Contract No: EP-W-09-002
WA #: 023-RARA-02PE

Region 2 RAC2
Remedial Action Contract

Bi-Weekly Progress Report No. 7
Remedial Action – Phase III
(Southern Extraction Wells Installation

Old Roosevelt Field Contaminated Groundwater Area Superfund Site

Remedial Action

Garden City, New York

April 2, 2013

213378

CDM Smith

Remedial Action Contract

U.S. EPA Contract No.: EP-W-09-002

Remedial Action - Phase III (Southern Extraction Wells Installation)

Work Assignment No:	**023-RARA-02PE**
	Old Roosevelt Field Contaminated Groundwater Area Site
EPA Remedial Project Manager:	**Sherrel Henry**
CDM Smith Site Manager:	**Thomas Mathew, P.E.**

Prepared for:
U.S. Environmental Protection Agency
Region 2
290 Broadway
New York, New York 10007-1866

Prepared by:
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New York, New York

Bi-Weekly Progress Report No. 7
Phase III - Southern Extraction Well Installation

1.0 Introduction

Pursuant of the Work Assignment Form (WAF) Statement of Work (SOW), for Region 2 Contract EP-W-09-002 Work Assignment 023-RARA-02PE, CDM Federal Programs Corporation (CDM Smith) is performing the Phase III (Southern Extraction Well Installation) Remedial Action (RA) at the Old Roosevelt Contaminated Groundwater Area Site, Garden City, New York. The Bi-Weekly Progress Report is intended to partially fulfill the requirements specified under WAF SOW for this assignment. This Bi-Weekly report is prepared for the work performed from February 25, 2013 to March 8, 2013.

The primary responsibility of the project geologist was to oversee all drilling and well installation activities to ensure that the work meets all requirements of the drilling statement of work and is performed by the Subcontractor in accordance with all applicable quality assurance, health and safety, and regulatory requirements.

The work completed during this reporting period includes: plumbness and alignment testing at SEW-1I, well development of SEW-1D and SEW-1I, investigation derived waste (IDW) handling, well disinfection, well completion and demobilization. This work is summarized in further detail below. A list of the supporting documentation attached with this bi-weekly progress report is as follows:

- Attachment 1 - CDM's Daily Status Report
- Attachment 2 - CDM's Field Log Book notes
- Attachment 3 – Photographic Log
- Attachment 4 – Well Construction Diagram (includes well development data)

2.0 Personnel On-Site

The following personnel were on site during this reporting period:

CDM Smith - Contractor

Mike Ehnot	Project Geologist
Ali Rahmani	Engineer
Thomas Mathew	Project Manager

Uni-Tech Drilling Company (UTD)-Drilling Subcontractor

Butch Hitzelberger	Driller
Brad Barnes	Helper

Seacoast Environmental Services-Investigation Derived Waste Subcontractor

Eugene Streiter
Carlos Tobar
Andrew McAuley
James Ulrich
Sal Reyes
Karl Musselman

3.0 Summary of Work Performed

The following is a brief summary of the field activities performed during this reporting period (refer to Attachment 1 through Attachment 4 for the Daily Status Reports, field logbook notes, photographic log, and well development data on well construction summaries, respectively):

- SEW-1D and SEW-1I Well Development
  - UTD performed well development using the air lift/swab and submersible pump methods. Purge water was contained and ultimately transferred to the Adler tanks at the staging area. UTD measured the flow rate, total gallons purged and the sand content within the water IDW using a Rossum Sand Tester. CDM Smith measured water quality parameters during development. SEW-1D and SEW-1I well development was completed as water quality parameters stabilized, turbidity was at 5 NTUs or less, and water was free of sand.
  - CDM Smith determined the specific capacity of SEW-1D using the final pump rate and subsequent drawdown during well development. SEW-1D was purged at 168 gallons per minute (gpm) and the drawdown was 13 feet; therefore, the specific capacity is 12.9 gpm/ft.
  - CDM Smith determined the specific capacity of SEW-1I using the final pump rate and subsequent drawdown during well development. SEW-1I was purged at 165 gallons per minute (gpm) and the drawdown was 15.4 feet; therefore, the specific capacity is 10.7 gpm/ft.

- Investigation Derived Waste (IDW) Handling
  - Seacoast transported three soil IDW rolloffs (#0480, #9869 and #9613) from the staging area to 110 Sand Company for disposal.
  - UTD mixed kiln dust into soil IDW rolloffs (#0480 and #9869) using a backhoe, prior to rolloff transport offsite.
  - During SEW-1D and SEW-1I well development, Seacoast transported water IDW from the Adler tanks at the staging area and emptied the water into Adler tank at the treatment building.
  - Seacoast pumped the development water from the Adler tank (#2031) through a portable filter housing unit which discharged into a holding tank at the existing groundwater treatment system for treatment and discharge to recharge basin #124.

- Plumbness & Alignment Testing
  - UTD performed plumbness and alignment testing of SEW-1I, using a plumbness bob and an alignment disk, respectively.
  - SEW-1I passed the plumbness and alignment testing.

- Well Disinfection
  - UTD performed well disinfection at SEW-1D, SEW-1I and SEW-1S by injecting a sodium hypochlorite solution into each well. After a minimum period of 24 hours following injection, UTD purged the extraction wells using a submersible pump to evacuate the chlorine solution from the wells. During pumping, the drillers tested the purge water for the presence of chlorine using a chlorine test kit. Water was purged until the extraction wells were free of chlorine.

- Well Completion
  - UTD welded stainless steel lids on top of each extraction well. Subsequently sand was placed over the wells and a steel plate was welded to the lids for well completion.

- Equipment Decontamination
  - UTD cleaned equipment used during drilling, development and disinfection, prior to removal offsite.

- Demobilization
  - The drillers transported the drill rig and associated equipment offsite for demobilization.

- Health and Safety
  - CDM Smith conducted a daily Health and Safety meeting at the onset of each day.

4.0 Problems/Corrective Action

- Processing through the portable filter housing unit became slow due to the turbid water IDW; therefore, development water was allowed to settle for a period of time before processing commenced.

5.0 Deviations

None noted for this period.

6.0 Conclusions

All RA construction work was completed in general accordance with RA Subcontract Documents and approved construction submittals.

ATTACHMENT 1
DAILY STATUS REPORTS

Daily Status Report

PROJECT: **Old Roosevelt Field Site**
Remedial Action

Date: 2-25-13

Day: 66 (Monday)

WEATHER: Sunny & Cold
TEMP: 35/45
WIND:

SEW-1D

PERSONNEL ONSITE

CDM Smith: Mike Ehnot

Uni-Tech: Butch Hitzelberger (Driller); Brad Barnes (Helper)

VISITORS

TIME	NAME	REPRESENTING	REMARKS

EQUIPMENT IN USE:
Failing Jed A Drill Rig
Semco Rig
Water/Tender truck
Box Trailer
One-ton Support truck
Trailer
JCB 3CX Backhoe
Rolloff #9869 @ Staging Area (*November 30, 2012-Present*) [Full] {*Needs Kiln Dust*}
Rolloff #0480 @ Staging Area (*February 4, 2013-Present*) [Full]
Rolloff #9613 @ Staging Area (*January 9, 2013-Present*) [Kiln Dust]
Adler Tank #A1241 @ Staging Area (*November 30, 2012-Present*) [Full]
Adler Tank #A2122 @ Staging Area (*February 18, 2013-Present*) [~2,000 gallons]
Adler Tank #A2043 @ Staging Area (*February 18, 2013-Present*) [Full]
Adler Tank #A2878 @ Staging Area (*February 20, 2013-Present*) [~2,000 gallons]
Adler Tank #A2031 @ Treatment Building (*February 18, 2013-Present*) [~3,000 gallons]

CONSTRUCTION ACTIVITIES COMPLETED AND/OR IN PROGRESS:

-UTD begins air lift/swabbing well development at SEW-1D. Purge water is contained in the drill cutting container then pumped into Alder Tank #A1241, Tank #2122 and Tank #A2043 at the staging area. Approximately 14,000 gallons of water was purged from SEW-1D today.

WORK BEING INSPECTED:

NA

JOB SAFETY. INDICATE WHAT WAS CHECKED, RESULTS, AND CORRECTIVE ACTIONS TAKEN:
Daily tailgate Health & Safety meeting Topic: Ear Protection

Daily Status Report (Continued)

PROJECT: **Old Roosevelt Field Site**

TESTING PERFORMED:
PROBLEM/DELAYS/CORRECTIVE ACTION TO BE TAKEN:
GREEN REMEDIATION PRACTICES IMPLEMENTED AND QUANTITIES TRACKED:
COMMUNICATION WITH CONTRACTOR STAFF:
MEETING:
ADDITIONAL ACTIVITIES AND REMARKS:

By: Mike Ehnot

Title: Geologist

Daily Status Report

PROJECT: **Old Roosevelt Field Site**
Remedial Action

Date: 2-26-13

Day: 67 (Tuesday)

WEATHER: Sunny & Cool
TEMP: 35/45
WIND:

SEW-1D

PERSONNEL ONSITE

CDM Smith: Mike Ehnot

Uni-Tech: Butch Hitzelberger (Driller); Brad Barnes (Helper)

Seacoast: Gene Streiter, Randy Burnett, Karl Musselman

VISITORS

TIME	NAME	REPRESENTING	REMARKS

EQUIPMENT IN USE:
Failing Jed A Drill Rig
Semco Rig
Water/Tender truck
Box Trailer
One-ton Support truck
Trailer
JCB 3CX Backhoe
Rolloff #9869 @ Staging Area (*November 30, 2012-Present*) [Full]
Rolloff #0480 @ Staging Area (*February 4, 2013-Present*) [Full]
Rolloff #9613 @ Staging Area (*January 9, 2013-Present*) [Kiln Dust]
Adler Tank #A1241 @ Staging Area (*November 30, 2012-Present*) [~10,000 gallons]
Adler Tank #A2122 @ Staging Area (*February 18, 2013-Present*) [~1,000 gallons]
Adler Tank #A2043 @ Staging Area (*February 18, 2013-Present*) [~5,000 gallons]
Adler Tank #A2878 @ Staging Area (*February 20, 2013-Present*) [~2,000 gallons]
Adler Tank #A2031 @ Treatment Building (*February 18, 2013-Present*) [~5,000 gallons]

CONSTRUCTION ACTIVITIES COMPLETED AND/OR IN PROGRESS:

-UTD resumes air lift/swabbing well development at SEW-1D. Purge water is contained in the drill cutting container then pumped into Alder Tank #A2122 and Tank #A2043 at the staging area. Approximately 35,000 gallons of water was purged from SEW-1D today.
-The drillers mix kiln dust into Rolloff #9869 and Rolloff #0480 using a backhoe.
-Seacoast transports water IDW from the Adler tanks at the staging area and empties it into the Adler tank at the treatment building. Subsequently, Seacoast pumps water IDW from Adler Tank #2031 into a portable filter (10-mil size) housing unit and discharges into the holding tank of the treatment system for processing. Approximately 48,000 gallons of water IDW were transported and approximately 42,000 gallons were processed today.

Daily Status Report (Continued)

PROJECT: **Old Roosevelt Field Site**

WORK BEING INSPECTED: NA
JOB SAFETY. INDICATE WHAT WAS CHECKED, RESULTS, AND CORRECTIVE ACTIONS TAKEN: Daily tailgate Health & Safety meeting Topic: Opening Hoses & Valves
TESTING PERFORMED:
PROBLEM/DELAYS/CORRECTIVE ACTION TO BE TAKEN:
GREEN REMEDIATION PRACTICES IMPLEMENTED AND QUANTITIES TRACKED:
COMMUNICATION WITH CONTRACTOR STAFF:
MEETING:
ADDITIONAL ACTIVITIES AND REMARKS:

By: Mike Ehnot

Title: Geologist

Daily Status Report

PROJECT: **Old Roosevelt Field Site**
Remedial Action

Date: 2-27-13

Day: 68 (Wednesday)

WEATHER: Rainy
TEMP: 35/45
WIND:

SEW-1D

PERSONNEL ONSITE

CDM Smith: Mike Ehnot

Uni-Tech: Butch Hitzelberger (Driller); Brad Barnes (Helper)

Seacoast: Carlos Tobar, Andrew McAuley, Karl Musselman

VISITORS

TIME	NAME	REPRESENTING	REMARKS

EQUIPMENT IN USE:
Failing Jed A Drill Rig
Semco Rig
Water/Tender truck
Box Trailer
One-ton Support truck
Trailer
JCB 3CX Backhoe
Rolloff #9613 @ Staging Area (*January 9, 2013-Present*) [Kiln Dust]
Adler Tank #A1241 @ Staging Area (*November 30, 2012-Present*) [Empty]
Adler Tank #A2122 @ Staging Area (*February 18, 2013-Present*) [Empty]
Adler Tank #A2043 @ Staging Area (*February 18, 2013-Present*) [Empty]
Adler Tank #A2878 @ Staging Area (*February 20, 2013-Present*) [Empty]
Adler Tank #A2031 @ Treatment Building (*February 18, 2013-Present*) [~5,000 gallons]

CONSTRUCTION ACTIVITIES COMPLETED AND/OR IN PROGRESS:

-UTD resumes and completes SEW-1D well development via submersible pump. Purge water is discharged directly into Adler Tank #A2878 at the staging area. Approximately 30,500 gallons of water was purged today for a total of approximately 80,000 gallons purged from SEW-1D for well development. During well development, the drillers monitored the purge water, volume purged and sand content and CDM measured specific capacity and water quality parameters.
-Seacoast transports soil IDW Rolloff #9869 and Rolloff #0480 offsite for disposal at 110 Sand Company.
-Seacoast transports water IDW from the Adler tanks at the staging area and empties it into the Adler tank at the treatment building. Subsequently, Seacoast pumps water IDW from Adler Tank #2031 into a portable filter (10-mil size) housing unit and discharges into the holding tank of the treatment system for processing. Approximately 53,000 gallons of water IDW were transported and approximately 54,000 gallons were processed today.

WORK BEING INSPECTED:

NA

Daily Status Report (Continued)

PROJECT: **Old Roosevelt Field Site**

JOB SAFETY. INDICATE WHAT WAS CHECKED, RESULTS, AND CORRECTIVE ACTIONS TAKEN: Daily tailgate Health & Safety meeting Topic: Slips, Trips & Falls
TESTING PERFORMED: During SEW-1D well development the drillers measured the sand content of the purge water using a Rossum Sand Tester. Additionally, CDM measured the pH, temperature, specific conductance, dissolved oxygen, oxygen reduction potential and turbidity. SEW-1D well development was complete as the sand content was 0 mg/l, the turbidity was below 5 nephelometric turbidity units (NTU) and the water quality parameters stabilized. SEW-1D was pumped at 168 gallons per minute (gpm) and the drawdown was 13 feet; therefore, the specific capacity is 12.9 gpm/ft.
PROBLEM/DELAYS/CORRECTIVE ACTION TO BE TAKEN:
GREEN REMEDIATION PRACTICES IMPLEMENTED AND QUANTITIES TRACKED:
COMMUNICATION WITH CONTRACTOR STAFF:
MEETING:
ADDITIONAL ACTIVITIES AND REMARKS:

By: Mike Ehnot

Title: Geologist

Daily Status Report

PROJECT: **Old Roosevelt Field Site**
Remedial Action

Date: 2-28-13

Day: 69 (Thursday)

WEATHER: Rainy
TEMP: 35/45
WIND:

SEW-1I

PERSONNEL ONSITE

CDM Smith: Mike Ehnot

Uni-Tech: Butch Hitzelberger (Driller); Brad Barnes (Helper)

VISITORS

TIME	NAME	REPRESENTING	REMARKS

EQUIPMENT IN USE:
Failing Jed A Drill Rig
Semco Rig
Water/Tender truck
Box Trailer
One-ton Support truck
Trailer
JCB 3CX Backhoe
Rolloff #9613 @ Staging Area (*January 9, 2013-Present*) [Kiln Dust]
Adler Tank #A1241 @ Staging Area (*November 30, 2012-Present*) [Empty]
Adler Tank #A2122 @ Staging Area (*February 18, 2013-Present*) [Empty]
Adler Tank #A2043 @ Staging Area (*February 18, 2013-Present*) [Empty]
Adler Tank #A2878 @ Staging Area (*February 20, 2013-Present*) [Empty]
Adler Tank #A2031 @ Treatment Building (*February 18, 2013-Present*) [~5,000 gallons]

CONSTRUCTION ACTIVITIES COMPLETED AND/OR IN PROGRESS:

-UTD performs plumbness and alignment testing at SEW-1I.
-The drillers set up air lift/swabbing equipment at SEW-1I.

WORK BEING INSPECTED:

NA

JOB SAFETY. INDICATE WHAT WAS CHECKED, RESULTS, AND CORRECTIVE ACTIONS TAKEN:
Daily tailgate Health & Safety meeting Topic: Extension Cord Inspection

TESTING PERFORMED:

SEW-1I passes plumbness and alignment testing.

Daily Status Report (Continued)

PROJECT: **Old Roosevelt Field Site**

PROBLEM/DELAYS/CORRECTIVE ACTION TO BE TAKEN:
GREEN REMEDIATION PRACTICES IMPLEMENTED AND QUANTITIES TRACKED:
COMMUNICATION WITH CONTRACTOR STAFF:
MEETING:
ADDITIONAL ACTIVITIES AND REMARKS:

By: Mike Ehnot

Title: Geologist

Daily Status Report

PROJECT: **Old Roosevelt Field Site**
Remedial Action

Date: 3-01-13
Day: 70 (Friday)
WEATHER: Sunny & Mild
TEMP: 35/45
WIND:

SEW-1I

PERSONNEL ONSITE

CDM Smith: Mike Ehnot

Uni-Tech: Butch Hitzelberger (Driller); Brad Barnes (Helper)

VISITORS

TIME	NAME	REPRESENTING	REMARKS
11:15	Ali Rahmani, Thomas Mathew	CDM Smith	Site Visit/Meeting
11:15	Sherrel Henry	EPA	Site Visit/Meeting

EQUIPMENT IN USE:
Failing Jed A Drill Rig
Semco Rig
Water/Tender truck
Box Trailer
One-ton Support truck
Trailer
JCB 3CX Backhoe
Rolloff #9613 @ Staging Area (*January 9, 2013-Present*) [Kiln Dust]
Adler Tank #A1241 @ Staging Area (*November 30, 2012-Present*) [~20,000 gallons]
Adler Tank #A2122 @ Staging Area (*February 18, 2013-Present*) [Empty]
Adler Tank #A2043 @ Staging Area (*February 18, 2013-Present*) [Empty]
Adler Tank #A2878 @ Staging Area (*February 20, 2013-Present*) [Empty]
Adler Tank #A2031 @ Treatment Building (*February 18, 2013-Present*) [~5,000 gallons]

CONSTRUCTION ACTIVITIES COMPLETED AND/OR IN PROGRESS:

-UTD begins air lift/swabbing well development at SEW-1I. Purge water is contained in the drill cutting container then pumped into Alder Tank #A1241. Approximately 20,000 gallons of water was purged from SEW-1I today.

WORK BEING INSPECTED:

NA

JOB SAFETY. INDICATE WHAT WAS CHECKED, RESULTS, AND CORRECTIVE ACTIONS TAKEN:
Daily tailgate Health & Safety meeting Topic: Safety Vests

TESTING PERFORMED:

Daily Status Report (Continued)

PROJECT: **Old Roosevelt Field Site**

PROBLEM/DELAYS/CORRECTIVE ACTION TO BE TAKEN:
GREEN REMEDIATION PRACTICES IMPLEMENTED AND QUANTITIES TRACKED:
COMMUNICATION WITH CONTRACTOR STAFF:
MEETING:
ADDITIONAL ACTIVITIES AND REMARKS:

By: Mike Ehnot

Title: Geologist

Daily Status Report

PROJECT: **Old Roosevelt Field Site**
Remedial Action

Date: 3-04-13
Day: 71 (Monday)
WEATHER: Sunny & Cold
TEMP: 25/35
WIND:

SEW-1I

PERSONNEL ONSITE

CDM Smith: Mike Ehnot

Uni-Tech: Butch Hitzelberger (Driller); Brad Barnes (Helper)

VISITORS

TIME	NAME	REPRESENTING	REMARKS

EQUIPMENT IN USE:
Failing Jed A Drill Rig
Semco Rig
Water/Tender truck
Box Trailer
One-ton Support truck
Trailer
JCB 3CX Backhoe
Rolloff #9613 @ Staging Area (*January 9, 2013-Present*) [Kiln Dust]
Adler Tank #A1241 @ Staging Area (*November 30, 2012-Present*) [~20,000 gallons]
Adler Tank #A2122 @ Staging Area (*February 18, 2013-Present*) [Empty]
Adler Tank #A2043 @ Staging Area (*February 18, 2013-Present*) [~18,000 gallons]
Adler Tank #A2878 @ Staging Area (*February 20, 2013-Present*) [Empty]
Adler Tank #A2031 @ Treatment Building (*February 18, 2013-Present*) [~5,000 gallons]

CONSTRUCTION ACTIVITIES COMPLETED AND/OR IN PROGRESS:

-UTD resumes air lift/swabbing well development at SEW-1I. Purge water is contained in the drill cutting container then pumped into Alder Tank #A2043. Approximately 18,000 gallons of water was purged from SEW-1I today.
-The drillers inject sodium hypochlorite/water solution into SEW-1D for well disinfection.

WORK BEING INSPECTED:

NA

JOB SAFETY. INDICATE WHAT WAS CHECKED, RESULTS, AND CORRECTIVE ACTIONS TAKEN:
Daily tailgate Health & Safety meeting Topic: Fueling Equipment & Vehicles

TESTING PERFORMED:

Daily Status Report (Continued)

PROJECT: **Old Roosevelt Field Site**

PROBLEM/DELAYS/CORRECTIVE ACTION TO BE TAKEN:
GREEN REMEDIATION PRACTICES IMPLEMENTED AND QUANTITIES TRACKED:
COMMUNICATION WITH CONTRACTOR STAFF:
MEETING:
ADDITIONAL ACTIVITIES AND REMARKS:

By: Mike Ehnot

Title: Geologist

Daily Status Report

PROJECT: **Old Roosevelt Field Site**
Remedial Action

Date: 3-05-13

Day: 72 (Tuesday)

WEATHER: Sunny & Cold
TEMP: 25/35
WIND:

SEW-1I

PERSONNEL ONSITE

CDM Smith: Mike Ehnot

Uni-Tech: Butch Hitzelberger (Driller); Brad Barnes (Helper)

Seacoast: Carlos Tobar, James Ulrich, Karl Musselman

VISITORS

TIME	NAME	REPRESENTING	REMARKS

EQUIPMENT IN USE:
Failing Jed A Drill Rig
Semco Rig
Water/Tender truck
Box Trailer
One-ton Support truck
Trailer
JCB 3CX Backhoe
Rolloff #9613 @ Staging Area (*January 9, 2013-Present*) [Kiln Dust]
Adler Tank #A1241 @ Staging Area (*November 30, 2012-Present*) [~5,000 gallons]
Adler Tank #A2122 @ Staging Area (*February 18, 2013-Present*) [~4,000 gallons]
Adler Tank #A2043 @ Staging Area (*February 18, 2013-Present*) [~3,000 gallons]
Adler Tank #A2878 @ Staging Area (*February 20, 2013-Present*) [~2,500 gallons]
Adler Tank #A2031 @ Treatment Building (*February 18, 2013-Present*) [~5,000 gallons]

CONSTRUCTION ACTIVITIES COMPLETED AND/OR IN PROGRESS:

-UTD resumes and completes SEW-1I well development via submersible pump. Purge water is discharged directly into Adler Tank #A2878 at the staging area. Approximately 20,000 gallons of water was purged today for a total of approximately 58,000 gallons purged from SEW-1I for well development. During well development, the drillers monitored the purge water, volume purged and sand content and CDM measured specific capacity and water quality parameters.
-Seacoast transports water IDW from the Adler tanks at the staging area and empties it into the Adler tank at the treatment building. Subsequently, Seacoast pumps water IDW from Adler Tank #2031 into a portable filter (10-mil size) housing unit and discharges into the holding tank of the treatment system for processing. Approximately 43,000 gallons of water IDW were transported and approximately 41,000 gallons were processed today.
-The drillers inject sodium hypochlorite/water solution into SEW-1S and SEW-1I for well disinfection.
-UTD evacuates water from SEW-1D using a submersible pump until the discharge water is free of chlorine.

Daily Status Report (Continued)

PROJECT: **Old Roosevelt Field Site**

WORK BEING INSPECTED:

NA

JOB SAFETY. INDICATE WHAT WAS CHECKED, RESULTS, AND CORRECTIVE ACTIONS TAKEN:
Daily tailgate Health & Safety meeting Topic: Route to Hospital

TESTING PERFORMED:

During SEW-1I well development the drillers measured the sand content of the purge water using a Rossum Sand Tester. Additionally, CDM measured the pH, temperature, specific conductance, dissolved oxygen, oxygen reduction potential and turbidity. SEW-1I well development was complete as the sand content was 0 mg/l, the turbidity was below 5 nephelometric turbidity units (NTU) and the water quality parameters stabilized. SEW-1I was pumped at 165 gallons per minute (gpm) and the drawdown was 15.4 feet; therefore, the specific capacity is 10.7 gpm/ft.

UTD periodically tested the chlorine content of purge water from SEW-1D during evacuation. The drillers used a chlorine test kit to measure the chlorine content. SEW-1D was purged until chlorine was no longer present.

PROBLEM/DELAYS/CORRECTIVE ACTION TO BE TAKEN:

Approximately 1,000 gallons of water IDW from Adler Tank#A1241 was pumped into the tanker truck containing approximately 3,800 gallons of water from Adler Tank #A2878 and was emptied into Adler Tank #A2031 at the treatment building. While Seacoast was processing this load of water, the bag filters became clogged quickly and repeatedly. Considerable sediment content is within Adler Tank#A1241 thereby clogging the filter. Therefore, approximately 5,000 gallons of water from the hydrant was added to help dilute the water IDW inside Adler tank #A2031. Additionally, water IDW from the bottom of Adler Tank #1241 will not be processed and will be considered sludge IDW.

GREEN REMEDIATION PRACTICES IMPLEMENTED AND QUANTITIES TRACKED:

COMMUNICATION WITH CONTRACTOR STAFF:

MEETING:

ADDITIONAL ACTIVITIES AND REMARKS:

By: Mike Ehnot

Title: Geologist

Daily Status Report

PROJECT: **Old Roosevelt Field Site**
Remedial Action

Date: 3-06-13

Day: 73 (Wednesday)

WEATHER: Overcast & Cold
TEMP: 25/35
WIND:

SEW-1D, 1I & 1S Well Disinfection

PERSONNEL ONSITE

CDM Smith: Mike Ehnot

Uni-Tech: Butch Hitzelberger (Driller); Brad Barnes (Helper)

Seacoast: Carlos Tobar, Sal Reyes, Karl Musselman

VISITORS

TIME	NAME	REPRESENTING	REMARKS

EQUIPMENT IN USE:
Failing Jed A Drill Rig
Semco Rig
Water/Tender truck
One-ton Support truck
Trailer
JCB 3CX Backhoe
Rolloff #9613 @ Staging Area (*January 9, 2013-Present*) [Kiln Dust]
Adler Tank #A1241 @ Staging Area (*November 30, 2012-Present*) [~2,400 gallons]
Adler Tank #A2122 @ Staging Area (*February 18, 2013-Present*) [~254 gallons]
Adler Tank #A2043 @ Staging Area (*February 18, 2013-Present*) [~254 gallons]
Adler Tank #A2878 @ Staging Area (*February 20, 2013-Present*) [~30 gallons]
Adler Tank #A2031 @ Treatment Building (*February 18, 2013-Present*) [~5,000 gallons]

CONSTRUCTION ACTIVITIES COMPLETED AND/OR IN PROGRESS:

-UTD disassembles equipment for demobilization and transports the box trailer offsite.
-The drillers clean equipment at the staging area.
-Seacoast transports water IDW from the Adler tanks at the staging area and empties it into the Adler tank at the treatment building. Subsequently, Seacoast pumps water IDW from Adler Tank #2031 into a portable filter (10-mil size) housing unit and discharges into the holding tank of the treatment system for processing. Approximately 62,400 gallons of water IDW were transported and approximately 62,400 gallons were processed today.
-UTD evacuates water from SEW-1S and SEW-1I using a submersible pump until the discharge water is free of chlorine.

WORK BEING INSPECTED:

NA

JOB SAFETY. INDICATE WHAT WAS CHECKED, RESULTS, AND CORRECTIVE ACTIONS TAKEN:
Daily tailgate Health & Safety meeting Topic: Steel Toed Boots

Daily Status Report (Continued)

PROJECT: **Old Roosevelt Field Site**

TESTING PERFORMED: UTD periodically tested the chlorine content of purge water from SEW-1I and SEW-1S during evacuation. The drillers used a chlorine test kit to measure the chlorine content. SEW-1I and SEW-1S were purged until chlorine was no longer present.
PROBLEM/DELAYS/CORRECTIVE ACTION TO BE TAKEN: Approximately 1,000 gallons of water IDW from Adler Tank#A1241 was pumped into the tanker truck containing approximately 3,800 gallons of water from Adler Tank #A2878 and was emptied into Adler Tank #A2031 at the treatment building. Seacoast attempted to process this load of water, the bag filters became clogged quickly and repeatedly, just like yesterday The water in Adler Tank #A2031 will be allowed to settle for a period of days then will be processed by Arrowhead next week.
GREEN REMEDIATION PRACTICES IMPLEMENTED AND QUANTITIES TRACKED:
COMMUNICATION WITH CONTRACTOR STAFF:
MEETING:
ADDITIONAL ACTIVITIES AND REMARKS:

By: Mike Ehnot

Title: Geologist

Daily Status Report

PROJECT: **Old Roosevelt Field Site**
Remedial Action

Date: 3-07-13

Day: 74 (Thursday)

WEATHER: Overcast & Cold; Flurries
TEMP: 25/40
WIND:

Demobilization

PERSONNEL ONSITE

CDM Smith: Mike Ehnot

Uni-Tech: Butch Hitzelberger (Driller); Brad Barnes (Helper)

VISITORS

TIME	NAME	REPRESENTING	REMARKS

EQUIPMENT IN USE:
Failing Jed A Drill Rig
Semco Rig
One-ton Support truck
Trailer
JCB 3CX Backhoe
Rolloff #9613 @ Staging Area (*January 9, 2013-Present*) [Kiln Dust]
Adler Tank #A1241 @ Staging Area (*November 30, 2012-Present*) [~2,400 gallons]
Adler Tank #A2122 @ Staging Area (*February 18, 2013-Present*) [~254 gallons]
Adler Tank #A2043 @ Staging Area (*February 18, 2013-Present*) [~254 gallons]
Adler Tank #A2878 @ Staging Area (*February 20, 2013-Present*) [~30 gallons]
Adler Tank #A2031 @ Treatment Building (*February 18, 2013-Present*) [~5,000 gallons]

CONSTRUCTION ACTIVITIES COMPLETED AND/OR IN PROGRESS:

-UTD disassembles equipment, loads equipment onto trailers and transports equipment offsite for demobilization. The rig tender is offsite.
-The drillers clean equipment at the staging area.
-UTD places sand around the extraction wells and welds a steel plate to the top of each well.

WORK BEING INSPECTED:

NA

JOB SAFETY. INDICATE WHAT WAS CHECKED, RESULTS, AND CORRECTIVE ACTIONS TAKEN:
Daily tailgate Health & Safety meeting Topic: Winterize Equipment

TESTING PERFORMED:

Daily Status Report (Continued)

PROJECT: **Old Roosevelt Field Site**

PROBLEM/DELAYS/CORRECTIVE ACTION TO BE TAKEN:
GREEN REMEDIATION PRACTICES IMPLEMENTED AND QUANTITIES TRACKED:
COMMUNICATION WITH CONTRACTOR STAFF:
MEETING:
ADDITIONAL ACTIVITIES AND REMARKS:

By: Mike Ehnot

Title: Geologist

Daily Status Report

PROJECT: **Old Roosevelt Field Site**
Remedial Action

Date: 3-08-13
Day: 75 (Friday)
WEATHER: Snowing
TEMP: 25/40
WIND:

Demobilization

PERSONNEL ONSITE

CDM Smith: Mike Ehnot

Uni-Tech: Butch Hitzelberger (Driller); Brad Barnes (Helper)

VISITORS

TIME	NAME	REPRESENTING	REMARKS

EQUIPMENT IN USE:
JCB 3CX Backhoe
Adler Tank #A1241 @ Staging Area (*November 30, 2012-Present*) [~2,400 gallons]
Adler Tank #A2122 @ Staging Area (*February 18, 2013-Present*) [~254 gallons]
Adler Tank #A2043 @ Staging Area (*February 18, 2013-Present*) [~254 gallons]
Adler Tank #A2878 @ Staging Area (*February 20, 2013-Present*) [~30 gallons]
Adler Tank #A2031 @ Treatment Building (*February 18, 2013-Present*) [~5,000 gallons]

CONSTRUCTION ACTIVITIES COMPLETED AND/OR IN PROGRESS:

-UTD drives the Jed A drill rig and Semco rig offsite. Additionally, the drillers load the drill cutting container and associated equipment onto a trailer and transport equipment offsite.
--Seacoast Environmental transports Rolloff #9613 offsite to the soil IDW disposal facility (110 Sand Co.).

WORK BEING INSPECTED:

NA

JOB SAFETY. INDICATE WHAT WAS CHECKED, RESULTS, AND CORRECTIVE ACTIONS TAKEN:
Daily tailgate Health & Safety meeting Topic: Driving in Snow

TESTING PERFORMED:

PROBLEM/DELAYS/CORRECTIVE ACTION TO BE TAKEN:

GREEN REMEDIATION PRACTICES IMPLEMENTED AND QUANTITIES TRACKED:

Daily Status Report (Continued)

PROJECT: **Old Roosevelt Field Site**

COMMUNICATION WITH CONTRACTOR STAFF:
MEETING:
ADDITIONAL ACTIVITIES AND REMARKS:

By: Mike Ehnot

Title: Geologist

ATTACHMENT 2
FIELD LOGBOOK NOTES

FEBRUARY 25th 2013
EXTRACTION WELL INSTALLATION
WELL DEVELOPMENT
WEATHER: SUNNY & COLD
700 I AM: ONSITE;
LTD DRILLERS ONSITE &
BUTCH HITZELBERGER - DRILLER
BRAD BARNES - HELPER
715 H&S MTG TOPIC: EAR PROTECTION
710 DRILLERS FUEL DRILL RIG & PERFORM ROUTINE MAINTENANCE
725 DRILLERS LOWER ASSEMBLED PIPES - SPACERS 20-ft APART INTO SEW-1D TO TOP OF WELL SCREEN AT 480-490 ft BGS
930 SWAB IN PLACE INSIDE SEW-1D
940 DRILLERS LOWER AIRLINE TO 22.99 145 ft BGS; SEW-1D OTW: ~~35.99~~ (TOC)
1000 SET UP DISCHARGES HOSES (2) TO ADLER TANK # 1241 FROM SEW-1D. MOVE DRILL CUTTING CONTAINER NEXT TO SEW-1D
1115 BEGIN WELL DEVELOPMENT AT SEW-1D BY AIRLIFT VIA AIR COMPRESSOR, DISCHARGING INTO DRILL CUTTING CONTAINER THEN PUMPED TO TANK # 1241.
MIKE EPPOT
2/25/13

(76)

SEW-1D WELL DEVELOPMENT
1135 SEW-1D DTW: 36.21' (TOC)
1155 WATER BEGIN TO CLEAR; DRILLER STARTS AIRLIFT & PUMPS OUT DRILL CUTTING CONTAINER INTO ADLER # 1241
1330 PUMPED ~9,000 GALLONS INTO ADLER TANK # 1241 & SWITCH INTO ADLER TANK # 2403
SWITCH DISCHARGE INTO ADLER TANK # 2122
1500 STOP AIRLIFT/SWABBING
[NOTE: DURING WELL DEVELOPMENT THE SWAB WAS RAISED & LOWERED IN 20-ft LENGTHS PERIODICALLY AT UPPER PORTION OF WELL SCREEN]
PURGED ~14,000 GALS WATER FROM SEW-1D TODAY; ~9,000 GALS INTO ADLER TANK # 1241; ~3,000 GALS INTO ADLER TANK # 2043; ~2,000 GALS INTO ADLER TANK # 2122
1530 ADLER TANK # 1241 & TANK # 2043 ARE FULL & ~2,000 GALS IN # 2122
1600 DRILLERS EMPTY HOSES THEN ALL W. SITE

DAILY SUMMARY
SEW-1D
- AIRLIFT/SWAB WELL DEVELOPMENT

(77)
2/25/13

FEBRUARY 26, 2013
EXTRACTION WELL INSTALLATION
WELL DEVELOPMENT
WEATHER: SUNNY & COOL
6:45 I ARE ONSITE.
SEACOAST PERS. ONSITE &
GENE STREITER
RANDY BURNETT
KARL MUSSELMAN
WD DRILLERS ONSITE &
BUTCH HITZELBERGER - DRILLER
BRAD BARNES - HELPER
7:00 HRS MTG. TOPIC: OPENING HOSES
7:10 SEACOAST SETS UP HOSES
AT TREATMENT BLDG. TO
ADLER TANK # 2031
MEANWHILE,
DRILLERS LOWER SLIMS
TO BOTTOM PORTION OF WELL SCREEN
(BELOW BLANK) TO ~ 570 FT BGS.
DRILLERS SET UP HOSES & CONN.
FROM DRILL CUTTING CONTAINER TO
ADLER TANK # 2122.
7:20 SEACOAST 5,000-GAL TANKER
ONSITE & IS PUMPING WATER IN
FROM ADLER TANK # 2122 (~2,000 GALS)
& TANK # 2043 (~4,800 GALS).
MIKE BENOIT
2/26/13

SEW - 1.A WELL DEVELOPMENT
SEW - 1.D STW: 222.93' (TOC)
DRILLERS RESUME AIR LIFT
SEW - 1.D TO DRILL CUTTING
CONTAINER TO ADLER TANK # 2122;
FLOW RATE: ~ 150 GPM
SEACOAST TANKER
TRANSPORTS 1ST LOAD (~4,800 GALS)
TO TREATMENT BLDG.
SEW - 1.D STW: 334.56' (TOC)
DRILLERS RAISE & LOWER
SLIMS AT BOTTOM OF
WELL SCREEN IN 20-FT STROKE
8:45 SEACOAST TANKER TRANSPORTS
2ND LOAD (~4,800 GALS FROM
ADLER # 2043) TO TREATMENT BLDG.
9:00 DRILLERS DE-WATER SOIL IDW
ROLLOFF # 9869 & # 0480
INTO ADLER TANK # 2122
9:45 SEACOAST TANKER TRANSPORTS
3RD LOAD (~4,800 GALS FROM
ADLER # 2043) TO TREAT BLDG.
10:40 SEACOAST TANKER TRANSPORTS
4TH LOAD (~4,800 GALS FROM
ADLER # 2043) TO TREAT BLDG.
2/26/13

WELL
SEW - 1D DEVELOPMENT

1000 TANK # 2122 IS NOW FULL; THEREFORE, DRILLERS SWITCH DISCHARGE TO TANK # 2043

SEACOAST TANKER TRANSPORTS 5TH LOAD (~4,800 GALS) FROM ADEL TANK # 2122 TO TREAT BLDG.

1130 SEACOAST TANKER TRANSPORTS 5TH LOAD (~4,800 GALS FROM TANK # 2122) TO TREATMENT BLDG.

1135 STOP/END AIR LIFT/SWAB WELL DEVELOPMENT; DRILLERS CONTINUE TO PUMP WATER (IDW) FROM DRILL CUTTING CONTAINER TO ADEL TANK # 2043;

PUMPED A TOTAL OF ~35,000 GALS TODAY FROM SEW - 1D

1215 SEACOAST TANKER TRANSPORTS 6TH LOAD (~4,800 GALS FROM TANK # 2122) TO TREATMENT BLDG.

1215 DRILLERS MIX KILN DUST INTO SOIL IN ROLLOFF # 9869 & ROLLOFF # 0480

1300 SEACOAST TANKER TRANSPORTS 7TH LOAD (~4,800 GALS FROM TANK # 1241) TO TREATMENT BLDG.

2/26/13

WELL
SEW - 1D DEVELOPMENT

1345 SEACOAST TANKER TRANSPORTS 8TH LOAD (~4,800 GALS FROM TANK # 1241) TO TREATMENT BLDG.

1425 SEACOAST TANKER TRANSPORTS 9TH LOAD (~4,800 GALS FROM TANK # 2122) TO TREATMENT BLDG.

1510 SEACOAST TANKER TRANSPORTS 10TH LOAD (~4,800 GALS FROM TANK # 2122) TO TREATMENT BLDG.

1530 SEACOAST PROCESSED ~42,000 GALS THRU TREATMENT SYSTEM TODAY; ~6,000 GALS RETURN TO ADEL TANK # 2031.

NOTE: ADEL TANK # 1241 CONTAINS ~10,000 GALS; ADEL TANK # 2122 ~1,000 GALS; ADEL TANK # 2043 ~5,000 GALS AT STAGING AREA

AT CONCLUSION OF TODAY'S ACTIVITIES.

1630 ALL W. SITE

DAILY SUMMARY
SEW - 1D

- WELL DEVELOP VIA AIRLIFT/SWAB W/ DISCHARGE TO ADEL TANKS.
IDW HAULING
- SEACOAST TRANSPORTS (~48,000 GAL) & ~42,000 GALS @ TREAT BLDG
- LTD MIXES KILN DUST INTO THE ROLLOFF

FEBRUARY 27, 2013
EXTRACTION WELL INSTALLATION
WELL DEVELOPMENT
WEATHER: RAINY
6:40 I AM ONSITE;
SEACOAST PERS. ONSITE @
CARLOS TOBAR
ANDREW MCAVLEY
KARL MUSSELMAN
LTD DRILLERS ONSITE @
BUTCH HITZELBERGER – DRILLER
BRIAN BARNES – HELPER
H&S MTG. TOPIC: SLIPS TRIPS & FALLS
7:00 SEACOAST SETS UP EQUIPMENT
AT TREATMENT BLDG
7:00 I CALIBRATE YSI WQ MTR
& TURBIDITY MTR; AS BEFORE
7:10 DRILLERS LOWER PUMP INTO
SEW-10 TO ~ 80 ft. BGS W/
DISCHARGE DIRECTLY INTO ADVER
TANK # 2879;
7:10 SEW-10 DTW: 22.5' (TOC)
TOTALIZER BEGIN: 19009450 GAL
7:15 BEGIN WELL DEVELOPMENT
VIA SUB PUMP AT SEW-10
RATE: 158 GPM

2/27/13

SEW-10 WELL DEVELOPMENT
7:35 SEACOAST TANKER TRANSFERS
1ST LOAD (~ 4,800 GALS) FROM
ADVER TANK # 2043 TO
TREATMENT BLDG.
7:40 SEACOAST ALREADY EMPTIES
~ 6,100 GALS IN ADVER TANK # 2031
AT TREATMENT BLDG.
8:00 PURGE RATE: 168 GPM
SEW-10 DTW: 34.9' (TOC) [CREW]
pH: 5.62 DO: 4.81 mg/l
T: 13.13 °C ORP: ~~214 mV~~ 214.7 mV
SC: 0.119 mS/cm² TURB: 10.64 NTUs
8:30 SEACOAST TRANSPORTS TWO
SOIL ROLLOFFS (# 0480 & # 9869)
OFF TO HD SUD CO. FOR DISPOSAL
8:30 SEACOAST TANKER TRANSFERS
2ND LOAD (~ 4,800 GALS) FROM
ADVER TANK # 2879 TO TREAT. BLDG.
8:45 SEW-10 DTW: 35.1' (TOC)
PURGE RATE: 168 GPM [CREW]
pH: 5.60 DO: 4.62 mg/l
T: 13.15 °C °C ORP: 220.6 mV
SC: 0.118 mS/cm² TURB: 4.64 NTU

2/27/13

WELL
SEW - 1D DEVELOPMENT

9:10 SEACOAST TANKER TRANSPORTS 3RD LOAD (~ 8,000 GALS) FROM ADLER TANK # 2078 TO TREAT. BLDG.

9:15 SEW - 1D DTW: 35.28' (TOC)
PURGE RATE: 168 GPM [CHAN]
PH: 5.60 DO: 4.96 mg/l
T: 13.18 ORP: 221.8 mV
SC: 0.118 mS/cm³ TURB: 0.54 NTUs

9:45 SEACOAST TANKER TRANSPORTS 4TH LOAD (~4,000 GALS) FROM ADLER TANK # 2078 TO TREAT BLDG.

9:45 SEW-1D DTW: 35.45' (TOC)
PURGE RATE: 168 GPM
PH: 5.60 DO: 5.19 (CHAN)
T: 13.14°C ORP: 221.6
SC: 0.117 mS/cm³ TUR: 1.6 NTUs

9:50 SEW-1D DTW: 35.46' (TOC)
PURGE RATE 168 GPM
PH: 5.60 DO: 5.20 mg/l
T: 13.14 °C ORP: 221.0 mV
SC: 0.117 mS/cm³ TURB: 0.52 NTUs

9:55 SEW-1D DTW: 35.46' (TOC)
PURGE RATE: 164 GPM
PH: 5.60 DO: 4.90 mg/l
T: 13.14°C ORP: 221.7 mV
SC: 0.117 mS/cm³ TURB: 0.55 NTUs

MM 2/27/13

WELL
SEW - 1D DEVELOPMENT

10:00 SEW - 1D DTW: 35.48' (TOC)
PURGE RATE: 168 GPM
PH: 5.59 DO: 4.87 mg/l
T: 13.14°C ORP: 221.0 mV
SC: 0.117 mS/cm³ TURB: 0.37 NTUs

10:05 SEW - 1D DTW: 35.50' (TOC)
PURGE RATE: 168 GPM 4.83 mg/l
PH: 5.59 DO: ~~4.80 mg/l~~ 4.83
T: 13.14°C ORP: ~~221.3 mV~~ 221.1
SC: 0.117 mS/cm³ TURB: ~~0.30~~ 0.70

10:10 SEW-1D DTW: 35.51' (TOC)
PURGE RATE: 168 GPM
PH: 5.59 DO: 4.80 mg/l
T: 13.14°C ORP: 222.3 mV
SC: 0.117 mS/cm³ TURB: 0.30 NTU

10:15 SEW-1D DTW: 35.52' (TOC)
PURGE RATE: 168 GPM
PH: ~~35.52~~ 5.59 DO: 4.82 mg/l
T: 13.13 ORP: 222.3 mV
SC: 0.117 mS/cm³ TURB: 0.39 NTUs

10:15 STOP/END/COMPLETE SEW-10 WELL DEVELOPMENT. STOP SUB PUMP
TOTALIZER END: 190399.80 GALS
ROSELYN SAND SAMPLER: 0 mg/l
PURGED 30,530 GALS TODAY
FOR GRAND TOTAL OF ~ 80,000 GALS TOTAL FROM SEW - 1D MM 2/28/13

WELL
SEW-1D DEVELOPMENT

SEW-1D WELL DEVELOPMENT IS COMPLETE BECAUSE TURBIDITY IS <5 NTU; SAND CONTENT < 5mg/L & WATER QUALITY PARAMETERS HAVE STABILIZED

10[45] SEACOAST TANKER TRANSPORTS LOAD 5 (~4,800 GALS) FROM ADLER TANK # 2878

11[00] SEACOAST TANKER TRANSPORTS LOAD 6 (~4,800 GALLONS) FROM ADLER TANK # ADLER TANK # 1241

MEANWHILE, DRILLERS ARE DISCONNECTING THE SUB PUMP WELL DEVELOPMENT ASSEMBLY; RETRIEVE SUB PUMP PIPING

11[45] SEACOAST TANKER TRANSPORTS 7TH LOAD (~4,800 GALS) FROM ADLER TANK # 2878 TO TREATMENT BLDG.

12[00] PROBLEM AT TREATMENT BLDG, BLOCKING TANK INSIDE BLDG IS FULL & DISCHARGE PUMP IS NOT OPERATING! I CALL JOE COTTER FOR ASSISTANCE

12[30] JOE COTTER RE-STARTS PUMP & WE RESUME PROCESSING WATER FROM ADLER TANK # 2031 AT TREAT BLDG. 2/27/13

WELL
SEW-1D DEVELOPMENT

12[45] SEACOAST TANKER TRANSPORTS 8TH LOAD (~4,800 GALS) FROM ADLER TANK # 1241 TO TREAT BLDG.

13[45] SEACOAST TANKER TRANSPORT 9TH LOAD (~4,800 GALS) FROM ADLER TANK # 2878 TO TREAT BLDG

14[40] SEACOAST TANKER TRANSPORTS 10TH LOAD (~4,800 GALS) FROM ADLER TANK # 2878 (~2,500 GALS) & ADLER TANK # 2043 (~2,500 GALS) TO TREATMENT BLDG.

NOTE: ADLER TANK # 1241 & # 2878 ARE PRESENTLY EMPTY

1430 DRILLERS MIX GROUT & PUMP INTO SEW-1D BH AND [illegible] TOP OF GRAVEL. SECURE/[illegible] LID TO TOP OF SEW-1D. CLEAN UP TRENCH, PIPE & HOSES & PUMP

15[26] SEACOAST TANKER TRANSPORT 11TH LOAD (~4,800 GALS) FROM ADLER TANK # 2043 (~3,800 GALS) & ADLER TANK # 2122 (~1,000 GALS)

NOTE: ADLER TANKS # 2122, TANK # 2122, TANK # 2043 & TANK # 2878 ARE NOW EMPTY.

2/27/13

WELL
SEW-1D DEVELOPMENT

15:30 SEACOAST PROCESSED
~ 54,000 GALS THRU TREATMENT
SYSTEM TODAY (WHICH INCL.
(10) 4,000 GAL TRUCKLOADS PLUS
6,000 GALS THAT REMAINED IN ADDER
TANK #2031 FROM 2/26 DELIVERY)
SEACOAST TRANSFERRED
~ 52,000 GALS FROM EXTRACTION
WELL LOCATION TO TREATMENT BLDG.
TODAY (USING (10) TRUCKLOADS)

15:45 SEACOAST SHUTDOWN THE
GASKET RUNNING INSIDE HOUSING
OF PORTABLE FILTER HOUSING BUT
IT DIDN'T AFFECT PROCESSING

15:45 ALL W. SITE —
ONLY ADDER TANK #2031 (5,000 GAL)
CONTAINS WATER NOW

DAILY SUMMARY
SEW-1D

- COMPLETE WELL DEVELOPMENT
VIA SUB PUMP; PURGEWATER
IS CLEAR & FREE OF SAND
SPECIFIC CAPACITY 168 gpm ÷ 13 ft = 12.9

[signature] 2/27/13

FEBRUARY 28, 2013
EXTRACTION WELL INSTALLATION
WELL DEVELOPMENT

7:00 I ARR ONSITE;
LTD DRILLERS ONSITE:
BUTCH HITZELBERGER - DRILLER
BRAD BARNES - HELPER

7:05 HRS MTG. TOPIC: INSPECT EXTENSIONS
7:10 DRILLERS PREPARE TO DO PLUMBNESS/
ALIGNMENT TESTING AT SEW-1I.

7:30 DRILLERS SEND ALIGNMENT DISK
INTO SEW-1I EXTRACTION WELL
FROM THE SURFACE TO THE TOP OF
THE UPPERMOST WELL SCREEN

8:30 SEW-1I PASSES ALIGNMENT
TEST AS DISK TRAVERSED TO
DEPTH WITHOUT SNAGGING

8:30 LTD SETS UP EQUIPMENT TO
PERFORM PLUMBNESS TEST AT
SEW-1I USING A PLUMBNESS
BOB. DRILLERS MEASURE A
10-FT. DISTANCE FROM THE TOP
OF THE WELL TO THE PLUMB
APEX ON THE DRILL RIG;
MANUVER DRILL RIG SO
PLUMB BOB IS CENTERED IN
SEW-1I. MIKE EHNOT

[signature] 2/28/13

SEW - 1 I PLUMBNESS TEST

DEPTH	N	E	S	W
10'	3.2	3.2	3.2	3.2
20'	3.2	3.2	3.2	3.2
30'	3.2	3.2	3.2	3.2
40'	3.2	3.2	3.2	3.2
50'	3.2	3.2	3.2	3.2
60'	3.2	3.2	3.2	3.2
70'	3.2	3.2	3.2	3.2
80'	3.2	3.2	3.2	3.2
90'	3.2	3.2	3.2	3.2
100'	3.2	3.2	3.2	3.2
110'	3.2	3.1	3.2	3.3
120'	3.2	3.2	3.2	3.2
130'	3.1	3.2	3.3	3.2
140'	3.1	3.1	3.3	3.3
150'	3.1	3.2	3.3	3.2
160'	3.1	3.1	3.3	3.3
170'	3.1	3.1	3.3	3.3
180'	3.1	3.2	3.3	3.2
190'	3.1	3.2	3.3	3.2
200'	3.1	3.1	3.3	3.3
210'	3.1	3.1	3.3	3.3
220'	3.1	3.2	3.3	3.2
230'	3.1	3.2	3.3	3.2
240'	3.1	3.2	3.3	3.2

MIKE EDWARDS

2/28/13

SEW - 1 I PLUMBNESS TEST

DEPTH	N	E	S	W
250'	3.1	3.1	3.3	3.3
260'	3.1	3.2	3.3	3.2
270'	3.1	3.1	3.3	3.3
280'	3.1	3.1	3.3	3.3
290'	3.1	3.1	3.3	3.3
300'	3.1	3.1	3.3	3.3
310'	3.1	3.1	3.3	3.3
320'	3.1	3.1	3.3	3.3
330'	3.1	3.1	3.3	3.3
340'	3.1	3.1	3.3	3.3
350'	3.1	3.1	3.3	3.3
360'	3.1	3.1	3.3	3.3
370'	3.1	3.1	3.3	3.3
380'	3.1	3.1	3.3	3.3
390'	3.1	3.1	3.3	3.3
400'	3.1	3.1	3.3	3.3
410'	3.1	3.0	3.3	3.4
414'	3.1	3.0	3.3	3.4

SEW - 1 I PASSES PLUMBNESS TEST AS WELL IS WITHIN ACCEPTABLE CRITERIA

2/28/13

SEW-1I

10⁰⁰ DRILLERS PUT AWAY PLUMBNESS EQUIPMENT & SET UP TO PERFORM AIR/LIFT SWAB WELL DEVELOPMENT AT SEW-1I

10³⁰ I CALL ALI RAHMANI (COM) TO DISCUSS UPCOMING EVENTS:

A) CONFIRM SEACOAST TANKER WILL BE ONSITE TUE (3/5) & WED (3/6) TO TRANSFER WATER FROM TREATMENT BLDG. & PROCESS WATER AT TREAT BLDG, AS BEFORE

B) CHLORINE DISINFECTION TO BE DONE BY LTD AT SEW-1D & SEW-1S ON MON (3/4) AND AT SEW-1I ON TUES. (3/5) IMMEDIATELY FOLLOWING WELL DEVELOPMENT; CL FROM WELLS TO BE PUMPED INTO ADJ. TANKS (FOLLOWING A MIN. OF 24-HR PERIOD SINCE SHOCKING); ALI RAHMANI INFORMS ME THAT CL PURGES FROM WELLS WILL BE ONSITE SO IT'LL BE SAFE TO PLACE INTO ADJ. TANKS.

(CONT'D)

2/28/13

SEW-1I

(CONT'D)

C) LTD WILL WELD PLATE OVER 8" SS ELLS FOR PROTECTION BUT CANNOT WELD COVER OVER 16" OUTER CASING BECAUSE 8" SS ELLS STICK UP ABOVE THE 16" OC; THEREFORE, ALI RAHMANI INSTRUCTS ME TO BE CERTAIN ABOVE 8" SS ELLS BEFORE PLACING STEEL PLATES OVER ELLS

D) ALI RAHMANI INFORMS ME THAT EPA & COM WILL VISIT SITE TOMORROW.

15⁰⁰ DRILLERS HAVE CONNECTED AIR LINE & SWAB TO SENCO RIG AT SEW-1I; MOVED WELL CUTTING CONTAINER NEXT TO SEW-1I TO CONTAIN BYREGENWATER.

15³⁰ ALL W. SITE WILL HAVE TO WORK LONGER ON FRIDAY THAN ANTICIPATED.

DAILY SUMMARY

SEW-1I

- PERFORM ALIGNMENT & PLUMBNESS TEST

2/28/13

MARCH 1, 2013
EXTRACTION WELL DEVELOPMENT
WEATHER: SUNNY & MILD
7:10 I ARR ONSITE AFTER
CHECKING OUT OF HOTEL
LTD PERSONNEL ONSITE 8
BUTCH HITZELBERGER - DRILLER
BRAD BARNES - HELPER
7:15 H&S MTG. TOPIC: SAFETY VEST
7:20 SEW-1I STW: 29.31' (TOC)
7:25 DRILLERS BEGIN AIR LIFT
AT SEW-1I FOR WELL
DEVELOPMENT; PURGEWATER
CONTAINED IN ADLER TANK #1241
8:00 DRILLERS DISCOVER
VEHICLES DRIVE OVER
GRASSY PORTION OF SITE
LAST NIGHT DUE TO
NUMEROUS TIRE TRACKS !!!
VEHICLES DRIVE IN DIRECTION OF
LAWN NORTH & TREELINE!
I PHOTOGRAPH DAMAGE
DUE TO LAWN.
MIKE EHART
3/1/13

SEW-1I WELL DEVELOPMENT
8:40 SEW-1I STW: NA! WL IS
BELOW THE CAPABILITIES OF THE
100-FT. LENGTH WL METER
8:45 DRILLERS REPEATEDLY RAISE & LOWER
THE SWAB (20-FT LENGTH) AT THE
UPPERMOST WELL SCREEN IN 20-FT
STROKES
PURGE RATE: ~60 GPM
NOTE: SEW-1I DOES NOT MAKE
NEARLY AS MUCH WATER AS
SEW-1D & SEW-1S.
9:45 OFFICER CAPUTO GARDEN CITY PD
VISITS SITE TO VIEW TIRE
TRACK DAMAGE TO PROPERTY
DONE LAST NIGHT - WE INFORM
HIM THAT NOTHING WAS STOLEN
BUT IT APPEARS SOMEONE GOT
STUCK IN THE MUD & NEED A
WRECKER TO GET OUT. HE WILL
CHECK W/ OFFICER ON DUTY LAST
NIGHT TO SEE IF HE SAW ANYTHING.
10:00 DRILLERS LOWER AIR LIFT/SWAB
ASSEMBLY TO BOTTOMMOST WELL
SCREEN & SWAB BOTTOM SCREEN
3/1/13

SEW - 1 I WELL DEVELOPMENT

NOTE: I CALLED PURE ENVIRONMENTAL TO GET A 300' LENGTH WL MTR. TO EXCHANGE FOR 100' WL MTR. THEY CALLED TO CANCEL

10:40 AFTER SWABBING THE BOTTOM ZONE, THE WELL SEEMS BETTER & MORE WATER IS NOW COMING OUT OF SEW-1 I.

10:45 SEW - 1 I DTW: 52.5' (TOC)

11:00 SEW - 1 I PURGE RATE: ~150 GPM
SEW - 1 I DTW: 55.3' (TOC)

11:30 SEW - 1 I DTW: 57.15' (TOC)
PURGE RATE: ~150 GPM

11:15 THOMAS MATTHEWS, ALI RAHMANI (CDM) & STEVEN HEARN (CDM) & FRANK KOCH (VGC) VISIT SITE

11:45 STOP AIR LIFT / SWAB WELL DEVELOPMENT AT SEW-1 I
A TOTAL OF ~20,000 gallons OF WATER PURGED FROM SEW-1 I TO ADLER TANK #1241 TODAY.

NOTE: ALI RAHMANI TELLS US TO LEVEL ROADWAY & PLACE GRAVEL ON TOP. (CONT'D.)

3/1/13

SEW 1 I WELL DEVELOPMENT

12:00 ADLER TANK #1241 IS FULL w/ 20,000 gals OF RAINWATER FROM SEW-1 I.

12:05 DRILLERS & I GO TO RADELNICK
THEY LV. SITE

DAILY SUMMARY
SEW - 1 I

- BEGAN AIR LIFT / SWAB WELL DEVELOPMENT; PURGED 20,000 gals INTO ADLER TANK #1241.

3/1/13

MARCH 4, 2013
EXTRACTION WELL INSTALLATION
WELL DEVELOPMENT
WEATHER: SUNNY & V. COLD
7:00 I ARR ONSITE;
LTD DRILLERS ONSITE 8
BUTCH HITZELBERGER - DRILLER
BRAD BARNES - HELPER
7:15 H&S MTG. TOPIC: FUELING EQUIP. & VEHICLES
7:15 DRILLERS SET UP EQUIP. & HOSES TO RESUME AIRLIFT/SWABBING FOR WELL DEVELOPMENT
7:18 SEW-1I DTW: 25.3' (TOC)
SEW-1S DTW: 21.5' (TOC)
SEW-1D DTW: 22.1' (TOC)
7:25 BEGIN/RESUME SWABBING W/O AIRLIFT AT BOTTOM OF WELL SCREEN OF SEW-1I; DISCHARGE RECOV WATER TO DRUM CUTTING CONTAINER THEN PUMP WATER FROM CONTAINER TO ADER TANK # 2043 USING TWO TRASH PUMPS.
8:00 RESUME AIRLIFTING SEW-1I; PURGE RATE: ~ 150 GPM
MIKE ELLIOT
3/4/13
(98)

SEW-1I WELL DEVELOPMENT
9:30 STOP AIRLIFT AT SEW-1I; RAISE SWAB TO UPPERMOST WELL SCREEN THEN RAISE & LOWER SWAB REPEATEDLY FOR ~ 15 MIN.; THEN AIR LIFT AT SEW-1I
10:30 STOP/END AIR LIFT AT SEW-1I; PURGED ~ 18,000 GALS INTO ADER TANK # 2043 TODAY; DTW: 42.5' (TOC) SEW-1I
10:00 DRILLERS LEVELED GRAVEL ROADWAY & GRASSY AREAS OF LAWN USING THE BACKHOE
10:30 DRILLERS REMOVE AIR COMPRESSOR FROM PREMISES & MOBILIZE RIG TENDER/WATER TANK TO SITE
12:00 DRILLERS PREPARE TO PERFORM WELL DISINFECTION AT SEW-1D & SEW-1S, USING SODIUM HYPOCHLORITE SOLUTION.
12:10 DRILLERS LOAD ~ 2,000 GALLONS OF WATER FROM HYDRANT INTO RIG TENDER/WATER TANK.
12:15 DRILLERS ADD ~ 3.2 gallons of SODIUM HYPOCHLORITE SOLUTION (12.5%) TO WATER IN RIG TENDER & INJECT INTO SEW-1D.
3/4/13
(99)

SEW - 1D WELL DISINFECTION

NOTE: CHLORINE DISINFECTION WILL BE DONE USING A 200mg/l Cl^- SOLUTION?

SEW - 1D 8" DIA WELL

WELL DEPTH: 530 ft (BGS)
— DTW: 22 ft (BGS)
508 ft WATER COLUMN

FOR 8" DIA HOLE, 2.6 gal/ft VOLUME THEREFORE,

508 ft × 2.6 gal/ft = 1320.8 gals

FOR DISINFECTION, YOU MUST USE 4 TIMES VOLUME; THEREFORE

1320.8 gals × 4 = 5283 gallons

NOTE: DRILLERS WILL INJECT A 200mg/l Cl^- SOLUTION; THEREFORE, VOLUME OF Cl TO BE ADDED IS 22,50

5283 × .02 = 105 gal

DIVIDED BY CONCENTRATION OF SODIUM HYPOCHLORITE —

DRILLERS USING 12.5% CONCENTRATION THEREFORE,

105g ÷ 12.5 = 8.45 gals OF Cl^- NEEDED TO BE ADDED TO 5283 gallons of H_2O

3/4/13

SEW - 1S WELL DISINFECTION

NOTE: CHLORINE DISINFECTION WILL BE DONE USING A 200 mg/l CHLORINE SOLUTION

SEW - 1S 8" DIA WELL

WELL DEPTH: 405 ft (BGS)
— DTW: 21 ft (BGS)
384 ft WATER COLUMN

FOR 8" DIA HOLE, 2.6 gal/ft VOLUME THEREFORE

384 × 2.6 gal/ft = 998.4 gals

FOR DISINFECTION, YOU MUST USE 4 TIMES VOLUME; THEREFORE

998.4 gals × 4 = 3994 gals

NOTE: DRILLERS WILL INJECT A 200mg/l CHLORINE SOLN. THEREFORE, VOLUME OF Cl TO BE ADDED SHOULD BE 22,50

3994 × .02 = 79.9 gal

DIVIDED BY CONCENTRATION OF SODIUM HYPOCHLORITE —

DRILLERS USING 12.5% CONCENTRATION THEREFORE

79.9g ÷ 12.5 = 6.4 gals OF Cl^- NEEDED TO BE ADDED TO 3994 gals of H_2O

3/4/13

SEW-1I & SEW-1D

13⁰⁰ DRILLERS LOAD ANOTHER 2,000 GALLONS OF WATER INTO RIG TENDER/WATER TANK & ADD ANOTHER ~3.2 gallons of SODIUM HYPOCHLORITE (12.5% CONCENTRATION)

13¹⁵ INJECT 2ND LOAD OF 2,000 GALS OF WATER/CHLORINE INTO SEW-1D

MEANWHILE,

12³⁰ DRILLERS RETRACT AIRLIFT/SWAB ASSEMBLY FROM SEW-1I.

14¹⁵ INJECT 3RD & FINAL LOAD (~1,600) OF WATER/CHLORINE INTO SEW-1D; USED A TOTAL OF 9 GALS OF SODIUM HYPOCHLORITE IN 5,600 GALS OF WATER FOR SEW-1D WELL DISINFECTION

15⁰⁰ DRILLERS FINISHING RETRACTING AIRLIFT/SWAB ASSEMBLY FROM SEW-1I

NOTE: ADDED TANK #2043 18,000 gals

15³⁰ SUBMERSIBLE PUMP LOWERED TO 20 FT. AT SEW 1I

15⁴⁵ ALL W. SITE

DAILY SUMMARY

SEW-1I

- AIRLIFT/SWAB WELL DEVELOPMENT

SEW-1S

- INJECT Cl⁻ FOR DISINFECTION

3/4/

MARCH 5, 2013

EXTRACTION WELL INSTALLATION
WELL DEVELOPMENT

WEATHER: SUNNY & COLD

6⁴⁵ I ARR ONSITE;
LTD DRILLERS ONSITE &
BUTCH HITZELBERGER - DRILLER
BRAD BARNES - HELPER
SEACOAST PERS. ONSITE &
CARLOS TOBAR
JAMES ULRICH
KARL MUSSELMAN

7⁰⁰ I CALIBRATE YSI WL MTR. & TURB MTR AS BEFORE

7⁰⁵ H&S MTG. TOPIC: ROUTE TO HOSPITAL

NOTE: DRILLERS HAVE ALREADY LOADED 2,000 gals OF WATER FROM HYDRANT & ADDED 3.2 gal of Cl⁻ TO LOAD.

7⁰⁵ DRILLERS INJECT 1ST LOAD (~2,000 gals) OF WATER/CHLORINE INTO SEW-1S.

MEANWHILE,
DRILLERS HAVING TROUBLE STARTING SEMCO RIG; STARTER SHOT & HYDRAULICS

MIKE REYNOLDS

3/6/13

SEW - 1 I WELL DEVELOPMENT

7:45 SEACOAST TANKER TRANSPORTS 1ST LOAD (~4,800 gals) FROM ADLER TANK #2041 TO TREAT BLDG. MEANWHILE,

SEACOAST TREATS WATER FROM ADLER TANK #2031 @ TREAT BLDG. THRU PORTABLE FILTER PUMPING UNTREATED TO TREATMENT SYSTEM.

8:25 SEACOAST TANKER TRANSPORTS 2ND LOAD (~4,800 gals) FROM ADLER TANK #1241 TO TREAT BLDG

9:00 DRILLERS INJECT 2ND LOAD (~2,000 gals) OF WATER/CL (i.e. SODIUM HYPOCHLORITE) INTO SEW-1S.

NOTE: DRILLERS USE A TOTAL OF 6.5 gallons OF SODIUM HYPOCHLORITE (12.5%) FOR SEW-1S WELL DISINFECTION; A TOTAL OF 4,000 gallons OF WATER USED FOR SEW-1S DISINFECTION

9:25 SEACOAST TANKER TRANSPORTS 3RD LOAD (~4,800 gals) FROM ADLER TANK #1241 TO TREATMENT BLDG.

3/5/13

SEW - 1 I WELL DEVELOPMENT

9:30 LTD CANNOT FIX SEMCO RIG ENGINE STARTER ON SITE; THEREFORE, THE DRILLERS WILL HAVE A MECHANIC VISIT THE SITE TO REPAIR THE DRILL RIG

9:30 DRILLERS WILL ATTEMPT TO USE THE RIG TENDER/WATER TANK TO LOWER DRILL RODS INTO SEW-1I TO GET SUB PUMP TO DEPTH, SO WELL DEVELOPMENT CAN RESUME.

DRILLERS LOWERED SUB PUMP TO APPROX 40 FEET IN SEW-1I.

10:10 SEACOAST TANKER TRANSPORTS 4TH LOAD (~4,800 gals) FROM ADLER TANK #2043 TO TREAT BLDG.

10:50 SEACOAST TRANSPORTS 5TH LOAD (~4,800 gals) FROM ADLER TANK #2043 TO TREAT BLDG.

10:50 SEW-1I DTW: 25.34' (TOC)

TOTALIZER BEGIN: 19039900 GAL

10:50 BEGIN SEW-1I WELL DEVELOPMENT W/ SUB PUMP DISCHARGING DIRECTLY INTO ADLER TANK #2018.

3/5/13

WELL

SEW - 1 I DEVELOPMENT

10:50 SEW - 1I PURGE RATE: 165 GPM

(+) NOTE: DALLERS FLOW METER NOT OPERATIONAL!! THEREFORE, DETERMINE FLOW RATE BY TIMED VOLUME IN ADLER

10:50 DALLERS' MECHANIC ONSITE TO REPAIR ~~[illegible]~~ SEMCO RIG/PUMP TRUCK STARTER

11:00 SEACOAST TRUCKING DELIVERED 6TH LOAD (~ 4,800 gals) FROM ADLER TANK to 2478 TO TREAT BLDG.

11:00 CLEARVIEW ELEC. (SEACOAST) ELEC. ONSITE TO INSPECT TANK BOTTOM SLUDGE

11:00 JOB CALLER INFORMS ME SOME ALARMS GOING OFF @ PLANT PERTAINING TO HOUSING TANK

12:20 SEW - 1I DTW: 40.73' (TOC)
PURGE RATE: 165 GPM
PH: 5.28 DO: 3.53 mg/l
T: 13.41 °C ORP: 194.7 mV
SC: 0.162 mS/cm³ TURB: 18.5 NTU

3/5/13

WELL

SEW - 1I DEVELOPMENT

12:30 SEW - 1 I DTW: 40.73' (TOC)
PH: 5.28 DO: 3.54 mg/l
T: 13.40 °C ORP: 195.1 mV
SC: 0.162 mS/cm³ TURB: 12.3 NTU

12:35 SEW - 1I DTW: 40.73' (TOC)
PH: 5.27 DO: 3.53 mg/l
T: 13.42 °C ORP: 197.7 mV
SC: 0.164 mS/cm³ TURB: 12.9 NTU
PURGE RATE: 165 GPM

12:40 SEW - 1I DTW: 40.73' (TOC)
PH: 5.27 DO: 3.55 mg/l
T: 13.40 °C ORP: 200.4 mV
SC: 0.162 mS/cm³ TURB: 10.7 NTU
PURGE RATE: 165 GPM

12:45 SEW - 1 I DTW: 40.73' (TOC)
PH: 5.27 DO: 3.56
T: 13.41 ORP: 200.5
SC: 0.161 TURB: 5.26 NTU
PURGE RATE: 165 GPM

12:50 SEW - 1 I DTW: 40.73' (TOC)
PH: 5.26 DO: 3.61 mg/l
T: 13.41 °C ORP: 200.6 mV
SC: 0.161 mS/cm³ TURB: 3.7 NTU
SPECIFIC CAPACITY = 165 GPM ÷ 15.39 = 10.7 GPM/ft

3/5/13

WELL
SEW-1I DEVELOPMENT
1205 SEACOAST TANKER TRANSPORTS
7TH LOAD (~4,000 gals) FROM
ADLER TANK # 2878 TO TREATMENT BLDG.
1255 STOP/END/COMPLETE
SEW-1I WELL DEVELOPMENT;
STOP SUB PUMP; RUNS ~20,000 GALS TODAY
ROSS VM SAND TESTER WAS
0 mg/L; TURBIDITY WAS
LESS THAN 5 NTU & WE
PARAMETER STABILIZED; THEREFORE,
I END WELL DEVELOPMENT
1320 JOE COTTER INFORMED ME
ALARMS FROM HOLDING TANK &
SYSTEM'S BAG FILTERS
WERE BUGGED; J. COTTER
CHANGED HIS BAG FILTERS
1320 SEACOAST INFORMED ME
THAT "UNAFFECTED VALVE" ON
PORTABLE FILTER HOUSING UNIT
BECAME DEFECTIVE WHERE
VALVE WOULD NOT OPEN OR
CLOSE PROPERLY; THEREFORE,
SEACOAST CHANGED AROUND
EXISTING VALVES SO THAT A
VALVE COULD BE CLOSED &
NOT AFFECT FLOW WHILE CHANGING
BAG FILTERS. 3/5/23

SEW-1D WELL
SEW-1I DISINFECTION
1355 DRILLERS BEGIN PUMPING
Cl⁻ SOLUTION OUT OF SEW-1D
INTO ADLER TANK # 2122;
DRILLERS PERIODICALLY CHECK
CHLORINE CONTENT DURING
EVACUATION USING A CHLORINE
TEST KIT.
PURGING SEW-1D USING SUBPUMP
AT 25 GPM; CHECK PH TOO!
1345 SEACOAST TANKER TRANSPORTS
8TH LOAD (~4,000 gals) FROM
ADLER TANK # 1241 (~1,000 GALS) &
ADLER TANK # 2878 (~3000 GALS) TO
TREATMENT BLDG.
1410 BEGIN INJECTING CHLORINE
(i.e., 50% HYPOCHLORITE - 12.5%)
INTO SEW-1I; THE WATER WAS
PLACED INTO THE RIE TANKER
VIA HYDRANT (~2,000 gals) &
~3.5 gal Cl ADDED
1415 JOE COTTER INFORMS ME
THAT SEACOAST CAN PROCESS
WATER THRU FILTER SYSTEM
FROM 8TH LOAD.
3/5/12

SEW 1 I

14:40 SEACOAST TANKER TRANSFERS 9TH LOAD (~4800 gals) FROM ADVER TANK #1241 (~1000 gals) & ADVER TANK #2878 (~3800 gals) TO TREATMENT BLDG.

15:10 I SEE THAT SEACOAST DIDN'T BRIDGE TRANS WATER; THEREFORE, I INSTRUCT SEACOAST TO RE-TRANSFER 9TH LOAD TO ESTS & UNLOAD INTO ADVER TANK #1241. ADDITIONALLY, TELL SEACOAST BRIDGES TO GO HOME BECAUSE WE'LL GET WATER SOON IN ADVER.

15:50 SEACOAST EMPTIES 9TH LOAD INTO ADVER TANK #1241; THEN LOADS ~5,000 gals of WATER FROM HYDRANT INTO TANKER.

16:25 SEACOAST TRANSPORTS RE-DO OF 9TH/(10TH) LOAD (~4,800 gals) OF WATER TO TREATMENT BLDG & UNLOADS INTO ADVER TANK #203, AT TREATMENT BLDG; GET WATER SOFTER & DRIVE W/S. SITE

16:50 MECHANIC REPAIRS STARTER ON RIG (SEMCO); RIG TENDER TAKES OFF FOR

(110)

3/5/13

SEW - 1 I WELL DISINFECTION

NOTE: CHLORINE DISINFECTION WILL BE DONE USING a 200 mg/L SOLUTION

SEW - 1 I 8" DIAMETER

WELL DEPTH: 472 ft (BGS)
— STW: 25 ft. (BGS)
447 ft WATER COLUMN

For 8" HOLE, 2.6 gal/ft VOLUME THEREFORE,
447 ft x 2.6 gal/ft = 1162.2 gals

For DISINFECTION YOU MUST USE 4 TIMES VOLUME; THEREFORE,
gals x 4 = 4648.8 gals

NOTE: DRILLERS WILL INJECT A 200 mg/L CHLORINE SOLN; THEREFORE, VOLUME OF Cl⁻ TO BE ADDED SHALL BE 225 gals
4648.8 x 0.02 = 92.97 gals

DIVIDED BY CONCENTRATION OF SODIUM HYPOCHLORITE — DRILLERS USING 12.5% CONCENTRATION; THEREFORE,
92.97 gals ÷ 12.5 = 7.43 gals of Cl⁻ NEEDED TO BE ADDED TO 4648 gals of H2O

3/5/13

(111)

SEW - 1I WELL
SEW - 1D DISINFECTION

NOTE: DRILLERS INJECTED ~ 4600 gal of CHLORINE SOLUTION INTO SEW-1I USING A TOTAL OF 7.5 gals OF SODIUM HYPOCHLORITE (12.5%)

18[15] STOP EVACUATING CHLORINE FROM SEW - 1D VIA SUB PUMP; PURGED ~ 4000 GALS & WILL RESUME TOMORROW; PUMPED INTO ADLER TANK # 2122

NOTE: AT END OF DAY
ADLER TANK # 2031 : ~ 5000 gals
ADLER TANK # 2041 : ~ 5000 gals
ADLER TANK # 2122 : ~ 4000 gals
ADLER TANK # 2043 : ~ 3000 gals
~~ADLER TANK # 2878 : 1/4~~ 3/5
ADLER TANK # 2878 : ~ 2000 gals

18[20] UTD & I W. SITE; PROCESSED 41K TODAY

DAILY SUMMARY
SEW - 1 I
· COMPLETE WELL DEVELOPMENT VIA SUB PUMP
SEW - 1S & SEW - 1I
· INJECT Cl⁻ FOR WELL DISINFECTION IN W
· SEACOAST TRANSPORTS & TREATS WATER IN SEW - 1D
· EVACUATE Cl⁻

3/5/13

MARCH 6, 2013
EXTRACTION WELL INSTALLATION
WELL DISINFECTION
WEATHER: OVERCAST & COLD
6[45] I ARR ONSITE
UTD DRILLERS ONSITE &
BUTCH HITZELBERGER - DRILLER
BRAD BARNES - HELPER
SEACOAST PERS. ONSITE &
CARLOS TOBAR
SAL REYES
KARL MUSSELMAN
7[15] H&S MTG. TOPIC: STEEL TOED BOOTS
7[25] DRILLERS MOVE SEWCO RIG TO SEW-1D AFTER REMOVING SUB PUMP; SUBSEQUENTLY DRILLERS LOWER SUB PUMP TO ~ 60-80' BGS.
7[25] RESUME EVACUATION OF Cl⁻ FROM SEW-1D @ ~ 200 GPM DISCHARGING DIRECTLY INTO ADLER TANK # 2878
MEANWHILE
SEACOAST PROCESSING ~ 5,200 gals W. WATER IN ADLER TANK # 2031 AT TREATMENT BLDG

MIKE REHOT
3/6/13

WELL
SEW-1D DISINFECTION

8:00 SEACOAST TRANSPORTS 1ST LOAD (~4,800 gals) FROM ADLER TANK #3122 (~2,800 gals) ADLER TANK #2878 (~2300 gal) TO TREATMENT BLDG.

8:30 STOP/END SEW-1D Cl- EVACUATION AS DIRECTED W/ Cl TEST & NO Cl- PRESENT IN DISCHARGE WATER. PURGED ~13,000 gals TODAY FROM SEW-1D TO ADLER TANK #2878

8:50 SEACOAST TANKER TRANSPORTS 2ND LOAD (~4,800 gals) FROM ADLER TANK #2878 TO TREAT BLDG. MEANWHILE, SEACOAST REPLACES VALVE IN UNIT & DRILLERS MOVE SEMCO RIG TO SEW-1S & LOWER SUB PUMP TO ~60-80' BGS INTO WELL.

9:10 BEGIN Cl- EVACUATION AT SEW-1S VIA SUB PUMP DISCHARGING DIRECTLY INTO ADLER TANK #2043 @ ~200 GPM

9:15 TRASH PUMP @ TREATMENT BLDG. SHUT DOWN!!!

3/6/13

WELL
SEW-1S DISINFECTION

9:45 STOP/END SEW-1S Cl- EVACUATION AS Cl- IS NO LONGER PRESENT IN DISCHARGE WATER - TESTED BY LTD USING POOL KIT; PURGED ~7000 GALS FROM SEW-1S FOR EVACUATION INTO ADLER TANK #2043

9:50 SEACOAST TANKER TRANSPORTS 3RD LOAD (~4,800 gals) FROM ADLER TANK #2878 TO TREAT BLDG.

9:50 TANKER DRIVER REPAIRS SUB PUMP & BACKUP SUB PUMP AT TREATMENT BLDG.

10:15 SEACOAST RESUMES PROCESSING WATER AFTER AN 1 HR DELAY, DUE TO PROBLEM W/ PUMP.

9:45 LTD DEMOBILIZES TANKER FROM PREMISES.

9:45 LTD GRADES/LEVELS PITS & GRASS LAWN USING BACKHOE

10:20 DRILLERS MOVE DRILL CUTTING CONTAINER TO STAGING AREA USING BACKHOE

10:30 LTD MOVES SEMCO RIG FROM SEW-1S AFTER RETRACTING SUB PUMP.

3/6/13

WELL

SEW - 1I DISINFECTION

10[xx] DRILLERS SET UP SEMCO RIG AT SEW - 1I & LOWER SUB PUMP TO ~60-80' BGS IN WELL

10[20] SEACOAST TANKER TRANSPORTS 4TH LOAD (~4,800 gals) FROM ADLER TANK # 2078 TO TREAT BLDG.

11[15] SEACOAST TANKER TRANSPORTS 5TH LOAD (~4,800 gals) FROM ADLER TANK # 2078 [NOW MT]

11[15] WEATHER: LIGHT RAIN

12[15] SEACOAST TANKER TRANSPORTS 6TH LOAD (~4,800 gals) FROM ADLER TANK # 2043 TO TREAT BLDG.

12[50] SEACOAST TANKER TRANSPORTS 7TH LOAD (~4,800 gals) FROM ADLER TANK # 2043 TO TREAT BLDG.

13[40] SEACOAST TANKER TRANSPORTS 8TH LOAD (~4,800 gal) FROM ADLER TANKS # 2043 & # 2122

14[30] SEACOAST TANKER TRANSPORTS 9TH LOAD (~4,800 gal) FROM ADLER TANKS # 2043 & # 2122

ADLER TANK # 2122 NOW MT.

15[25] SEACOAST TANKER TRANSPORTS ~~ADLER TANK~~ 10TH LOAD (~4,800 gals) FROM ADLER TANK # 2043

WELL

SEW - 1I DISINFECTION

14[05] BEGIN Cl⁻ EVACUATION AT SEW - 1I VIA SUB PUMP DISCHARGING DIRECTLY INTO ADLER TANK # 2043; PURGE RATE: ~200 GPM

15[05] STOP/END SEW - 1I Cl⁻ EVACUATION AS CHLORINE IS NO LONGER PRESENT IN DISCHARGE WATER, AS TESTED BY CTD USING A CHLORINE POOL KIT; PURGED ~12,000 GALS FROM SEW-1I FOR WELL DISINFECTION

15[50] DTW MEASUREMENTS:

SEW - 1S DTW: 22.30' (TOC)

SEW - 1I DTW: 23.07' (TOC)

SEW - 1D DTW: 23.11' (TOC)

16[00] DRILLER WELDS STEEL LID TO EACH SEW 8" DIA. WELL.

SEACOAST TANKER TRANSPORTS 11TH LOAD (~4,800 gals) FROM ADLER TANKS # 2043 & # 2122

16[40] SEACOAST TANKER TRANSPORTS 12TH LOAD (~4,800 gals) FROM ADLER TANKS # 2043 & # 2122 [# 2043 & # 2122 ARE MT]

17[30] SEACOAST TANKER TRANSPORTS 13TH LOAD (~4,800 gals) FROM ADLER TANK # 2078 (MT) & # 1224

WELL

SEW - 1 I DISINFECTION

17 35 SEACOAST INFORMS ME THAT THEY CANNOT PROCESS REJECT LOADS (#1241 & #2878) BECAUSE IT CLOGS FILTERS QUICKLY; THEREFORE, I DECIDE TO END PROCESSING & TO LET WATER IN ADLER TANK #2031 & ARROWHEAD WILL TREAT WATER

17 45 SEACOAST LEAVE & I W. SITE

ADLER TANK #2031: ~5,000 gallons
ADLER TANK #1241: 15" (~2,400 gals)
ADLER TANK #2122: 3" (~254 gals)
ADLER TANK #2043: 3" (~254 gals)
ADLER TANK #2878: 1" (~31 gals)

NOTE: DURING PROCESSING ~42,800 gallons UTD CLEANS EQUIPMENT & RODS TO STAGING AREA (4 HRS.); DRILLERS LOADED DRILL RODS ONTO TRAILER

NOTE: DRILLERS WELDED STEEL PLATE ONTO EXTRACTION WELL 8" DIA. SS

DAILY SUMMARY

SEW - 10, 1S, 1I

- EVACUATE GC FROM EWS
IDW HANDLING
- SEACOAST TRANSPORTS (~62,400 gallons) & PROCESSES ~62,400 gallons MISC.

LB

[illegible] 3/6/13 · SC (4 HRS)

MARCH 7, 2013

EXTRACTION WELL INSTALLATION DEMOBILIZATION

WEATHER: SNOW FLURRIES - STORM APPROACHING NY/EAST COAST

7 00 I ARR ONSITE;
UTD DRILLERS ONSITE &
BUTCH HITZELBERGER - DRILLER
BRAD BARNES - HELPER

7 00 H&S MTG TOPIC: WINTERIZE EQUIP.

7 00 DRILLERS DEMOBILIZE TRAILER & DRILL RODS OFFSITE

7 45 DRILLERS RETURN & LOAD UP EQUIPMENT.

8 35 DRILLERS DEMOBILIZE RENTAL GENERATOR OFFSITE

9 35 DRILLERS LOAD MORE EQUIPMENT ONTO TRAILER & TRANSPORT OFFSITE.

10 45 DRILLERS CLEAN UP DRILL CUTTING CONTAINER & MISC EQUIPMENT

1330 UTD INFORMS ME THAT SEACOAST WILL BE HAULING TO BE HAULED OFFSITE ~ NEAR FUTURE

1345 DRILLERS HAVE PLACED SLED OVER SS WELL & WELDED STEEL PLATE TO TOP OF REACH SEW

MIKE [illegible] 3/7/13

(1A)

DEMOBILIZATION

15:00 RIG TENDER/WATER TRUCK DE-MOBILIZED FROM SITE

16:00 DRILLERS & I LEFT SITE

DAILY SUMMARY

SEW - 1 DEMOB

- DRILLERS DEMOB EQUIPMENT FROM SITE

MISC

- STEAM CLEAN (2 HRS.)
- WELL COMPLETION @ SEW-1 DIS

3/12/13

MARCH 8, 2013

DEMOBILIZATION

WEATHER: SNOWING w/ ACCUMULATION

7:10 I ARR ONSITE AFTER CHECKING OUT OF HOTEL

LTO DRILLERS ONSITE @

BUTCH HITZELBERGER - DRILLER

BAO BARNES - HELPER

7:15 H&S MTG TOPIC: DRIVING IN SNOW

NOTE: DRILLERS ALREADY DE-MOBILIZED THE CTES & DRILLRIG & SEMCO RIG FROM THE SITE EARLIER THIS MORNING

8:30 DRILLERS LOAD DRILL CUTTING CONTAINER ONTO TRAILER; PLACE HOSES & EQUIP. INTO CONTAINER

NOTE: SEACOAST SCHEDULED TO REMOVE SOIL IDW PRODUCE TODAY; HOWEVER, DRIVER MAY BE DELAYED DUE TO SNOW STORM; THEREFORE, SEACOAST INSTRUCTED ME TO SECURE MANIFEST IN ZIPLOC TO THE POLLOCK

11:00 DRILLERS DEMOB DRILL CUTTING CONTAINER & ASSOC. EQUIP. ON TRAILER FROM PREMISES.

MIKE ELLIOT

3/8/13

DEMOBILIZATION

NOTE: DRILLERS INFORM ME THAT THEY WILL REMOVE FENCING NEXT WEEK; ADDITIONALLY, PORTAJOHN TO BE REMOVED; BACKHOE WILL BE PICKED UP BY RENTAL CO. NEXT WEEK; MISC EQUIP. TO BE LOADED & REMOVED NEXT WEEK.

NOTE: SEACOAST SCHEDULED TO CLEAN OUT ADLER TANKS NEXT WEEK ON TUES. (3/12) & WED (3/13); SEACOAST WILL TRY TO HAVE THE FOUR ADLER TANKS REMOVED FROM THE STAGING AREA NEXT WEEK.

NOTE: DRILLERS TO MAKE FINAL GRAVEL LAYER TO GRAVEL ROADWAY; HOWEVER, LTD IS CONCERNED THAT IF GRAVEL & WORK TO ROADWAY IS DONE BEFORE THE ADLER TANKS ARE GONE, THEN THEY FEAR TANKS WILL DAMAGE ROADWAY DURING DEMOB & THEY WILL HAVE NO WAY TO FIX RUTS LEFT BY ADLERS IN GRASS.

3/8/13

DEMOBILIZATION

NOTES: ARROWHEAD (FOR COTTAGE) LINE PUMP WATER FLOW IN ADLER TANK # 2031 THRU FILTER UNIT INTO TREATMENT SYSTEM ON MONDAY (3/11), TO EMPTY LAST ADLER TANK. IF THIS WATER FLOW IS TOO TURBID, THEN SEACOAST WILL HANDLE IT AS SLUDGE.

11:00 DRILLERS & I LV. SITE; SIGNIFICANT SNOWFALL HAS ACCUMULATED ALREADY.

DAILY SUMMARY
DEMOBILIZATION

3/8/13

ATTACHMENT 3
PHOTOGRAPHIC LOG

PHOTOLOG

SITE NAME: **Old Roosevelt Field**

CAMERA # Kodak Easy Share C913

Photograph #	Description	Date/Time	Photographer
1	SEW-1D Final Purge Water	2/27/13	MJE
2	Well Disinfection at SEW-1D (View East)	3/4/13	MJE
3	Sodium Hypochlorite Solution	3/4/13	MJE
4	Chlorine Testing Kit	3/5/13	MJE
5	SEW-1I Final Purge Water	3/5/13	MJE
6	Adler Tank #1241 Sludge	3/5/13	MJE
7	Driller Demobilization	3/12/13	MJE
8			
9			
10			
11			
12			
13			
14			
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16			
17			

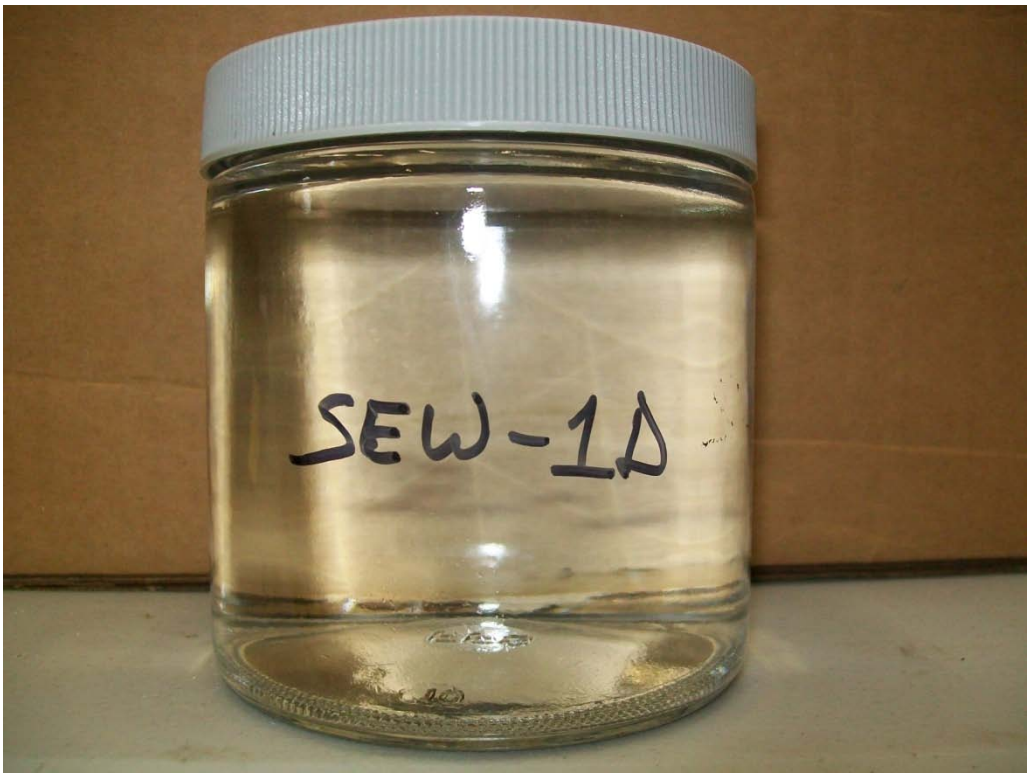


Photo 1: SEW-1D Final Purge Water

Photo 2: Well Disinfection at SEW-1D (View East)

Photo 3: Sodium Hypochlorite Solution

Photo 4: Chlorine Testing Kit

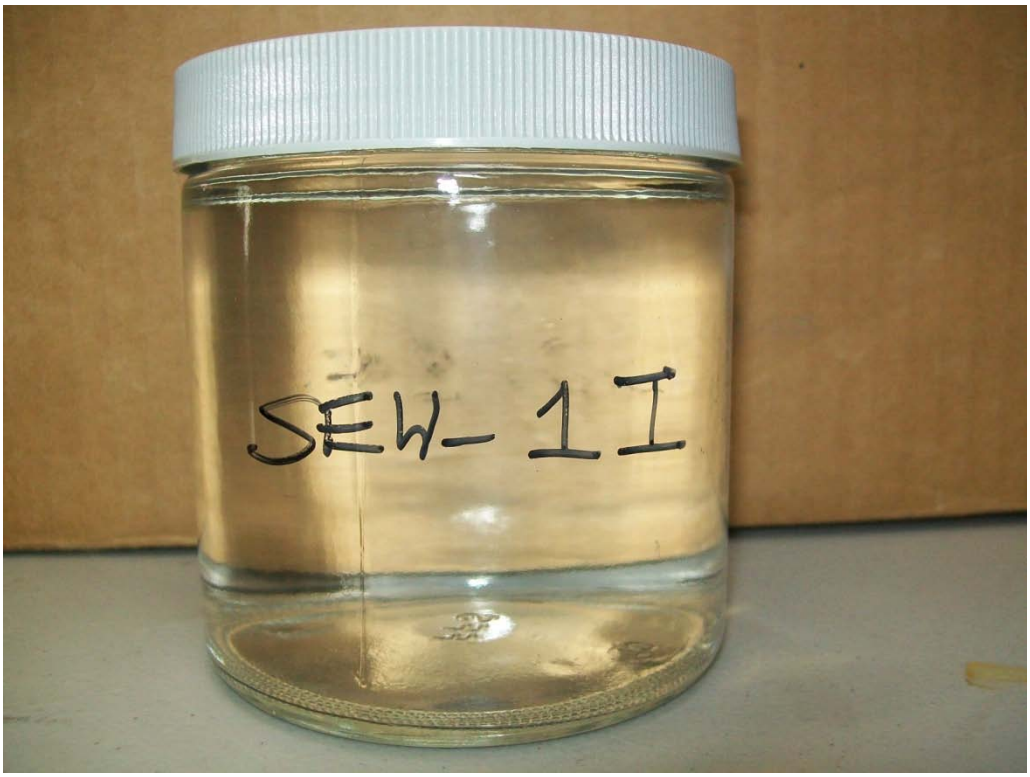


Photo 5: SEW-1I Final Purge Water

Photo 6: Adler Tank #1241 Sludge

Photo 7: Driller Demobilization (View West)

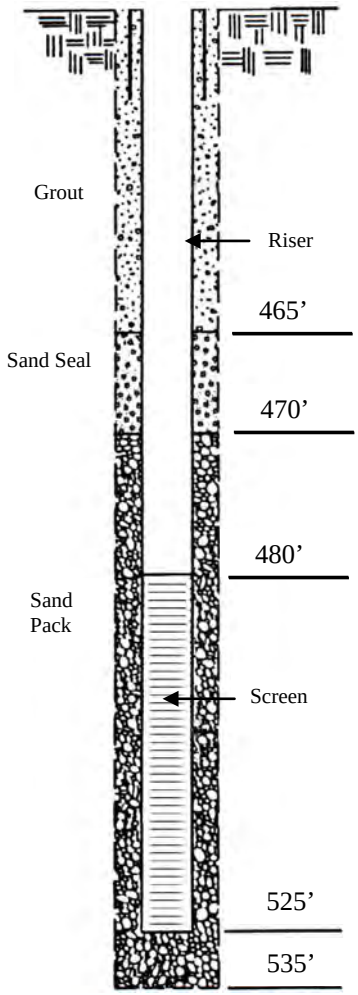
ATTACHMENT 4
WELL CONSTRUCTION SUMMARY

CDM

consulting engineering construction operations

WELL CONSTRUCTION SUMMARY

Project: Old Roosevelt Field Client: U.S. EPA Well No: **SEW-1D**



DRILLING SUMMARY

Drilling Co: Uni-Tech Drilling Company (UTD) Drillers: K. Hitzelberger
Drill Rig Make/Model: Failing Jed A
Borehole Diameters: 21"/16" Drilling Fluid: Water (Reverse Circ)
Bits/Depths: 21" Drag bit (0-110')/16" Moab Drag bit (110'-535')
Total Depth: 535 feet Depth to Water: Multiple
Supervisory Geologist: Mike Ehnot

WELL DESIGN

Casing Material:	Stainless Steel	Diameter:	8"	Length:	480'
Screen Material	Stainless Steel	Diameter:	8"	Length:	25'
Slot Size:	0.030"	Setting:	480'-500' & 510'-525'		
Filter Material:	Filpro #1 Sand	Setting:	470' – 535'		
Seals Material:	Filpro #00 Sand	Setting:	465' – 470'		
Grout:	Cement	Setting:	0 - 465'		
Surface Casing Material:	16" Steel	Setting:	0 - 110'		

Blank @ 500'-510'; Sump @ 525'-530'

TIME LOG

	Started	Completed
Drilling and Installation:	1/14/13	1/21/13
Development:	2/25/13	2/27/13

WELL DEVELOPMENT

Method: Air Lift/Swab & Sub. Pump
Static Depth to Water: 22.5' (TOC)
Pumping Depth to Water: ~80 feet
Pumping Rate: 168 gpm Specific Capacity: 12.9 gpm/ft.
Volume Pumped: ~80,000 gallons

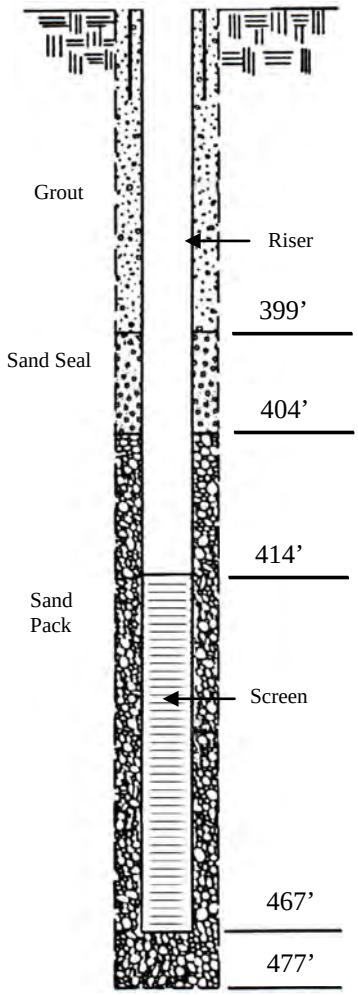
Well Disinfection (Chlorine): March 4-6, 2013

CDM

consulting engineering construction operations

WELL CONSTRUCTION SUMMARY

Project: Old Roosevelt Field Client: U.S. EPA Well No: **SEW-1I**



DRILLING SUMMARY

Drilling Co: Uni-Tech Drilling Company (UTD) Drillers: K. Hitzelberger
Drill Rig Make/Model: Failing Jed A
Borehole Diameters: 21"/16" Drilling Fluid: Water (Reverse Circ)
Bits/Depths: 21" Drag bit (0-110')/16" Moab Drag bit (110'-477')
Total Depth: 477 feet Depth to Water: Multiple
Supervisory Geologist: Mike Ehnot

WELL DESIGN

Casing Material:	Stainless Steel	Diameter:	8"	Length:	414'
Screen Material	Stainless Steel	Diameter:	8"	Length:	30'
Slot Size:	0.020"	Setting:	414'-434' & 457'-467'		
Filter Material:	Filpro #0 Sand	Setting:	404' – 477'		
Seals Material:	Filpro #00 Sand	Setting:	399' – 404'		
Grout:	Cement	Setting:	0 - 399'		
Surface Casing Material:	16" Steel	Setting:	0 - 110'		

Blank @ 434'-457'; Sump @ 467'-472'

TIME LOG

	Started	Completed
Drilling and Installation:	1/28/13	2/4/13
Development:	3/1/13	3/5/13

WELL DEVELOPMENT

Method: Air Lift/Swab & Sub. Pump
Static Depth to Water: 25.34' (TOC)
Pumping Depth to Water: ~80 feet
Pumping Rate: 165 gpm Specific Capacity: 10.7 gpm/ft.
Volume Pumped: ~58,000 gallons

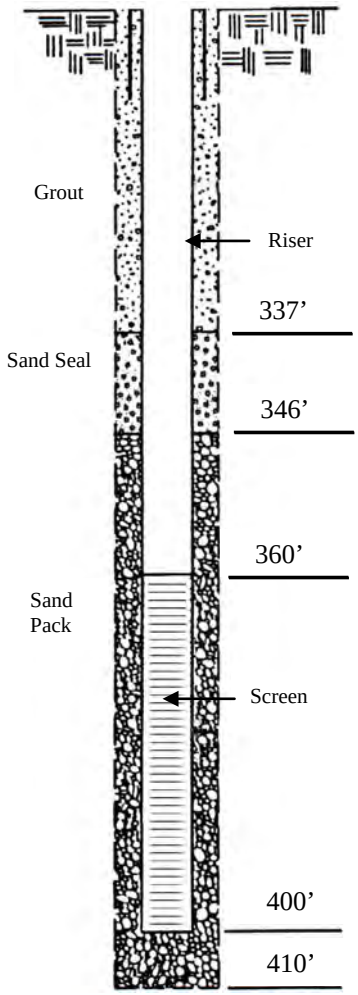
Well Disinfection (Chlorine): March 5-6, 2013

CDM

consulting engineering construction operations

WELL CONSTRUCTION SUMMARY

Project: Old Roosevelt Field Client: U.S. EPA Well No: **SEW-1S**



DRILLING SUMMARY

Drilling Co: Uni-Tech Drilling Company (UTD) Drillers: K. Hitzelberger
Drill Rig Make/Model: Failing Jed A
Borehole Diameters: 21"/16" Drilling Fluid: Water (Reverse Circ)
Bits/Depths: 21" Drag bit (0-110')/16" Moab Drag bit (110'-410')
Total Depth: 410 feet Depth to Water: Multiple
Supervisory Geologist: Mike Ehnot

WELL DESIGN

Casing Material:	Stainless Steel	Diameter:	8"	Length:	360'
Screen Material	Stainless Steel	Diameter:	8"	Length:	40'
Slot Size:	0.030"	Setting:	360'-400'		
Filter Material:	Filpro #1 Sand	Setting:	346' – 410'		
Seals Material:	Filpro #00 Sand	Setting:	337' – 346'		
Grout:	Cement	Setting:	0 - 337'		
Surface Casing Material:	16" Steel	Setting:	0 - 110'		

Sump @ 400'-405'

TIME LOG

	Started	Completed
Drilling and Installation:	2/11/13	2/15/13
Development:	2/19/13	2/21/13

WELL DEVELOPMENT

Method: Air Lift/Swab & Sub. Pump
Static Depth to Water: 25.96' (TOC)
Pumping Depth to Water: ~100 feet
Pumping Rate: 165 gpm Specific Capacity: 18.6 gpm/ft.
Volume Pumped: ~87,000 gallons

Well Disinfection (Chlorine): March 5-6, 2013