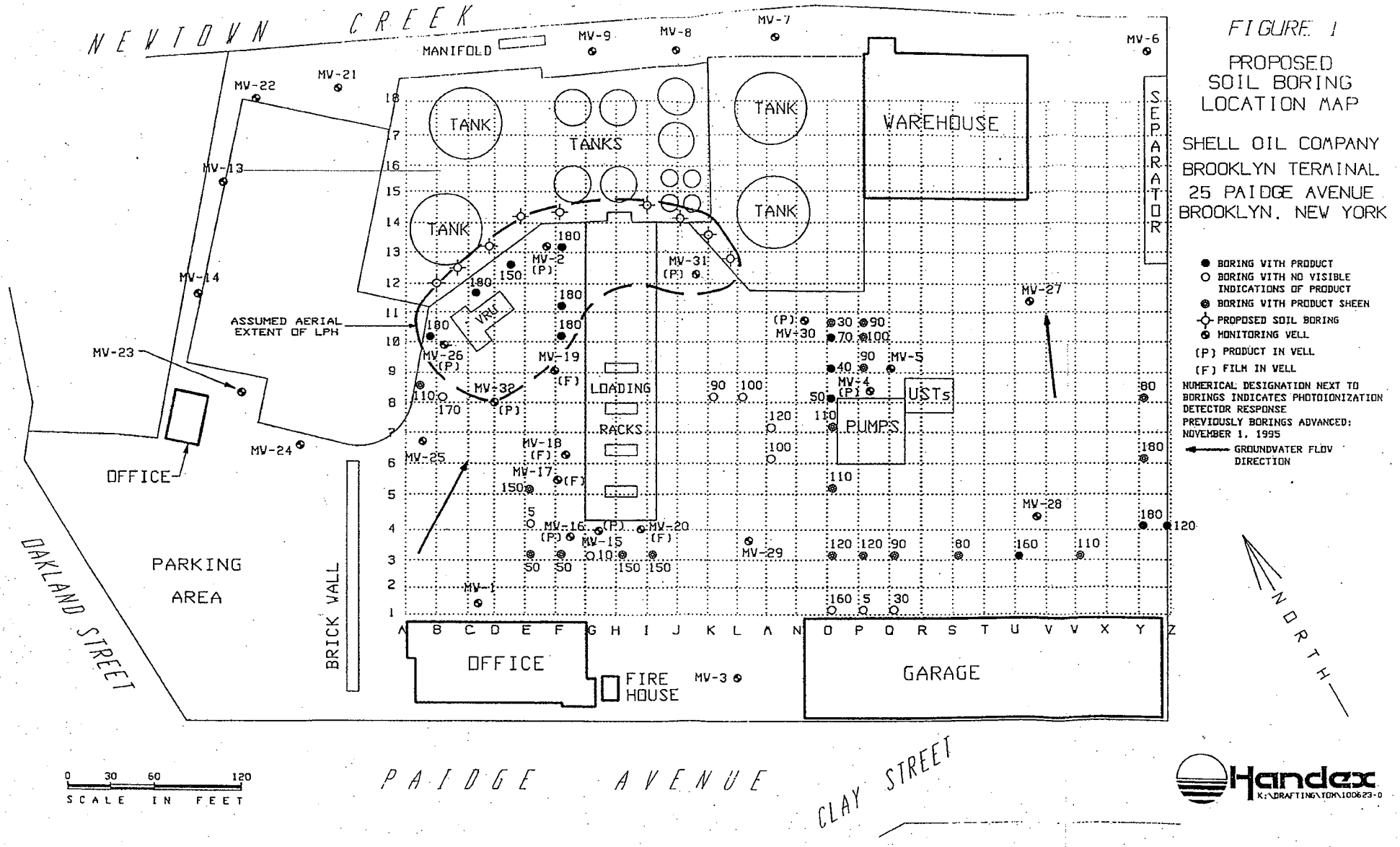



FIGURE 1

PROPOSED SOIL BORING LOCATION MAP

SHELL OIL COMPANY
BROOKLYN TERMINAL
25 PAIDGE AVENUE
BROOKLYN, NEW YORK

- ● BORING WITH PRODUCT
- ○ BORING WITH NO VISIBLE INDICATIONS OF PRODUCT
- ⊗ BORING WITH PRODUCT SHEEN
- ⊕ PROPOSED SOIL BORING
- ⊗ MONITORING WELL

(P) PRODUCT IN WELL

(F) FILM IN WELL

NUMERICAL DESIGNATION NEXT TO BORINGS INDICATES PHOTOIONIZATION DETECTOR RESPONSE

PREVIOUSLY BORINGS ADVANCED: NOVEMBER 1, 1995

← GROUNDWATER FLOW DIRECTION

Handex

K:\DRAFTING\TOM\100623-0

Shell/Motiva 0008125

# DOCUMENT INFO

16
44

DocID: 00000049

Filename: 58603-1990-04-09-PER-01 (Holding Tank Notification - Handex).pdf

HANDEX OF NEW JERSEY, INC., 500 Campus Drive, P.O. Box 451, Morganville, New Jersey 07751-04511 (201) 536-8500

April 9, 1990

New York Fire Department
260 Livingston Street
Brooklyn, New York 11201

Att: John J. Toohey, Fire Chief

Re: Holding Tank
Shell Oil Terminal
25 Paidge Avenue
Brooklyn, New York

Dear Mr. Toohey,

This letter is in response to a request from Mr. Harry Ott of your department with whom I spoke to on April 4, 1990. This letter also provides formal notification that Handex of New Jersey, Inc. has received permission from the New York Department of Environmental Control (NYDEC) to install a temporary above ground 290-gallon holding tank at the above referenced location. The purpose of the holding tank is to collect fuel oil that is bailed from monitor wells on the terminal property. The holding tank will be grounded, vented, and labeled according to NYDEC specifications.

Should you have any questions or require addition information do not hesitate to call.

Sincerely,

Douglas S. Lessing
Environmental Engineer

cc: Tom Turner, Shell Oil Company



Shell/Motiva 0008127

# DOCUMENT INFO

16
44

DocID: 00000050

Filename: 58603-1990-05-14-COR-01 (Holding Tank Correspondence - Handex).pdf

HANDEX OF NEW JERSEY, INC., 500 Campus Drive, P.O. Box 451, Morganville, New Jersey 07751-04511 (201) 536-8500

May 14, 1990

New York Fire Department
260 Livingston Street
Brooklyn, New York 11201

Att: Mr. Nicolo Sicuranza

Re: Holding Tank
Shell Oil Terminal
25 Paidge Avenue
Brooklyn, New York

Dear Mr. Sicuranza,

This letter is in response to our telephone conversation of 8 May 1990 regarding installation of an above ground waste oil tank at the Shell Oil Terminal in Brooklyn, New York.

Attached is a site plan of the Shell Terminal indicating the proposed location of the 275-gallon waste oil tank and a copy of the tank schematic. As illustrated on the site plan, the tank will be located within the terminal's diked underground storage tank area and will be fitted with two cradles for above ground installation. Referring to the schematic, the tank is a 36" diameter, 78" O.A.L. steel waste oil tank with a 1/4" steel shell.

In addition to tank specifications, the tank will be grounded, properly vented and affixed with a permanent "Flammable Waste" label as directed by Mr. Anthony Sigona of the NYDEC.

If you should have any questions or require additional information do not hesitate to call (tel.#201-536-8500, x271).

Sincerely,

Douglas S. Lessing
Environmental Engineer

enclosures

c: Tom Turner, Shell Oil Company
Jack Rogers, Brooklyn Shell Terminal

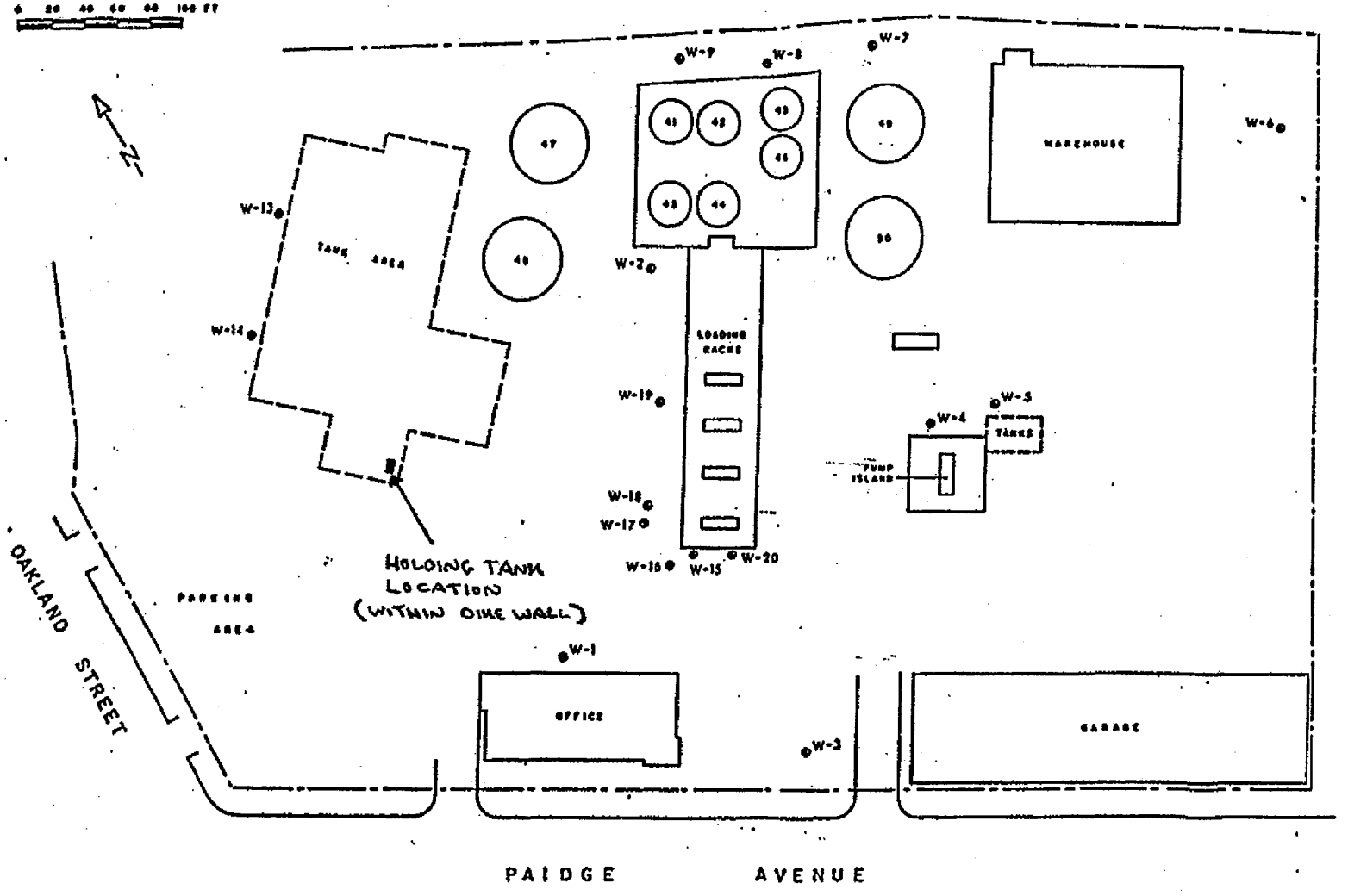


Shell/Motiva 0008129

SHELL OIL TERMINAL
BROOKLYN, NEW YORK

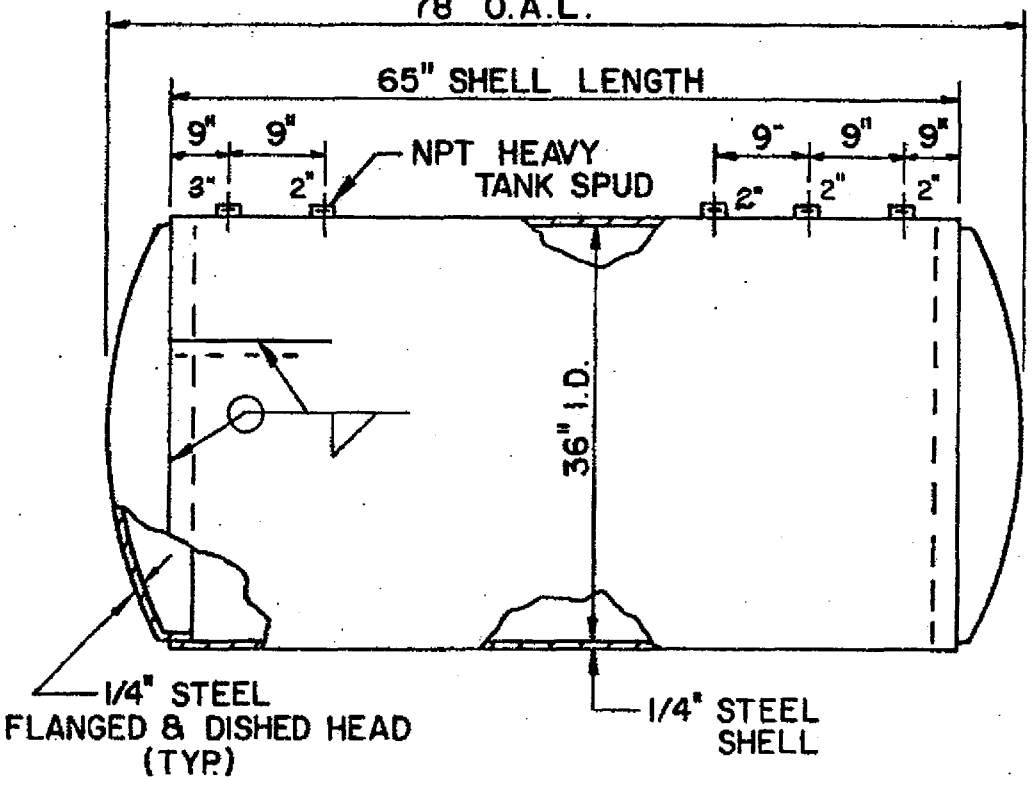
FIGURE 1

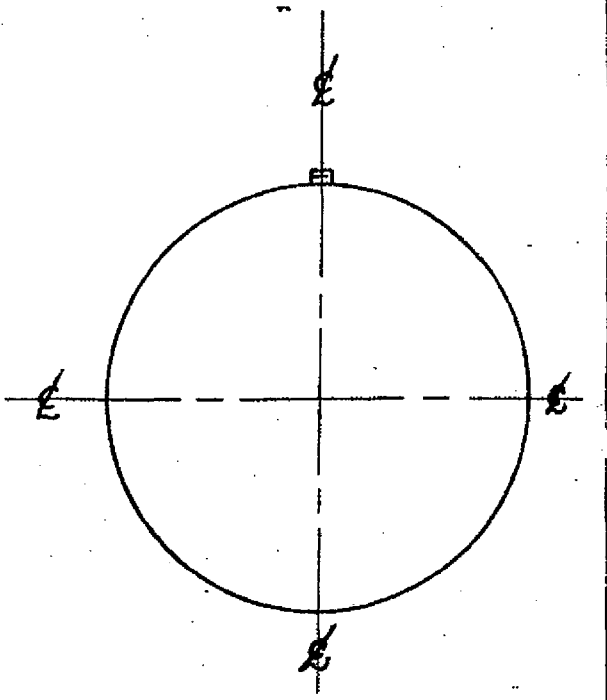
SITE PLAN




Handex

Shell/Motiva 0008130




NOTES:

1. TEST TANK FOR TIGHTNESS.
2. AFFIX N.Y. CITY LABEL.
3. PAINT: 2 COATS RED OXIDE PRIMER.
4. CAP ALL OPENINGS.

JOB: BROOKLYN, N.Y.

TANKS REQ'D.: (1)

| | | | |
|---|---|---|---|
| N.Y. CITY 275 GALLON WASTE OIL TANK<br>36" DIA. X 78" O.A.L. | | | |
| FOR: HANDEX OF N.J. INC.<br>MORGANVILLE, N.J. | | | |
| ALPHA TANK CO. INC.<br>1850 STEINWAY ST., L.I. CITY, N.Y. | | | |
| DW. BY [illegible]<br>DATE 5/9/90<br>SCALE — | APP. BY | CONT. NO | DWG. NO<br>1303 |