WASTE MANAGEMENT

WASTE MANAGEMENT OF HAWAII INC.
92-460 Farrington Highway
Kapolei, HI 96707
(808) 668-2985
(808) 668-1366 Fax

February 28, 2014

2014 MAR 3 1:45PM

Director of Health
Clean Water Branch
Environmental Management Division
State Department of Health
919 Ala Moana Boulevard, #300
Honolulu, HI 96801-3378

Attention: Ms. Kris Poentis, Engineering Section

Subject: Annual Discharge Monitoring Report and Storm Water Results
Waimanalo Gulch Sanitary Landfill, Kapolei, Oahu, Hawaii
File No. HI R50A533

Dear Ms. Poentis:

On behalf of the City & County of Honolulu, Waste Management of Hawaii (WMH) submits the annual storm water monitoring results, including the Discharge Monitoring Report (DMR) for the Waimanalo Gulch Sanitary Landfill for the monitoring period of January 1, 2013 through December 31, 2013.

Rainfall events on January 14, March 10, April 24, October 14, December 1, December 15, and December 19, 2013 resulted in storm water sampling events at the site. The January and March sampling events are discounted from being valid representative sampling events because the discharges were too low to measure, the samples were collected (for information only) by grab method from ponded water in the vicinity of compliance point DB01E (detention basin east outfall), and no storm water was observed leaving the property boundary. During the five April through December events, which are considered representative for permit compliance purposes, offsite storm water discharges were observed and samples were collected from flowing water at the compliance point.

The April 24th event resulted from overnight and early morning rain. Total rainfall over April 23 and 24 was 0.72 inches. The samples were collected by grab and composite methods from actively flowing water at DB01E. The flow rate from DB01E was approximately 0.36 cubic feet per second.

The October 14th event resulted from heavy rain in the early and late morning. Total rainfall that day was 3.34 inches. The samples were collected by grab and composite methods from actively flowing water at DB01E. The total discharge flow rate was 4.8 cubic feet per second.

The December 1st event resulted from rain overnight and throughout the day. Total rainfall that day was 0.03 inches. The samples were collected by grab and composite samples from actively

flowing water at the detention basin west outfall (DB01W, also a compliance point). The total discharge flow rate was 2.39 cubic feet per second.

The December 15th event resulted from overnight rains. Total rainfall that day was 1.40 inches. The samples were collected by grab and composite samples from actively flowing water at DB01E. The total discharge flow rate was 3.1 cubic feet per second.

Finally, the December 19th event showed a slight discharge from overnight rains. Total rainfall that day was 0.11 inches. The samples were collected by grab and composite samples from active flowing water at DB01W. The total discharge flow rate was 0.2 cubic feet per second.

As indicated on the attached DMR form (Attachment C) and the following Table 1, several parameters have been measured in exceedance of the permit limits, primarily pH, TSS, and some metals. Per the permit requirements, the required verbal and written notifications of exceedance were provided to the State Department of Health, Clean Water Branch (DOH CWB).

Table 1. WGSL Storm Water Notices of Exceedance and Submittal Dates

Sampling Event Date	Notice of Exceedance	Submittal Date
1/14/2013	pH	1/16/13
	Iron, lead, zinc, and TSS	2/6/2013
3/10/2013	Iron, zinc, and TSS	4/23/2013
4/24/2013	pH	4/26/2013
	Iron, zinc, and TSS	5/15/2013
10/14/2013	pH; iron, zinc, and TSS	11/7/2013
12/1/2013	pH	12/3/2013
	Fe, Zn, TSS	1/2/2014
12/15/2013	pH	12/18/2013
	Iron and zinc	1/10/2014
12/19/2013	pH	12/20/13
	Iron and Oil & Grease	2/5/14

The 2013 Field Information Forms are presented in Attachment A and provide the details of the sampling events. Laboratory reports, including quality assurance/quality control data and chains of custody, are included on a CD in Attachment B. The flow rates were determined using the depth-flow tables (Attachment F) developed for both the west and east detention basin outfall pipes.

The bi-annual site inspection logs and the non-storm water discharge certifications are included as Attachment E. Note that the "wet season" (November to April) inspection was conducted in February 2014.

Extensive improvements to the site storm water conveyance systems have recently been completed, and additional improvements are currently under construction, as described in the Surface Water Management Plan (GEI Consultants, August 2012).

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you should have any questions or require additional information, please contact me at (808) 668-2985.

Very truly yours,

Joseph R. Whelan

Joseph Whelan
General Manager/Vice President
Waste Management of Hawaii

Enclosures: Attachment A – Field Information Form
Attachment B – Analytical Laboratory Reports (on CD)
Attachment C – Discharge Monitoring Report Form
Attachment D – Written Notices of Exceedance
Attachment E – Inspection Reports
Attachment F – Depth-Flow Tables

cc: Wayne Hamada – City and County of Honolulu
Justin Lottig – WMH
Mark Hofferbert – AECOM

Attachment A
Field Information Forms

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: WGSL

Site No.:

Sample Point: DB01-E (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or N

Filter Device: Y or N — 0.45 µ or ____ µ (circle or fill in)

Purging Device: A- Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device: F

X-Other:

Filter Type: A-In-line Disposable, B-Pressure, C-Vacuum, X-Other

Sample Tube Type: A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other:

WELL DATA

Well Elevation (at TOC) (ft/msl)

Depth to Water (DTW) (from TOC) (ft)

Groundwater Elevation (site datum, from TOC) (ft/msl)

Total Well Depth (from TOC) (ft)

Stick Up (from ground elevation) (ft)

Casing ID (in)

Casing Material

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
	1st	1st	1st					
	2nd	2nd	2nd					
	3rd	3rd	3rd					
	4th	4th	4th					
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: Units
01 14 13	8.97						

Final Field Readings are required *(i.e. record field measurements; final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

FIELD COMMENTS

Sample Appearance: murky **Odor:** none **Color:** brown - orange **Other:** no scum / silt

Weather Conditions (required daily, or as conditions change): **Direction/Speed:** NW 15mph **Outlook:** overcast **Precipitation:** Y or (N)

Specific Comments (including purge/well volume calculations if required):

Naglible / no flow at DB01-E and -W. Ponded water sampled at 01/14/13 12:58.

Depth of ponded water: DB01-E 12 in; DB01-W 1 in

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
01, 14, 13	Margie Thrash		AECOM
01/14/13	Timothy Ashton		AECOM

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

TAL-8029WM (0108)

WESL St. Water FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: Det. Basin E. outfall

Site No.:

Sample Point: E outfall

Sample ID pipe

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment … Dedicated: Y or N

Filter Device: Y or N 0.45 µ or µ (circle or fill in)

Purging Device: A- Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device: F

X-Other:

Filter Type: A-In-line Disposable, B-Pressure, C-Vacuum, X-Other

Sample Tube Type: A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other:

WELL DATA

Well Elevation (at TOC) (ft/msl)

Depth to Water (DTW) (from TOC) (ft)

Groundwater Elevation (site datum, from TOC) (ft/msl)

Total Well Depth (from TOC) (ft)

Stick Up (from ground elevation) (ft)

Casing ID (in)

Casing Material

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

	Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
1st									
2nd									
3rd									
4th									
Suggested range for 3 consec. readings or note Permit/State requirements:			+/- 0.2	+/- 3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: Units
03 10 13	9.40						

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

FIELD COMMENTS

Sample Appearance: milky light brown

Odor: none

Color: lt brown

Other:

Weather Conditions (required daily, or as conditions change):

Direction/Speed: Same 20 mph SW

Outlook: rain

Precipitation: Y or N

Specific Comments (including purge/well volume calculations if required):

E. outfall collected @ 1530

Flow over weir was negligible. Water puddled behind weir was seeping through concrete and trickling into detention basin. was sampled Grab sample.

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
3/10/13	D. Hamberger	D. Hamberger	AECOM
3/10/13	Dustin Goto		AECOM
3/10/13	Andrew Dumas		AECOM

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

TAL-8029WM (0108)

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: DB01E-WGSL

Site No.: 915 Sample Point: DB01E (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: _____

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or N

Filter Device: Y or N 0.45 µ or _____ µ (circle or fill in)

Purging Device ____ A- Submersible Pump B-Peristaltic Pump C-QED Bladder Pump D-Bailer E-Piston Pump F-Dipper/Bottle

Filter Type: A-In-line Disposable B-Pressure C-Vacuum X-Other _____

Sampling Device ____

X-Other: _____

Sample Tube Type: A-Teflon B-Stainless Steel C-PVC D-Polypropylene X-Other: _____

WELL DATA

Well Elevation (at TOC) _____ (ft/msl) Depth to Water (DTW) (from TOC) _____ (ft) Groundwater Elevation (site datum, from TOC) _____ (ft/msl)

Total Well Depth (from TOC) _____ (ft) Stick Up (from ground elevation) _____ (ft) Casing ID _____ (in) Casing Material _____

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
	1st	1st						
	2nd	2nd						
	3rd	3rd						
	4th	4th						
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: _____ Units _____
04 24 13	8.70						

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

Sample Appearance: cloudy Odor: none Color: slight brown Other: _____

Weather Conditions (required daily, or as conditions change): Direction/Speed: calm Outlook: clear Precipitation: Y or N

Specific Comments (including purge/well volume calculations if required):

FIELD COMMENTS

pH Meter: YSI 10A, SN. IC00754 calibrated with 4-7-10 buffer solutions at 0935.

Collect Sample @ 1140 (oil + Grease - Grab
1205 (all other) - composite

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
4/24/13	Mark Bigelow	[signature]	AECOM

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

TAL-8029WM (0108)

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: WGSL

Site No.:

Sample Point: D801-E (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment... Dedicated: Y or N

Filter Device: Y or N 0.45 µ or ____ µ (circle or fill in)

Purging Device ____ A-Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device ____

X-Other:

Filter Type: A-In-line Disposable, B-Pressure, C-Vacuum, X-Other ____

Sample Tube Type: A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other: ____

WELL DATA

Well Elevation (at TOC) ____ (ft/msl)

Depth to Water (DTW) (from TOC) ____ (ft)

Groundwater Elevation (site datum, from TOC) ____ (ft/msl)

Total Well Depth (from TOC) ____ (ft)

Stick Up (from ground elevation) ____ (ft)

Casing ID ____ (in)

Casing Material ____

Note: Total Well Depth, Stick Up, Casing Id. etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm@25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
		1st	1st					
		2nd	2nd					
		3rd	3rd					
		4th	4th					
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site.* ***If more fields above are needed, use separate sheet or form.***

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: ____ Units ____
10 14 13	8.69						

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

Sample Appearance: very turbid Odor: none Color: brown Other: foam + scum

Weather Conditions (required daily, or as conditions change): Direction/Speed: NA Outlook: cloudy Precipitation: (Y) or N

Specific Comments (including purge/well volume calculations if required):

FIELD COMMENTS

	Sample time	flow	pH	
Oil + grease	1429	1L/sec	8.69	D801-E depth - 5 inches = 1.8 ft³/sec
Aliquot A	1432	1L/sec		D801-W depth - 7 inches = 3.0 ft³/sec
Aliquot B	1448	1L/sec	8.48	Total = 4.8 ft³/sec
Aliquot C	1503	1L/sec	8.41	
Aliquot D	1518	1L/sec	8.30	

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
10, 14, 13	Margie Thack	Margie Thack	AECOM
10, 14, 13	Michelle Wong	Michelle Wong	AECOM

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

TAL-8029WM (0108)

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: WGEL-DB01W

Site No.: ~~DB01E~~ Sample Point: DDB01W (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or N

Filter Device: Y or N 0.45 µ or ____ µ (circle or fill in)

Purging Device: A-Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device:

X-Other:

Filter Type: A-In-line Disposable, B-Pressure, C-Vacuum, X-Other

Sample Tube Type: A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other:

WELL DATA

Well Elevation (at TOC) (ft/msl)

Depth to Water (DTW) (from TOC) (ft)

Groundwater Elevation (site datum, from TOC) (ft/msl)

Total Well Depth (from TOC) (ft)

Stick Up (from ground elevation) (ft)

Casing ID (in)

Casing Material

Note: Total Well Depth, Stick Up, Casing Id. etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm@25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
	1st	1st						
	2nd	2nd						
	3rd	3rd						
	4th	4th						
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site.* ***If more fileds above are needed, use separate sheet or form.***

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: Units
12 01 13	8.22						

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

FIELD COMMENTS

Sample Appearance: Murky Odor: None Color: Brown Other:

Weather Conditions (required daily, or as conditions change): Direction/Speed: light Outlook: Cloudy Precipitation: Y or N

Specific Comments (including purge/well volume calculations if required): Flow Measurements DB01W Flow DB01E

	Sample Time	pH		
A/oil & Grease	11:50	8.22	4 in = 1.3 ft³/sec	A = 3 in = 0.8 ft³/sec
B	12:05	7.22	4 in = 1.3 ft³/sec	B = 3 in = 0.8 ft³/sec
C	12:21	8.15	4.5 in = 1.46 ft³/sec	C = 3.5 in = 0.93 ft³/sec
D	12:35	7.93	4.5 in = 1.46 ft³/sec	D = 3.5 in = 0.93 ft³/sec

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
12/01/13	Didier Dumas	[signature]	AECOM
12/01/13	Michelle Wong	Michelle Wong	AECOM

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

TAL-8029WM (0108)

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: WGSL

Site No.:

Sample Point: DB01E (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment... Dedicated: Y or N

Filter Device: Y or N 0.45 µ or ____ µ (circle or fill in)

Purging Device: A-Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device

X-Other:

Filter Type: A-In-line Disposable, B-Pressure, C-Vacuum, X-Other

Sample Tube Type: A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other:

WELL DATA

Well Elevation (at TOC) (ft/msl)

Depth to Water (DTW) (from TOC) (ft)

Groundwater Elevation (site datum, from TOC) (ft/msl)

Total Well Depth (from TOC) (ft)

Stick Up (from ground elevation) (ft)

Casing ID (in)

Casing Material

Note: Total Well Depth, Stick Up, Casing Id. etc, are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm@25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
	1st	1st	1st					
	2nd	2nd	2nd					
	3rd	3rd	3rd					
	4th	4th	4th					
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site.* ***If more fields above are needed, use separate sheet or form.***

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: ____ Units ____
12 15 13	8.60						

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

Sample Appearance: Turbid

Odor: none

Color: tan

Other: floating debris

Weather Conditions (required daily, or as conditions change):

Direction/Speed: NE < 5 mph

Outlook: cloudy

Precipitation: Y or N

Specific Comments (including purge/well volume calculations if required):

FIELD COMMENTS

Flow measurements

	East	pH	Time	West
A	4in = 1.3 ft³/sec	8.60	1214	4in = 1.3 ft³/sec
B	4in = 1.3 ft³/sec	8.07	1231	4.5in = 1.5 ft³/sec
C	4in = 1.3 ft³/sec	8.37	1245	4.5in = 1.5 ft³/sec
D	4in = 1.3 ft³/sec	8.11	1300	5in = 1.8 ft³/sec

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
12/15/13	Margie Thach	[signature]	AECOM
12/15/13	Michelle Wong	Michelle Wong	AECOM

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

TAL-8029WM (0108)

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: WGSL

Site No.:

Sample Point: DB01-W (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment . . . Dedicated: Y or N

Filter Device: Y or N 0.45 µ or ____ µ (circle or fill in)

Purging Device ____ A-Submersible Pump B-Peristaltic Pump C-QED Bladder Pump D-Bailer E-Piston Pump F-Dipper/Bottle

Sampling Device ____

X-Other: ____

Filter Type: ____ A-In-line Disposable B-Pressure C-Vacuum X-Other ____

Sample Tube Type: ____ A-Teflon B-Stainless Steel C-PVC D-Polypropylene X-Other: ____

WELL DATA

Well Elevation (at TOC) ____ (ft/msl)

Depth to Water (DTW) (from TOC) ____ (ft)

Groundwater Elevation (site datum, from TOC) ____ (ft/msl)

Total Well Depth (from TOC) ____ (ft)

Stick Up (from ground elevation) ____ (ft)

Casing ID ____ (in)

Casing Material ____

Note: Total Well Depth, Stick Up, Casing Id. etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm@25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
	1st	1st						
	2nd	2nd						
	3rd	3rd						
	4th	4th						
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fileds above are needed, use separate sheet or form.*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: ____ Units ____
121913	873						

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

FIELD COMMENTS

Sample Appearance: slightly turbid, no scum + foam Odor: none Color: light gray-tan Other: no oil sheen + debris

Weather Conditions (required daily, or as conditions change): Direction/Speed: ~5mph variable Outlook: fair Precipitation: Y or N

Specific Comments (including purge/well volume calculations if required):

Oil & Grease	Time	pH	Flow Deol-W	Deol-E	Bottle
Aliquot A	1721	8.73	0.75 inch = 0.15 ft³/s	0.8 inch = 0.16 ft³/s	1L/4sec
Aliquot B	1736	8.25	0.75 inch = 0.15 ft³/s	0.75 inch = 0.15 ft³/s	1L/4sec
Aliquot C	1751	8.10	0.5 inch = 0.1 ft³/s	0.7 inch = 0.14 ft³/s	1L/4.5sec
Aliquot D	1806	8.00	0.5 inch = 0.1 ft³/s	0.5 inch = 0.1 ft³/s	1L/5sec

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
12/19/13	Margie Thach	[signature]	AECOM
12/19/13	Michelle Wong	[signature]	AECOM

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

TAL-8029WM (0108)

Attachment B
Analytical Laboratory Reports

ANALYTICAL REPORT

Job Number: 280-37877-1

Job Description: 995|Waimanalo Gulch LF

For:
Waste Management
Waimanalo Gulch Landfill
92-460 Farrington Highway
Kapolei, HI 96707

Attention: Mr. Justin Lottig

Approved for release.
Betsy A Sara
Project Manager II
1/30/2013 1:09 PM

Betsy A Sara
Project Manager II
betsy.sara@testamericainc.com
01/30/2013

cc: Mr. Mark Hofferbert
Ms. Margie Thach

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is E87667.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

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CASE NARRATIVE

Client: Waste Management

Project: 995|Waimanalo Gulch LF

Report Number: 280-37877-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

This report may include reporting limits (RLs) less than TestAmerica's standard reporting limit. The reported sample results and associated reporting limits are being used specifically to meet the needs of this project. Note that data are not normally reported to these levels without qualification because they are inherently less reliable and potentially less defensible than required by the latest industry standards.

Sample Receiving

The samples were received on 01/17/2013; the samples arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 2.5C and 2.6C.

Total Kjeldahl Nitrogen was not listed on the chain of custody for analysis, however, this analysis is required for the Total Nitrogen calculation and is also included in the site addendum for this event and was analyzed. The client was notified 1/18/13.

Holding Times

All holding times were met.

Method Blanks

Total Phosphorus Method 365.1 was detected in the Method Blank below the project established reporting limit. No corrective action is taken for any values in Method Blanks that are below the requested reporting limits. The Method Blank data are included at the end of this report.

All other Method Blanks were within established control limits.

Laboratory Control Samples (LCS)

All Laboratory Control Samples were within established control limits.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD)

The method required MS/MSD could not be performed for Method 625 and Method 1664A due to insufficient sample volume, however, LCS/LCSD pairs were analyzed to demonstrate method precision and accuracy.

The Matrix Spike and Matrix Spike Duplicate performed on a sample from another client exhibited recoveries outside control limits for Total Kjeldahl Nitrogen Method 351.2. Because the corresponding Laboratory Control Sample and the Method Blank sample were within control limits, this anomaly may be due to matrix interference and no corrective action was taken.

Sample DB01-E was selected to fulfill the laboratory batch quality control requirements for Method 365.1. Analysis of the laboratory generated MS/MSD for this sample exhibited recoveries of Total Phosphorus below the lower control limit indicating the possible presence of a matrix interference.

All other MS and MSD samples were within established control limits.

Organics

The Method 625 surrogate recovery of Terphenyl-d14 was below control limits in the analysis of sample DB01-E. All other surrogate recoveries were within QC control limits. EPA surrogate guidelines for GC/MS SVOA is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater. As sample analysis met these criteria, corrective action is deemed unnecessary.

The sample FLIP BUCKET was diluted for Method 625 to bring the concentration of target analytes within the calibration range. Elevated reporting limits (RLs) are provided. In addition, the Method 625 surrogate result of Terphenyl-d14 for the sample FLIP BUCKET was below

the laboratories quantitation level due to the dilution performed on the sample. As a result, the laboratory does not rely on the reported recoveries for quality control evaluation purposes

General Comments

The analysis for Biochemical Oxygen Demand (BOD) was performed at TestAmerica's Honolulu facility.
TestAmerica Honolulu
99-193 Aiea Heights Drive
Suite 121
Aiea, HI 96701
Phone: 808.486.5227

The analysis for Hexavalent Chromium was performed at TestAmerica's Irvine facility.
TestAmerica Irvine
17461 Derian Avenue
Suite 100
Irvine, CA 92614
Phone: 949.261.1022

For samples requiring analysis at a dilution, the dilution factor has been multiplied by the Method Detection Limit (MDL) for each analyte and evaluated versus the project-specific reporting limit (PSRL). If the obtained value is below the PSRL, then the PSRL is preserved as the reporting limit for the diluted result, otherwise, the obtained value becomes the reporting limit. This is done in order to maintain the PSRL to meet permit requirements at the request of the client and to report the lowest possible RL for each analyte.

EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-37877-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
280-37877-1	**DB01-E**					
Mercury		0.00014	J	0.00020	mg/L	245.1
Field pH		8.97			SU	Field Sampling
HEM		4.8	J	5.0	mg/L	1664A
Ammonia		0.37		0.10	mg/L	350.1
Nitrogen, Kjeldahl		0.67		0.50	mg/L	351.2
Nitrate Nitrite as N		4.7		0.10	mg/L	353.2
Phosphorus, Total		1.2	B	0.050	mg/L	365.1
Chemical Oxygen Demand		73		20	mg/L	410.4
Total Suspended Solids		340		5.5	mg/L	SM 2540D
Nitrogen, Total		5.4		0.10	mg/L	Total Nitrogen
Dissolved						
Chromium, hexavalent		1.6		1.0	ug/L	218.6
Total Recoverable						
Arsenic		0.0073	J	0.015	mg/L	200.7 Rev 4.4
Cadmium		0.0013	J	0.0050	mg/L	200.7 Rev 4.4
Iron		25		0.10	mg/L	200.7 Rev 4.4
Lead		0.050		0.0090	mg/L	200.7 Rev 4.4
Zinc		0.26		0.020	mg/L	200.7 Rev 4.4
280-37877-2	**FLIP BUCKET**					
Benzoic acid		0.039	J	0.050	mg/L	625
Mercury		0.000043	J	0.00020	mg/L	245.1
Field pH		9.29			SU	Field Sampling
HEM		2.6	J	5.0	mg/L	1664A
Ammonia		0.070	J	0.10	mg/L	350.1
Nitrogen, Kjeldahl		0.38	J	0.50	mg/L	351.2
Nitrate Nitrite as N		0.78		0.10	mg/L	353.2
Phosphorus, Total		0.73	B	0.050	mg/L	365.1
Chemical Oxygen Demand		82		20	mg/L	410.4
Total Suspended Solids		300		5.5	mg/L	SM 2540D
Nitrogen, Total		1.2		0.10	mg/L	Total Nitrogen
Dissolved						
Chromium, hexavalent		2.0		1.0	ug/L	218.6
Total Recoverable						
Arsenic		0.0047	J	0.015	mg/L	200.7 Rev 4.4
Iron		22		0.10	mg/L	200.7 Rev 4.4
Lead		0.0068	J	0.0090	mg/L	200.7 Rev 4.4
Zinc		0.079		0.020	mg/L	200.7 Rev 4.4

METHOD SUMMARY

Client: Waste Management

Job Number: 280-37877-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Semivolatile Organic Compounds (GC/MS)	TAL DEN	40CFR136A 625	
Liquid-Liquid Extraction	TAL DEN		40CFR136A 625
Metals (ICP)	TAL DEN	EPA 200.7 Rev 4.4	
Preparation, Total Recoverable Metals	TAL DEN		EPA 200.7
Mercury (CVAA)	TAL DEN	EPA 245.1	
Preparation, Mercury	TAL DEN		EPA 245.1
HEM and SGT-HEM	TAL DEN	1664A 1664A	
HEM and SGT-HEM (SPE)	TAL DEN		1664A 1664A
Nitrogen, Ammonia	TAL DEN	MCAWW 350.1	
Nitrogen, Total Kjeldahl	TAL DEN	MCAWW 351.2	
Nitrogen, Total Kjeldahl	TAL DEN		MCAWW 351.2
Nitrogen, Nitrate-Nitrite	TAL DEN	MCAWW 353.2	
Phosphorus, Total	TAL DEN	EPA 365.1	
Phosphorus, Total	TAL DEN		MCAWW 365.2/365.3/365
COD	TAL DEN	MCAWW 410.4	
Solids, Total Suspended (TSS)	TAL DEN	SM SM 2540D	
Nitrogen, Total	TAL DEN	EPA Total Nitrogen	
Field Sampling	TAL DEN	EPA Field Sampling	
General Sub Contract Method	TAL HON	Subcontract	
Chromium, Hexavalent (Ion Chromatography)	TAL IRV	EPA 218.6	
Sample Filtration, Field			FIELD_FLTRD

Lab References:

TAL DEN = TestAmerica Denver

TAL HON = TestAmerica Honolulu

TAL IRV = TestAmerica Irvine

Method References:

1664A = EPA-821-98-002

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

METHOD / ANALYST SUMMARY

Client: Waste Management

Job Number: 280-37877-1

Method	Analyst	Analyst ID
40CFR136A 625	Hoffman, Michael G	MGH
EPA 200.7 Rev 4.4	Harre, John K	JKH
EPA 245.1	Mooney, Joseph C	JM
EPA Field Sampling	Field, Sampler	FS
1664A 1664A	Benson, Alex F	AFB
MCAWW 350.1	Allen, Andrew J	AJA
MCAWW 351.2	Woolley, Mark	MW
MCAWW 353.2	Scott, Samantha J	SJS
EPA 365.1	Scott, Samantha J	SJS
MCAWW 410.4	Bandy, Darlene F	DFB
SM SM 2540D	Woolley, Mark	MW
EPA Total Nitrogen	Sullivan, Roxanne	RS
EPA 218.6	Welch, Raquel	RW

SAMPLE SUMMARY

Client: Waste Management

Job Number: 280-37877-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-37877-1	DB01-E	Water	01/14/2013 1258	01/17/2013 0900
280-37877-2	FLIP BUCKET	Water	01/14/2013 1307	01/17/2013 0900

SAMPLE RESULTS

Client: Waste Management

Job Number: 280-37877-1

Client Sample ID: **DB01-E**

Lab Sample ID: 280-37877-1

Client Matrix: Water

Date Sampled: 01/14/2013 1258

Date Received: 01/17/2013 0900

625 Semivolatile Organic Compounds (GC/MS)

Analysis Method:	625	Analysis Batch:	280-156637	Instrument ID:	SMS_Y
Prep Method:	625	Prep Batch:	280-156338	Lab File ID:	Y2497.D
Dilution:	1.0			Initial Weight/Volume:	1023 mL
Analysis Date:	01/23/2013 0153			Final Weight/Volume:	1000 uL
Prep Date:	01/18/2013 1209			Injection Volume:	0.5 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Alpha-Terpineol	ND		0.0020	0.010
Benzoic acid	ND		0.0098	0.050
p-Cresol	ND		0.00024	0.010
Pentachlorophenol	ND		0.020	0.060
Phenol	ND		0.0020	0.010

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	95		50 - 120
2-Fluorobiphenyl	68		36 - 120
2-Fluorophenol	65		30 - 120
Nitrobenzene-d5	74		45 - 120
Phenol-d5	73		36 - 120
Terphenyl-d14	33	X	52 - 120

Client: Waste Management

Job Number: 280-37877-1

Client Sample ID: **FLIP BUCKET**

Lab Sample ID: 280-37877-2

Client Matrix: Water

Date Sampled: 01/14/2013 1307

Date Received: 01/17/2013 0900

625 Semivolatile Organic Compounds (GC/MS)

Analysis Method:	625	Analysis Batch:	280-156637	Instrument ID:	SMS_Y
Prep Method:	625	Prep Batch:	280-156338	Lab File ID:	Y2506.D
Dilution:	4.0			Initial Weight/Volume:	1044.5 mL
Analysis Date:	01/23/2013 0737			Final Weight/Volume:	1000 uL
Prep Date:	01/18/2013 1209			Injection Volume:	0.5 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Alpha-Terpineol	ND		0.0077	0.010
Benzoic acid	0.039	J	0.038	0.050
p-Cresol	ND		0.00096	0.010
Pentachlorophenol	ND		0.077	0.077
Phenol	ND		0.0077	0.010

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	94	D	50 - 120
2-Fluorobiphenyl	83	D	36 - 120
2-Fluorophenol	77	D	30 - 120
Nitrobenzene-d5	79	D	45 - 120
Phenol-d5	85	D	36 - 120
Terphenyl-d14	30	D	52 - 120

Client: Waste Management

Job Number: 280-37877-1

Client Sample ID: **DB01-E**

Lab Sample ID: 280-37877-1

Client Matrix: Water

Date Sampled: 01/14/2013 1258

Date Received: 01/17/2013 0900

218.6 Chromium, Hexavalent (Ion Chromatography)-Dissolved

Analysis Method:	218.6	Analysis Batch:	440-80111	Instrument ID:	IC-16
	N/A	Prep Batch:	N/A	Lab File ID:	Info
Dilution:	1.0			Initial Weight/Volume:	10 mL
Analysis Date:	01/22/2013 1801			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chromium, hexavalent	1.6		0.25	1.0

Client: Waste Management

Job Number: 280-37877-1

Client Sample ID: **FLIP BUCKET**

Lab Sample ID: 280-37877-2

Client Matrix: Water

Date Sampled: 01/14/2013 1307

Date Received: 01/17/2013 0900

218.6 Chromium, Hexavalent (Ion Chromatography)-Dissolved

Analysis Method:	218.6	Analysis Batch:	440-80111	Instrument ID:	IC-16
	N/A	Prep Batch:	N/A	Lab File ID:	Info
Dilution:	1.0			Initial Weight/Volume:	10 mL
Analysis Date:	01/22/2013 1814			Final Weight/Volume:	1.0 mL
Prep Date:	N/A			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chromium, hexavalent	2.0		0.25	1.0

Client: Waste Management

Job Number: 280-37877-1

Client Sample ID: **DB01-E**

Lab Sample ID: 280-37877-1

Client Matrix: Water

Date Sampled: 01/14/2013 1258

Date Received: 01/17/2013 0900

200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	280-156608	Instrument ID:	MT_025
Prep Method:	200.7	Prep Batch:	280-156288	Lab File ID:	25A2012113.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	01/21/2013 1509			Final Weight/Volume:	50 mL
Prep Date:	01/21/2013 0830				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Arsenic	0.0073	J	0.0044	0.015
Cadmium	0.0013	J	0.00045	0.0050
Iron	25		0.022	0.10
Lead	0.050		0.0026	0.0090
Selenium	ND		0.0049	0.015
Zinc	0.26		0.0045	0.020
Silver	ND		0.00093	0.010

245.1 Mercury (CVAA)

Analysis Method:	245.1	Analysis Batch:	280-156661	Instrument ID:	MT_033
Prep Method:	245.1	Prep Batch:	280-156483	Lab File ID:	130121aa.txt
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	01/21/2013 1527			Final Weight/Volume:	30 mL
Prep Date:	01/21/2013 1130				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Mercury	0.00014	J	0.000027	0.00020

Client: Waste Management

Job Number: 280-37877-1

Client Sample ID: **FLIP BUCKET**

Lab Sample ID: 280-37877-2

Client Matrix: Water

Date Sampled: 01/14/2013 1307

Date Received: 01/17/2013 0900

200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	280-156608	Instrument ID:	MT_025
Prep Method:	200.7	Prep Batch:	280-156288	Lab File ID:	25A2012113.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	01/21/2013 1511			Final Weight/Volume:	50 mL
Prep Date:	01/21/2013 0830				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Arsenic	0.0047	J	0.0044	0.015
Cadmium	ND		0.00045	0.0050
Iron	22		0.022	0.10
Lead	0.0068	J	0.0026	0.0090
Selenium	ND		0.0049	0.015
Zinc	0.079		0.0045	0.020
Silver	ND		0.00093	0.010

245.1 Mercury (CVAA)

Analysis Method:	245.1	Analysis Batch:	280-156661	Instrument ID:	MT_033
Prep Method:	245.1	Prep Batch:	280-156483	Lab File ID:	130121aa.txt
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	01/21/2013 1534			Final Weight/Volume:	30 mL
Prep Date:	01/21/2013 1130				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Mercury	0.000043	J	0.000027	0.00020

General Chemistry

Client Sample ID: **DB01-E**

Lab Sample ID: 280-37877-1 Date Sampled: 01/14/2013 1258
Client Matrix: Water Date Received: 01/17/2013 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
HEM	4.8	J	mg/L	1.9	5.0	1.0	1664A
Analysis Batch: 280-157163	Analysis Date: 01/24/2013 1538						
Prep Batch: 280-157107	Prep Date: 01/24/2013 1219						
Ammonia	0.37		mg/L	0.022	0.10	1.0	350.1
Analysis Batch: 280-156746	Analysis Date: 01/22/2013 1216						
Nitrogen, Kjeldahl	0.67		mg/L	0.18	0.50	1.0	351.2
Analysis Batch: 280-156999	Analysis Date: 01/23/2013 2314						
Prep Batch: 280-156949	Prep Date: 01/23/2013 1610						
Nitrate Nitrite as N	4.7		mg/L	0.019	0.10	1.0	353.2
Analysis Batch: 280-156933	Analysis Date: 01/23/2013 1225						
Phosphorus, Total	1.2	B	mg/L	0.010	0.050	2.0	365.1
Analysis Batch: 280-156693	Analysis Date: 01/22/2013 1102						
Prep Batch: 280-156507	Prep Date: 01/21/2013 1139						
Chemical Oxygen Demand	73		mg/L	4.1	20	1.0	410.4
Analysis Batch: 280-156549	Analysis Date: 01/22/2013 1044						
Total Suspended Solids	340		mg/L	5.5	5.5	1.0	SM 2540D
Analysis Batch: 280-156239	Analysis Date: 01/17/2013 1615						
Nitrogen, Total	5.4		mg/L	0.042	0.10	1.0	Total Nitrogen
Analysis Batch: 280-157640	Analysis Date: 01/29/2013 0941						

General Chemistry

Client Sample ID: **FLIP BUCKET**

Lab Sample ID: 280-37877-2 Date Sampled: 01/14/2013 1307
Client Matrix: Water Date Received: 01/17/2013 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
HEM	2.6	J	mg/L	1.8	5.0	1.0	1664A
Analysis Batch: 280-157163	Analysis Date: 01/24/2013 1538						
Prep Batch: 280-157107	Prep Date: 01/24/2013 1219						
Ammonia	0.070	J	mg/L	0.022	0.10	1.0	350.1
Analysis Batch: 280-156746	Analysis Date: 01/22/2013 1219						
Nitrogen, Kjeldahl	0.38	J	mg/L	0.18	0.50	1.0	351.2
Analysis Batch: 280-156999	Analysis Date: 01/23/2013 2315						
Prep Batch: 280-156949	Prep Date: 01/23/2013 1610						
Nitrate Nitrite as N	0.78		mg/L	0.019	0.10	1.0	353.2
Analysis Batch: 280-156933	Analysis Date: 01/23/2013 1230						
Phosphorus, Total	0.73	B	mg/L	0.0050	0.050	1.0	365.1
Analysis Batch: 280-156693	Analysis Date: 01/22/2013 0947						
Prep Batch: 280-156507	Prep Date: 01/21/2013 1139						
Chemical Oxygen Demand	82		mg/L	4.1	20	1.0	410.4
Analysis Batch: 280-156549	Analysis Date: 01/22/2013 1044						
Total Suspended Solids	300		mg/L	5.5	5.5	1.0	SM 2540D
Analysis Batch: 280-156239	Analysis Date: 01/17/2013 1615						
Nitrogen, Total	1.2		mg/L	0.042	0.10	1.0	Total Nitrogen
Analysis Batch: 280-157640	Analysis Date: 01/29/2013 0941						

Field Service / Mobile Lab

Client Sample ID: **DB01-E**

Lab Sample ID: 280-37877-1

Client Matrix: Water

Date Sampled: 01/14/2013 1258

Date Received: 01/17/2013 0900

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed Date Prepared
Field pH	8.97		SU	1.0	Field Sampling	280-156321	01/14/2013 1258

Field Service / Mobile Lab

Client Sample ID: **FLIP BUCKET**

Lab Sample ID: 280-37877-2

Client Matrix: Water

Date Sampled: 01/14/2013 1307

Date Received: 01/17/2013 0900

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed Date Prepared
Field pH	9.29		SU	1.0	Field Sampling	280-156321	01/14/2013 1307

DATA REPORTING QUALIFIERS

Client: Waste Management

Job Number: 280-37877-1

Lab Section	Qualifier	Description
GC/MS Semi VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
	X	Surrogate is outside control limits
Metals		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
General Chemistry		
	B	Compound was found in the blank and sample.
	F	MS/MSD Recovery or RPD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: Waste Management

Job Number: 280-37877-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 280-156338					
LCS 280-156338/2-A	Lab Control Sample	T	Water	625	
LCSD 280-156338/3-A	Lab Control Sample Duplicate	T	Water	625	
MB 280-156338/1-A	Method Blank	T	Water	625	
280-37877-1	DB01-E	T	Water	625	
280-37877-2	FLIP BUCKET	T	Water	625	
Analysis Batch:280-156637					
LCS 280-156338/2-A	Lab Control Sample	T	Water	625	280-156338
LCSD 280-156338/3-A	Lab Control Sample Duplicate	T	Water	625	280-156338
MB 280-156338/1-A	Method Blank	T	Water	625	280-156338
280-37877-1	DB01-E	T	Water	625	280-156338
280-37877-2	FLIP BUCKET	T	Water	625	280-156338

Report Basis

T = Total

Client: Waste Management

Job Number: 280-37877-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-156288					
LCS 280-156288/2-A	Lab Control Sample	R	Water	200.7	
MB 280-156288/1-A	Method Blank	R	Water	200.7	
280-37877-1	DB01-E	R	Water	200.7	
280-37877-2	FLIP BUCKET	R	Water	200.7	
280-37922-D-1-B MS	Matrix Spike	R	Water	200.7	
280-37922-D-1-C MSD	Matrix Spike Duplicate	R	Water	200.7	
Prep Batch: 280-156483					
LCS 280-156483/2-A	Lab Control Sample	T	Water	245.1	
MB 280-156483/1-A	Method Blank	T	Water	245.1	
280-37877-1	DB01-E	T	Water	245.1	
280-37877-1MS	Matrix Spike	T	Water	245.1	
280-37877-1MSD	Matrix Spike Duplicate	T	Water	245.1	
280-37877-2	FLIP BUCKET	T	Water	245.1	
Analysis Batch:280-156608					
LCS 280-156288/2-A	Lab Control Sample	R	Water	200.7 Rev 4.4	280-156288
MB 280-156288/1-A	Method Blank	R	Water	200.7 Rev 4.4	280-156288
280-37877-1	DB01-E	R	Water	200.7 Rev 4.4	280-156288
280-37877-2	FLIP BUCKET	R	Water	200.7 Rev 4.4	280-156288
280-37922-D-1-B MS	Matrix Spike	R	Water	200.7 Rev 4.4	280-156288
280-37922-D-1-C MSD	Matrix Spike Duplicate	R	Water	200.7 Rev 4.4	280-156288
Analysis Batch:280-156661					
LCS 280-156483/2-A	Lab Control Sample	T	Water	245.1	280-156483
MB 280-156483/1-A	Method Blank	T	Water	245.1	280-156483
280-37877-1	DB01-E	T	Water	245.1	280-156483
280-37877-1MS	Matrix Spike	T	Water	245.1	280-156483
280-37877-1MSD	Matrix Spike Duplicate	T	Water	245.1	280-156483
280-37877-2	FLIP BUCKET	T	Water	245.1	280-156483

Report Basis

R = Total Recoverable

T = Total

Field Service / Mobile Lab

Analysis Batch:280-156321					
280-37877-1	DB01-E	T	Water	Field Sampling	
280-37877-2	FLIP BUCKET	T	Water	Field Sampling	

Report Basis

T = Total

Client: Waste Management

Job Number: 280-37877-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-156239					
LCS 280-156239/1	Lab Control Sample	T	Water	SM 2540D	
LCSD 280-156239/2	Lab Control Sample Duplicate	T	Water	SM 2540D	
MB 280-156239/3	Method Blank	T	Water	SM 2540D	
280-37877-1	DB01-E	T	Water	SM 2540D	
280-37877-1DU	Duplicate	T	Water	SM 2540D	
280-37877-2	FLIP BUCKET	T	Water	SM 2540D	
Prep Batch: 280-156507					
LCS 280-156507/3-A	Lab Control Sample	T	Water	365.2/365.3/365	
LCSD 280-156507/4-A	Lab Control Sample Duplicate	T	Water	365.2/365.3/365	
MB 280-156507/5-A	Method Blank	T	Water	365.2/365.3/365	
280-37877-1	DB01-E	T	Water	365.2/365.3/365	
280-37877-1MS	Matrix Spike	T	Water	365.2/365.3/365	
280-37877-1MSD	Matrix Spike Duplicate	T	Water	365.2/365.3/365	
280-37877-2	FLIP BUCKET	T	Water	365.2/365.3/365	
Analysis Batch:280-156549					
LCS 280-156549/3	Lab Control Sample	T	Water	410.4	
LCSD 280-156549/4	Lab Control Sample Duplicate	T	Water	410.4	
MB 280-156549/5	Method Blank	T	Water	410.4	
280-37849-A-10 MS	Matrix Spike	T	Water	410.4	
280-37849-A-10 MSD	Matrix Spike Duplicate	T	Water	410.4	
280-37877-1	DB01-E	T	Water	410.4	
280-37877-2	FLIP BUCKET	T	Water	410.4	
Analysis Batch:280-156693					
LCS 280-156507/3-A	Lab Control Sample	T	Water	365.1	280-156507
LCSD 280-156507/4-A	Lab Control Sample Duplicate	T	Water	365.1	280-156507
MB 280-156507/5-A	Method Blank	T	Water	365.1	280-156507
280-37877-1	DB01-E	T	Water	365.1	280-156507
280-37877-1MS	Matrix Spike	T	Water	365.1	280-156507
280-37877-1MSD	Matrix Spike Duplicate	T	Water	365.1	280-156507
280-37877-2	FLIP BUCKET	T	Water	365.1	280-156507
Analysis Batch:280-156746					
LCS 280-156746/54	Lab Control Sample	T	Water	350.1	
LCSD 280-156746/55	Lab Control Sample Duplicate	T	Water	350.1	
MB 280-156746/21	Method Blank	T	Water	350.1	
MB 280-156746/56	Method Blank	T	Water	350.1	
280-37851-B-1 MS	Matrix Spike	T	Water	350.1	
280-37851-B-1 MSD	Matrix Spike Duplicate	T	Water	350.1	
280-37877-1	DB01-E	T	Water	350.1	
280-37877-2	FLIP BUCKET	T	Water	350.1	

Client: Waste Management

Job Number: 280-37877-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-156933					
LCS 280-156933/21	Lab Control Sample	T	Water	353.2	
LCSD 280-156933/22	Lab Control Sample Duplicate	T	Water	353.2	
MB 280-156933/20	Method Blank	T	Water	353.2	
280-37877-1	DB01-E	T	Water	353.2	
280-37877-1MS	Matrix Spike	T	Water	353.2	
280-37877-1MSD	Matrix Spike Duplicate	T	Water	353.2	
280-37877-2	FLIP BUCKET	T	Water	353.2	
Prep Batch: 280-156949					
LCS 280-156949/1-A	Lab Control Sample	T	Water	351.2	
LCSD 280-156949/2-A	Lab Control Sample Duplicate	T	Water	351.2	
MB 280-156949/3-A	Method Blank	T	Water	351.2	
280-37809-A-2-C MS	Matrix Spike	T	Water	351.2	
280-37809-A-2-D MSD	Matrix Spike Duplicate	T	Water	351.2	
280-37877-1	DB01-E	T	Water	351.2	
280-37877-2	FLIP BUCKET	T	Water	351.2	
Analysis Batch:280-156999					
LCS 280-156949/1-A	Lab Control Sample	T	Water	351.2	280-156949
LCSD 280-156949/2-A	Lab Control Sample Duplicate	T	Water	351.2	280-156949
MB 280-156949/3-A	Method Blank	T	Water	351.2	280-156949
280-37809-A-2-C MS	Matrix Spike	T	Water	351.2	280-156949
280-37809-A-2-D MSD	Matrix Spike Duplicate	T	Water	351.2	280-156949
280-37877-1	DB01-E	T	Water	351.2	280-156949
280-37877-2	FLIP BUCKET	T	Water	351.2	280-156949
Prep Batch: 280-157107					
LCS 280-157107/2-A	Lab Control Sample	T	Water	1664A	
LCSD 280-157107/3-A	Lab Control Sample Duplicate	T	Water	1664A	
MB 280-157107/1-A	Method Blank	T	Water	1664A	
280-37877-1	DB01-E	T	Water	1664A	
280-37877-2	FLIP BUCKET	T	Water	1664A	
Analysis Batch:280-157163					
LCS 280-157107/2-A	Lab Control Sample	T	Water	1664A	280-157107
LCSD 280-157107/3-A	Lab Control Sample Duplicate	T	Water	1664A	280-157107
MB 280-157107/1-A	Method Blank	T	Water	1664A	280-157107
280-37877-1	DB01-E	T	Water	1664A	280-157107
280-37877-2	FLIP BUCKET	T	Water	1664A	280-157107
Analysis Batch:280-157640					
MB 280-157640/1	Method Blank	T	Water	Total Nitrogen	
280-37877-1	DB01-E	T	Water	Total Nitrogen	
280-37877-2	FLIP BUCKET	T	Water	Total Nitrogen	

Client: Waste Management

Job Number: 280-37877-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Report Basis					
T = Total					
HPLC/IC					
Analysis Batch:440-80111					
LCS 440-80111/2	Lab Control Sample	T	Water	218.6	
MB 440-80111/3	Method Blank	T	Water	218.6	
280-37877-1	DB01-E	D	Water	218.6	
280-37877-2	FLIP BUCKET	D	Water	218.6	
280-37877-2MS	Matrix Spike	D	Water	218.6	
280-37877-2MSD	Matrix Spike Duplicate	D	Water	218.6	

Report Basis

D = Dissolved

T = Total

Client: Waste Management

Job Number: 280-37877-1

Surrogate Recovery Report

625 Semivolatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	TBP %Rec	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
280-37877-1	DB01-E	95	68	65	74	73	33X
280-37877-2	FLIP BUCKET	94D	83D	77D	79D	85D	30D
MB 280-156338/1-A		84	57	74	77	78	88
LCS 280-156338/2-A		99	71	71	78	76	90
LCSD 280-156338/3-A		99	73	80	85	84	88

Surrogate	Acceptance Limits
TBP = 2,4,6-Tribromophenol	50-120
FBP = 2-Fluorobiphenyl	36-120
2FP = 2-Fluorophenol	30-120
NBZ = Nitrobenzene-d5	45-120
PHL = Phenol-d5	36-120
TPH = Terphenyl-d14	52-120

Client: Waste Management

Job Number: 280-37877-1

Method Blank - Batch: 280-156338

Method: 625
Preparation: 625

Lab Sample ID:	MB 280-156338/1-A	Analysis Batch:	280-156637	Instrument ID:	SMS_Y
Client Matrix:	Water	Prep Batch:	280-156338	Lab File ID:	Y2492.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	01/23/2013 0009	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	01/18/2013 1209			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Alpha-Terpineol	ND		0.0020	0.010
Benzoic acid	ND		0.010	0.050
p-Cresol	ND		0.00025	0.010
Pentachlorophenol	ND		0.020	0.060
Phenol	ND		0.0020	0.010

Surrogate	% Rec	Acceptance Limits
2,4,6-Tribromophenol	84	50 - 120
2-Fluorobiphenyl	57	36 - 120
2-Fluorophenol	74	30 - 120
Nitrobenzene-d5	77	45 - 120
Phenol-d5	78	36 - 120
Terphenyl-d14	88	52 - 120

Client: Waste Management

Job Number: 280-37877-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-156338

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-156338/2-A	Analysis Batch:	280-156637	Instrument ID:	SMS_Y
Client Matrix:	Water	Prep Batch:	280-156338	Lab File ID:	Y2456.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	01/22/2013 1133	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	01/18/2013 1209			Injection Volume:	0.5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-156338/3-A	Analysis Batch:	280-156637	Instrument ID:	SMS_Y
Client Matrix:	Water	Prep Batch:	280-156338	Lab File ID:	Y2457.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	01/22/2013 1155	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	01/18/2013 1209			Injection Volume:	0.5 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
1,2,4-Trichlorobenzene	64	71	44 - 120	10	35		
1,2-Dichlorobenzene	59	67	32 - 120	13	42		
1,3-Dichlorobenzene	58	66	23 - 120	14	47		
1,4-Dichlorobenzene	57	65	24 - 120	14	49		
2,2'-Oxybis(1-chloropropane)	70	79	37 - 120	12	30		
2,4,6-Trichlorophenol	87	93	51 - 120	7	30		
2,4-Dichlorophenol	80	88	46 - 120	9	30		
2,4-Dimethylphenol	67	72	44 - 119	7	35		
2,4-Dinitrophenol	92	94	20 - 121	2	61		
2,4-Dinitrotoluene	97	101	57 - 120	4	35		
2,6-Dinitrotoluene	92	93	56 - 120	1	30		
2-Chloronaphthalene	77	80	60 - 118	4	30		
2-Chlorophenol	75	84	34 - 120	11	30		
2-Methylphenol	74	83	38 - 120	12	35		
2-Nitrophenol	84	93	47 - 120	10	30		
3,3'-Dichlorobenzidine	71	73	18 - 120	3	50		
4,6-Dinitro-2-methylphenol	100	102	40 - 120	2	55		
4-Bromophenyl phenyl ether	88	89	53 - 120	2	34		
4-Chloro-3-methylphenol	86	92	57 - 120	6	30		
4-Chlorophenyl phenyl ether	86	88	51 - 120	2	30		
4-Nitrophenol	103	105	53 - 120	2	42		
Acenaphthene	81	83	47 - 120	3	30		
Acenaphthylene	82	85	33 - 120	4	30		
Anthracene	88	87	52 - 120	1	30		
Benzidine	80	83	10 - 218	4	50		
Benzo[a]anthracene	88	88	54 - 120	1	30		
Benzo[a]pyrene	77	76	39 - 120	1	73		
Benzo[b]fluoranthene	86	84	51 - 120	2	90		
Benzo[g,h,i]perylene	92	93	48 - 120	1	64		
Benzo[k]fluoranthene	89	91	49 - 120	2	50		
Bis(2-chloroethoxy)methane	77	85	50 - 120	9	30		
Bis(2-chloroethyl)ether	76	85	35 - 120	12	30		
Bis(2-ethylhexyl) phthalate	96	97	56 - 120	2	30		
Butyl benzyl phthalate	92	93	53 - 120	1	30		
Chrysene	91	93	51 - 120	2	30		
Dibenz(a,h)anthracene	92	91	45 - 120	1	78		

Client: Waste Management

Job Number: 280-37877-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-156338

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-156338/2-A	Analysis Batch:	280-156637	Instrument ID:	SMS_Y
Client Matrix:	Water	Prep Batch:	280-156338	Lab File ID:	Y2456.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	01/22/2013 1133	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	01/18/2013 1209			Injection Volume:	0.5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-156338/3-A	Analysis Batch:	280-156637	Instrument ID:	SMS_Y
Client Matrix:	Water	Prep Batch:	280-156338	Lab File ID:	Y2457.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	01/22/2013 1155	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	01/18/2013 1209			Injection Volume:	0.5 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Diethyl phthalate	90	91	59 - 114	1	30		
Dimethyl phthalate	89	91	58 - 112	2	30		
Di-n-butyl phthalate	93	92	57 - 118	1	30		
Di-n-octyl phthalate	91	91	56 - 120	1	30		
Fluoranthene	92	92	58 - 120	0	30		
Fluorene	84	87	59 - 120	4	30		
Hexachlorobenzene	89	89	53 - 120	0	30		
Hexachlorobutadiene	57	65	27 - 116	13	41		
Hexachlorocyclopentadiene	19	19	10 - 120	1	82	J	J
Hexachloroethane	56	63	40 - 113	13	52		
Indeno[1,2,3-cd]pyrene	89	89	50 - 120	1	73		
Isophorone	81	88	50 - 120	8	30		
Naphthalene	69	76	37 - 120	9	30		
Nitrobenzene	78	86	46 - 120	10	30		
N-Nitrosodimethylamine	71	81	37 - 120	13	30		
N-Nitrosodi-n-propylamine	78	86	50 - 120	10	30		
N-Nitrosodiphenylamine	86	87	46 - 203	2	50		
p-Cresol	75	83	42 - 120	11	39		
Pentachlorophenol	92	93	46 - 120	1	30		
Phenanthrene	89	87	54 - 120	1	30		
Phenol	77	88	37 - 112	13	30		
Pyrene	89	89	55 - 115	0	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
2,4,6-Tribromophenol	99	99	50 - 120
2-Fluorobiphenyl	71	73	36 - 120
2-Fluorophenol	71	80	30 - 120
Nitrobenzene-d5	78	85	45 - 120
Phenol-d5	76	84	36 - 120
Terphenyl-d14	90	88	52 - 120

Client: Waste Management

Job Number: 280-37877-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-156338

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-156338/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-156338/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/22/2013 1133			Analysis Date:	01/22/2013 1155
Prep Date:	01/18/2013 1209			Prep Date:	01/18/2013 1209
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
1,2,4-Trichlorobenzene	0.0800	0.0800	0.0509	0.0565
1,2-Dichlorobenzene	0.0800	0.0800	0.0474	0.0540
1,3-Dichlorobenzene	0.0800	0.0800	0.0461	0.0532
1,4-Dichlorobenzene	0.0800	0.0800	0.0454	0.0523
2,2'-Oxybis(1-chloropropane)	0.0800	0.0800	0.0560	0.0630
2,4,6-Trichlorophenol	0.0800	0.0800	0.0695	0.0744
2,4-Dichlorophenol	0.0800	0.0800	0.0638	0.0702
2,4-Dimethylphenol	0.0800	0.0800	0.0538	0.0579
2,4-Dinitrophenol	0.0800	0.0800	0.0735	0.0752
2,4-Dinitrotoluene	0.0800	0.0800	0.0780	0.0808
2,6-Dinitrotoluene	0.0800	0.0800	0.0739	0.0744
2-Chloronaphthalene	0.0800	0.0800	0.0614	0.0641
2-Chlorophenol	0.0800	0.0800	0.0600	0.0669
2-Methylphenol	0.0800	0.0800	0.0589	0.0665
2-Nitrophenol	0.0800	0.0800	0.0673	0.0744
3,3'-Dichlorobenzidine	0.0800	0.0800	0.0565	0.0582
4,6-Dinitro-2-methylphenol	0.0800	0.0800	0.0798	0.0814
4-Bromophenyl phenyl ether	0.0800	0.0800	0.0701	0.0713
4-Chloro-3-methylphenol	0.0800	0.0800	0.0687	0.0733
4-Chlorophenyl phenyl ether	0.0800	0.0800	0.0685	0.0702
4-Nitrophenol	0.0800	0.0800	0.0824	0.0838
Acenaphthene	0.0800	0.0800	0.0644	0.0664
Acenaphthylene	0.0800	0.0800	0.0658	0.0682
Anthracene	0.0800	0.0800	0.0703	0.0697
Benzidine	0.200	0.200	0.159	0.165
Benzo[a]anthracene	0.0800	0.0800	0.0701	0.0707
Benzo[a]pyrene	0.0800	0.0800	0.0617	0.0611
Benzo[b]fluoranthene	0.0800	0.0800	0.0688	0.0676
Benzo[g,h,i]perylene	0.0800	0.0800	0.0738	0.0745
Benzo[k]fluoranthene	0.0800	0.0800	0.0714	0.0728
Bis(2-chloroethoxy)methane	0.0800	0.0800	0.0619	0.0679
Bis(2-chloroethyl)ether	0.0800	0.0800	0.0607	0.0683
Bis(2-ethylhexyl) phthalate	0.0800	0.0800	0.0765	0.0778
Butyl benzyl phthalate	0.0800	0.0800	0.0733	0.0743
Chrysene	0.0800	0.0800	0.0730	0.0743
Dibenz(a,h)anthracene	0.0800	0.0800	0.0735	0.0724
Diethyl phthalate	0.0800	0.0800	0.0723	0.0730
Dimethyl phthalate	0.0800	0.0800	0.0716	0.0730
Di-n-butyl phthalate	0.0800	0.0800	0.0746	0.0736

Client: Waste Management

Job Number: 280-37877-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-156338

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-156338/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-156338/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/22/2013 1133			Analysis Date:	01/22/2013 1155
Prep Date:	01/18/2013 1209			Prep Date:	01/18/2013 1209
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual		LCSD Result/Qual	
Di-n-octyl phthalate	0.0800	0.0800	0.0727		0.0732	
Fluoranthene	0.0800	0.0800	0.0738		0.0739	
Fluorene	0.0800	0.0800	0.0671		0.0696	
Hexachlorobenzene	0.0800	0.0800	0.0710		0.0713	
Hexachlorobutadiene	0.0800	0.0800	0.0456		0.0518	
Hexachlorocyclopentadiene	0.0800	0.0800	0.0156	J	0.0155	J
Hexachloroethane	0.0800	0.0800	0.0446		0.0507	
Indeno[1,2,3-cd]pyrene	0.0800	0.0800	0.0716		0.0709	
Isophorone	0.0800	0.0800	0.0651		0.0705	
Naphthalene	0.0800	0.0800	0.0551		0.0606	
Nitrobenzene	0.0800	0.0800	0.0622		0.0686	
N-Nitrosodimethylamine	0.0800	0.0800	0.0569		0.0646	
N-Nitrosodi-n-propylamine	0.0800	0.0800	0.0622		0.0687	
N-Nitrosodiphenylamine	0.0683	0.0683	0.0585		0.0597	
p-Cresol	0.160	0.160	0.120		0.133	
Pentachlorophenol	0.0800	0.0800	0.0737		0.0746	
Phenanthrene	0.0800	0.0800	0.0709		0.0700	
Phenol	0.0800	0.0800	0.0613		0.0700	
Pyrene	0.0800	0.0800	0.0712		0.0711	

Client: Waste Management

Job Number: 280-37877-1

Method Blank - Batch: 440-80111

Method: 218.6
Preparation: N/A

Lab Sample ID:	MB 440-80111/3	Analysis Batch:	440-80111	Instrument ID:	IC-16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Info 2_TAIIRV167_Hex
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	01/22/2013 0658	Units:	ug/L	Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Chromium, hexavalent	ND		0.25	1.0

Lab Control Sample - Batch: 440-80111

Method: 218.6
Preparation: N/A

Lab Sample ID:	LCS 440-80111/2	Analysis Batch:	440-80111	Instrument ID:	IC-16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Info 2_TAIIRV167_Hex
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	01/22/2013 0646	Units:	ug/L	Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chromium, hexavalent	50.0	46.8	94	90 - 110	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 440-80111

Method: 218.6
Preparation: N/A

MS Lab Sample ID:	280-37877-2	Analysis Batch:	440-80111	Instrument ID:	IC-16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Info 2_TAIIRV167_Hex
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	01/22/2013 1826			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	280-37877-2	Analysis Batch:	440-80111	Instrument ID:	IC-16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Info 2_TAIIRV167_Hex
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	01/22/2013 1839			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Chromium, hexavalent	102	100	90 - 110	2	10		

Client: Waste Management

Job Number: 280-37877-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 440-80111

Method: 218.6
Preparation: N/A

MS Lab Sample ID:	280-37877-2	Units:	ug/L	MSD Lab Sample ID:	280-37877-2
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/22/2013 1826			Analysis Date:	01/22/2013 1839
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Chromium, hexavalent	2.0	50.0	50.0	53.0	51.9

Client: Waste Management

Job Number: 280-37877-1

Method Blank - Batch: 280-156288

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	MB 280-156288/1-A	Analysis Batch:	280-156608	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-156288	Lab File ID:	25A2012113.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/21/2013 1451	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	01/21/2013 0830				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Arsenic	ND		0.0044	0.015
Cadmium	ND		0.00045	0.0050
Iron	ND		0.022	0.10
Lead	ND		0.0026	0.0090
Selenium	ND		0.0049	0.015
Zinc	ND		0.0045	0.020
Silver	ND		0.00093	0.010

Lab Control Sample - Batch: 280-156288

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	LCS 280-156288/2-A	Analysis Batch:	280-156608	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-156288	Lab File ID:	25A2012113.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/21/2013 1453	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	01/21/2013 0830				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	1.00	0.993	99	88 - 110	
Cadmium	0.100	0.101	101	88 - 111	
Iron	1.00	1.01	101	89 - 115	
Lead	0.500	0.503	101	89 - 110	
Selenium	2.00	1.97	98	85 - 112	
Zinc	0.500	0.504	101	85 - 111	
Silver	0.0500	0.0530	106	85 - 115	

Client: Waste Management

Job Number: 280-37877-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-156288

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-37922-D-1-B MS	Analysis Batch:	280-156608	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-156288	Lab File ID:	25A2012113.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/21/2013 1500			Final Weight/Volume:	50 mL
Prep Date:	01/21/2013 0830				
Leach Date:	N/A				

MSD Lab Sample ID:	280-37922-D-1-C MSD	Analysis Batch:	280-156608	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-156288	Lab File ID:	25A2012113.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/21/2013 1502			Final Weight/Volume:	50 mL
Prep Date:	01/21/2013 0830				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Arsenic	98	99	88 - 110	1	20		
Cadmium	100	101	88 - 111	1	20		
Iron	109	106	89 - 115	2	20		
Lead	99	100	89 - 110	0	20		
Selenium	97	98	85 - 112	1	20		
Zinc	100	100	85 - 111	0	20		
Silver	105	107	85 - 115	2	20		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-156288

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-37922-D-1-B MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	01/21/2013 1500		
Prep Date:	01/21/2013 0830		
Leach Date:	N/A		

MSD Lab Sample ID:	280-37922-D-1-C MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	01/21/2013 1502
Prep Date:	01/21/2013 0830
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Arsenic	ND	1.00	1.00	0.982	0.993
Cadmium	ND	0.100	0.100	0.100	0.101
Iron	0.46	1.00	1.00	1.55	1.52
Lead	0.078	0.500	0.500	0.574	0.576
Selenium	ND	2.00	2.00	1.93	1.96
Zinc	0.11	0.500	0.500	0.608	0.611
Silver	ND	0.0500	0.0500	0.0525	0.0535

Client: Waste Management

Job Number: 280-37877-1

Method Blank - Batch: 280-156483

Method: 245.1
Preparation: 245.1

Lab Sample ID:	MB 280-156483/1-A	Analysis Batch:	280-156661	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-156483	Lab File ID:	130121aa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	01/21/2013 1513	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	01/21/2013 1130				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000027	0.00020

Lab Control Sample - Batch: 280-156483

Method: 245.1
Preparation: 245.1

Lab Sample ID:	LCS 280-156483/2-A	Analysis Batch:	280-156661	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-156483	Lab File ID:	130121aa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	01/21/2013 1520	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	01/21/2013 1130				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00494	99	90 - 110	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-156483

Method: 245.1
Preparation: 245.1

MS Lab Sample ID:	280-37877-1	Analysis Batch:	280-156661	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-156483	Lab File ID:	130121aa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	01/21/2013 1529			Final Weight/Volume:	30 mL
Prep Date:	01/21/2013 1130				
Leach Date:	N/A				

MSD Lab Sample ID:	280-37877-1	Analysis Batch:	280-156661	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-156483	Lab File ID:	130121aa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	01/21/2013 1531			Final Weight/Volume:	30 mL
Prep Date:	01/21/2013 1130				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	97	97	80 - 120	1	10		

Client: Waste Management

Job Number: 280-37877-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-156483

Method: 245.1
Preparation: 245.1

MS Lab Sample ID:	280-37877-1	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	01/21/2013 1529		
Prep Date:	01/21/2013 1130		
Leach Date:	N/A		

MSD Lab Sample ID:	280-37877-1
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	01/21/2013 1531
Prep Date:	01/21/2013 1130
Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Mercury	0.00014	J	0.00500	0.00500	0.00498	0.00501

Client: Waste Management

Job Number: 280-37877-1

Method Blank - Batch: 280-157107

Method: 1664A
Preparation: 1664A

Lab Sample ID:	MB 280-157107/1-A	Analysis Batch:	280-157163	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	280-157107	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	01/24/2013 1538	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	01/24/2013 1219				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
HEM	ND		1.4	5.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-157107

Method: 1664A
Preparation: 1664A

LCS Lab Sample ID:	LCS 280-157107/2-A	Analysis Batch:	280-157163	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	280-157107	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	01/24/2013 1538	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	01/24/2013 1219				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-157107/3-A	Analysis Batch:	280-157163	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	280-157107	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	01/24/2013 1538	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	01/24/2013 1219				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
HEM	101	84	81 - 107	18	22		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-157107

Method: 1664A
Preparation: 1664A

LCS Lab Sample ID:	LCS 280-157107/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-157107/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/24/2013 1538			Analysis Date:	01/24/2013 1538
Prep Date:	01/24/2013 1219			Prep Date:	01/24/2013 1219
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
HEM	40.0	40.0	40.3	33.6

Client: Waste Management

Job Number: 280-37877-1

Method Blank - Batch: 280-156746

Method: 350.1
Preparation: N/A

Lab Sample ID:	MB 280-156746/21	Analysis Batch:	280-156746	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\012213.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/22/2013 1011	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Ammonia	ND		0.022	0.10

Method Blank - Batch: 280-156746

Method: 350.1
Preparation: N/A

Lab Sample ID:	MB 280-156746/56	Analysis Batch:	280-156746	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\012213.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/22/2013 1141	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Ammonia	ND		0.022	0.10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-156746

Method: 350.1
Preparation: N/A

LCS Lab Sample ID:	LCS 280-156746/54	Analysis Batch:	280-156746	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\012213.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/22/2013 1137	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-156746/55	Analysis Batch:	280-156746	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\012213.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/22/2013 1139	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Ammonia	107	107	90 - 110	0	10		

Client: Waste Management

Job Number: 280-37877-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-156746

Method: 350.1
Preparation: N/A

LCS Lab Sample ID:	LCS 280-156746/54	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-156746/55
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/22/2013 1137			Analysis Date:	01/22/2013 1139
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Ammonia	2.50	2.50	2.67	2.67

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-156746

Method: 350.1
Preparation: N/A

MS Lab Sample ID:	280-37851-B-1 MS	Analysis Batch:	280-156746	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\012213.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	20 mL
Analysis Date:	01/22/2013 1146			Final Weight/Volume:	20 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-37851-B-1 MSD	Analysis Batch:	280-156746	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\012213.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	20 mL
Analysis Date:	01/22/2013 1148			Final Weight/Volume:	20 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Ammonia	110	110	90 - 110	1	10		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-156746

Method: 350.1
Preparation: N/A

MS Lab Sample ID:	280-37851-B-1 MS	Units:	mg/L	MSD Lab Sample ID:	280-37851-B-1 MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/22/2013 1146			Analysis Date:	01/22/2013 1148
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Ammonia	ND	1.00	1.00	1.10	1.10

Client: Waste Management

Job Number: 280-37877-1

Method Blank - Batch: 280-156949

Method: 351.2
Preparation: 351.2

Lab Sample ID:	MB 280-156949/3-A	Analysis Batch:	280-156999	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-156949	Lab File ID:	012313TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	01/23/2013 2246	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	01/23/2013 1610				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrogen, Kjeldahl	ND		0.18	0.50

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-156949

Method: 351.2
Preparation: 351.2

LCS Lab Sample ID:	LCS 280-156949/1-A	Analysis Batch:	280-156999	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-156949	Lab File ID:	012313TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	01/23/2013 2244	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	01/23/2013 1610				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-156949/2-A	Analysis Batch:	280-156999	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-156949	Lab File ID:	012313TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	01/23/2013 2245	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	01/23/2013 1610				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Nitrogen, Kjeldahl	97	97	90 - 110	0	25		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-156949

Method: 351.2
Preparation: 351.2

LCS Lab Sample ID:	LCS 280-156949/1-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-156949/2-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/23/2013 2244			Analysis Date:	01/23/2013 2245
Prep Date:	01/23/2013 1610			Prep Date:	01/23/2013 1610
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Nitrogen, Kjeldahl	6.00	6.00	5.80	5.83

Client: Waste Management

Job Number: 280-37877-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-156949

Method: 351.2
Preparation: 351.2

MS Lab Sample ID:	280-37809-A-2-C MS	Analysis Batch:	280-156999	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-156949	Lab File ID:	012313TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	01/23/2013 2249			Final Weight/Volume:	25 mL
Prep Date:	01/23/2013 1610				
Leach Date:	N/A				

MSD Lab Sample ID:	280-37809-A-2-D MSD	Analysis Batch:	280-156999	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-156949	Lab File ID:	012313TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	01/23/2013 2250			Final Weight/Volume:	25 mL
Prep Date:	01/23/2013 1610				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Nitrogen, Kjeldahl	136	142	90 - 110	3	25	F	F

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-156949

Method: 351.2
Preparation: 351.2

MS Lab Sample ID:	280-37809-A-2-C MS	Units: mg/L	
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	01/23/2013 2249		
Prep Date:	01/23/2013 1610		
Leach Date:	N/A		

MSD Lab Sample ID:	280-37809-A-2-D MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	01/23/2013 2250
Prep Date:	01/23/2013 1610
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Nitrogen, Kjeldahl	3.5	3.00	3.00	7.54	F	7.73	F

Client: Waste Management

Job Number: 280-37877-1

Method Blank - Batch: 280-156933

Method: 353.2
Preparation: N/A

Lab Sample ID:	MB 280-156933/20	Analysis Batch:	280-156933	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0123NXN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	01/23/2013 1218	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrate Nitrite as N	ND		0.019	0.10

Method Reporting Limit Check - Batch: 280-156933

Method: 353.2
Preparation: N/A

Lab Sample ID:	MRL 280-156933/18	Analysis Batch:	280-156933	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0123NXN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/23/2013 1215	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate Nitrite as N	0.100	0.0922	92	50 - 150	J

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-156933

Method: 353.2
Preparation: N/A

LCS Lab Sample ID:	LCS 280-156933/21	Analysis Batch:	280-156933	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0123NXN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/23/2013 1219	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-156933/22	Analysis Batch:	280-156933	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0123NXN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/23/2013 1221	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Nitrate Nitrite as N	101	101	90 - 110	0	10		

Client: Waste Management

Job Number: 280-37877-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-156933

Method: 353.2
Preparation: N/A

LCS Lab Sample ID:	LCS 280-156933/21	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-156933/22
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/23/2013 1219			Analysis Date:	01/23/2013 1221
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Nitrate Nitrite as N	5.00	5.00	5.06	5.07

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-156933

Method: 353.2
Preparation: N/A

MS Lab Sample ID:	280-37877-1	Analysis Batch:	280-156933	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0123NXN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2013 1227			Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-37877-1	Analysis Batch:	280-156933	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0123NXN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2013 1228			Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Nitrate Nitrite as N	95	98	90 - 110	1	10		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-156933

Method: 353.2
Preparation: N/A

MS Lab Sample ID:	280-37877-1	Units:	mg/L	MSD Lab Sample ID:	280-37877-1
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/23/2013 1227			Analysis Date:	01/23/2013 1228
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Nitrate Nitrite as N	4.7	4.00	4.00	8.48	8.60

Client: Waste Management

Job Number: 280-37877-1

Method Blank - Batch: 280-156507

Method: 365.1
Preparation: 365.2/365.3/365

Lab Sample ID:	MB 280-156507/5-A	Analysis Batch:	280-156693	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-156507	Lab File ID:	012213tphos.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50.0 mL
Analysis Date:	01/22/2013 0913	Units:	mg/L	Final Weight/Volume:	50.0 mL
Prep Date:	01/21/2013 1139				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Phosphorus, Total	0.00963	J	0.0050	0.050

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-156507

Method: 365.1
Preparation: 365.2/365.3/365

LCS Lab Sample ID:	LCS 280-156507/3-A	Analysis Batch:	280-156693	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-156507	Lab File ID:	012213tphos.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50.0 mL
Analysis Date:	01/22/2013 0913	Units:	mg/L	Final Weight/Volume:	50.0 mL
Prep Date:	01/21/2013 1139				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-156507/4-A	Analysis Batch:	280-156693	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-156507	Lab File ID:	012213tphos.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50.0 mL
Analysis Date:	01/22/2013 0913	Units:	mg/L	Final Weight/Volume:	50.0 mL
Prep Date:	01/21/2013 1139				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Phosphorus, Total	100	99	90 - 110	1	10		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-156507

Method: 365.1
Preparation: 365.2/365.3/365

LCS Lab Sample ID:	LCS 280-156507/3-A	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	01/22/2013 0913		
Prep Date:	01/21/2013 1139		
Leach Date:	N/A		

LCSD Lab Sample ID:	LCSD 280-156507/4-A
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	01/22/2013 0913
Prep Date:	01/21/2013 1139
Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Phosphorus, Total	0.500	0.500	0.499	0.496

Client: Waste Management

Job Number: 280-37877-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-156507

Method: 365.1
Preparation: 365.2/365.3/365

MS Lab Sample ID:	280-37877-1	Analysis Batch:	280-156693	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-156507	Lab File ID:	012213tphos.xls
Dilution:	2.0	Leach Batch:	N/A	Initial Weight/Volume:	50.0 mL
Analysis Date:	01/22/2013 1102			Final Weight/Volume:	50.0 mL
Prep Date:	01/21/2013 1139				
Leach Date:	N/A				

MSD Lab Sample ID:	280-37877-1	Analysis Batch:	280-156693	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-156507	Lab File ID:	012213tphos.xls
Dilution:	2.0	Leach Batch:	N/A	Initial Weight/Volume:	50.0 mL
Analysis Date:	01/22/2013 1102			Final Weight/Volume:	50.0 mL
Prep Date:	01/21/2013 1139				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Phosphorus, Total	75	97	90 - 110	6	10	F	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-156507

Method: 365.1
Preparation: 365.2/365.3/365

MS Lab Sample ID:	280-37877-1	Units: mg/L	
Client Matrix:	Water		
Dilution:	2.0		
Analysis Date:	01/22/2013 1102		
Prep Date:	01/21/2013 1139		
Leach Date:	N/A		

MSD Lab Sample ID:	280-37877-1
Client Matrix:	Water
Dilution:	2.0
Analysis Date:	01/22/2013 1102
Prep Date:	01/21/2013 1139
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual
Phosphorus, Total	1.2	0.500	0.500	1.62	F	1.73

Client: Waste Management

Job Number: 280-37877-1

Method Blank - Batch: 280-156549

Method: 410.4
Preparation: N/A

Lab Sample ID:	MB 280-156549/5	Analysis Batch:	280-156549	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2 mL
Analysis Date:	01/21/2013 1500	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Chemical Oxygen Demand	ND		4.1	20

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-156549

Method: 410.4
Preparation: N/A

LCS Lab Sample ID:	LCS 280-156549/3	Analysis Batch:	280-156549	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/21/2013 1500	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-156549/4	Analysis Batch:	280-156549	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/21/2013 1500	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Chemical Oxygen Demand	99	100	90 - 110	1	11		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-156549

Method: 410.4
Preparation: N/A

LCS Lab Sample ID:	LCS 280-156549/3	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-156549/4
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/21/2013 1500			Analysis Date:	01/21/2013 1500
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Chemical Oxygen Demand	50.0	50.0	49.3	49.9

Client: Waste Management

Job Number: 280-37877-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-156549

Method: 410.4
Preparation: N/A

MS Lab Sample ID:	280-37849-A-10 MS	Analysis Batch:	280-156549	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/21/2013 1500			Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-37849-A-10 MSD	Analysis Batch:	280-156549	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/21/2013 1500			Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Chemical Oxygen Demand	93	91	90 - 110	2	11		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-156549

Method: 410.4
Preparation: N/A

MS Lab Sample ID:	280-37849-A-10 MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	01/21/2013 1500		
Prep Date:	N/A		
Leach Date:	N/A		

MSD Lab Sample ID:	280-37849-A-10 MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	01/21/2013 1500
Prep Date:	N/A
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Chemical Oxygen Demand	ND	50.0	50.0	46.7	45.7

Client: Waste Management

Job Number: 280-37877-1

Method Blank - Batch: 280-156239

Method: SM 2540D
Preparation: N/A

Lab Sample ID:	MB 280-156239/3	Analysis Batch:	280-156239	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	01/17/2013 1615	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Total Suspended Solids	ND		1.1	4.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-156239

Method: SM 2540D
Preparation: N/A

LCS Lab Sample ID:	LCS 280-156239/1	Analysis Batch:	280-156239	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/17/2013 1615	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-156239/2	Analysis Batch:	280-156239	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/17/2013 1615	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Total Suspended Solids	94	88	86 - 114	7	20		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-156239

Method: SM 2540D
Preparation: N/A

LCS Lab Sample ID:	LCS 280-156239/1	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-156239/2
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/17/2013 1615			Analysis Date:	01/17/2013 1615
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Total Suspended Solids	100	100	94.0	88.0

Client: Waste Management

Job Number: 280-37877-1

Duplicate - Batch: 280-156239

Method: SM 2540D
Preparation: N/A

Lab Sample ID:	280-37877-1	Analysis Batch:	280-156239	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/17/2013 1615	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Suspended Solids	340	332	4	10	

Client: Waste Management

Job Number: 280-37877-1

Method Blank - Batch: 280-157640

Method: Total Nitrogen
Preparation: N/A

Lab Sample ID:	MB 280-157640/1	Analysis Batch:	280-157640	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	01/29/2013 0941	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrogen, Total	ND		0.042	0.10

Client: Waste Management

Job Number: 280-37877-1

Laboratory Chronicle

Lab ID: 280-37877-1 **Client ID:** DB01-E

Sample Date/Time: 01/14/2013 12:58 Received Date/Time: 01/17/2013 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	280-37877-D-1-A		280-156637	280-156338	01/18/2013 12:09	1	TAL DEN	KS
A:625	280-37877-D-1-A		280-156637	280-156338	01/23/2013 01:53	1	TAL DEN	MGH
A:218.6	280-37877-H-1		440-80111		01/22/2013 18:01	1	TAL IRV	RW
P:200.7	280-37877-I-1-A		280-156608	280-156288	01/21/2013 08:30	1	TAL DEN	JA
A:200.7 Rev 4.4	280-37877-I-1-A		280-156608	280-156288	01/21/2013 15:09	1	TAL DEN	JKH
P:245.1	280-37877-I-1-B		280-156661	280-156483	01/21/2013 11:30	1	TAL DEN	JM
A:245.1	280-37877-I-1-B		280-156661	280-156483	01/21/2013 15:27	1	TAL DEN	JM
P:1664A	280-37877-A-1-A		280-157163	280-157107	01/24/2013 12:19	1	TAL DEN	AFB
A:1664A	280-37877-A-1-A		280-157163	280-157107	01/24/2013 15:38	1	TAL DEN	AFB
A:350.1	280-37877-G-1		280-156746		01/22/2013 12:16	1	TAL DEN	AJA
P:351.2	280-37877-F-1-A		280-156999	280-156949	01/23/2013 16:10	1	TAL DEN	MW
A:351.2	280-37877-F-1-A		280-156999	280-156949	01/23/2013 23:14	1	TAL DEN	MW
A:353.2	280-37877-G-1		280-156933		01/23/2013 12:25	1	TAL DEN	SJS
P:365.2/365.3/365	280-37877-G-1-A		280-156693	280-156507	01/21/2013 11:39	2	TAL DEN	SJS
A:365.1	280-37877-G-1-A		280-156693	280-156507	01/22/2013 11:02	2	TAL DEN	SJS
A:410.4	280-37877-F-1		280-156549		01/22/2013 10:44	1	TAL DEN	DFB
A:SM 2540D	280-37877-E-1		280-156239		01/17/2013 16:15	1	TAL DEN	MW
A:Total Nitrogen	280-37877-A-1		280-157640		01/29/2013 09:41	1	TAL DEN	RS
A:Field Sampling	280-37877-A-1		280-156321		01/14/2013 12:58	1	TAL DEN	FS

Lab ID: 280-37877-1 MS **Client ID:** DB01-E

Sample Date/Time: 01/14/2013 12:58 Received Date/Time: 01/17/2013 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:245.1	280-37877-I-1-C MS		280-156661	280-156483	01/21/2013 11:30	1	TAL DEN	JM
A:245.1	280-37877-I-1-C MS		280-156661	280-156483	01/21/2013 15:29	1	TAL DEN	JM
A:353.2	280-37877-G-1 MS		280-156933		01/23/2013 12:27	1	TAL DEN	SJS
P:365.2/365.3/365	280-37877-G-1-B MS		280-156693	280-156507	01/21/2013 11:39	2	TAL DEN	SJS
A:365.1	280-37877-G-1-B MS		280-156693	280-156507	01/22/2013 11:02	2	TAL DEN	SJS

Lab ID: 280-37877-1 MSD **Client ID:** DB01-E

Sample Date/Time: 01/14/2013 12:58 Received Date/Time: 01/17/2013 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:245.1	280-37877-I-1-D MSD		280-156661	280-156483	01/21/2013 11:30	1	TAL DEN	JM
A:245.1	280-37877-I-1-D MSD		280-156661	280-156483	01/21/2013 15:31	1	TAL DEN	JM
A:353.2	280-37877-G-1 MSD		280-156933		01/23/2013 12:28	1	TAL DEN	SJS
P:365.2/365.3/365	280-37877-G-1-C MSD		280-156693	280-156507	01/21/2013 11:39	2	TAL DEN	SJS
A:365.1	280-37877-G-1-C MSD		280-156693	280-156507	01/22/2013 11:02	2	TAL DEN	SJS

Client: Waste Management

Job Number: 280-37877-1

Laboratory Chronicle

Lab ID: **280-37877-1 DU** **Client ID:** **DB01-E**

Sample Date/Time: 01/14/2013 12:58 Received Date/Time: 01/17/2013 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:SM 2540D	280-37877-E-1 DU		280-156239		01/17/2013 16:15	1	TAL DEN	MW

Lab ID: **280-37877-2** **Client ID:** **FLIP BUCKET**

Sample Date/Time: 01/14/2013 13:07 Received Date/Time: 01/17/2013 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	280-37877-D-2-A		280-156637	280-156338	01/18/2013 12:09	4	TAL DEN	KS
A:625	280-37877-D-2-A		280-156637	280-156338	01/23/2013 07:37	4	TAL DEN	MGH
A:218.6	280-37877-H-2		440-80111		01/22/2013 18:14	1	TAL IRV	RW
P:200.7	280-37877-I-2-A		280-156608	280-156288	01/21/2013 08:30	1	TAL DEN	JA
A:200.7 Rev 4.4	280-37877-I-2-A		280-156608	280-156288	01/21/2013 15:11	1	TAL DEN	JKH
P:245.1	280-37877-I-2-B		280-156661	280-156483	01/21/2013 11:30	1	TAL DEN	JM
A:245.1	280-37877-I-2-B		280-156661	280-156483	01/21/2013 15:34	1	TAL DEN	JM
P:1664A	280-37877-B-2-A		280-157163	280-157107	01/24/2013 12:19	1	TAL DEN	AFB
A:1664A	280-37877-B-2-A		280-157163	280-157107	01/24/2013 15:38	1	TAL DEN	AFB
A:350.1	280-37877-F-2		280-156746		01/22/2013 12:19	1	TAL DEN	AJA
P:351.2	280-37877-F-2-B		280-156999	280-156949	01/23/2013 16:10	1	TAL DEN	MW
A:351.2	280-37877-F-2-B		280-156999	280-156949	01/23/2013 23:15	1	TAL DEN	MW
A:353.2	280-37877-F-2		280-156933		01/23/2013 12:30	1	TAL DEN	SJS
P:365.2/365.3/365	280-37877-F-2-A		280-156693	280-156507	01/21/2013 11:39	1	TAL DEN	SJS
A:365.1	280-37877-F-2-A		280-156693	280-156507	01/22/2013 09:47	1	TAL DEN	SJS
A:410.4	280-37877-G-2		280-156549		01/22/2013 10:44	1	TAL DEN	DFB
A:SM 2540D	280-37877-E-2		280-156239		01/17/2013 16:15	1	TAL DEN	MW
A:Total Nitrogen	280-37877-A-2		280-157640		01/29/2013 09:41	1	TAL DEN	RS
A:Field Sampling	280-37877-A-2		280-156321		01/14/2013 13:07	1	TAL DEN	FS

Lab ID: **280-37877-2 MS** **Client ID:** **FLIP BUCKET**

Sample Date/Time: 01/14/2013 13:07 Received Date/Time: 01/17/2013 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:218.6	280-37877-H-2 MS		440-80111		01/22/2013 18:26	1	TAL IRV	RW

Lab ID: **280-37877-2 MSD** **Client ID:** **FLIP BUCKET**

Sample Date/Time: 01/14/2013 13:07 Received Date/Time: 01/17/2013 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:218.6	280-37877-H-2 MSD		440-80111		01/22/2013 18:39	1	TAL IRV	RW

Client: Waste Management

Job Number: 280-37877-1

Laboratory Chronicle

Lab ID: **MB** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	MB 280-156338/1-A		280-156637	280-156338	01/18/2013 12:09	1	TAL DEN	KS
A:625	MB 280-156338/1-A		280-156637	280-156338	01/23/2013 00:09	1	TAL DEN	MGH
A:218.6	MB 440-80111/3		440-80111		01/22/2013 06:58	1	TAL IRV	RW
P:200.7	MB 280-156288/1-A		280-156608	280-156288	01/21/2013 08:30	1	TAL DEN	JA
A:200.7 Rev 4.4	MB 280-156288/1-A		280-156608	280-156288	01/21/2013 14:51	1	TAL DEN	JKH
P:245.1	MB 280-156483/1-A		280-156661	280-156483	01/21/2013 11:30	1	TAL DEN	JM
A:245.1	MB 280-156483/1-A		280-156661	280-156483	01/21/2013 15:13	1	TAL DEN	JM
P:1664A	MB 280-157107/1-A		280-157163	280-157107	01/24/2013 12:19	1	TAL DEN	AFB
A:1664A	MB 280-157107/1-A		280-157163	280-157107	01/24/2013 15:38	1	TAL DEN	AFB
A:350.1	MB 280-156746/21		280-156746		01/22/2013 10:11	1	TAL DEN	AJA
A:350.1	MB 280-156746/56		280-156746		01/22/2013 11:41	1	TAL DEN	AJA
P:351.2	MB 280-156949/3-A		280-156999	280-156949	01/23/2013 16:10	1	TAL DEN	MW
A:351.2	MB 280-156949/3-A		280-156999	280-156949	01/23/2013 22:46	1	TAL DEN	MW
A:353.2	MB 280-156933/20		280-156933		01/23/2013 12:18	1	TAL DEN	SJS
P:365.2/365.3/365	MB 280-156507/5-A		280-156693	280-156507	01/21/2013 11:39	1	TAL DEN	SJS
A:365.1	MB 280-156507/5-A		280-156693	280-156507	01/22/2013 09:13	1	TAL DEN	SJS
A:410.4	MB 280-156549/5		280-156549		01/21/2013 15:00	1	TAL DEN	DFB
A:SM 2540D	MB 280-156239/3		280-156239		01/17/2013 16:15	1	TAL DEN	MW
A:Total Nitrogen	MB 280-157640/1		280-157640		01/29/2013 09:41	1	TAL DEN	RS

Lab ID: **LCS** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	LCS 280-156338/2-A		280-156637	280-156338	01/18/2013 12:09	1	TAL DEN	KS
A:625	LCS 280-156338/2-A		280-156637	280-156338	01/22/2013 11:33	1	TAL DEN	MGH
A:218.6	LCS 440-80111/2		440-80111		01/22/2013 06:46	1	TAL IRV	RW
P:200.7	LCS 280-156288/2-A		280-156608	280-156288	01/21/2013 08:30	1	TAL DEN	JA
A:200.7 Rev 4.4	LCS 280-156288/2-A		280-156608	280-156288	01/21/2013 14:53	1	TAL DEN	JKH
P:245.1	LCS 280-156483/2-A		280-156661	280-156483	01/21/2013 11:30	1	TAL DEN	JM
A:245.1	LCS 280-156483/2-A		280-156661	280-156483	01/21/2013 15:20	1	TAL DEN	JM
P:1664A	LCS 280-157107/2-A		280-157163	280-157107	01/24/2013 12:19	1	TAL DEN	AFB
A:1664A	LCS 280-157107/2-A		280-157163	280-157107	01/24/2013 15:38	1	TAL DEN	AFB
A:350.1	LCS 280-156746/54		280-156746		01/22/2013 11:37	1	TAL DEN	AJA
P:351.2	LCS 280-156949/1-A		280-156999	280-156949	01/23/2013 16:10	1	TAL DEN	MW
A:351.2	LCS 280-156949/1-A		280-156999	280-156949	01/23/2013 22:44	1	TAL DEN	MW
A:353.2	LCS 280-156933/21		280-156933		01/23/2013 12:19	1	TAL DEN	SJS
P:365.2/365.3/365	LCS 280-156507/3-A		280-156693	280-156507	01/21/2013 11:39	1	TAL DEN	SJS
A:365.1	LCS 280-156507/3-A		280-156693	280-156507	01/22/2013 09:13	1	TAL DEN	SJS
A:410.4	LCS 280-156549/3		280-156549		01/21/2013 15:00	1	TAL DEN	DFB
A:SM 2540D	LCS 280-156239/1		280-156239		01/17/2013 16:15	1	TAL DEN	MW

Client: Waste Management

Job Number: 280-37877-1

Laboratory Chronicle

Lab ID: **LCSD** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	LCSD 280-156338/3-A		280-156637	280-156338	01/18/2013 12:09	1	TAL DEN	KS
A:625	LCSD 280-156338/3-A		280-156637	280-156338	01/22/2013 11:55	1	TAL DEN	MGH
P:1664A	LCSD 280-157107/3-A		280-157163	280-157107	01/24/2013 12:19	1	TAL DEN	AFB
A:1664A	LCSD 280-157107/3-A		280-157163	280-157107	01/24/2013 15:38	1	TAL DEN	AFB
A:350.1	LCSD 280-156746/55		280-156746		01/22/2013 11:39	1	TAL DEN	AJA
P:351.2	LCSD 280-156949/2-A		280-156999	280-156949	01/23/2013 16:10	1	TAL DEN	MW
A:351.2	LCSD 280-156949/2-A		280-156999	280-156949	01/23/2013 22:45	1	TAL DEN	MW
A:353.2	LCSD 280-156933/22		280-156933		01/23/2013 12:21	1	TAL DEN	SJS
P:365.2/365.3/365	LCSD 280-156507/4-A		280-156693	280-156507	01/21/2013 11:39	1	TAL DEN	SJS
A:365.1	LCSD 280-156507/4-A		280-156693	280-156507	01/22/2013 09:13	1	TAL DEN	SJS
A:410.4	LCSD 280-156549/4		280-156549		01/21/2013 15:00	1	TAL DEN	DFB
A:SM 2540D	LCSD 280-156239/2		280-156239		01/17/2013 16:15	1	TAL DEN	MW

Lab ID: **MRL** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:353.2	MRL 280-156933/18		280-156933		01/23/2013 12:15	1	TAL DEN	SJS

Lab ID: **MS** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:200.7	280-37922-D-1-B MS		280-156608	280-156288	01/21/2013 08:30	1	TAL DEN	JA
A:200.7 Rev 4.4	280-37922-D-1-B MS		280-156608	280-156288	01/21/2013 15:00	1	TAL DEN	JKH
A:350.1	280-37851-B-1 MS		280-156746		01/22/2013 11:46	1	TAL DEN	AJA
P:351.2	280-37809-A-2-C MS		280-156999	280-156949	01/23/2013 16:10	1	TAL DEN	MW
A:351.2	280-37809-A-2-C MS		280-156999	280-156949	01/23/2013 22:49	1	TAL DEN	MW
A:410.4	280-37849-A-10 MS		280-156549		01/21/2013 15:00	1	TAL DEN	DFB

Client: Waste Management

Job Number: 280-37877-1

Laboratory Chronicle

Lab ID: **MSD** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:200.7	280-37922-D-1-C MSD		280-156608	280-156288	01/21/2013 08:30	1	TAL DEN	JA
A:200.7 Rev 4.4	280-37922-D-1-C MSD		280-156608	280-156288	01/21/2013 15:02	1	TAL DEN	JKH
A:350.1	280-37851-B-1 MSD		280-156746		01/22/2013 11:48	1	TAL DEN	AJA
P:351.2	280-37809-A-2-D MSD		280-156999	280-156949	01/23/2013 16:10	1	TAL DEN	MW
A:351.2	280-37809-A-2-D MSD		280-156999	280-156949	01/23/2013 22:50	1	TAL DEN	MW
A:410.4	280-37849-A-10 MSD		280-156549		01/21/2013 15:00	1	TAL DEN	DFB

Lab References:

TAL DEN = TestAmerica Denver

TAL IRV = TestAmerica Irvine

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Honolulu
99-193 Aiea Heights Drive, Suite 121
Aiea, HI 96701
Tel: 808-486-5227

TestAmerica Job ID: HWA0071
Client Project/Site: Denver 280-37877-1
Client Project Description: AECOM, WGSL STORMWATER
Revision: 1

For:
TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002

Attn: Betsy Sarah

Authorized for release by:
1/29/2013 12:42:01 AM
Jimson E. Carr
Service Center Manager
Jimson.Carr@testamericainc.com

Designee for

Kristie Reilly
Project Manager
Kristie.Brachmann@testamericainc.com

LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDA	Minimum detectable activity
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: TestAmerica Denver
Project/Site: Denver 280-37877-1

TestAmerica Job ID: HWA0071

Job ID: HWA0071

Laboratory: TestAmerica Honolulu

Narrative

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory unless otherwise stated in the report. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. TestAmerica Analytical Testing Corporation certifies that the analytical results contained herein apply only to the specific sample(s) analyzed.

The Chain(s) of Custody are included and are an integral part of this report. This entire report was reviewed and approved for release.

If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-(808)486-5227

LABORATORY REPORT

At sample receipt, the cooler/sample was 4 degrees C.
NELAC states that samples which require thermal preservation shall be considered acceptable if the arrival temperature is within 2 degrees C of the required temperature or the method specified range. For samples with a temperature requirement of 4 degrees C, an arrival temperature from 0 degrees C to 6 degrees C meets specifications. Samples that are delivered to the laboratory on the same day that they are collected may not meet these criteria. In these cases, the samples are considered acceptable if there is evidence that the chilling process has begun, such as arrival on ice.

The reported results were obtained in compliance with the 2003 NELAC standards unless otherwise noted.

Sample Summary

Client: TestAmerica Denver
Project/Site: Denver 280-37877-1

TestAmerica Job ID: HWA0071

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
HWA0071-01	DB01-E	Water - NonPotable	01/14/13 12:58	01/14/13 14:40
HWA0071-02	FLIP BUCKET	Water - NonPotable	01/14/13 13:07	01/14/13 14:40

Detection Summary

Client: TestAmerica Denver
Project/Site: Denver 280-37877-1

TestAmerica Job ID: HWA0071

Client Sample ID: DB01-E — Lab Sample ID: HWA0071-01

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
BOD - 5 Day	5.87		2.00		mg/L	1.00		SM5210B	Total

Client Sample ID: FLIP BUCKET — Lab Sample ID: HWA0071-02

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
BOD - 5 Day	20.0		2.00		mg/L	1.00		SM5210B	Total

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: TestAmerica Denver
Project/Site: Denver 280-37877-1

TestAmerica Job ID: HWA0071

Client Sample ID: DB01-E

Lab Sample ID: HWA0071-01

Date Collected: 01/14/13 12:58
Matrix: Water - NonPotable
Date Received: 01/14/13 14:40

Method: SM5210B - General Chemistry Parameters

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
BOD - 5 Day	5.87		2.00		mg/L		01/16/13 11:35	01/21/13 11:35	1.00

Client Sample ID: FLIP BUCKET

Lab Sample ID: HWA0071-02

Date Collected: 01/14/13 13:07
Matrix: Water - NonPotable
Date Received: 01/14/13 14:40

Method: SM5210B - General Chemistry Parameters

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
BOD - 5 Day	20.0		2.00		mg/L		01/16/13 11:33	01/21/13 11:31	1.00

QC Sample Results

Client: TestAmerica Denver
Project/Site: Denver 280-37877-1

TestAmerica Job ID: HWA0071

Method: SM5210B - General Chemistry Parameters

Lab Sample ID: 13A0014-BLK1 — **Client Sample ID: Method Blank**
Matrix: Water - NonPotable — **Prep Type: Total**
Analysis Batch: 13A0014 — **Prep Batch: 13A0014_P**

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
BOD - 5 Day	ND		2.00		mg/L		01/16/13 11:07	01/21/13 11:01	1.00

Lab Sample ID: 13A0014-BS1 — **Client Sample ID: Lab Control Sample**
Matrix: Water - NonPotable — **Prep Type: Total**
Analysis Batch: 13A0014 — **Prep Batch: 13A0014_P**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
BOD - 5 Day			198	194		mg/L		98	85 - 115		

Lab Sample ID: 13A0014-DUP1 — **Client Sample ID: Duplicate**
Matrix: Water - NonPotable — **Prep Type: Total**
Analysis Batch: 13A0014 — **Prep Batch: 13A0014_P**

Analyte	Sample Result	Sample Qualifier		Duplicate Result	Duplicate Qualifier	Unit	D			RPD	RPD Limit
BOD - 5 Day	3.07			2.98		mg/L				3	20

QC Association Summary

Client: TestAmerica Denver
Project/Site: Denver 280-37877-1

TestAmerica Job ID: HWA0071

WetChem

Analysis Batch: 13A0014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
13A0014-BLK1	Method Blank	Total	Water - NonPotable	SM5210B	13A0014_P
13A0014-BS1	Lab Control Sample	Total	Water - NonPotable	SM5210B	13A0014_P
13A0014-DUP1	Duplicate	Total	Water - NonPotable	SM5210B	13A0014_P
HWA0071-01	DB01-E	Total	Water - NonPotable	SM5210B	13A0014_P
HWA0071-02	FLIP BUCKET	Total	Water - NonPotable	SM5210B	13A0014_P

Prep Batch: 13A0014_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
13A0014-BLK1	Method Blank	Total	Water - NonPotable	Default Prep GenChem	
13A0014-BS1	Lab Control Sample	Total	Water - NonPotable	Default Prep GenChem	
13A0014-DUP1	Duplicate	Total	Water - NonPotable	Default Prep GenChem	
HWA0071-01	DB01-E	Total	Water - NonPotable	Default Prep GenChem	
HWA0071-02	FLIP BUCKET	Total	Water - NonPotable	Default Prep GenChem	

Lab Chronicle

Client: TestAmerica Denver
Project/Site: Denver 280-37877-1

TestAmerica Job ID: HWA0071

Client Sample ID: DB01-E

Lab Sample ID: HWA0071-01

Date Collected: 01/14/13 12:58
Matrix: Water - NonPotable
Date Received: 01/14/13 14:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Default Prep		1.00	13A0014_P	01/16/13 11:35	NK	TAL HON
Total	Analysis	GenChem SM5210B		1.00	13A0014	01/21/13 11:35	NK	TAL HON

Client Sample ID: FLIP BUCKET

Lab Sample ID: HWA0071-02

Date Collected: 01/14/13 13:07
Matrix: Water - NonPotable
Date Received: 01/14/13 14:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Default Prep		1.00	13A0014_P	01/16/13 11:33	NK	TAL HON
Total	Analysis	GenChem SM5210B		1.00	13A0014	01/21/13 11:31	NK	TAL HON

Laboratory References:

TAL HON = TestAmerica Honolulu, 99-193 Aiea Heights Drive, Suite 121, Aiea, HI 96701, TEL 808-486-5227

Certification Summary

Client: TestAmerica Denver
Project/Site: Denver 280-37877-1

TestAmerica Job ID: HWA0071

Laboratory: TestAmerica Honolulu

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Florida	NELAP	4	E87907	06-30-13
Hawaii	State Program	9	N/A	06-28-13
USDA	Federal		HON-S-206	01-31-15

Method Summary

Client: TestAmerica Denver
Project/Site: Denver 280-37877-1

TestAmerica Job ID: HWA0071

Method	Method Description	Protocol	Laboratory
SM5210B	General Chemistry Parameters		TAL HON

Protocol References:

Laboratory References:

TAL HON = TestAmerica Honolulu, 99-193 Aiea Heights Drive, Suite 121, Aiea, HI 96701, TEL 808-486-5227

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TESTAMERICA DENVER

LABORATORY USE ONLY
LAB JOB NO. HLW40071
LOCATION
CONTAINERS

Chain of Custody / Analysis Request Form

Report to: Mark Hofferbert
Company name: AECOM Technical Services, Inc.
Address: 1001 Bishop St., Suite 1600
City: Honolulu | State: HI | ZIP: 96813
Phone: 808-523-8874 | Fax: 808-523-8950
Sampler | # samples in shipment

Project identification
Job name: WGSL Stormwater
Job number: 60246625.02
Contact email address: mark.hofferbert@aecom.com, margie.thach@aecom.com
Date results needed: 2 weeks

Indicate analyses requested

Item no.	Client sample ID	COMP	GRAB	Matrix: Water	Soil	Wastewater	Drinking water	Sludge	Liquid	Solid	Oil	Other	Preservation method	Sampling Date	Sampling Time	No. of containers	1664 Oil&Grease	TSS SM2540D	625 SVOCs*	COD 410.4, T. Phos 365.1, NH3 350.1 NO2-NO3 353.2, T. Nitrogen SM4500N	200.7, 245.1 Metals**	BOD	CrVI			Laboratory ID no.
1	DBD1-E		X	X									HCl	01/14/13	1258	2	X									HLW40071-01
2		MT 01/14/13	X	X									varies	01/14/13	1258	7	X MT 01/14/13	X	X	X	X	X	X			
3																										
4																										
5																										
6																										
7																										
8																										
9																										
10																										

Released by (print / sign)	Date / time released	Delivery method	Received by (print / sign)	Company / Agency affiliation	Date / time received	Condition noted
Margie Thach	01/14/13 1440	Hand	[illegible]	TestAmerica	1/14/13 / 1440	Dust wet 42
[illegible]	1/15/13 / 1045	Fedex			/	
	/				/	

Comments: * SVOCs: alpha-terpineol, benzoic acid, p-cresol, pentachlorophenol, phenol. ** Metals: As, Cd, Fe, Pb, Hg, Se, Ag, Zn

TA-Honolulu
~~Food Quality Labs~~ to analyze BOD (SM 5210) and preserve CrVI (218.6); report to TA-Denver (PM: Betsy Sara). Drop Ship to TA-Den

Please check one:
☒ Dispose by lab
☐ Return to client
☐ Archive

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TESTAMERICA DENVER

LABORATORY USE ONLY
LAB JOB NO. HWA0071
LOCATION
CONTAINERS

Chain of Custody / Analysis Request Form

Report to: Mark Hofferbert
Company name: AECOM Technical Services, Inc.
Address: 1001 Bishop St., Suite 1600
City: Honolulu | State: HI | ZIP: 96813
Phone: 808-523-8874 | Fax: 808-523-8950
Sampler | # samples in shipment

Project identification
Job name: WGSL Stormwater
Job number: 60246625.02
Contact email address: mark.hofferbert@aecom.com, margie.thach@aecom.com
Date results needed: 2 weeks

Indicate analyses requested

Item no.	Client sample ID	COMP	GRAB	Matrix: Water	Soil	Wastewater	Drinking water	Sludge	Liquid	Solid	Oil	Other	Preservation method	Sampling: Date	Time	No. of containers	1664 Oil&Grease	TSS SM2540D	625 SVOCs*	COD 410.4, T. Phos 365.1, NH3 350.1 NO2-NO3 353.2, T. Nitrogen SM4500N	200.7, 245.1 Metals**	BOD	CrVI			Laboratory ID no.
1	Flip Bucket		X	X									HCl	01/14/13	13:07	2	X									HW
2		X		X									varies	01/14/13	13:07	7		X	X	X	X	X	X			HWA0071-02
3																										
4																										
5																										
6																										
7																										
8																										
9																										
10																										

Released by (print / sign)	Date / time released	Delivery method	Received by (print / sign)	Company / Agency affiliation	Date / time received	Condition noted
Margie Thach	01/14/13 1440	Hand	[signature]	TestAmerica	1/14/13 / 1440	Sent Wet 142
[signature]	1/15/13 / 1045	Fedex			/	
	/				/	

Comments: * SVOCs: alpha-terpineol, benzoic acid, p-cresol, pentachlorophenol, phenol. ** Metals: As, Cd, Fe, Pb, Hg, Se, Ag, Zn

TA-Honolulu
~~Food Quality Labs~~ to analyze BOD (SM 5210) and preserve CrVI (218.6); report to TA-Denver (PM: Betsy Sara). Drop Ship to TA-Den

Please check one:
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TestAmerica

Rush TAT Confirmation (Initial/Date) _____

Sample Receipt Checklist

Client Name: TA Denver Date/ Time Received: 1/4/13 1440

Received By: n

Matrices: AQ Carrier: Client Airbill# :

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Chain of Custody present?	Yes ☑	No ☐	☐
Chain of Custody Signed when relinquished and received?	Yes ☑	No ☐	
Chain of Custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sample containers on ice?	Yes ☑	No ☐	Type: Wet
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Water - VOA Vials have Zero Headspace?	Yes ☐	No ☐	No VOA vials present: ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Checked: ☑
pH Adjusted?	Yes ☐	No ☑	Final pH:
Encores / Mi-VOC / 5035 Vials Present?	Yes ☐	No ☑	Location:
Sample Filtration Needed?	Yes ☐	No ☑	Filtered in Field: ☐
Dry Weight Corrected Results?	Yes ☐	No ☑	Take Action: ☐
DODQSM / QAPP Project?	Yes ☐	No ☑	Type:

Temperature Blank Present? Yes ☐ No ☑

Sample Container Temperature: 4 °C

Comments/ Sampling Handling Notes:

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TESTAMERICA DENVER

2.52.4 @ 2.4 1e4 11713

LABORATORY USE ONLY
LAB JOB NO.
LOCATION
CONTAINERS

Chain of Custody / Analysis Request Form

Report to: Mark Hofferbert	Project identification
Company name: AECOM Technical Services, Inc.	Job name: WGSL Stormwater
Address: 1001 Bishop St., Suite 1600	Job number: 60246625.02
City: Honolulu; State: HI; ZIP: 96813	
Phone: 808-523-8874; Fax: 808-523-8950	Contact email address: mark.hofferbert@aecom.com, margie.thach@aecom.com; Date results needed: 2 weeks
Sampler; # samples in shipment	

Indicate analyses requested

Item no.	Client sample ID	COMP	GRAB	Matrix: Water	Soil	Wastewater	Drinking water	Sludge	Liquid	Solid	Oil	Other	Preservation method	Sampling: Date	Time	No. of containers	1664 Oil&Grease	TSS SM2540D	625 SVOCs*	COD 410.4, T. Phos 365.1, NH3 350.1 NO2-NO3 353.2, T. Nitrogen SM4500N	200.7, 245.1 Metals**	BOD	CrVI			Laboratory ID no.
1	DBD1-E		X	X									HCl	01/14/13	1258	2	X									
2	01/14/13		X	X									varies	01/14/13	1258	7	X	X	X	X	X	X	X			
3																										
4																										
5																										
6																										
7																										
8																										
9																										
10																										

Released by (print / sign)	Date / time released	Delivery method	Received by (print / sign)	Company / Agency affiliation	Date / time received	Condition noted
Margie Thach	01/14/13 1440	Hand	[illegible]	TestAmerica	1/14/13 / 1440	Sent Wed 42
[illegible]	1/15/13 / 1045	fedex	[illegible]		1/17/13 / 0900	
	/				/	

Comments: * SVOCs: alpha-terpineol, benzoic acid, p-cresol, pentachlorophenol, phenol. ** Metals: As, Cd, Fe, Pb, Hg, Se, Ag, Zn

TA - Honolulu ~~Food Quality Labs~~ to analyze BOD (SM 5210) and preserve CrVI (218.6); report to TA-Denver (PM: Betsy Sara). Drop Ship to TA - Denv

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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TESTAMERICA DENVER

LABORATORY USE ONLY
LAB JOB NO.
LOCATION
CONTAINERS

Chain of Custody / Analysis Request Form

Report to:			Project identification	
Mark Hofferbert				
Company name: AECOM Technical Services, Inc.			Job name: WGSL Stormwater	
Address: 1001 Bishop St., Suite 1600			Job number: 60246625.02	
City: Honolulu	State: HI	ZIP: 96813		
Phone: 808-523-8874	Fax: 808-523-8950		Contact email address: mark.hofferbert@aecom.com, margie.thach@aecom.com	Date results needed: 2 weeks
Sampler	# samples in shipment			

Indicate analyses requested

Item no.	Client sample ID	COMP	GRAB	Matrix: Water	Soil	Wastewater	Drinking water	Sludge	Liquid	Solid	Oil	Other	Preservation method	Sampling: Date	Time	No. of containers	1664 Oil&Grease	TSS SM2540D	625 SVOCs*	COD 410.4, T. Phos 365.1, NH3 350.1 NO2-NO3 353.2, T. Nitrogen SM4500N	200.7, 245.1 Metals**	BOD	CrVI			Laboratory ID no.
1	Flip Bucket		X	X									HCl	01/14/13	1307	2	X									
2		X		X									varies	01/14/13	1307	7		X	X	X	X	X	X			
3																										
4																										
5																										
6																										
7																										
8																										
9																										
10																										

Released by (print / sign)	Date / time released	Delivery method	Received by (print / sign)	Company / Agency affiliation	Date / time received	Condition noted
Margie Thach	01/14/13 1440	Hand		TestAmerica	1/14/13 1440	Sent Wet 142
	1/15/13 1045	Fedex			1/15/13 0900	
	/				/	

Comments: * SVOCs: alpha-terpineol, benzoic acid, p-cresol, pentachlorophenol, phenol. ** Metals: As, Cd, Fe, Pb, Hg, Se, Ag, Zn

~~TA Honolulu~~ ~~Food Quality Labs~~ to analyze BOD (SM 5210) and preserve CrVI (218.6); report to TA-Denver (PM: Betsy Sara). Drop Ship to TA-Den

Please check one:
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FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: WGGL

Site No.:

Sample Point: D B 0 1 - E (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or N

Filter Device: Y or N, 0.45 µ or ____ µ (circle or fill in)

Purging Device: A- Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device: F

X-Other:

Filter Type: A-In-line Disposable, B-Pressure, C-Vacuum, X-Other

Sample Tube Type: A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other:

WELL DATA

Well Elevation (at TOC) (ft/msl)

Depth to Water (DTW) (from TOC) (ft)

Groundwater Elevation (site datum, from TOC) (ft/msl)

Total Well Depth (from TOC) (ft)

Stick Up (from ground elevation) (ft)

Casing ID (in)

Casing Material

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
	1st	1st						
	2nd	2nd						
	3rd	3rd						
	4th	4th						
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: ____ Units ____
0 1 1 4 1 3	8 9 7						

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

Sample Appearance: murky Odor: none Color: brown - orange Other: no scum / oil sheen

Weather Conditions (required daily, or as conditions change): Direction/Speed: NW 15mph Outlook: overcast Precipitation: Y or (N)

Specific Comments (including purge/well volume calculations if required):

FIELD COMMENTS

Naglible /no flow at DB01-E and -W. Ponded water sampled at 01/14/13 12:58.

Depth of ponded water: DB01-E 12 in DB01-W 1 in

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
01, 14, 13	Margie Thash		AECOM
01/14/13	Timothy Ashton		AECOM

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

TAL-8029WM (0108)

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: WGSL

Site No.:

Sample Point: FLIPBUCKET (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or N

Filter Device: Y or N 0.45 µ or ____ µ (circle or fill in)

Purging Device: A- Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device: F

X-Other:

Filter Type: A-In-line Disposable, B-Pressure, C-Vacuum, X-Other

Sample Tube Type: A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other:

WELL DATA

Well Elevation (at TOC) (ft/msl)

Depth to Water (DTW) (from TOC) (ft)

Groundwater Elevation (site datum, from TOC) (ft/msl)

Total Well Depth (from TOC) (ft)

Stick Up (from ground elevation) (ft)

Casing ID (in)

Casing Material

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
	1st	1st	1st					
	2nd	2nd	2nd					
	3rd	3rd	3rd					
	4th	4th	4th					
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: ____ Units ____
011413	9.29						

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

Sample Appearance: murky Odor: none Color: brown-orange Other: no scum/oil sheen

Weather Conditions (required daily, or as conditions change): Direction/Speed: NW 15 mph Outlook: overcast Precipitation: Y or (N)

Specific Comments (including purge/well volume calculations if required):

FIELD COMMENTS

		Time	pH	Flow
Flow approximately 1 L/sec.				
Composite sample every 15 minutes	Aliquot A	1300	9.29	~1L/sec
	B	1315		~1L/sec
	C	1330		~0.33L/sec
	D	1345	8.83	~0.25L/sec

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
01/14/13	Margie Thach		AECOM
01/14/13	Timothy Ashton		AECOM

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

TAL-8029WM (0108)

Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-37877-1

Login Number: 37877

List Source: TestAmerica Denver

List Number: 1

Creator: Laspe, Laura

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-37877-1

Login Number: 37877
List Number: 1
Creator: Soderblom, Tim

List Source: TestAmerica Irvine
List Creation: 01/19/13 11:08 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Job Number: 280-39892-1

Job Description: 995|Waimanalo Gulch LF

For:
Waste Management
Waimanalo Gulch Landfill
92-460 Farrington Highway
Kapolei, HI 96707

Attention: Mr. Justin Lottig

Approved for release.
Betsy A Sara
Project Manager II
4/4/2013 9:58 AM

Betsy A Sara
Project Manager II
betsy.sara@testamericainc.com
04/04/2013

cc: Mr. Mark Hofferbert
Ms. Margie Thach

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is E87667.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

TestAmerica Laboratories, Inc.
TestAmerica Denver 4955 Yarrow Street, Arvada, CO 80002
Tel (303) 736-0100 Fax (303) 431-7171 www.testamericainc.com

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CASE NARRATIVE

Client: Waste Management

Project: 995|Waimanalo Gulch LF

Report Number: 280-39892-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

This report may include reporting limits (RLs) less than TestAmerica's standard reporting limit. The reported sample results and associated reporting limits are being used specifically to meet the needs of this project. Note that data are not normally reported to these levels without qualification because they are inherently less reliable and potentially less defensible than required by the latest industry standards.

Sample Receiving

The samples were received on 03/14/2013; the samples arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 2.2C, 3.1C, 3.3C, 4.1C and 4.7C.

Oil and Grease (HEM) was not listed on the chain of custody for analysis, however, the lab received the volume required to perform this analysis. Oil and Grease was logged for analysis per the volume received. The client was notified 3/14/13.

The container labels for samples DB01-E and CROSS DRAIN OWS listed the sample IDs as DB and Oil-Water Sep., respectively. These samples were logged per the sample IDs listed on the chain of custody. The client was notified 3/14/13.

Holding Times

All holding times were met.

Method Blanks

P-Cresol Method 625 and Total Mercury Method 245.1 were detected in the Method Blanks below the project established reporting limits. No corrective action is taken for any values in Method Blanks that are below the requested reporting limits. The Method Blank data are included at the end of this report.

All other Method Blanks were within established control limits.

Laboratory Control Samples (LCS)

All Laboratory Control Samples were within established control limits.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD)

The method required MS/MSD could not be performed for Method 625 and Method 1664A due to insufficient sample volume, however, LCS/LCSD pairs were analyzed to demonstrate method precision and accuracy.

The percent recoveries and/or the relative percent difference of the MS/MSD performed on sample DB01E were outside control limits for Total Iron during Method 200.7 because the sample concentration was greater than four times the spike amount.

The Matrix Spike and Matrix Spike Duplicate performed on a sample from another client exhibited recoveries outside control limits for Total Kjeldahl Nitrogen (TKN) Method 351.2. Because the corresponding Laboratory Control Sample and the Method Blank sample were within control limits, this anomaly may be due to matrix interference and no corrective action was taken.

The percent recoveries and/or the relative percent difference of the MS/MSD performed on sample CONCRETE CHANNEL were outside control limits for Total Phosphorus during Method 365.1 because the sample concentration was greater than four times the spike amount. In addition, the RPD result was outside the RPD limit for Total Phosphorus.

All other MS and MSD samples were within established control limits.

Organics

The Method 625 surrogate recoveries of 2,4,6-Tribromophenol and Terphenyl-d14 for the sample CONCRETE CHANNEL were below the

lower control limits. Evidence of matrix interference was present; therefore, re-extraction and reanalysis were not performed.

The Method 625 surrogate recovery of Terphenyl-d14 for the sample FLIP BUCKET was below the lower control limit. Evidence of matrix interference was present; therefore, re-extraction and reanalysis were not performed.

General Comments

The analysis for Biochemical Oxygen Demand (BOD) was performed at TestAmerica's Honolulu facility.
TestAmerica Honolulu
99-193 Aiea Heights Drive
Suite 121
Aiea, HI 96701
Phone: 808.486.5227

The analysis for Hexavalent Chromium was performed at TestAmerica's Irvine facility.
TestAmerica Irvine
17461 Derian Avenue
Suite 100
Irvine, CA 92614
Phone: 949.261.1022

For samples requiring analysis at a dilution, the dilution factor has been multiplied by the Method Detection Limit (MDL) for each analyte and evaluated versus the project-specific reporting limit (PSRL). If the obtained value is below the PSRL, then the PSRL is preserved as the reporting limit for the diluted result, otherwise, the obtained value becomes the reporting limit. This is done in order to maintain the PSRL to meet permit requirements at the request of the client and to report the lowest possible RL for each analyte.

EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-39892-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
280-39892-1	**DB01E**					
Mercury		0.00013	J B	0.00020	mg/L	245.1
Field pH		9.40			SU	Field Sampling
HEM		2.3	J	5.0	mg/L	1664A
Ammonia		0.035	J	0.10	mg/L	350.1
Nitrogen, Kjeldahl		0.40	J	0.50	mg/L	351.2
Nitrate Nitrite as N		1.1		0.10	mg/L	353.2
Phosphorus, Total		0.56		0.050	mg/L	365.1
Chemical Oxygen Demand		41		20	mg/L	410.4
Total Suspended Solids		160		4.0	mg/L	SM 2540D
Nitrogen, Total		1.5		0.10	mg/L	Total Nitrogen
Dissolved						
Chromium, hexavalent		1.9		1.0	ug/L	218.6
Total Recoverable						
Arsenic		0.0068	J	0.015	mg/L	200.7 Rev 4.4
Cadmium		0.00073	J	0.0050	mg/L	200.7 Rev 4.4
Iron		16		0.10	mg/L	200.7 Rev 4.4
Lead		0.023		0.0090	mg/L	200.7 Rev 4.4
Zinc		0.10		0.020	mg/L	200.7 Rev 4.4
280-39892-2	**CONCRETE CHANNEL**					
Mercury		0.0018	B	0.00020	mg/L	245.1
Field pH		8.80			SU	Field Sampling
Ammonia		0.45		0.10	mg/L	350.1
Nitrogen, Kjeldahl		3.3		0.50	mg/L	351.2
Nitrate Nitrite as N		5.8		0.10	mg/L	353.2
Phosphorus, Total		8.1		0.25	mg/L	365.1
Chemical Oxygen Demand		830		41	mg/L	410.4
Total Suspended Solids		32000		140	mg/L	SM 2540D
Nitrogen, Total		9.1		0.10	mg/L	Total Nitrogen
Dissolved						
Chromium, hexavalent		1.8		1.0	ug/L	218.6
Total Recoverable						
Arsenic		0.029		0.022	mg/L	200.7 Rev 4.4
Cadmium		0.014		0.0050	mg/L	200.7 Rev 4.4
Iron		730		0.11	mg/L	200.7 Rev 4.4
Lead		0.39		0.013	mg/L	200.7 Rev 4.4
Zinc		2.7		0.023	mg/L	200.7 Rev 4.4

EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-39892-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
280-39892-3	**FLIP BUCKET**					
Benzoic acid		0.011	J	0.050	mg/L	625
Mercury		0.000094	J B	0.00020	mg/L	245.1
Field pH		9.20			SU	Field Sampling
HEM		3.0	J	5.0	mg/L	1664A
Ammonia		0.029	J	0.10	mg/L	350.1
Nitrogen, Kjeldahl		1.2		0.50	mg/L	351.2
Nitrate Nitrite as N		0.53		0.10	mg/L	353.2
Phosphorus, Total		0.68		0.050	mg/L	365.1
Chemical Oxygen Demand		55		20	mg/L	410.4
Total Suspended Solids		49		4.0	mg/L	SM 2540D
Nitrogen, Total		1.7		0.10	mg/L	Total Nitrogen
Dissolved						
Chromium, hexavalent		4.3		1.0	ug/L	218.6
Total Recoverable						
Arsenic		0.0058	J	0.015	mg/L	200.7 Rev 4.4
Iron		12		0.10	mg/L	200.7 Rev 4.4
Lead		0.0034	J	0.0090	mg/L	200.7 Rev 4.4
Zinc		0.047		0.020	mg/L	200.7 Rev 4.4
280-39892-4	**ACCESS ROAD DRAINAGE**					
Mercury		0.00012	J B	0.00020	mg/L	245.1
Field pH		9.40			SU	Field Sampling
HEM		2.9	J	5.0	mg/L	1664A
Ammonia		0.055	J	0.10	mg/L	350.1
Nitrate Nitrite as N		1.2		0.10	mg/L	353.2
Phosphorus, Total		0.80		0.050	mg/L	365.1
Chemical Oxygen Demand		29		20	mg/L	410.4
Total Suspended Solids		300		5.5	mg/L	SM 2540D
Nitrogen, Total		1.2		0.10	mg/L	Total Nitrogen
Total Recoverable						
Arsenic		0.0048	J	0.015	mg/L	200.7 Rev 4.4
Cadmium		0.00063	J	0.0050	mg/L	200.7 Rev 4.4
Iron		14		0.10	mg/L	200.7 Rev 4.4
Lead		0.023		0.0090	mg/L	200.7 Rev 4.4
Zinc		0.087		0.020	mg/L	200.7 Rev 4.4

EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-39892-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
280-39892-5	**CROSS DRAIN OWS**					
Mercury		0.00021	B	0.00020	mg/L	245.1
Field pH		9.30			SU	Field Sampling
HEM		4.1	J	5.0	mg/L	1664A
Ammonia		0.18		0.10	mg/L	350.1
Nitrogen, Kjeldahl		0.31	J	0.50	mg/L	351.2
Nitrate Nitrite as N		0.10		0.10	mg/L	353.2
Phosphorus, Total		1.7		0.050	mg/L	365.1
Chemical Oxygen Demand		81		20	mg/L	410.4
Total Suspended Solids		570		7.9	mg/L	SM 2540D
Nitrogen, Total		0.41		0.10	mg/L	Total Nitrogen
Dissolved						
Chromium, hexavalent		0.76	J	1.0	ug/L	218.6
Total Recoverable						
Arsenic		0.0082	J	0.015	mg/L	200.7 Rev 4.4
Cadmium		0.0024	J	0.0050	mg/L	200.7 Rev 4.4
Iron		32		0.10	mg/L	200.7 Rev 4.4
Lead		0.087		0.0090	mg/L	200.7 Rev 4.4
Zinc		0.32		0.020	mg/L	200.7 Rev 4.4

METHOD SUMMARY

Client: Waste Management

Job Number: 280-39892-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Semivolatile Organic Compounds (GC/MS)	TAL DEN	40CFR136A 625	
Liquid-Liquid Extraction	TAL DEN		40CFR136A 625
Metals (ICP)	TAL DEN	EPA 200.7 Rev 4.4	
Preparation, Total Recoverable Metals	TAL DEN		EPA 200.7
Mercury (CVAA)	TAL DEN	EPA 245.1	
Preparation, Mercury	TAL DEN		EPA 245.1
HEM and SGT-HEM	TAL DEN	1664A 1664A	
HEM and SGT-HEM (SPE)	TAL DEN		1664A 1664A
Nitrogen, Ammonia	TAL DEN	MCAWW 350.1	
Nitrogen, Total Kjeldahl	TAL DEN	MCAWW 351.2	
Nitrogen, Total Kjeldahl	TAL DEN		MCAWW 351.2
Nitrogen, Nitrate-Nitrite	TAL DEN	MCAWW 353.2	
Phosphorus, Total	TAL DEN	EPA 365.1	
Phosphorus, Total	TAL DEN		MCAWW 365.2/365.3/365
COD	TAL DEN	MCAWW 410.4	
Solids, Total Suspended (TSS)	TAL DEN	SM SM 2540D	
Nitrogen, Total	TAL DEN	EPA Total Nitrogen	
Field Sampling	TAL DEN	EPA Field Sampling	
General Sub Contract Method	TAL HON	Subcontract	
Chromium, Hexavalent (Ion Chromatography)	TAL IRV	EPA 218.6	
Sample Filtration, Field			FIELD_FLTRD

Lab References:

TAL DEN = TestAmerica Denver

TAL HON = TestAmerica Honolulu

TAL IRV = TestAmerica Irvine

Method References:

1664A = EPA-821-98-002

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

METHOD / ANALYST SUMMARY

Client: Waste Management

Job Number: 280-39892-1

Method	Analyst	Analyst ID
40CFR136A 625	Kiekel, Daniel C	DCK
EPA 200.7 Rev 4.4	Bowen, Heidi E	HEB
EPA 200.7 Rev 4.4	Harre, John K	JKH
EPA 245.1	Mooney, Joseph C	JM
EPA Field Sampling	Field, Sampler	FS
1664A 1664A	Benson, Alex F	AFB
MCAWW 350.1	Elkin, David	DE
MCAWW 351.2	Woolley, Mark	MW
MCAWW 353.2	Scott, Samantha J	SJS
EPA 365.1	Scott, Samantha J	SJS
MCAWW 410.4	Bandy, Darlene F	DFB
SM SM 2540D	Woolley, Mark	MW
EPA Total Nitrogen	Sullivan, Roxanne	RS
EPA 218.6	Welch, Raquel	RW

SAMPLE SUMMARY

Client: Waste Management

Job Number: 280-39892-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-39892-1	DB01E	Water	03/10/2013 1530	03/14/2013 0900
280-39892-2	CONCRETE CHANNEL	Water	03/10/2013 1450	03/14/2013 0900
280-39892-3	FLIP BUCKET	Water	03/10/2013 1400	03/14/2013 0900
280-39892-4	ACCESS ROAD DRAINAGE	Water	03/10/2013 1410	03/14/2013 0900
280-39892-5	CROSS DRAIN OWS	Water	03/10/2013 1415	03/14/2013 0900

SAMPLE RESULTS

Client: Waste Management

Job Number: 280-39892-1

Client Sample ID: **DB01E**

Lab Sample ID: 280-39892-1

Client Matrix: Water

Date Sampled: 03/10/2013 1530

Date Received: 03/14/2013 0900

625 Semivolatile Organic Compounds (GC/MS)

Analysis Method:	625	Analysis Batch:	280-166513	Instrument ID:	SMS_G6
Prep Method:	625	Prep Batch:	280-165039	Lab File ID:	G6_8657.D
Dilution:	1.0			Initial Weight/Volume:	931.2 mL
Analysis Date:	03/26/2013 0310			Final Weight/Volume:	1000 uL
Prep Date:	03/15/2013 1252			Injection Volume:	0.5 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Alpha-Terpineol	ND		0.0021	0.010
Benzoic acid	ND		0.011	0.050
p-Cresol	ND		0.00027	0.010
Pentachlorophenol	ND		0.021	0.060
Phenol	ND		0.0021	0.010

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	75		50 - 120
2-Fluorobiphenyl	75		36 - 120
2-Fluorophenol	74		30 - 120
Nitrobenzene-d5	77		45 - 120
Phenol-d5	79		36 - 120
Terphenyl-d14	64		52 - 120

Client: Waste Management

Job Number: 280-39892-1

Client Sample ID: **CONCRETE CHANNEL**

Lab Sample ID: 280-39892-2

Client Matrix: Water

Date Sampled: 03/10/2013 1450

Date Received: 03/14/2013 0900

625 Semivolatile Organic Compounds (GC/MS)

Analysis Method:	625	Analysis Batch:	280-166513	Instrument ID:	SMS_G6
Prep Method:	625	Prep Batch:	280-165039	Lab File ID:	G6_8658.D
Dilution:	1.0			Initial Weight/Volume:	938.5 mL
Analysis Date:	03/26/2013 0338			Final Weight/Volume:	1000 uL
Prep Date:	03/15/2013 1252			Injection Volume:	0.5 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Alpha-Terpineol	ND		0.0021	0.010
Benzoic acid	ND		0.011	0.050
p-Cresol	ND		0.00027	0.010
Pentachlorophenol	ND		0.021	0.060
Phenol	ND		0.0021	0.010

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	35	X	50 - 120
2-Fluorobiphenyl	41		36 - 120
2-Fluorophenol	55		30 - 120
Nitrobenzene-d5	77		45 - 120
Phenol-d5	64		36 - 120
Terphenyl-d14	33	X	52 - 120

Client: Waste Management

Job Number: 280-39892-1

Client Sample ID: **FLIP BUCKET**

Lab Sample ID: 280-39892-3

Client Matrix: Water

Date Sampled: 03/10/2013 1400

Date Received: 03/14/2013 0900

625 Semivolatile Organic Compounds (GC/MS)

Analysis Method:	625	Analysis Batch:	280-166202	Instrument ID:	SMS_G6
Prep Method:	625	Prep Batch:	280-165039	Lab File ID:	G6_8604.D
Dilution:	1.0			Initial Weight/Volume:	1038.7 mL
Analysis Date:	03/23/2013 0310			Final Weight/Volume:	1000 uL
Prep Date:	03/15/2013 1252			Injection Volume:	0.5 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Alpha-Terpineol	ND		0.0019	0.010
Benzoic acid	0.011	J	0.0096	0.050
p-Cresol	ND		0.00024	0.010
Pentachlorophenol	ND		0.019	0.060
Phenol	ND		0.0019	0.010

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	80		50 - 120
2-Fluorobiphenyl	67		36 - 120
2-Fluorophenol	68		30 - 120
Nitrobenzene-d5	71		45 - 120
Phenol-d5	74		36 - 120
Terphenyl-d14	43	X	52 - 120

Client: Waste Management

Job Number: 280-39892-1

Client Sample ID: **ACCESS ROAD DRAINAGE**

Lab Sample ID: 280-39892-4

Client Matrix: Water

Date Sampled: 03/10/2013 1410

Date Received: 03/14/2013 0900

625 Semivolatile Organic Compounds (GC/MS)

Analysis Method:	625	Analysis Batch:	280-166513	Instrument ID:	SMS_G6
Prep Method:	625	Prep Batch:	280-165039	Lab File ID:	G6_8659.D
Dilution:	1.0			Initial Weight/Volume:	899.8 mL
Analysis Date:	03/26/2013 0405			Final Weight/Volume:	1000 uL
Prep Date:	03/15/2013 1252			Injection Volume:	0.5 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Alpha-Terpineol	ND		0.0022	0.010
Benzoic acid	ND		0.011	0.050
p-Cresol	ND		0.00028	0.010
Pentachlorophenol	ND		0.022	0.060
Phenol	ND		0.0022	0.010

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	69		50 - 120
2-Fluorobiphenyl	72		36 - 120
2-Fluorophenol	69		30 - 120
Nitrobenzene-d5	72		45 - 120
Phenol-d5	77		36 - 120
Terphenyl-d14	77		52 - 120

Client: Waste Management

Job Number: 280-39892-1

Client Sample ID: **CROSS DRAIN OWS**

Lab Sample ID: 280-39892-5

Client Matrix: Water

Date Sampled: 03/10/2013 1415

Date Received: 03/14/2013 0900

625 Semivolatile Organic Compounds (GC/MS)

Analysis Method:	625	Analysis Batch:	280-166513	Instrument ID:	SMS_G6
Prep Method:	625	Prep Batch:	280-165039	Lab File ID:	G6_8660.D
Dilution:	1.0			Initial Weight/Volume:	975.2 mL
Analysis Date:	03/26/2013 0433			Final Weight/Volume:	1000 uL
Prep Date:	03/15/2013 1252			Injection Volume:	0.5 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Alpha-Terpineol	ND		0.0021	0.010
Benzoic acid	ND		0.010	0.050
p-Cresol	ND		0.00026	0.010
Pentachlorophenol	ND		0.021	0.060
Phenol	ND		0.0021	0.010

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	77		50 - 120
2-Fluorobiphenyl	68		36 - 120
2-Fluorophenol	72		30 - 120
Nitrobenzene-d5	76		45 - 120
Phenol-d5	78		36 - 120
Terphenyl-d14	52		52 - 120

Client: Waste Management

Job Number: 280-39892-1

Client Sample ID: **DB01E**

Lab Sample ID: 280-39892-1

Client Matrix: Water

Date Sampled: 03/10/2013 1530

Date Received: 03/14/2013 0900

218.6 Chromium, Hexavalent (Ion Chromatography)-Dissolved

Analysis Method:	218.6	Analysis Batch:	440-93206	Instrument ID:	IC-16
	N/A	Prep Batch:	N/A	Lab File ID:	Info
Dilution:	1.0			Initial Weight/Volume:	10 mL
Analysis Date:	03/21/2013 1735			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chromium, hexavalent	1.9		0.25	1.0

Client: Waste Management

Job Number: 280-39892-1

Client Sample ID: **CONCRETE CHANNEL**

Lab Sample ID: 280-39892-2

Client Matrix: Water

Date Sampled: 03/10/2013 1450

Date Received: 03/14/2013 0900

218.6 Chromium, Hexavalent (Ion Chromatography)-Dissolved

Analysis Method:	218.6	Analysis Batch:	440-93206	Instrument ID:	IC-16
	N/A	Prep Batch:	N/A	Lab File ID:	Info
Dilution:	1.0			Initial Weight/Volume:	10 mL
Analysis Date:	03/21/2013 1748			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chromium, hexavalent	1.8		0.25	1.0

Client: Waste Management

Job Number: 280-39892-1

Client Sample ID: **FLIP BUCKET**

Lab Sample ID: 280-39892-3

Client Matrix: Water

Date Sampled: 03/10/2013 1400

Date Received: 03/14/2013 0900

218.6 Chromium, Hexavalent (Ion Chromatography)-Dissolved

Analysis Method:	218.6	Analysis Batch:	440-93206	Instrument ID:	IC-16
	N/A	Prep Batch:	N/A	Lab File ID:	Info
Dilution:	1.0			Initial Weight/Volume:	10 mL
Analysis Date:	03/21/2013 1800			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chromium, hexavalent	4.3		0.25	1.0

Client: Waste Management

Job Number: 280-39892-1

Client Sample ID: **CROSS DRAIN OWS**

Lab Sample ID: 280-39892-5

Client Matrix: Water

Date Sampled: 03/10/2013 1415

Date Received: 03/14/2013 0900

218.6 Chromium, Hexavalent (Ion Chromatography)-Dissolved

Analysis Method:	218.6	Analysis Batch:	440-93206	Instrument ID:	IC-16
	N/A	Prep Batch:	N/A	Lab File ID:	Info
Dilution:	1.0			Initial Weight/Volume:	10 mL
Analysis Date:	03/21/2013 1813			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chromium, hexavalent	0.76	J	0.25	1.0

Client: Waste Management

Job Number: 280-39892-1

Client Sample ID: **DB01E**

Lab Sample ID: 280-39892-1

Client Matrix: Water

Date Sampled: 03/10/2013 1530

Date Received: 03/14/2013 0900

200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	280-166127	Instrument ID:	MT_026
Prep Method:	200.7	Prep Batch:	280-165003	Lab File ID:	26b032113.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/21/2013 2340			Final Weight/Volume:	50 mL
Prep Date:	03/18/2013 0900				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Arsenic	0.0068	J	0.0044	0.015
Cadmium	0.00073	J	0.00045	0.0050
Lead	0.023		0.0026	0.0090
Selenium	ND		0.0049	0.015
Zinc	0.10		0.0045	0.020
Silver	ND		0.00093	0.010

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	280-166315	Instrument ID:	MT_026
Prep Method:	200.7	Prep Batch:	280-165003	Lab File ID:	26A1032313.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/23/2013 1253			Final Weight/Volume:	50 mL
Prep Date:	03/18/2013 0900				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Iron	16		0.022	0.10

245.1 Mercury (CVAA)

Analysis Method:	245.1	Analysis Batch:	280-165986	Instrument ID:	MT_034
Prep Method:	245.1	Prep Batch:	280-165583	Lab File ID:	130320tad.txt
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	03/20/2013 2053			Final Weight/Volume:	30 mL
Prep Date:	03/20/2013 1230				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Mercury	0.00013	J B	0.000027	0.00020

Client: Waste Management

Job Number: 280-39892-1

Client Sample ID: **CONCRETE CHANNEL**

Lab Sample ID: 280-39892-2

Client Matrix: Water

Date Sampled: 03/10/2013 1450

Date Received: 03/14/2013 0900

200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	280-166315	Instrument ID:	MT_026
Prep Method:	200.7	Prep Batch:	280-165003	Lab File ID:	26A1032313.asc
Dilution:	5.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/23/2013 1302			Final Weight/Volume:	50 mL
Prep Date:	03/18/2013 0900				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Arsenic	0.029		0.022	0.022
Cadmium	0.014		0.0023	0.0050
Iron	730		0.11	0.11
Lead	0.39		0.013	0.013
Selenium	ND		0.024	0.024
Zinc	2.7		0.023	0.023
Silver	ND		0.0047	0.010

245.1 Mercury (CVAA)

Analysis Method:	245.1	Analysis Batch:	280-165986	Instrument ID:	MT_034
Prep Method:	245.1	Prep Batch:	280-165583	Lab File ID:	130320tad.txt
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	03/20/2013 2100			Final Weight/Volume:	30 mL
Prep Date:	03/20/2013 1230				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Mercury	0.0018	B	0.000027	0.00020

Client: Waste Management

Job Number: 280-39892-1

Client Sample ID: **FLIP BUCKET**

Lab Sample ID: 280-39892-3

Client Matrix: Water

Date Sampled: 03/10/2013 1400

Date Received: 03/14/2013 0900

200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	280-166127	Instrument ID:	MT_026
Prep Method:	200.7	Prep Batch:	280-165003	Lab File ID:	26b032113.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/21/2013 2311			Final Weight/Volume:	50 mL
Prep Date:	03/18/2013 0900				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Arsenic	0.0058	J	0.0044	0.015
Cadmium	ND		0.00045	0.0050
Lead	0.0034	J	0.0026	0.0090
Selenium	ND		0.0049	0.015
Zinc	0.047		0.0045	0.020
Silver	ND		0.00093	0.010

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	280-166315	Instrument ID:	MT_026
Prep Method:	200.7	Prep Batch:	280-165003	Lab File ID:	26A1032313.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/23/2013 1304			Final Weight/Volume:	50 mL
Prep Date:	03/18/2013 0900				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Iron	12		0.022	0.10

245.1 Mercury (CVAA)

Analysis Method:	245.1	Analysis Batch:	280-165986	Instrument ID:	MT_034
Prep Method:	245.1	Prep Batch:	280-165583	Lab File ID:	130320tad.txt
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	03/20/2013 2102			Final Weight/Volume:	30 mL
Prep Date:	03/20/2013 1230				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Mercury	0.000094	J B	0.000027	0.00020

Client: Waste Management

Job Number: 280-39892-1

Client Sample ID: **ACCESS ROAD DRAINAGE**

Lab Sample ID: 280-39892-4

Client Matrix: Water

Date Sampled: 03/10/2013 1410

Date Received: 03/14/2013 0900

200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	280-166127	Instrument ID:	MT_026
Prep Method:	200.7	Prep Batch:	280-165003	Lab File ID:	26b032113.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/21/2013 2314			Final Weight/Volume:	50 mL
Prep Date:	03/18/2013 0900				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Arsenic	0.0048	J	0.0044	0.015
Cadmium	0.00063	J	0.00045	0.0050
Lead	0.023		0.0026	0.0090
Selenium	ND		0.0049	0.015
Zinc	0.087		0.0045	0.020
Silver	ND		0.00093	0.010

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	280-166315	Instrument ID:	MT_026
Prep Method:	200.7	Prep Batch:	280-165003	Lab File ID:	26A1032313.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/23/2013 1307			Final Weight/Volume:	50 mL
Prep Date:	03/18/2013 0900				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Iron	14		0.022	0.10

245.1 Mercury (CVAA)

Analysis Method:	245.1	Analysis Batch:	280-165986	Instrument ID:	MT_034
Prep Method:	245.1	Prep Batch:	280-165583	Lab File ID:	130320tad.txt
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	03/20/2013 2104			Final Weight/Volume:	30 mL
Prep Date:	03/20/2013 1230				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Mercury	0.00012	J B	0.000027	0.00020

Client: Waste Management

Job Number: 280-39892-1

Client Sample ID: **CROSS DRAIN OWS**

Lab Sample ID: 280-39892-5

Client Matrix: Water

Date Sampled: 03/10/2013 1415

Date Received: 03/14/2013 0900

200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	280-166127	Instrument ID:	MT_026
Prep Method:	200.7	Prep Batch:	280-165003	Lab File ID:	26b032113.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/21/2013 2316			Final Weight/Volume:	50 mL
Prep Date:	03/18/2013 0900				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Arsenic	0.0082	J	0.0044	0.015
Cadmium	0.0024	J	0.00045	0.0050
Lead	0.087		0.0026	0.0090
Selenium	ND		0.0049	0.015
Zinc	0.32		0.0045	0.020
Silver	ND		0.00093	0.010

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	280-166315	Instrument ID:	MT_026
Prep Method:	200.7	Prep Batch:	280-165003	Lab File ID:	26A1032313.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/23/2013 1309			Final Weight/Volume:	50 mL
Prep Date:	03/18/2013 0900				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Iron	32		0.022	0.10

245.1 Mercury (CVAA)

Analysis Method:	245.1	Analysis Batch:	280-165986	Instrument ID:	MT_034
Prep Method:	245.1	Prep Batch:	280-165583	Lab File ID:	130320tad.txt
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	03/20/2013 2107			Final Weight/Volume:	30 mL
Prep Date:	03/20/2013 1230				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Mercury	0.00021	B	0.000027	0.00020

General Chemistry

Client Sample ID: **DB01E**

Lab Sample ID: 280-39892-1

Client Matrix: Water

Date Sampled: 03/10/2013 1530

Date Received: 03/14/2013 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
HEM	2.3	J	mg/L	1.7	5.0	1.0	1664A
Analysis Batch: 280-166018	Analysis Date: 03/21/2013 1553						
Prep Batch: 280-165976	Prep Date: 03/21/2013 1224						
Ammonia	0.035	J	mg/L	0.022	0.10	1.0	350.1
Analysis Batch: 280-166254	Analysis Date: 03/22/2013 1232						
Nitrogen, Kjeldahl	0.40	J	mg/L	0.18	0.50	1.0	351.2
Analysis Batch: 280-166718	Analysis Date: 03/26/2013 1526						
Prep Batch: 280-166284	Prep Date: 03/22/2013 1844						
Nitrate Nitrite as N	1.1		mg/L	0.019	0.10	1.0	353.2
Analysis Batch: 280-166238	Analysis Date: 03/22/2013 1239						
Phosphorus, Total	0.56		mg/L	0.0050	0.050	1.0	365.1
Analysis Batch: 280-165813	Analysis Date: 03/20/2013 1613						
Prep Batch: 280-165730	Prep Date: 03/20/2013 1125						
Chemical Oxygen Demand	41		mg/L	4.1	20	1.0	410.4
Analysis Batch: 280-166172	Analysis Date: 03/22/2013 1113						
Total Suspended Solids	160		mg/L	2.8	4.0	1.0	SM 2540D
Analysis Batch: 280-164917	Analysis Date: 03/14/2013 1607						
Nitrogen, Total	1.5		mg/L	0.042	0.10	1.0	Total Nitrogen
Analysis Batch: 280-166762	Analysis Date: 03/27/2013 0640						

General Chemistry

Client Sample ID: **CONCRETE CHANNEL**

Lab Sample ID: 280-39892-2

Client Matrix: Water

Date Sampled: 03/10/2013 1450

Date Received: 03/14/2013 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
HEM	ND		mg/L	3.5	5.0	1.0	1664A
Analysis Batch: 280-166018	Analysis Date: 03/21/2013 1553						
Prep Batch: 280-165976	Prep Date: 03/21/2013 1224						
Ammonia	0.45		mg/L	0.022	0.10	1.0	350.1
Analysis Batch: 280-166254	Analysis Date: 03/22/2013 1235						
Nitrogen, Kjeldahl	3.3		mg/L	0.18	0.50	1.0	351.2
Analysis Batch: 280-166718	Analysis Date: 03/26/2013 1527						
Prep Batch: 280-166284	Prep Date: 03/22/2013 1844						
Nitrate Nitrite as N	5.8		mg/L	0.019	0.10	1.0	353.2
Analysis Batch: 280-166238	Analysis Date: 03/22/2013 1241						
Phosphorus, Total	8.1		mg/L	0.25	0.25	50	365.1
Analysis Batch: 280-165813	Analysis Date: 03/20/2013 1647						
Prep Batch: 280-165730	Prep Date: 03/20/2013 1125						
Chemical Oxygen Demand	830		mg/L	41	41	10	410.4
Analysis Batch: 280-166172	Analysis Date: 03/22/2013 1113						
Total Suspended Solids	32000		mg/L	140	140	1.0	SM 2540D
Analysis Batch: 280-164917	Analysis Date: 03/14/2013 1607						
Nitrogen, Total	9.1		mg/L	0.042	0.10	1.0	Total Nitrogen
Analysis Batch: 280-166762	Analysis Date: 03/27/2013 0640						

General Chemistry

Client Sample ID: **FLIP BUCKET**

Lab Sample ID: 280-39892-3

Client Matrix: Water

Date Sampled: 03/10/2013 1400

Date Received: 03/14/2013 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
HEM	3.0	J	mg/L	1.7	5.0	1.0	1664A
Analysis Batch: 280-166018	Analysis Date: 03/21/2013 1553						
Prep Batch: 280-165976	Prep Date: 03/21/2013 1224						
Ammonia	0.029	J	mg/L	0.022	0.10	1.0	350.1
Analysis Batch: 280-166254	Analysis Date: 03/22/2013 1237						
Nitrogen, Kjeldahl	1.2		mg/L	0.18	0.50	1.0	351.2
Analysis Batch: 280-166718	Analysis Date: 03/26/2013 1535						
Prep Batch: 280-166284	Prep Date: 03/22/2013 1844						
Nitrate Nitrite as N	0.53		mg/L	0.019	0.10	1.0	353.2
Analysis Batch: 280-166238	Analysis Date: 03/22/2013 1242						
Phosphorus, Total	0.68		mg/L	0.0050	0.050	1.0	365.1
Analysis Batch: 280-165813	Analysis Date: 03/20/2013 1616						
Prep Batch: 280-165730	Prep Date: 03/20/2013 1125						
Chemical Oxygen Demand	55		mg/L	4.1	20	1.0	410.4
Analysis Batch: 280-166172	Analysis Date: 03/22/2013 1113						
Total Suspended Solids	49		mg/L	1.8	4.0	1.0	SM 2540D
Analysis Batch: 280-164917	Analysis Date: 03/14/2013 1607						
Nitrogen, Total	1.7		mg/L	0.042	0.10	1.0	Total Nitrogen
Analysis Batch: 280-166762	Analysis Date: 03/27/2013 0640						

General Chemistry

Client Sample ID: **ACCESS ROAD DRAINAGE**

Lab Sample ID: 280-39892-4 Date Sampled: 03/10/2013 1410
Client Matrix: Water Date Received: 03/14/2013 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
HEM	2.9	J	mg/L	2.0	5.0	1.0	1664A
Analysis Batch: 280-166018	Analysis Date: 03/21/2013 1553						
Prep Batch: 280-165976	Prep Date: 03/21/2013 1224						
Ammonia	0.055	J	mg/L	0.022	0.10	1.0	350.1
Analysis Batch: 280-166254	Analysis Date: 03/22/2013 1314						
Nitrogen, Kjeldahl	ND		mg/L	0.18	0.50	1.0	351.2
Analysis Batch: 280-166718	Analysis Date: 03/26/2013 1536						
Prep Batch: 280-166284	Prep Date: 03/22/2013 1844						
Nitrate Nitrite as N	1.2		mg/L	0.019	0.10	1.0	353.2
Analysis Batch: 280-166238	Analysis Date: 03/22/2013 1244						
Phosphorus, Total	0.80		mg/L	0.0050	0.050	1.0	365.1
Analysis Batch: 280-165813	Analysis Date: 03/20/2013 1616						
Prep Batch: 280-165730	Prep Date: 03/20/2013 1125						
Chemical Oxygen Demand	29		mg/L	4.1	20	1.0	410.4
Analysis Batch: 280-166172	Analysis Date: 03/22/2013 1113						
Total Suspended Solids	300		mg/L	5.5	5.5	1.0	SM 2540D
Analysis Batch: 280-164917	Analysis Date: 03/14/2013 1607						
Nitrogen, Total	1.2		mg/L	0.042	0.10	1.0	Total Nitrogen
Analysis Batch: 280-166762	Analysis Date: 03/27/2013 0640						

General Chemistry

Client Sample ID: **CROSS DRAIN OWS**

Lab Sample ID: 280-39892-5 Date Sampled: 03/10/2013 1415
Client Matrix: Water Date Received: 03/14/2013 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
HEM	4.1	J	mg/L	1.9	5.0	1.0	1664A
Analysis Batch: 280-166018	Analysis Date: 03/21/2013 1553						
Prep Batch: 280-165976	Prep Date: 03/21/2013 1224						
Ammonia	0.18		mg/L	0.022	0.10	1.0	350.1
Analysis Batch: 280-166254	Analysis Date: 03/22/2013 1242						
Nitrogen, Kjeldahl	0.31	J	mg/L	0.18	0.50	1.0	351.2
Analysis Batch: 280-166718	Analysis Date: 03/26/2013 1537						
Prep Batch: 280-166284	Prep Date: 03/22/2013 1844						
Nitrate Nitrite as N	0.10		mg/L	0.019	0.10	1.0	353.2
Analysis Batch: 280-166238	Analysis Date: 03/22/2013 1245						
Phosphorus, Total	1.7		mg/L	0.025	0.050	5.0	365.1
Analysis Batch: 280-165813	Analysis Date: 03/20/2013 1647						
Prep Batch: 280-165730	Prep Date: 03/20/2013 1125						
Chemical Oxygen Demand	81		mg/L	4.1	20	1.0	410.4
Analysis Batch: 280-166172	Analysis Date: 03/22/2013 1113						
Total Suspended Solids	570		mg/L	7.9	7.9	1.0	SM 2540D
Analysis Batch: 280-164917	Analysis Date: 03/14/2013 1607						
Nitrogen, Total	0.41		mg/L	0.042	0.10	1.0	Total Nitrogen
Analysis Batch: 280-166762	Analysis Date: 03/27/2013 0640						

Field Service / Mobile Lab

Client Sample ID: **DB01E**

Lab Sample ID: 280-39892-1

Client Matrix: Water

Date Sampled: 03/10/2013 1530

Date Received: 03/14/2013 0900

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed Date Prepared
Field pH	9.40		SU	1.0	Field Sampling	280-164804	03/10/2013 1530

Field Service / Mobile Lab

Client Sample ID: **CONCRETE CHANNEL**

Lab Sample ID: 280-39892-2

Client Matrix: Water

Date Sampled: 03/10/2013 1450

Date Received: 03/14/2013 0900

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed Date Prepared
Field pH	8.80		SU	1.0	Field Sampling	280-164804	03/10/2013 1450

Field Service / Mobile Lab

Client Sample ID: **FLIP BUCKET**

Lab Sample ID: 280-39892-3

Client Matrix: Water

Date Sampled: 03/10/2013 1400

Date Received: 03/14/2013 0900

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed Date Prepared
Field pH	9.20		SU	1.0	Field Sampling	280-164804	03/10/2013 1400

Field Service / Mobile Lab

Client Sample ID: **ACCESS ROAD DRAINAGE**

Lab Sample ID: 280-39892-4

Client Matrix: Water

Date Sampled: 03/10/2013 1410

Date Received: 03/14/2013 0900

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed Date Prepared
Field pH	9.40		SU	1.0	Field Sampling	280-164804	03/10/2013 1410

Field Service / Mobile Lab

Client Sample ID: **CROSS DRAIN OWS**

Lab Sample ID: 280-39892-5

Client Matrix: Water

Date Sampled: 03/10/2013 1415

Date Received: 03/14/2013 0900

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed Date Prepared
Field pH	9.30		SU	1.0	Field Sampling	280-164804	03/10/2013 1415

DATA REPORTING QUALIFIERS

Client: Waste Management

Job Number: 280-39892-1

Lab Section	Qualifier	Description
GC/MS Semi VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	X	Surrogate is outside control limits
HPLC/IC		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals		
	B	Compound was found in the blank and sample.
	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
General Chemistry		
	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
	F	MS/MSD Recovery or RPD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: Waste Management

Job Number: 280-39892-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 280-165039					
LCS 280-165039/2-A	Lab Control Sample	T	Water	625	
LCSD 280-165039/3-A	Lab Control Sample Duplicate	T	Water	625	
MB 280-165039/1-A	Method Blank	T	Water	625	
280-39892-1	DB01E	T	Water	625	
280-39892-2	CONCRETE CHANNEL	T	Water	625	
280-39892-3	FLIP BUCKET	T	Water	625	
280-39892-4	ACCESS ROAD DRAINAGE	T	Water	625	
280-39892-5	CROSS DRAIN OWS	T	Water	625	
Analysis Batch:280-166202					
LCS 280-165039/2-A	Lab Control Sample	T	Water	625	280-165039
LCSD 280-165039/3-A	Lab Control Sample Duplicate	T	Water	625	280-165039
MB 280-165039/1-A	Method Blank	T	Water	625	280-165039
280-39892-3	FLIP BUCKET	T	Water	625	280-165039
Analysis Batch:280-166513					
280-39892-1	DB01E	T	Water	625	280-165039
280-39892-2	CONCRETE CHANNEL	T	Water	625	280-165039
280-39892-4	ACCESS ROAD DRAINAGE	T	Water	625	280-165039
280-39892-5	CROSS DRAIN OWS	T	Water	625	280-165039

Report Basis

T = Total

Client: Waste Management

Job Number: 280-39892-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-165003					
LCS 280-165003/2-A	Lab Control Sample	R	Water	200.7	
MB 280-165003/1-A	Method Blank	R	Water	200.7	
280-39892-1	DB01E	R	Water	200.7	
280-39892-1MS	Matrix Spike	R	Water	200.7	
280-39892-1MSD	Matrix Spike Duplicate	R	Water	200.7	
280-39892-2	CONCRETE CHANNEL	R	Water	200.7	
280-39892-3	FLIP BUCKET	R	Water	200.7	
280-39892-4	ACCESS ROAD DRAINAGE	R	Water	200.7	
280-39892-5	CROSS DRAIN OWS	R	Water	200.7	
Prep Batch: 280-165583					
LCS 280-165583/2-A	Lab Control Sample	T	Water	245.1	
MB 280-165583/1-A	Method Blank	T	Water	245.1	
280-39892-1	DB01E	T	Water	245.1	
280-39892-2	CONCRETE CHANNEL	T	Water	245.1	
280-39892-3	FLIP BUCKET	T	Water	245.1	
280-39892-4	ACCESS ROAD DRAINAGE	T	Water	245.1	
280-39892-5	CROSS DRAIN OWS	T	Water	245.1	
280-39908-A-1-I MS	Matrix Spike	T	Water	245.1	
280-39908-A-1-J MSD	Matrix Spike Duplicate	T	Water	245.1	
Analysis Batch:280-165986					
LCS 280-165583/2-A	Lab Control Sample	T	Water	245.1	280-165583
MB 280-165583/1-A	Method Blank	T	Water	245.1	280-165583
280-39892-1	DB01E	T	Water	245.1	280-165583
280-39892-2	CONCRETE CHANNEL	T	Water	245.1	280-165583
280-39892-3	FLIP BUCKET	T	Water	245.1	280-165583
280-39892-4	ACCESS ROAD DRAINAGE	T	Water	245.1	280-165583
280-39892-5	CROSS DRAIN OWS	T	Water	245.1	280-165583
280-39908-A-1-I MS	Matrix Spike	T	Water	245.1	280-165583
280-39908-A-1-J MSD	Matrix Spike Duplicate	T	Water	245.1	280-165583
Analysis Batch:280-166127					
LCS 280-165003/2-A	Lab Control Sample	R	Water	200.7 Rev 4.4	280-165003
MB 280-165003/1-A	Method Blank	R	Water	200.7 Rev 4.4	280-165003
280-39892-1	DB01E	R	Water	200.7 Rev 4.4	280-165003
280-39892-1MS	Matrix Spike	R	Water	200.7 Rev 4.4	280-165003
280-39892-1MSD	Matrix Spike Duplicate	R	Water	200.7 Rev 4.4	280-165003
280-39892-3	FLIP BUCKET	R	Water	200.7 Rev 4.4	280-165003
280-39892-4	ACCESS ROAD DRAINAGE	R	Water	200.7 Rev 4.4	280-165003
280-39892-5	CROSS DRAIN OWS	R	Water	200.7 Rev 4.4	280-165003

Client: Waste Management

Job Number: 280-39892-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:280-166315					
LCS 280-165003/2-A	Lab Control Sample	R	Water	200.7 Rev 4.4	280-165003
MB 280-165003/1-A	Method Blank	R	Water	200.7 Rev 4.4	280-165003
280-39892-1	DB01E	R	Water	200.7 Rev 4.4	280-165003
280-39892-1MS	Matrix Spike	R	Water	200.7 Rev 4.4	280-165003
280-39892-1MSD	Matrix Spike Duplicate	R	Water	200.7 Rev 4.4	280-165003
280-39892-2	CONCRETE CHANNEL	R	Water	200.7 Rev 4.4	280-165003
280-39892-3	FLIP BUCKET	R	Water	200.7 Rev 4.4	280-165003
280-39892-4	ACCESS ROAD DRAINAGE	R	Water	200.7 Rev 4.4	280-165003
280-39892-5	CROSS DRAIN OWS	R	Water	200.7 Rev 4.4	280-165003

Report Basis

R = Total Recoverable

T = Total

Field Service / Mobile Lab				
Analysis Batch:280-164804				
280-39892-1	DB01E	T	Water	Field Sampling
280-39892-2	CONCRETE CHANNEL	T	Water	Field Sampling
280-39892-3	FLIP BUCKET	T	Water	Field Sampling
280-39892-4	ACCESS ROAD DRAINAGE	T	Water	Field Sampling
280-39892-5	CROSS DRAIN OWS	T	Water	Field Sampling

Report Basis

T = Total

Client: Waste Management

Job Number: 280-39892-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-164917					
LCS 280-164917/1	Lab Control Sample	T	Water	SM 2540D	
LCSD 280-164917/2	Lab Control Sample Duplicate	T	Water	SM 2540D	
MB 280-164917/3	Method Blank	T	Water	SM 2540D	
280-39821-A-1 DU	Duplicate	T	Water	SM 2540D	
280-39892-1	DB01E	T	Water	SM 2540D	
280-39892-2	CONCRETE CHANNEL	T	Water	SM 2540D	
280-39892-3	FLIP BUCKET	T	Water	SM 2540D	
280-39892-4	ACCESS ROAD DRAINAGE	T	Water	SM 2540D	
280-39892-5	CROSS DRAIN OWS	T	Water	SM 2540D	
Prep Batch: 280-165730					
LCS 280-165730/3-A	Lab Control Sample	T	Water	365.2/365.3/365	
LCSD 280-165730/4-A	Lab Control Sample Duplicate	T	Water	365.2/365.3/365	
MB 280-165730/5-A	Method Blank	T	Water	365.2/365.3/365	
280-39892-1	DB01E	T	Water	365.2/365.3/365	
280-39892-2	CONCRETE CHANNEL	T	Water	365.2/365.3/365	
280-39892-2MS	Matrix Spike	T	Water	365.2/365.3/365	
280-39892-2MSD	Matrix Spike Duplicate	T	Water	365.2/365.3/365	
280-39892-3	FLIP BUCKET	T	Water	365.2/365.3/365	
280-39892-4	ACCESS ROAD DRAINAGE	T	Water	365.2/365.3/365	
280-39892-5	CROSS DRAIN OWS	T	Water	365.2/365.3/365	
Analysis Batch:280-165813					
LCS 280-165730/3-A	Lab Control Sample	T	Water	365.1	280-165730
LCSD 280-165730/4-A	Lab Control Sample Duplicate	T	Water	365.1	280-165730
MB 280-165730/5-A	Method Blank	T	Water	365.1	280-165730
280-39892-1	DB01E	T	Water	365.1	280-165730
280-39892-2	CONCRETE CHANNEL	T	Water	365.1	280-165730
280-39892-2MS	Matrix Spike	T	Water	365.1	280-165730
280-39892-2MSD	Matrix Spike Duplicate	T	Water	365.1	280-165730
280-39892-3	FLIP BUCKET	T	Water	365.1	280-165730
280-39892-4	ACCESS ROAD DRAINAGE	T	Water	365.1	280-165730
280-39892-5	CROSS DRAIN OWS	T	Water	365.1	280-165730
Prep Batch: 280-165976					
LCS 280-165976/2-A	Lab Control Sample	T	Water	1664A	
LCSD 280-165976/3-A	Lab Control Sample Duplicate	T	Water	1664A	
MB 280-165976/1-A	Method Blank	T	Water	1664A	
280-39892-1	DB01E	T	Water	1664A	
280-39892-2	CONCRETE CHANNEL	T	Water	1664A	
280-39892-3	FLIP BUCKET	T	Water	1664A	
280-39892-4	ACCESS ROAD DRAINAGE	T	Water	1664A	
280-39892-5	CROSS DRAIN OWS	T	Water	1664A	

Client: Waste Management

Job Number: 280-39892-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-166018					
LCS 280-165976/2-A	Lab Control Sample	T	Water	1664A	280-165976
LCSD 280-165976/3-A	Lab Control Sample Duplicate	T	Water	1664A	280-165976
MB 280-165976/1-A	Method Blank	T	Water	1664A	280-165976
280-39892-1	DB01E	T	Water	1664A	280-165976
280-39892-2	CONCRETE CHANNEL	T	Water	1664A	280-165976
280-39892-3	FLIP BUCKET	T	Water	1664A	280-165976
280-39892-4	ACCESS ROAD DRAINAGE	T	Water	1664A	280-165976
280-39892-5	CROSS DRAIN OWS	T	Water	1664A	280-165976
Analysis Batch:280-166172					
LCS 280-166172/3	Lab Control Sample	T	Water	410.4	
LCSD 280-166172/4	Lab Control Sample Duplicate	T	Water	410.4	
MB 280-166172/5	Method Blank	T	Water	410.4	
280-39836-G-1 MS	Matrix Spike	T	Water	410.4	
280-39836-G-1 MSD	Matrix Spike Duplicate	T	Water	410.4	
280-39892-1	DB01E	T	Water	410.4	
280-39892-2	CONCRETE CHANNEL	T	Water	410.4	
280-39892-3	FLIP BUCKET	T	Water	410.4	
280-39892-4	ACCESS ROAD DRAINAGE	T	Water	410.4	
280-39892-5	CROSS DRAIN OWS	T	Water	410.4	
Analysis Batch:280-166238					
LCS 280-166238/20	Lab Control Sample	T	Water	353.2	
LCSD 280-166238/21	Lab Control Sample Duplicate	T	Water	353.2	
MB 280-166238/19	Method Blank	T	Water	353.2	
280-39892-1	DB01E	T	Water	353.2	
280-39892-2	CONCRETE CHANNEL	T	Water	353.2	
280-39892-3	FLIP BUCKET	T	Water	353.2	
280-39892-4	ACCESS ROAD DRAINAGE	T	Water	353.2	
280-39892-5	CROSS DRAIN OWS	T	Water	353.2	
280-39911-B-1 MS	Matrix Spike	T	Water	353.2	
280-39911-B-1 MSD	Matrix Spike Duplicate	T	Water	353.2	
Analysis Batch:280-166254					
LCS 280-166254/58	Lab Control Sample	T	Water	350.1	
LCSD 280-166254/59	Lab Control Sample Duplicate	T	Water	350.1	
MB 280-166254/60	Method Blank	T	Water	350.1	
280-39892-1	DB01E	T	Water	350.1	
280-39892-2	CONCRETE CHANNEL	T	Water	350.1	
280-39892-3	FLIP BUCKET	T	Water	350.1	
280-39892-4	ACCESS ROAD DRAINAGE	T	Water	350.1	
280-39892-5	CROSS DRAIN OWS	T	Water	350.1	
280-39892-5MS	Matrix Spike	T	Water	350.1	
280-39892-5MSD	Matrix Spike Duplicate	T	Water	350.1	

Client: Waste Management

Job Number: 280-39892-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Prep Batch: 280-166284					
LCS 280-166284/1-A	Lab Control Sample	T	Water	351.2	
LCSD 280-166284/2-A	Lab Control Sample Duplicate	T	Water	351.2	
MB 280-166284/3-A	Method Blank	T	Water	351.2	
280-39892-1	DB01E	T	Water	351.2	
280-39892-2	CONCRETE CHANNEL	T	Water	351.2	
280-39892-3	FLIP BUCKET	T	Water	351.2	
280-39892-4	ACCESS ROAD DRAINAGE	T	Water	351.2	
280-39892-5	CROSS DRAIN OWS	T	Water	351.2	
280-39975-A-2-B MS	Matrix Spike	T	Water	351.2	
280-39975-A-2-C MSD	Matrix Spike Duplicate	T	Water	351.2	
Analysis Batch:280-166718					
LCS 280-166284/1-A	Lab Control Sample	T	Water	351.2	280-166284
LCSD 280-166284/2-A	Lab Control Sample Duplicate	T	Water	351.2	280-166284
MB 280-166284/3-A	Method Blank	T	Water	351.2	280-166284
280-39892-1	DB01E	T	Water	351.2	280-166284
280-39892-2	CONCRETE CHANNEL	T	Water	351.2	280-166284
280-39892-3	FLIP BUCKET	T	Water	351.2	280-166284
280-39892-4	ACCESS ROAD DRAINAGE	T	Water	351.2	280-166284
280-39892-5	CROSS DRAIN OWS	T	Water	351.2	280-166284
280-39975-A-2-B MS	Matrix Spike	T	Water	351.2	280-166284
280-39975-A-2-C MSD	Matrix Spike Duplicate	T	Water	351.2	280-166284
Analysis Batch:280-166762					
MB 280-166762/1	Method Blank	T	Water	Total Nitrogen	
280-39892-1	DB01E	T	Water	Total Nitrogen	
280-39892-2	CONCRETE CHANNEL	T	Water	Total Nitrogen	
280-39892-3	FLIP BUCKET	T	Water	Total Nitrogen	
280-39892-4	ACCESS ROAD DRAINAGE	T	Water	Total Nitrogen	
280-39892-5	CROSS DRAIN OWS	T	Water	Total Nitrogen	

Report Basis

T = Total

Client: Waste Management

Job Number: 280-39892-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
HPLC/IC					
Analysis Batch:440-93206					
LCS 440-93206/2	Lab Control Sample	T	Water	218.6	
MB 440-93206/3	Method Blank	T	Water	218.6	
280-39892-1	DB01E	D	Water	218.6	
280-39892-2	CONCRETE CHANNEL	D	Water	218.6	
280-39892-3	FLIP BUCKET	D	Water	218.6	
280-39892-5	CROSS DRAIN OWS	D	Water	218.6	
440-41314-H-1 MS	Matrix Spike	T	Water	218.6	
440-41314-H-1 MSD	Matrix Spike Duplicate	T	Water	218.6	

Report Basis

D = Dissolved

T = Total

Client: Waste Management

Job Number: 280-39892-1

Surrogate Recovery Report

625 Semivolatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	TBP %Rec	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
280-39892-1	DB01E	75	75	74	77	79	64
280-39892-2	CONCRETE CHANNEL	35X	41	55	77	64	33X
280-39892-3	FLIP BUCKET	80	67	68	71	74	43X
280-39892-4	ACCESS ROAD DRAINAGE	69	72	69	72	77	77
280-39892-5	CROSS DRAIN OWS	77	68	72	76	78	52
MB 280-165039/1-A		73	66	75	78	79	74
LCS 280-165039/2-A		94	67	72	72	75	82
LCSD 280-165039/3-A		89	67	74	74	77	71

Surrogate	Acceptance Limits
TBP = 2,4,6-Tribromophenol	50-120
FBP = 2-Fluorobiphenyl	36-120
2FP = 2-Fluorophenol	30-120
NBZ = Nitrobenzene-d5	45-120
PHL = Phenol-d5	36-120
TPH = Terphenyl-d14	52-120

Client: Waste Management

Job Number: 280-39892-1

Method Blank - Batch: 280-165039

Method: 625
Preparation: 625

Lab Sample ID:	MB 280-165039/1-A	Analysis Batch:	280-166202	Instrument ID:	SMS_G6
Client Matrix:	Water	Prep Batch:	280-165039	Lab File ID:	G6_8601.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/23/2013 0148	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	03/15/2013 1252			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Alpha-Terpineol	ND		0.0020	0.010
Benzoic acid	ND		0.010	0.050
p-Cresol	0.000437	J	0.00025	0.010
Pentachlorophenol	ND		0.020	0.060
Phenol	ND		0.0020	0.010

Surrogate	% Rec	Acceptance Limits
2,4,6-Tribromophenol	73	50 - 120
2-Fluorobiphenyl	66	36 - 120
2-Fluorophenol	75	30 - 120
Nitrobenzene-d5	78	45 - 120
Phenol-d5	79	36 - 120
Terphenyl-d14	74	52 - 120

Client: Waste Management

Job Number: 280-39892-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-165039

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-165039/2-A	Analysis Batch:	280-166202	Instrument ID:	SMS_G6
Client Matrix:	Water	Prep Batch:	280-165039	Lab File ID:	G6_8585.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/22/2013 1827	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	03/15/2013 1252			Injection Volume:	0.5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-165039/3-A	Analysis Batch:	280-166202	Instrument ID:	SMS_G6
Client Matrix:	Water	Prep Batch:	280-165039	Lab File ID:	G6_8586.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/22/2013 1854	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	03/15/2013 1252			Injection Volume:	0.5 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
1,2,4-Trichlorobenzene	64	65	44 - 120	1	35		
1,2-Dichlorobenzene	67	67	32 - 120	1	42		
1,3-Dichlorobenzene	64	64	23 - 120	0	47		
1,4-Dichlorobenzene	66	66	24 - 120	0	49		
2,2'-Oxybis(1-chloropropane)	69	70	37 - 120	2	30		
2,4,6-Trichlorophenol	80	77	51 - 120	4	30		
2,4-Dichlorophenol	73	75	46 - 120	2	30		
2,4-Dimethylphenol	60	61	44 - 119	1	35		
2,4-Dinitrophenol	72	71	20 - 121	1	61	J	J
2,4-Dinitrotoluene	90	85	57 - 120	5	35		
2,6-Dinitrotoluene	86	82	56 - 120	4	30		
2-Chloronaphthalene	70	71	60 - 118	0	30		
2-Chlorophenol	74	76	34 - 120	2	30		
2-Methylphenol	72	74	38 - 120	3	35		
2-Nitrophenol	80	83	47 - 120	3	30		
3,3'-Dichlorobenzidine	46	41	18 - 120	12	50	J	J
4,6-Dinitro-2-methylphenol	85	80	40 - 120	7	55		
4-Bromophenyl phenyl ether	82	74	53 - 120	9	34		
4-Chloro-3-methylphenol	85	83	57 - 120	3	30		
4-Chlorophenyl phenyl ether	81	77	51 - 120	5	30		
4-Nitrophenol	91	88	53 - 120	4	42		
Acenaphthene	75	73	47 - 120	3	30		
Acenaphthylene	77	75	33 - 120	3	30		
Anthracene	81	74	52 - 120	9	30		
Benzidine	36	29	10 - 218	22	50	J	J
Benzo[a]anthracene	80	74	54 - 120	8	30		
Benzo[a]pyrene	72	66	39 - 120	9	73		
Benzo[b]fluoranthene	79	73	51 - 120	8	90		
Benzo[g,h,i]perylene	77	70	48 - 120	9	64		
Benzo[k]fluoranthene	78	72	49 - 120	9	50		
Bis(2-chloroethoxy)methane	72	74	50 - 120	2	30		
Bis(2-chloroethyl)ether	74	77	35 - 120	4	30		
Bis(2-ethylhexyl) phthalate	93	86	56 - 120	8	30		
Butyl benzyl phthalate	90	83	53 - 120	8	30		
Chrysene	80	74	51 - 120	7	30		
Dibenz(a,h)anthracene	71	66	45 - 120	7	78		

Client: Waste Management

Job Number: 280-39892-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-165039

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-165039/2-A	Analysis Batch:	280-166202	Instrument ID:	SMS_G6
Client Matrix:	Water	Prep Batch:	280-165039	Lab File ID:	G6_8585.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/22/2013 1827	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	03/15/2013 1252			Injection Volume:	0.5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-165039/3-A	Analysis Batch:	280-166202	Instrument ID:	SMS_G6
Client Matrix:	Water	Prep Batch:	280-165039	Lab File ID:	G6_8586.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/22/2013 1854	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	03/15/2013 1252			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Diethyl phthalate	88	83	59 - 114	6	30		
Dimethyl phthalate	86	82	58 - 112	5	30		
Di-n-butyl phthalate	89	80	57 - 118	10	30		
Di-n-octyl phthalate	87	80	56 - 120	8	30		
Fluoranthene	84	77	58 - 120	10	30		
Fluorene	79	76	59 - 120	4	30		
Hexachlorobenzene	81	73	53 - 120	10	30		
Hexachlorobutadiene	60	61	27 - 116	2	41		
Hexachlorocyclopentadiene	11	12	10 - 120	8	82	J	J
Hexachloroethane	65	65	40 - 113	0	52		
Indeno[1,2,3-cd]pyrene	85	79	50 - 120	7	73		
Isophorone	77	77	50 - 120	0	30		
Naphthalene	68	69	37 - 120	2	30		
Nitrobenzene	74	75	46 - 120	1	30		
N-Nitrosodimethylamine	71	73	37 - 120	3	30		
N-Nitrosodi-n-propylamine	77	76	50 - 120	1	30		
N-Nitrosodiphenylamine	80	74	46 - 203	8	50		
p-Cresol	74	76	42 - 120	3	39		
Pentachlorophenol	78	69	46 - 120	12	30		J
Phenanthrene	82	74	54 - 120	10	30		
Phenol	77	78	37 - 112	1	30		
Pyrene	82	75	55 - 115	8	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
2,4,6-Tribromophenol	94	89	50 - 120
2-Fluorobiphenyl	67	67	36 - 120
2-Fluorophenol	72	74	30 - 120
Nitrobenzene-d5	72	74	45 - 120
Phenol-d5	75	77	36 - 120
Terphenyl-d14	82	71	52 - 120

Client: Waste Management

Job Number: 280-39892-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-165039

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-165039/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-165039/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	03/22/2013 1827			Analysis Date:	03/22/2013 1854
Prep Date:	03/15/2013 1252			Prep Date:	03/15/2013 1252
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual		LCSD Result/Qual	
1,2,4-Trichlorobenzene	0.0800	0.0800	0.0514		0.0520	
1,2-Dichlorobenzene	0.0800	0.0800	0.0534		0.0538	
1,3-Dichlorobenzene	0.0800	0.0800	0.0515		0.0514	
1,4-Dichlorobenzene	0.0800	0.0800	0.0529		0.0526	
2,2'-Oxybis(1-chloropropane)	0.0800	0.0800	0.0550		0.0560	
2,4,6-Trichlorophenol	0.0800	0.0800	0.0638		0.0613	
2,4-Dichlorophenol	0.0800	0.0800	0.0586		0.0599	
2,4-Dimethylphenol	0.0800	0.0800	0.0480		0.0485	
2,4-Dinitrophenol	0.0800	0.0800	0.0575	J	0.0572	J
2,4-Dinitrotoluene	0.0800	0.0800	0.0716		0.0681	
2,6-Dinitrotoluene	0.0800	0.0800	0.0689		0.0660	
2-Chloronaphthalene	0.0800	0.0800	0.0563		0.0566	
2-Chlorophenol	0.0800	0.0800	0.0595		0.0610	
2-Methylphenol	0.0800	0.0800	0.0572		0.0590	
2-Nitrophenol	0.0800	0.0800	0.0643		0.0664	
3,3'-Dichlorobenzidine	0.0800	0.0800	0.0370	J	0.0327	J
4,6-Dinitro-2-methylphenol	0.0800	0.0800	0.0682		0.0637	
4-Bromophenyl phenyl ether	0.0800	0.0800	0.0654		0.0595	
4-Chloro-3-methylphenol	0.0800	0.0800	0.0679		0.0662	
4-Chlorophenyl phenyl ether	0.0800	0.0800	0.0646		0.0617	
4-Nitrophenol	0.0800	0.0800	0.0730		0.0701	
Acenaphthene	0.0800	0.0800	0.0603		0.0585	
Acenaphthylene	0.0800	0.0800	0.0616		0.0601	
Anthracene	0.0800	0.0800	0.0645		0.0589	
Benzidine	0.200	0.200	0.0725	J	0.0583	J
Benzo[a]anthracene	0.0800	0.0800	0.0643		0.0596	
Benzo[a]pyrene	0.0800	0.0800	0.0579		0.0527	
Benzo[b]fluoranthene	0.0800	0.0800	0.0630		0.0582	
Benzo[g,h,i]perylene	0.0800	0.0800	0.0615		0.0564	
Benzo[k]fluoranthene	0.0800	0.0800	0.0626		0.0574	
Bis(2-chloroethoxy)methane	0.0800	0.0800	0.0574		0.0588	
Bis(2-chloroethyl)ether	0.0800	0.0800	0.0590		0.0612	
Bis(2-ethylhexyl) phthalate	0.0800	0.0800	0.0746		0.0691	
Butyl benzyl phthalate	0.0800	0.0800	0.0721		0.0667	
Chrysene	0.0800	0.0800	0.0637		0.0591	
Dibenz(a,h)anthracene	0.0800	0.0800	0.0568		0.0530	
Diethyl phthalate	0.0800	0.0800	0.0702		0.0661	
Dimethyl phthalate	0.0800	0.0800	0.0689		0.0655	
Di-n-butyl phthalate	0.0800	0.0800	0.0710		0.0642	

Client: Waste Management

Job Number: 280-39892-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-165039

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-165039/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-165039/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	03/22/2013 1827			Analysis Date:	03/22/2013 1854
Prep Date:	03/15/2013 1252			Prep Date:	03/15/2013 1252
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual		LCSD Result/Qual	
Di-n-octyl phthalate	0.0800	0.0800	0.0696		0.0640	
Fluoranthene	0.0800	0.0800	0.0673		0.0612	
Fluorene	0.0800	0.0800	0.0630		0.0605	
Hexachlorobenzene	0.0800	0.0800	0.0645		0.0584	
Hexachlorobutadiene	0.0800	0.0800	0.0484		0.0492	
Hexachlorocyclopentadiene	0.0800	0.0800	0.00916	J	0.00996	J
Hexachloroethane	0.0800	0.0800	0.0519		0.0520	
Indeno[1,2,3-cd]pyrene	0.0800	0.0800	0.0681		0.0632	
Isophorone	0.0800	0.0800	0.0612		0.0614	
Naphthalene	0.0800	0.0800	0.0540		0.0552	
Nitrobenzene	0.0800	0.0800	0.0591		0.0600	
N-Nitrosodimethylamine	0.0800	0.0800	0.0565		0.0584	
N-Nitrosodi-n-propylamine	0.0800	0.0800	0.0616		0.0611	
N-Nitrosodiphenylamine	0.0683	0.0683	0.0545		0.0502	
p-Cresol	0.160	0.160	0.118		0.121	
Pentachlorophenol	0.0800	0.0800	0.0624		0.0553	J
Phenanthrene	0.0800	0.0800	0.0655		0.0594	
Phenol	0.0800	0.0800	0.0619		0.0623	
Pyrene	0.0800	0.0800	0.0652		0.0603	

Client: Waste Management

Job Number: 280-39892-1

Method Blank - Batch: 440-93206

Method: 218.6
Preparation: N/A

Lab Sample ID:	MB 440-93206/3	Analysis Batch:	440-93206	Instrument ID:	IC-16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Info 2_TAIIRV167_Hex
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	03/21/2013 0741	Units:	ug/L	Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Chromium, hexavalent	ND		0.25	1.0

Lab Control Sample - Batch: 440-93206

Method: 218.6
Preparation: N/A

Lab Sample ID:	LCS 440-93206/2	Analysis Batch:	440-93206	Instrument ID:	IC-16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Info 2_TAIIRV167_Hex
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	03/21/2013 0728	Units:	ug/L	Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chromium, hexavalent	50.0	50.8	102	90 - 110	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 440-93206

Method: 218.6
Preparation: N/A

MS Lab Sample ID:	440-41314-H-1 MS	Analysis Batch:	440-93206	Instrument ID:	IC-16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Info 2_TAIIRV167_Hex
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	03/21/2013 1245			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	440-41314-H-1 MSD	Analysis Batch:	440-93206	Instrument ID:	IC-16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Info 2_TAIIRV167_Hex
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	03/21/2013 1258			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Chromium, hexavalent	101	102	90 - 110	1	10		

Client: Waste Management

Job Number: 280-39892-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 440-93206

Method: 218.6
Preparation: N/A

MS Lab Sample ID:	440-41314-H-1 MS	Units: ug/L	
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	03/21/2013 1245		
Prep Date:	N/A		
Leach Date:	N/A		

MSD Lab Sample ID:	440-41314-H-1 MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	03/21/2013 1258
Prep Date:	N/A
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Chromium, hexavalent	1.1	50.0	50.0	51.4	52.1

Client: Waste Management

Job Number: 280-39892-1

Method Blank - Batch: 280-165003

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	MB 280-165003/1-A	Analysis Batch:	280-166127	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-165003	Lab File ID:	26b032113.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/21/2013 2328	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	03/18/2013 0900				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Arsenic	ND		0.0044	0.015
Cadmium	ND		0.00045	0.0050
Lead	ND		0.0026	0.0090
Selenium	ND		0.0049	0.015
Zinc	ND		0.0045	0.020
Silver	ND		0.00093	0.010

Method Blank - Batch: 280-165003

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	MB 280-165003/1-A	Analysis Batch:	280-166315	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-165003	Lab File ID:	26A1032313.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/23/2013 1248	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	03/18/2013 0900				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Iron	ND		0.022	0.10

Client: Waste Management

Job Number: 280-39892-1

Lab Control Sample - Batch: 280-165003

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	LCS 280-165003/2-A	Analysis Batch:	280-166127	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-165003	Lab File ID:	26b032113.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/21/2013 2330	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	03/18/2013 0900				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	1.00	0.987	99	88 - 110	
Cadmium	0.100	0.104	104	88 - 111	
Lead	0.500	0.509	102	89 - 110	
Selenium	2.00	1.94	97	85 - 112	
Zinc	0.500	0.517	103	85 - 111	
Silver	0.0500	0.0515	103	85 - 115	

Lab Control Sample - Batch: 280-165003

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	LCS 280-165003/2-A	Analysis Batch:	280-166315	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-165003	Lab File ID:	26A1032313.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/23/2013 1251	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	03/18/2013 0900				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Iron	1.00	0.990	99	89 - 115	

Client: Waste Management

Job Number: 280-39892-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-165003

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-39892-1	Analysis Batch:	280-166127	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-165003	Lab File ID:	26b032113.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/21/2013 2344			Final Weight/Volume:	50 mL
Prep Date:	03/18/2013 0900				
Leach Date:	N/A				

MSD Lab Sample ID:	280-39892-1	Analysis Batch:	280-166127	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-165003	Lab File ID:	26b032113.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/21/2013 2347			Final Weight/Volume:	50 mL
Prep Date:	03/18/2013 0900				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Arsenic	96	98	88 - 110	1	20		
Cadmium	102	103	88 - 111	1	20		
Lead	98	99	89 - 110	1	20		
Selenium	95	96	85 - 112	1	20		
Zinc	101	103	85 - 111	1	20		
Silver	102	105	85 - 115	3	20		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-165003

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-39892-1	Analysis Batch:	280-166315	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-165003	Lab File ID:	26A1032313.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/23/2013 1258			Final Weight/Volume:	50 mL
Prep Date:	03/18/2013 0900				
Leach Date:	N/A				

MSD Lab Sample ID:	280-39892-1	Analysis Batch:	280-166315	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-165003	Lab File ID:	26A1032313.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/23/2013 1300			Final Weight/Volume:	50 mL
Prep Date:	03/18/2013 0900				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Iron	179	117	89 - 115	3	20	4	4

Client: Waste Management

Job Number: 280-39892-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-165003

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-39892-1	Units:	mg/L	MSD Lab Sample ID:	280-39892-1
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	03/21/2013 2344			Analysis Date:	03/21/2013 2347
Prep Date:	03/18/2013 0900			Prep Date:	03/18/2013 0900
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Arsenic	0.0068	J	1.00	1.00	0.971	0.985
Cadmium	0.00073	J	0.100	0.100	0.103	0.104
Lead	0.023		0.500	0.500	0.513	0.518
Selenium	ND		2.00	2.00	1.89	1.91
Zinc	0.10		0.500	0.500	0.611	0.616
Silver	ND		0.0500	0.0500	0.0511	0.0525

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-165003

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-39892-1	Units:	mg/L	MSD Lab Sample ID:	280-39892-1
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	03/23/2013 1258			Analysis Date:	03/23/2013 1300
Prep Date:	03/18/2013 0900			Prep Date:	03/18/2013 0900
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Iron	16	1.00	1.00	18.1	4	17.5	4

Client: Waste Management

Job Number: 280-39892-1

Method Blank - Batch: 280-165583

Method: 245.1
Preparation: 245.1

Lab Sample ID:	MB 280-165583/1-A	Analysis Batch:	280-165986	Instrument ID:	MT_034
Client Matrix:	Water	Prep Batch:	280-165583	Lab File ID:	130320tad.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	03/20/2013 2041	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	03/20/2013 1230				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.0000690	J	0.000027	0.00020

Lab Control Sample - Batch: 280-165583

Method: 245.1
Preparation: 245.1

Lab Sample ID:	LCS 280-165583/2-A	Analysis Batch:	280-165986	Instrument ID:	MT_034
Client Matrix:	Water	Prep Batch:	280-165583	Lab File ID:	130320tad.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	03/20/2013 2044	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	03/20/2013 1230				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00496	99	90 - 110	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-165583

Method: 245.1
Preparation: 245.1

MS Lab Sample ID:	280-39908-A-1-I MS	Analysis Batch:	280-165986	Instrument ID:	MT_034
Client Matrix:	Water	Prep Batch:	280-165583	Lab File ID:	130320tad.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	03/20/2013 2048			Final Weight/Volume:	30 mL
Prep Date:	03/20/2013 1230				
Leach Date:	N/A				

MSD Lab Sample ID:	280-39908-A-1-J MSD	Analysis Batch:	280-165986	Instrument ID:	MT_034
Client Matrix:	Water	Prep Batch:	280-165583	Lab File ID:	130320tad.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	03/20/2013 2051			Final Weight/Volume:	30 mL
Prep Date:	03/20/2013 1230				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	93	97	80 - 120	4	10		

Client: Waste Management

Job Number: 280-39892-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-165583

Method: 245.1
Preparation: 245.1

MS Lab Sample ID:	280-39908-A-1-I MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	03/20/2013 2048		
Prep Date:	03/20/2013 1230		
Leach Date:	N/A		

MSD Lab Sample ID:	280-39908-A-1-J MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	03/20/2013 2051
Prep Date:	03/20/2013 1230
Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Mercury	0.00012	J	0.00500	0.00500	0.00478	0.00498

Client: Waste Management

Job Number: 280-39892-1

Method Blank - Batch: 280-165976

Method: 1664A
Preparation: 1664A

Lab Sample ID:	MB 280-165976/1-A	Analysis Batch:	280-166018	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	280-165976	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/21/2013 1553	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	03/21/2013 1224				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
HEM	ND		1.6	5.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-165976

Method: 1664A
Preparation: 1664A

LCS Lab Sample ID:	LCS 280-165976/2-A	Analysis Batch:	280-166018	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	280-165976	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/21/2013 1553	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	03/21/2013 1224				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-165976/3-A	Analysis Batch:	280-166018	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	280-165976	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/21/2013 1553	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	03/21/2013 1224				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
HEM	82	89	81 - 107	8	22		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-165976

Method: 1664A
Preparation: 1664A

LCS Lab Sample ID:	LCS 280-165976/2-A	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	03/21/2013 1553		
Prep Date:	03/21/2013 1224		
Leach Date:	N/A		

LCSD Lab Sample ID:	LCSD 280-165976/3-A
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	03/21/2013 1553
Prep Date:	03/21/2013 1224
Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
HEM	40.0	40.0	32.7	35.5

Client: Waste Management

Job Number: 280-39892-1

Method Blank - Batch: 280-166254

Method: 350.1
Preparation: N/A

Lab Sample ID:	MB 280-166254/60	Analysis Batch:	280-166254	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\032213.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	03/22/2013 1202	Units:	mg/L	Final Weight/Volume:	10 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Ammonia	ND		0.022	0.10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-166254

Method: 350.1
Preparation: N/A

LCS Lab Sample ID:	LCS 280-166254/58	Analysis Batch:	280-166254	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\032213.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	03/22/2013 1157	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-166254/59	Analysis Batch:	280-166254	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\032213.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	03/22/2013 1159	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Ammonia	103	103	90 - 110	1	10		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-166254

Method: 350.1
Preparation: N/A

LCS Lab Sample ID:	LCS 280-166254/58	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-166254/59
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	03/22/2013 1157			Analysis Date:	03/22/2013 1159
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Ammonia	2.50	2.50	2.56	2.58

Client: Waste Management

Job Number: 280-39892-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-166254

Method: 350.1
Preparation: N/A

MS Lab Sample ID:	280-39892-5	Analysis Batch:	280-166254	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\032213.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	03/22/2013 1244			Final Weight/Volume:	20 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-39892-5	Analysis Batch:	280-166254	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\032213.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	03/22/2013 1300			Final Weight/Volume:	20 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Ammonia	100	102	90 - 110	1	10		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-166254

Method: 350.1
Preparation: N/A

MS Lab Sample ID:	280-39892-5	Units:	mg/L	MSD Lab Sample ID:	280-39892-5
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	03/22/2013 1244			Analysis Date:	03/22/2013 1300
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Ammonia	0.18	1.00	1.00	1.19	1.20

Client: Waste Management

Job Number: 280-39892-1

Method Blank - Batch: 280-166284

Method: 351.2
Preparation: 351.2

Lab Sample ID:	MB 280-166284/3-A	Analysis Batch:	280-166718	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-166284	Lab File ID:	032613TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	03/26/2013 1507	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	03/22/2013 1844				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrogen, Kjeldahl	ND		0.18	0.50

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-166284

Method: 351.2
Preparation: 351.2

LCS Lab Sample ID:	LCS 280-166284/1-A	Analysis Batch:	280-166718	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-166284	Lab File ID:	032613TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	03/26/2013 1505	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	03/22/2013 1844				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-166284/2-A	Analysis Batch:	280-166718	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-166284	Lab File ID:	032613TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	03/26/2013 1506	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	03/22/2013 1844				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Nitrogen, Kjeldahl	96	95	90 - 110	1	25		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-166284

Method: 351.2
Preparation: 351.2

LCS Lab Sample ID:	LCS 280-166284/1-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-166284/2-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	03/26/2013 1505			Analysis Date:	03/26/2013 1506
Prep Date:	03/22/2013 1844			Prep Date:	03/22/2013 1844
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Nitrogen, Kjeldahl	6.00	6.00	5.79	5.73

Client: Waste Management

Job Number: 280-39892-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-166284

Method: 351.2
Preparation: 351.2

MS Lab Sample ID:	280-39975-A-2-B MS	Analysis Batch:	280-166718	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-166284	Lab File ID:	032613TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	03/26/2013 1521			Final Weight/Volume:	25 mL
Prep Date:	03/22/2013 1844				
Leach Date:	N/A				

MSD Lab Sample ID:	280-39975-A-2-C MSD	Analysis Batch:	280-166718	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-166284	Lab File ID:	032613TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	03/26/2013 1522			Final Weight/Volume:	25 mL
Prep Date:	03/22/2013 1844				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Nitrogen, Kjeldahl	53	55	90 - 110	1	25	F	F

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-166284

Method: 351.2
Preparation: 351.2

MS Lab Sample ID:	280-39975-A-2-B MS	Units: mg/L	
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	03/26/2013 1521		
Prep Date:	03/22/2013 1844		
Leach Date:	N/A		

MSD Lab Sample ID:	280-39975-A-2-C MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	03/26/2013 1522
Prep Date:	03/22/2013 1844
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Nitrogen, Kjeldahl	5.5	3.00	3.00	7.03	F	7.11	F

Client: Waste Management

Job Number: 280-39892-1

Method Blank - Batch: 280-166238

Method: 353.2
Preparation: N/A

Lab Sample ID:	MB 280-166238/19	Analysis Batch:	280-166238	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0322NXNT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	03/22/2013 1218	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrate Nitrite as N	ND		0.019	0.10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-166238

Method: 353.2
Preparation: N/A

LCS Lab Sample ID:	LCS 280-166238/20	Analysis Batch:	280-166238	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0322NXNT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	03/22/2013 1220	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-166238/21	Analysis Batch:	280-166238	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0322NXNT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	03/22/2013 1221	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Nitrate Nitrite as N	101	101	90 - 110	0	10		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-166238

Method: 353.2
Preparation: N/A

LCS Lab Sample ID:	LCS 280-166238/20	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-166238/21
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	03/22/2013 1220			Analysis Date:	03/22/2013 1221
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Nitrate Nitrite as N	5.00	5.00	5.05	5.06

Client: Waste Management

Job Number: 280-39892-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-166238

Method: 353.2
Preparation: N/A

MS Lab Sample ID:	280-39911-B-1 MS	Analysis Batch:	280-166238	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0322NXNT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/22/2013 1302			Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-39911-B-1 MSD	Analysis Batch:	280-166238	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0322NXNT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	03/22/2013 1303			Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Nitrate Nitrite as N	97	102	90 - 110	5	10		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-166238

Method: 353.2
Preparation: N/A

MS Lab Sample ID:	280-39911-B-1 MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	03/22/2013 1302		
Prep Date:	N/A		
Leach Date:	N/A		

MSD Lab Sample ID:	280-39911-B-1 MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	03/22/2013 1303
Prep Date:	N/A
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Nitrate Nitrite as N	0.11	4.00	4.00	4.00	4.19

Client: Waste Management

Job Number: 280-39892-1

Method Blank - Batch: 280-165730

Method: 365.1
Preparation: 365.2/365.3/365

Lab Sample ID:	MB 280-165730/5-A	Analysis Batch:	280-165813	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-165730	Lab File ID:	032013tphos.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50.0 mL
Analysis Date:	03/20/2013 1551	Units:	mg/L	Final Weight/Volume:	50.0 mL
Prep Date:	03/20/2013 1125				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Phosphorus, Total	ND		0.0050	0.050

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-165730

Method: 365.1
Preparation: 365.2/365.3/365

LCS Lab Sample ID:	LCS 280-165730/3-A	Analysis Batch:	280-165813	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-165730	Lab File ID:	032013tphos.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50.0 mL
Analysis Date:	03/20/2013 1551	Units:	mg/L	Final Weight/Volume:	50.0 mL
Prep Date:	03/20/2013 1125				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-165730/4-A	Analysis Batch:	280-165813	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-165730	Lab File ID:	032013tphos.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50.0 mL
Analysis Date:	03/20/2013 1551	Units:	mg/L	Final Weight/Volume:	50.0 mL
Prep Date:	03/20/2013 1125				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Phosphorus, Total	93	90	90 - 110	3	10		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-165730

Method: 365.1
Preparation: 365.2/365.3/365

LCS Lab Sample ID:	LCS 280-165730/3-A	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	03/20/2013 1551		
Prep Date:	03/20/2013 1125		
Leach Date:	N/A		

LCSD Lab Sample ID:	LCSD 280-165730/4-A
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	03/20/2013 1551
Prep Date:	03/20/2013 1125
Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Phosphorus, Total	0.500	0.500	0.465	0.450

Client: Waste Management

Job Number: 280-39892-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-165730

Method: 365.1
Preparation: 365.2/365.3/365

MS Lab Sample ID:	280-39892-2	Analysis Batch:	280-165813	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-165730	Lab File ID:	032013tphos.xls
Dilution:	50	Leach Batch:	N/A	Initial Weight/Volume:	50.0 mL
Analysis Date:	03/20/2013 1647			Final Weight/Volume:	50.0 mL
Prep Date:	03/20/2013 1125				
Leach Date:	N/A				

MSD Lab Sample ID:	280-39892-2	Analysis Batch:	280-165813	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-165730	Lab File ID:	032013tphos.xls
Dilution:	50	Leach Batch:	N/A	Initial Weight/Volume:	50.0 mL
Analysis Date:	03/20/2013 1647			Final Weight/Volume:	50.0 mL
Prep Date:	03/20/2013 1125				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Phosphorus, Total	346	1164	90 - 110	35	10	4	4 F

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-165730

Method: 365.1
Preparation: 365.2/365.3/365

MS Lab Sample ID:	280-39892-2	Units: mg/L	
Client Matrix:	Water		
Dilution:	50		
Analysis Date:	03/20/2013 1647		
Prep Date:	03/20/2013 1125		
Leach Date:	N/A		

MSD Lab Sample ID:	280-39892-2
Client Matrix:	Water
Dilution:	50
Analysis Date:	03/20/2013 1647
Prep Date:	03/20/2013 1125
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Phosphorus, Total	8.1	0.500	0.500	9.81	4	13.9	4 F

Client: Waste Management

Job Number: 280-39892-1

Method Blank - Batch: 280-166172

Method: 410.4
Preparation: N/A

Lab Sample ID:	MB 280-166172/5	Analysis Batch:	280-166172	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2 mL
Analysis Date:	03/22/2013 1113	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Chemical Oxygen Demand	ND		4.1	20

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-166172

Method: 410.4
Preparation: N/A

LCS Lab Sample ID:	LCS 280-166172/3	Analysis Batch:	280-166172	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	03/22/2013 1113	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-166172/4	Analysis Batch:	280-166172	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	03/22/2013 1113	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Chemical Oxygen Demand	98	100	90 - 110	3	11		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-166172

Method: 410.4
Preparation: N/A

LCS Lab Sample ID:	LCS 280-166172/3	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-166172/4
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	03/22/2013 1113			Analysis Date:	03/22/2013 1113
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Chemical Oxygen Demand	100	100	97.6	100

Client: Waste Management

Job Number: 280-39892-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-166172

Method: 410.4
Preparation: N/A

MS Lab Sample ID:	280-39836-G-1 MS	Analysis Batch:	280-166172	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	03/22/2013 1113			Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-39836-G-1 MSD	Analysis Batch:	280-166172	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	03/22/2013 1113			Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Chemical Oxygen Demand	99	93	90 - 110	4	11		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-166172

Method: 410.4
Preparation: N/A

MS Lab Sample ID:	280-39836-G-1 MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	03/22/2013 1113		
Prep Date:	N/A		
Leach Date:	N/A		

MSD Lab Sample ID:	280-39836-G-1 MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	03/22/2013 1113
Prep Date:	N/A
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Chemical Oxygen Demand	29	50.0	50.0	78.3	75.3

Client: Waste Management

Job Number: 280-39892-1

Method Blank - Batch: 280-164917

Method: SM 2540D
Preparation: N/A

Lab Sample ID:	MB 280-164917/3	Analysis Batch:	280-164917	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	03/14/2013 1607	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Total Suspended Solids	ND		1.1	4.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-164917

Method: SM 2540D
Preparation: N/A

LCS Lab Sample ID:	LCS 280-164917/1	Analysis Batch:	280-164917	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	03/14/2013 1607	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-164917/2	Analysis Batch:	280-164917	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	03/14/2013 1607	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Total Suspended Solids	94	87	86 - 114	8	20		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-164917

Method: SM 2540D
Preparation: N/A

LCS Lab Sample ID:	LCS 280-164917/1	Units: mg/L	LCSD Lab Sample ID: LCSD 280-164917/2
Client Matrix:	Water		Client Matrix: Water
Dilution:	1.0		Dilution: 1.0
Analysis Date:	03/14/2013 1607		Analysis Date: 03/14/2013 1607
Prep Date:	N/A		Prep Date: N/A
Leach Date:	N/A		Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Total Suspended Solids	100	100	94.0	87.0

Client: Waste Management

Job Number: 280-39892-1

Duplicate - Batch: 280-164917

Method: SM 2540D
Preparation: N/A

Lab Sample ID:	280-39821-A-1 DU	Analysis Batch:	280-164917	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	03/14/2013 1607	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Suspended Solids	41	42.0	2	10	

Client: Waste Management

Job Number: 280-39892-1

Method Blank - Batch: 280-166762

Method: Total Nitrogen
Preparation: N/A

Lab Sample ID:	MB 280-166762/1	Analysis Batch:	280-166762	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	03/27/2013 0640	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrogen, Total	ND		0.042	0.10

Client: Waste Management

Job Number: 280-39892-1

Laboratory Chronicle

Lab ID: **280-39892-1** **Client ID:** **DB01E**

Sample Date/Time: 03/10/2013 15:30 Received Date/Time: 03/14/2013 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	280-39892-C-1-A		280-166513	280-165039	03/15/2013 12:52	1	TAL DEN	JJW
A:625	280-39892-C-1-A		280-166513	280-165039	03/26/2013 03:10	1	TAL DEN	DCK
A:218.6	280-39892-I-1		440-93206		03/21/2013 17:35	1	TAL IRV	RW
P:200.7	280-39892-H-1-B		280-166127	280-165003	03/18/2013 09:00	1	TAL DEN	JA
A:200.7 Rev 4.4	280-39892-H-1-B		280-166127	280-165003	03/21/2013 23:40	1	TAL DEN	HEB
P:200.7	280-39892-H-1-B		280-166315	280-165003	03/18/2013 09:00	1	TAL DEN	JA
A:200.7 Rev 4.4	280-39892-H-1-B		280-166315	280-165003	03/23/2013 12:53	1	TAL DEN	JKH
P:245.1	280-39892-H-1-E		280-165986	280-165583	03/20/2013 12:30	1	TAL DEN	JM
A:245.1	280-39892-H-1-E		280-165986	280-165583	03/20/2013 20:53	1	TAL DEN	JM
P:1664A	280-39892-B-1-A		280-166018	280-165976	03/21/2013 12:24	1	TAL DEN	AFB
A:1664A	280-39892-B-1-A		280-166018	280-165976	03/21/2013 15:53	1	TAL DEN	AFB
A:350.1	280-39892-F-1		280-166254		03/22/2013 12:32	1	TAL DEN	DE
P:351.2	280-39892-F-1-A		280-166718	280-166284	03/22/2013 18:44	1	TAL DEN	MW
A:351.2	280-39892-F-1-A		280-166718	280-166284	03/26/2013 15:26	1	TAL DEN	MW
A:353.2	280-39892-G-1		280-166238		03/22/2013 12:39	1	TAL DEN	SJS
P:365.2/365.3/365	280-39892-G-1-A		280-165813	280-165730	03/20/2013 11:25	1	TAL DEN	SJS
A:365.1	280-39892-G-1-A		280-165813	280-165730	03/20/2013 16:13	1	TAL DEN	SJS
A:410.4	280-39892-G-1		280-166172		03/22/2013 11:13	1	TAL DEN	DFB
A:SM 2540D	280-39892-C-1		280-164917		03/14/2013 16:07	1	TAL DEN	MW
A:Total Nitrogen	280-39892-A-1		280-166762		03/27/2013 06:40	1	TAL DEN	RS
A:Field Sampling	280-39892-A-1		280-164804		03/10/2013 15:30	1	TAL DEN	FS

Lab ID: **280-39892-1 MS** **Client ID:** **DB01E**

Sample Date/Time: 03/10/2013 15:30 Received Date/Time: 03/14/2013 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:200.7	280-39892-H-1-C MS		280-166127	280-165003	03/18/2013 09:00	1	TAL DEN	JA
A:200.7 Rev 4.4	280-39892-H-1-C MS		280-166127	280-165003	03/21/2013 23:44	1	TAL DEN	HEB
P:200.7	280-39892-H-1-C MS		280-166315	280-165003	03/18/2013 09:00	1	TAL DEN	JA
A:200.7 Rev 4.4	280-39892-H-1-C MS		280-166315	280-165003	03/23/2013 12:58	1	TAL DEN	JKH

Client: Waste Management

Job Number: 280-39892-1

Laboratory Chronicle

Lab ID: **280-39892-1 MSD** **Client ID:** **DB01E**

Sample Date/Time: 03/10/2013 15:30 Received Date/Time: 03/14/2013 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:200.7	280-39892-H-1-D MSD		280-166127	280-165003	03/18/2013 09:00	1	TAL DEN	JA
A:200.7 Rev 4.4	280-39892-H-1-D MSD		280-166127	280-165003	03/21/2013 23:47	1	TAL DEN	HEB
P:200.7	280-39892-H-1-D MSD		280-166315	280-165003	03/18/2013 09:00	1	TAL DEN	JA
A:200.7 Rev 4.4	280-39892-H-1-D MSD		280-166315	280-165003	03/23/2013 13:00	1	TAL DEN	JKH

Lab ID: **280-39892-2** **Client ID:** **CONCRETE CHANNEL**

Sample Date/Time: 03/10/2013 14:50 Received Date/Time: 03/14/2013 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	280-39892-D-2-A		280-166513	280-165039	03/15/2013 12:52	1	TAL DEN	JJW
A:625	280-39892-D-2-A		280-166513	280-165039	03/26/2013 03:38	1	TAL DEN	DCK
A:218.6	280-39892-I-2		440-93206		03/21/2013 17:48	1	TAL IRV	RW
P:200.7	280-39892-H-2-B ^5		280-166315	280-165003	03/18/2013 09:00	5	TAL DEN	JA
A:200.7 Rev 4.4	280-39892-H-2-B ^5		280-166315	280-165003	03/23/2013 13:02	5	TAL DEN	JKH
P:245.1	280-39892-H-2-C		280-165986	280-165583	03/20/2013 12:30	1	TAL DEN	JM
A:245.1	280-39892-H-2-C		280-165986	280-165583	03/20/2013 21:00	1	TAL DEN	JM
P:1664A	280-39892-A-2-A		280-166018	280-165976	03/21/2013 12:24	1	TAL DEN	AFB
A:1664A	280-39892-A-2-A		280-166018	280-165976	03/21/2013 15:53	1	TAL DEN	AFB
A:350.1	280-39892-F-2		280-166254		03/22/2013 12:35	1	TAL DEN	DE
P:351.2	280-39892-F-2-A		280-166718	280-166284	03/22/2013 18:44	1	TAL DEN	MW
A:351.2	280-39892-F-2-A		280-166718	280-166284	03/26/2013 15:27	1	TAL DEN	MW
A:353.2	280-39892-G-2		280-166238		03/22/2013 12:41	1	TAL DEN	SJS
P:365.2/365.3/365	280-39892-G-2-A		280-165813	280-165730	03/20/2013 11:25	50	TAL DEN	SJS
A:365.1	280-39892-G-2-A		280-165813	280-165730	03/20/2013 16:47	50	TAL DEN	SJS
A:410.4	280-39892-G-2		280-166172		03/22/2013 11:13	10	TAL DEN	DFB
A:SM 2540D	280-39892-D-2		280-164917		03/14/2013 16:07	1	TAL DEN	MW
A:Total Nitrogen	280-39892-A-2		280-166762		03/27/2013 06:40	1	TAL DEN	RS
A:Field Sampling	280-39892-A-2		280-164804		03/10/2013 14:50	1	TAL DEN	FS

Lab ID: **280-39892-2 MS** **Client ID:** **CONCRETE CHANNEL**

Sample Date/Time: 03/10/2013 14:50 Received Date/Time: 03/14/2013 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:365.2/365.3/365	280-39892-G-2-B MS		280-165813	280-165730	03/20/2013 11:25	50	TAL DEN	SJS
A:365.1	280-39892-G-2-B MS		280-165813	280-165730	03/20/2013 16:47	50	TAL DEN	SJS

Client: Waste Management

Job Number: 280-39892-1

Laboratory Chronicle

Lab ID: **280-39892-2 MSD** **Client ID:** **CONCRETE CHANNEL**

Sample Date/Time: 03/10/2013 14:50 Received Date/Time: 03/14/2013 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:365.2/365.3/365	280-39892-G-2-C MSD		280-165813	280-165730	03/20/2013 11:25	50	TAL DEN	SJS
A:365.1	280-39892-G-2-C MSD		280-165813	280-165730	03/20/2013 16:47	50	TAL DEN	SJS

Lab ID: **280-39892-3** **Client ID:** **FLIP BUCKET**

Sample Date/Time: 03/10/2013 14:00 Received Date/Time: 03/14/2013 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	280-39892-D-3-A		280-166202	280-165039	03/15/2013 12:52	1	TAL DEN	JJW
A:625	280-39892-D-3-A		280-166202	280-165039	03/23/2013 03:10	1	TAL DEN	DCK
A:218.6	280-39892-I-3		440-93206		03/21/2013 18:00	1	TAL IRV	RW
P:200.7	280-39892-H-3-B		280-166127	280-165003	03/18/2013 09:00	1	TAL DEN	JA
A:200.7 Rev 4.4	280-39892-H-3-B		280-166127	280-165003	03/21/2013 23:11	1	TAL DEN	HEB
P:200.7	280-39892-H-3-B		280-166315	280-165003	03/18/2013 09:00	1	TAL DEN	JA
A:200.7 Rev 4.4	280-39892-H-3-B		280-166315	280-165003	03/23/2013 13:04	1	TAL DEN	JKH
P:245.1	280-39892-H-3-C		280-165986	280-165583	03/20/2013 12:30	1	TAL DEN	JM
A:245.1	280-39892-H-3-C		280-165986	280-165583	03/20/2013 21:02	1	TAL DEN	JM
P:1664A	280-39892-A-3-A		280-166018	280-165976	03/21/2013 12:24	1	TAL DEN	AFB
A:1664A	280-39892-A-3-A		280-166018	280-165976	03/21/2013 15:53	1	TAL DEN	AFB
A:350.1	280-39892-F-3		280-166254		03/22/2013 12:37	1	TAL DEN	DE
P:351.2	280-39892-E-3-A		280-166718	280-166284	03/22/2013 18:44	1	TAL DEN	MW
A:351.2	280-39892-E-3-A		280-166718	280-166284	03/26/2013 15:35	1	TAL DEN	MW
A:353.2	280-39892-G-3		280-166238		03/22/2013 12:42	1	TAL DEN	SJS
P:365.2/365.3/365	280-39892-G-3-A		280-165813	280-165730	03/20/2013 11:25	1	TAL DEN	SJS
A:365.1	280-39892-G-3-A		280-165813	280-165730	03/20/2013 16:16	1	TAL DEN	SJS
A:410.4	280-39892-G-3		280-166172		03/22/2013 11:13	1	TAL DEN	DFB
A:SM 2540D	280-39892-C-3		280-164917		03/14/2013 16:07	1	TAL DEN	MW
A:Total Nitrogen	280-39892-A-3		280-166762		03/27/2013 06:40	1	TAL DEN	RS
A:Field Sampling	280-39892-A-3		280-164804		03/10/2013 14:00	1	TAL DEN	FS

Client: Waste Management

Job Number: 280-39892-1

Laboratory Chronicle

Lab ID: **280-39892-4** **Client ID:** **ACCESS ROAD DRAINAGE**

Sample Date/Time: 03/10/2013 14:10 Received Date/Time: 03/14/2013 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	280-39892-D-4-A		280-166513	280-165039	03/15/2013 12:52	1	TAL DEN	JJW
A:625	280-39892-D-4-A		280-166513	280-165039	03/26/2013 04:05	1	TAL DEN	DCK
P:200.7	280-39892-G-4-B		280-166127	280-165003	03/18/2013 09:00	1	TAL DEN	JA
A:200.7 Rev 4.4	280-39892-G-4-B		280-166127	280-165003	03/21/2013 23:14	1	TAL DEN	HEB
P:200.7	280-39892-G-4-B		280-166315	280-165003	03/18/2013 09:00	1	TAL DEN	JA
A:200.7 Rev 4.4	280-39892-G-4-B		280-166315	280-165003	03/23/2013 13:07	1	TAL DEN	JKH
P:245.1	280-39892-G-4-C		280-165986	280-165583	03/20/2013 12:30	1	TAL DEN	JM
A:245.1	280-39892-G-4-C		280-165986	280-165583	03/20/2013 21:04	1	TAL DEN	JM
P:1664A	280-39892-A-4-A		280-166018	280-165976	03/21/2013 12:24	1	TAL DEN	AFB
A:1664A	280-39892-A-4-A		280-166018	280-165976	03/21/2013 15:53	1	TAL DEN	AFB
A:350.1	280-39892-E-4		280-166254		03/22/2013 13:14	1	TAL DEN	DE
P:351.2	280-39892-E-4-A		280-166718	280-166284	03/22/2013 18:44	1	TAL DEN	MW
A:351.2	280-39892-E-4-A		280-166718	280-166284	03/26/2013 15:36	1	TAL DEN	MW
A:353.2	280-39892-F-4		280-166238		03/22/2013 12:44	1	TAL DEN	SJS
P:365.2/365.3/365	280-39892-F-4-A		280-165813	280-165730	03/20/2013 11:25	1	TAL DEN	SJS
A:365.1	280-39892-F-4-A		280-165813	280-165730	03/20/2013 16:16	1	TAL DEN	SJS
A:410.4	280-39892-F-4		280-166172		03/22/2013 11:13	1	TAL DEN	DFB
A:SM 2540D	280-39892-C-4		280-164917		03/14/2013 16:07	1	TAL DEN	MW
A:Total Nitrogen	280-39892-A-4		280-166762		03/27/2013 06:40	1	TAL DEN	RS
A:Field Sampling	280-39892-A-4		280-164804		03/10/2013 14:10	1	TAL DEN	FS

Client: Waste Management

Job Number: 280-39892-1

Laboratory Chronicle

Lab ID: **280-39892-5** **Client ID:** **CROSS DRAIN OWS**

Sample Date/Time: 03/10/2013 14:15 Received Date/Time: 03/14/2013 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	280-39892-C-5-A		280-166513	280-165039	03/15/2013 12:52	1	TAL DEN	JJW
A:625	280-39892-C-5-A		280-166513	280-165039	03/26/2013 04:33	1	TAL DEN	DCK
A:218.6	280-39892-I-5		440-93206		03/21/2013 18:13	1	TAL IRV	RW
P:200.7	280-39892-H-5-B		280-166127	280-165003	03/18/2013 09:00	1	TAL DEN	JA
A:200.7 Rev 4.4	280-39892-H-5-B		280-166127	280-165003	03/21/2013 23:16	1	TAL DEN	HEB
P:200.7	280-39892-H-5-B		280-166315	280-165003	03/18/2013 09:00	1	TAL DEN	JA
A:200.7 Rev 4.4	280-39892-H-5-B		280-166315	280-165003	03/23/2013 13:09	1	TAL DEN	JKH
P:245.1	280-39892-H-5-C		280-165986	280-165583	03/20/2013 12:30	1	TAL DEN	JM
A:245.1	280-39892-H-5-C		280-165986	280-165583	03/20/2013 21:07	1	TAL DEN	JM
P:1664A	280-39892-A-5-A		280-166018	280-165976	03/21/2013 12:24	1	TAL DEN	AFB
A:1664A	280-39892-A-5-A		280-166018	280-165976	03/21/2013 15:53	1	TAL DEN	AFB
A:350.1	280-39892-F-5		280-166254		03/22/2013 12:42	1	TAL DEN	DE
P:351.2	280-39892-F-5-A		280-166718	280-166284	03/22/2013 18:44	1	TAL DEN	MW
A:351.2	280-39892-F-5-A		280-166718	280-166284	03/26/2013 15:37	1	TAL DEN	MW
A:353.2	280-39892-G-5		280-166238		03/22/2013 12:45	1	TAL DEN	SJS
P:365.2/365.3/365	280-39892-G-5-A		280-165813	280-165730	03/20/2013 11:25	5	TAL DEN	SJS
A:365.1	280-39892-G-5-A		280-165813	280-165730	03/20/2013 16:47	5	TAL DEN	SJS
A:410.4	280-39892-G-5		280-166172		03/22/2013 11:13	1	TAL DEN	DFB
A:SM 2540D	280-39892-D-5		280-164917		03/14/2013 16:07	1	TAL DEN	MW
A:Total Nitrogen	280-39892-A-5		280-166762		03/27/2013 06:40	1	TAL DEN	RS
A:Field Sampling	280-39892-A-5		280-164804		03/10/2013 14:15	1	TAL DEN	FS

Lab ID: **280-39892-5 MS** **Client ID:** **CROSS DRAIN OWS**

Sample Date/Time: 03/10/2013 14:15 Received Date/Time: 03/14/2013 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:350.1	280-39892-F-5 MS		280-166254		03/22/2013 12:44	1	TAL DEN	DE

Lab ID: **280-39892-5 MSD** **Client ID:** **CROSS DRAIN OWS**

Sample Date/Time: 03/10/2013 14:15 Received Date/Time: 03/14/2013 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:350.1	280-39892-F-5 MSD		280-166254		03/22/2013 13:00	1	TAL DEN	DE

Client: Waste Management

Job Number: 280-39892-1

Laboratory Chronicle

Lab ID: **MB** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	MB 280-165039/1-A		280-166202	280-165039	03/15/2013 12:52	1	TAL DEN	JJW
A:625	MB 280-165039/1-A		280-166202	280-165039	03/23/2013 01:48	1	TAL DEN	DCK
A:218.6	MB 440-93206/3		440-93206		03/21/2013 07:41	1	TAL IRV	RW
P:200.7	MB 280-165003/1-A		280-166127	280-165003	03/18/2013 09:00	1	TAL DEN	JA
A:200.7 Rev 4.4	MB 280-165003/1-A		280-166127	280-165003	03/21/2013 23:28	1	TAL DEN	HEB
P:200.7	MB 280-165003/1-A		280-166315	280-165003	03/18/2013 09:00	1	TAL DEN	JA
A:200.7 Rev 4.4	MB 280-165003/1-A		280-166315	280-165003	03/23/2013 12:48	1	TAL DEN	JKH
P:245.1	MB 280-165583/1-A		280-165986	280-165583	03/20/2013 12:30	1	TAL DEN	JM
A:245.1	MB 280-165583/1-A		280-165986	280-165583	03/20/2013 20:41	1	TAL DEN	JM
P:1664A	MB 280-165976/1-A		280-166018	280-165976	03/21/2013 12:24	1	TAL DEN	AFB
A:1664A	MB 280-165976/1-A		280-166018	280-165976	03/21/2013 15:53	1	TAL DEN	AFB
A:350.1	MB 280-166254/60		280-166254		03/22/2013 12:02	1	TAL DEN	DE
P:351.2	MB 280-166284/3-A		280-166718	280-166284	03/22/2013 18:44	1	TAL DEN	MW
A:351.2	MB 280-166284/3-A		280-166718	280-166284	03/26/2013 15:07	1	TAL DEN	MW
A:353.2	MB 280-166238/19		280-166238		03/22/2013 12:18	1	TAL DEN	SJS
P:365.2/365.3/365	MB 280-165730/5-A		280-165813	280-165730	03/20/2013 11:25	1	TAL DEN	SJS
A:365.1	MB 280-165730/5-A		280-165813	280-165730	03/20/2013 15:51	1	TAL DEN	SJS
A:410.4	MB 280-166172/5		280-166172		03/22/2013 11:13	1	TAL DEN	DFB
A:SM 2540D	MB 280-164917/3		280-164917		03/14/2013 16:07	1	TAL DEN	MW
A:Total Nitrogen	MB 280-166762/1		280-166762		03/27/2013 06:40	1	TAL DEN	RS

Client: Waste Management

Job Number: 280-39892-1

Laboratory Chronicle

Lab ID: **LCS** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	LCS 280-165039/2-A		280-166202	280-165039	03/15/2013 12:52	1	TAL DEN	JJW
A:625	LCS 280-165039/2-A		280-166202	280-165039	03/22/2013 18:27	1	TAL DEN	DCK
A:218.6	LCS 440-93206/2		440-93206		03/21/2013 07:28	1	TAL IRV	RW
P:200.7	LCS 280-165003/2-A		280-166127	280-165003	03/18/2013 09:00	1	TAL DEN	JA
A:200.7 Rev 4.4	LCS 280-165003/2-A		280-166127	280-165003	03/21/2013 23:30	1	TAL DEN	HEB
P:200.7	LCS 280-165003/2-A		280-166315	280-165003	03/18/2013 09:00	1	TAL DEN	JA
A:200.7 Rev 4.4	LCS 280-165003/2-A		280-166315	280-165003	03/23/2013 12:51	1	TAL DEN	JKH
P:245.1	LCS 280-165583/2-A		280-165986	280-165583	03/20/2013 12:30	1	TAL DEN	JM
A:245.1	LCS 280-165583/2-A		280-165986	280-165583	03/20/2013 20:44	1	TAL DEN	JM
P:1664A	LCS 280-165976/2-A		280-166018	280-165976	03/21/2013 12:24	1	TAL DEN	AFB
A:1664A	LCS 280-165976/2-A		280-166018	280-165976	03/21/2013 15:53	1	TAL DEN	AFB
A:350.1	LCS 280-166254/58		280-166254		03/22/2013 11:57	1	TAL DEN	DE
P:351.2	LCS 280-166284/1-A		280-166718	280-166284	03/22/2013 18:44	1	TAL DEN	MW
A:351.2	LCS 280-166284/1-A		280-166718	280-166284	03/26/2013 15:05	1	TAL DEN	MW
A:353.2	LCS 280-166238/20		280-166238		03/22/2013 12:20	1	TAL DEN	SJS
P:365.2/365.3/365	LCS 280-165730/3-A		280-165813	280-165730	03/20/2013 11:25	1	TAL DEN	SJS
A:365.1	LCS 280-165730/3-A		280-165813	280-165730	03/20/2013 15:51	1	TAL DEN	SJS
A:410.4	LCS 280-166172/3		280-166172		03/22/2013 11:13	1	TAL DEN	DFB
A:SM 2540D	LCS 280-164917/1		280-164917		03/14/2013 16:07	1	TAL DEN	MW

Lab ID: **LCSD** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	LCSD 280-165039/3-A		280-166202	280-165039	03/15/2013 12:52	1	TAL DEN	JJW
A:625	LCSD 280-165039/3-A		280-166202	280-165039	03/22/2013 18:54	1	TAL DEN	DCK
P:1664A	LCSD 280-165976/3-A		280-166018	280-165976	03/21/2013 12:24	1	TAL DEN	AFB
A:1664A	LCSD 280-165976/3-A		280-166018	280-165976	03/21/2013 15:53	1	TAL DEN	AFB
A:350.1	LCSD 280-166254/59		280-166254		03/22/2013 11:59	1	TAL DEN	DE
P:351.2	LCSD 280-166284/2-A		280-166718	280-166284	03/22/2013 18:44	1	TAL DEN	MW
A:351.2	LCSD 280-166284/2-A		280-166718	280-166284	03/26/2013 15:06	1	TAL DEN	MW
A:353.2	LCSD 280-166238/21		280-166238		03/22/2013 12:21	1	TAL DEN	SJS
P:365.2/365.3/365	LCSD 280-165730/4-A		280-165813	280-165730	03/20/2013 11:25	1	TAL DEN	SJS
A:365.1	LCSD 280-165730/4-A		280-165813	280-165730	03/20/2013 15:51	1	TAL DEN	SJS
A:410.4	LCSD 280-166172/4		280-166172		03/22/2013 11:13	1	TAL DEN	DFB
A:SM 2540D	LCSD 280-164917/2		280-164917		03/14/2013 16:07	1	TAL DEN	MW

Client: Waste Management

Job Number: 280-39892-1

Laboratory Chronicle

Lab ID: **MS** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:218.6	440-41314-H-1 MS		440-93206		03/21/2013 12:45	1	TAL IRV	RW
P:245.1	280-39908-A-1-I MS		280-165986	280-165583	03/20/2013 12:30	1	TAL DEN	JM
A:245.1	280-39908-A-1-I MS		280-165986	280-165583	03/20/2013 20:48	1	TAL DEN	JM
P:351.2	280-39975-A-2-B MS		280-166718	280-166284	03/22/2013 18:44	1	TAL DEN	MW
A:351.2	280-39975-A-2-B MS		280-166718	280-166284	03/26/2013 15:21	1	TAL DEN	MW
A:353.2	280-39911-B-1 MS		280-166238		03/22/2013 13:02	1	TAL DEN	SJS
A:410.4	280-39836-G-1 MS		280-166172		03/22/2013 11:13	1	TAL DEN	DFB

Lab ID: **MSD** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:218.6	440-41314-H-1 MSD		440-93206		03/21/2013 12:58	1	TAL IRV	RW
P:245.1	280-39908-A-1-J MSD		280-165986	280-165583	03/20/2013 12:30	1	TAL DEN	JM
A:245.1	280-39908-A-1-J MSD		280-165986	280-165583	03/20/2013 20:51	1	TAL DEN	JM
P:351.2	280-39975-A-2-C MSD		280-166718	280-166284	03/22/2013 18:44	1	TAL DEN	MW
A:351.2	280-39975-A-2-C MSD		280-166718	280-166284	03/26/2013 15:22	1	TAL DEN	MW
A:353.2	280-39911-B-1 MSD		280-166238		03/22/2013 13:03	1	TAL DEN	SJS
A:410.4	280-39836-G-1 MSD		280-166172		03/22/2013 11:13	1	TAL DEN	DFB

Lab ID: **DU** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:SM 2540D	280-39821-A-1 DU		280-164917		03/14/2013 16:07	1	TAL DEN	MW

Lab References:

TAL DEN = TestAmerica Denver

TAL IRV = TestAmerica Irvine

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Honolulu
99-193 Aiea Heights Drive, Suite 121
Aiea, HI 96701
Tel: 808-486-5227

TestAmerica Job ID: HWC0071
Client Project/Site: 60287037.02
Client Project Description: AECOM, WGSL STORMWATER

For:
TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002

Attn: Betsy Sarah

Authorized for release by:
3/26/2013 6:27:35 PM
Jimson E. Carr
Service Center Manager
Jimson.Carr@testamericainc.com

Designee for

Kristie Reilly
Project Manager
Kristie.Brachmann@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWC0071

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWC0071

Job ID: HWC0071

Laboratory: TestAmerica Honolulu

Narrative

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory unless otherwise stated in the report. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. TestAmerica Analytical Testing Corporation certifies that the analytical results contained herein apply only to the specific sample(s) analyzed.

The Chain(s) of Custody are included and are an integral part of this report. This entire report was reviewed and approved for release.

If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-(808)486-5227

LABORATORY REPORT

At sample receipt, the cooler/sample was 6 degrees C.
NELAC states that samples which require thermal preservation shall be considered acceptable if the arrival temperature is within 2 degrees C of the required temperature or the method specified range. For samples with a temperature requirement of 4 degrees C, an arrival temperature from 0 degrees C to 6 degrees C meets specifications. Samples that are delivered to the laboratory on the same day that they are collected may not meet these criteria. In these cases, the samples are considered acceptable if there is evidence that the chilling process has begun, such as arrival on ice.

The reported results were obtained in compliance with the 2003 NELAC standards unless otherwise noted.

Sample Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWC0071

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
HWC0071-01	DB01-E	Water - NonPotable	03/10/13 15:30	03/11/13 12:00
HWC0071-02	CONCRETE CHANNEL	Water - NonPotable	03/10/13 14:50	03/11/13 12:00
HWC0071-03	FLIP BUCKET	Water - NonPotable	03/10/13 14:00	03/11/13 12:00
HWC0071-04	CROSS DRAIN OWS	Water - NonPotable	03/10/13 14:15	03/11/13 12:00

Detection Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWC0071

Client Sample ID: DB01-E — Lab Sample ID: HWC0071-01

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
BOD - 5 Day	4.29		2.00		mg/L	1.00		SM5210B	Total

Client Sample ID: CONCRETE CHANNEL — Lab Sample ID: HWC0071-02

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
BOD - 5 Day	19.2		2.00		mg/L	1.00		SM5210B	Total

Client Sample ID: FLIP BUCKET — Lab Sample ID: HWC0071-03

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
BOD - 5 Day	8.75		2.00		mg/L	1.00		SM5210B	Total

Client Sample ID: CROSS DRAIN OWS — Lab Sample ID: HWC0071-04

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
BOD - 5 Day	3.23		2.00		mg/L	1.00		SM5210B	Total

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWC0071

Client Sample ID: DB01-E

Lab Sample ID: HWC0071-01

Date Collected: 03/10/13 15:30
Matrix: Water - NonPotable
Date Received: 03/11/13 12:00

Method: SM5210B - General Chemistry Parameters

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
BOD - 5 Day	4.29		2.00		mg/L		03/11/13 16:46	03/16/13 16:34	1.00

Client Sample ID: CONCRETE CHANNEL

Lab Sample ID: HWC0071-02

Date Collected: 03/10/13 14:50
Matrix: Water - NonPotable
Date Received: 03/11/13 12:00

Method: SM5210B - General Chemistry Parameters

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
BOD - 5 Day	19.2		2.00		mg/L		03/11/13 16:40	03/16/13 16:30	1.00

Client Sample ID: FLIP BUCKET

Lab Sample ID: HWC0071-03

Date Collected: 03/10/13 14:00
Matrix: Water - NonPotable
Date Received: 03/11/13 12:00

Method: SM5210B - General Chemistry Parameters

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
BOD - 5 Day	8.75		2.00		mg/L		03/11/13 16:43	03/16/13 16:32	1.00

Client Sample ID: CROSS DRAIN OWS

Lab Sample ID: HWC0071-04

Date Collected: 03/10/13 14:15
Matrix: Water - NonPotable
Date Received: 03/11/13 12:00

Method: SM5210B - General Chemistry Parameters

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
BOD - 5 Day	3.23		2.00		mg/L		03/11/13 16:49	03/16/13 16:36	1.00

QC Sample Results

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWC0071

Method: SM5210B - General Chemistry Parameters

Lab Sample ID: 13C0009-BLK1 — **Client Sample ID: Method Blank**
Matrix: Water - NonPotable — **Prep Type: Total**
Analysis Batch: 13C0009 — **Prep Batch: 13C0009_P**

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
BOD - 5 Day	ND		2.00		mg/L		03/11/13 16:17	03/16/13 16:15	1.00

Lab Sample ID: 13C0009-BS1 — **Client Sample ID: Lab Control Sample**
Matrix: Water - NonPotable — **Prep Type: Total**
Analysis Batch: 13C0009 — **Prep Batch: 13C0009_P**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
BOD - 5 Day			198	207		mg/L		104	85 - 115		

Lab Sample ID: 13C0009-DUP1 — **Client Sample ID: Duplicate**
Matrix: Water - NonPotable — **Prep Type: Total**
Analysis Batch: 13C0009 — **Prep Batch: 13C0009_P**

Analyte	Sample Result	Sample Qualifier		Duplicate Result	Duplicate Qualifier	Unit	D			RPD	RPD Limit
BOD - 5 Day	4.34			4.61		mg/L				6	20

QC Association Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWC0071

WetChem

Analysis Batch: 13C0009

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
13C0009-BLK1	Method Blank	Total	Water - NonPotable	SM5210B	13C0009_P
13C0009-BS1	Lab Control Sample	Total	Water - NonPotable	SM5210B	13C0009_P
13C0009-DUP1	Duplicate	Total	Water - NonPotable	SM5210B	13C0009_P
HWC0071-01	DB01-E	Total	Water - NonPotable	SM5210B	13C0009_P
HWC0071-02	CONCRETE CHANNEL	Total	Water - NonPotable	SM5210B	13C0009_P
HWC0071-03	FLIP BUCKET	Total	Water - NonPotable	SM5210B	13C0009_P
HWC0071-04	CROSS DRAIN OWS	Total	Water - NonPotable	SM5210B	13C0009_P

Prep Batch: 13C0009_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
13C0009-BLK1	Method Blank	Total	Water - NonPotable	Default Prep GenChem	
13C0009-BS1	Lab Control Sample	Total	Water - NonPotable	Default Prep GenChem	
13C0009-DUP1	Duplicate	Total	Water - NonPotable	Default Prep GenChem	
HWC0071-01	DB01-E	Total	Water - NonPotable	Default Prep GenChem	
HWC0071-02	CONCRETE CHANNEL	Total	Water - NonPotable	Default Prep GenChem	
HWC0071-03	FLIP BUCKET	Total	Water - NonPotable	Default Prep GenChem	
HWC0071-04	CROSS DRAIN OWS	Total	Water - NonPotable	Default Prep GenChem	

Lab Chronicle

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWC0071

Client Sample ID: DB01-E

Lab Sample ID: HWC0071-01

Date Collected: 03/10/13 15:30
Matrix: Water - NonPotable
Date Received: 03/11/13 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Default Prep		1.00	13C0009_P	03/11/13 16:46	NK	TAL HON
Total	Analysis	GenChem SM5210B		1.00	13C0009	03/16/13 16:34	NK	TAL HON

Client Sample ID: CONCRETE CHANNEL

Lab Sample ID: HWC0071-02

Date Collected: 03/10/13 14:50
Matrix: Water - NonPotable
Date Received: 03/11/13 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Default Prep		1.00	13C0009_P	03/11/13 16:40	NK	TAL HON
Total	Analysis	GenChem SM5210B		1.00	13C0009	03/16/13 16:30	NK	TAL HON

Client Sample ID: FLIP BUCKET

Lab Sample ID: HWC0071-03

Date Collected: 03/10/13 14:00
Matrix: Water - NonPotable
Date Received: 03/11/13 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Default Prep		1.00	13C0009_P	03/11/13 16:43	NK	TAL HON
Total	Analysis	GenChem SM5210B		1.00	13C0009	03/16/13 16:32	NK	TAL HON

Client Sample ID: CROSS DRAIN OWS

Lab Sample ID: HWC0071-04

Date Collected: 03/10/13 14:15
Matrix: Water - NonPotable
Date Received: 03/11/13 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Default Prep		1.00	13C0009_P	03/11/13 16:49	NK	TAL HON
Total	Analysis	GenChem SM5210B		1.00	13C0009	03/16/13 16:36	NK	TAL HON

Laboratory References:

TAL HON = TestAmerica Honolulu, 99-193 Aiea Heights Drive, Suite 121, Aiea, HI 96701, TEL 808-486-5227

Certification Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWC0071

Laboratory: TestAmerica Honolulu

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Florida	NELAP	4	E87907	05-30-13
Hawaii	State Program	9	N/A	06-28-13
USDA	Federal		HON-S-206	01-31-15

Method Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWC0071

Method	Method Description	Protocol	Laboratory
SM5210B	General Chemistry Parameters		TAL HON

Protocol References:

Laboratory References:

TAL HON = TestAmerica Honolulu, 99-193 Aiea Heights Drive, Suite 121, Aiea, HI 96701, TEL 808-486-5227

Chain of Custody Record

TAL-4124-280 (0508)

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

HWL0071

Client: Waste Management / AECOM	Project Manager: Mark Hofferbert	Date: 03/11/13	Chain of Custody Number: 157502
Address: 1001 Bishop St. Suite 1600	Telephone Number (Area Code)/Fax Number: 808-523-8874	Lab Number	Page 1 of 1
City: Honolulu; State: HI; Zip Code: 96813	Site Contact: Rick Kahelawai	Lab Contact: Betsy Sara	
Project Name and Location (State): WGSL Stormwater	Carrier/Waybill Number		
Contract/Purchase Order/Quote No.: 60287037.02			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	SVOCs 625	BOD	TSS SM2540D	CrVI 218.6	Metals 200.7	COD 410.4	T. Phos 365.1	NH3 350.1	NO2+NO3 353.2	T. Nitrogen SM4500	TKN	Special Instructions/ Conditions of Receipt
DB01-E	03/10/13	1530		X			4	4	1				X	X	X	X	X	X	X	X	X	X	X	-01 SVOCs: α-terpineol, benzoic acid, p-cresol, penta chlorophenol, phenol
Concrete Channel	03/10/13	1450		X			4	4	1				X	X	X	X	X	X	X	X	X	X	X	-02
Flip Bucket	03/10/13	1400		X			4	4	1				X	X	X	X	X	X	X	X	X	X	X	-03 Metals: As, Cd, Fe, Pb, Hg, Se, Ag, Zn
Access Road Drainage	03/10/13	1410		X			2	4	1				X		X		X	X	X	X	X	X	X	
Cross Drain DWS	03/10/13	1415		X			4	4	1				X	X	X	X	X	X	X	X	X	X	X	-04

HWL0071

no BOD & CrVI for Access Road Drainage sample

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☒ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

1. Relinquished By: Margie Thal / AECOM	Date: 3/11/13	Time: 1700	1. Received By: Johnson Cen TA Hon	Date: 3/11/13	Time: 1200
2. Relinquished By	Date	Time	2. Received By: Weir 62	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments: Drop ship to TA-DNVR; BOD + CrVI to TA-HNL.

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica

Rush TAT Confirmation (Initial/Date) _____

AECOM / **Sample Receipt Checklist**

Client Name: Waste Management Date/ Time Received: 3/11/13 1200

Received By: AK JL

Matrices: AQ Carrier: Client Airbill# :

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Chain of Custody present?	Yes ☑	No ☐	☐
Chain of Custody Signed when relinquished and received?	Yes ☑	No ☐	
Chain of Custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sample containers on ice?	Yes ☑	No ☐	Type: Wet
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Water - VOA Vials have Zero Headspace?	Yes ☐	No ☐	No VOA vials present: ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Checked: ☑
pH Adjusted?	Yes ☐	No ☑	Final pH:
Encores / MI-VOC / 5035 Vials Present?	Yes ☐	No ☑	Location:
Sample Filtration Needed?	Yes ☐	No ☑	Filtered in Field: ☐
Dry Weight Corrected Results?	Yes ☐	No ☑	Take Action: ☐
DODQSM / QAPP Project?	Yes ☐	No ☑	Type:

Temperature Blank Present? Yes ☐ No ☑

Sample Container Temperature: 6 °C

Comments/ Sampling Handling Notes:

Chain of Custody Record

TAL-4124-280 (0508)

Sampler ID _____ 4.1 3.3 4.7

Temperature on Receipt 3.1 ree

Drinking Water? Yes ☐ No ☐ IRI 3/13/13

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client: Waste Management / AECOM	Project Manager: Mark Hofferbert	Date: 03/11/13	Chain of Custody Number: 157502
Address: 1001 Bishop St. Suite 1600	Telephone Number (Area Code)/Fax Number: 808-523-8874	Lab Number:	Page 1 of 1
City: Honolulu; State: HI; Zip Code: 96813	Site Contact: Rick Kahelawai; Lab Contact: Betsy Sara		
Project Name and Location (State): WGSL Stormwater	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.: 60287037.02			

Analysis (Attach list if more space is needed)

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	SVOCs 625	BOD	TSS SM2540D	CrVI 218.6	Metals 200.7, 2	COD 410.4	T. Phos 365.1	NH3 350.1	NO2-NO3 353.2	T. Nitrogen SM4500N	TKN	Special Instructions/ Conditions of Receipt
DB01-E	03/10/13	1530		X			4	4	1				X	X	X	X	X	X	X	X	X	X	X	SVOCs: α-terpineol, benzoic acid, p-cresol, pentachlorophenol, phenol
Concrete Channel	03/10/13	1450		X			4	4	1				X	X	X	X	X	X	X	X	X	X	X	
Flip Bucket	03/10/13	1400		X			4	4	1				X	X	X	X	X	X	X	X	X	X	X	Metals: As, Cd, Fe, Pb, Hg, Se, Ag, Zn
Access Road Drainage	03/10/13	1410		X			2	4	1				X		X		X	X	X	X	X	X	X	
Cross Drain OWS	03/10/13	1415		X			4	4	1				X	X	X	X	X	X	X	X	X	X	X	

No BOD + CrVI for Access Road Drainage sample

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☒ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: Margie Thad [signature] AECOM	3/11/13	1200	1. Received By: [signature] Johnson Carr TA Hon	3/11/13	1200
2. Relinquished By: Nina Kim [signature]	3/11/13	1230	2. Received By: [signature] Wet 62		
3. Relinquished By:			3. Received By: [signature]	3/13/13	0900

Comments: Drop ship to TA-DNVR; BOD + CrVI to TA-HNL.

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

WGSL St. Water **FIELD INFORMATION FORM**

WASTE MANAGEMENT

Site Name: Det. Basin Outfall

Site No.:

Sample Point: Outfall

Sample ID pipe

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: P

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or N

Filter Device: Y or N 0.45 µ or ____ µ (circle or fill in)

Purging Device: A- Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device: F

X-Other:

Filter Type: A-In-line Disposable, B-Pressure, C-Vacuum, X-Other

Sample Tube Type: A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other:

WELL DATA

Well Elevation (at TOC) (ft/msl)

Depth to Water (DTW) (from TOC) (ft)

Groundwater Elevation (site datum, from TOC) (ft/msl)

Total Well Depth (from TOC) (ft)

Stick Up (from ground elevation) (ft)

Casing ID (in)

Casing Material

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

	Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
1st									
2nd									
3rd									
4th									
Suggested range for 3 consec. readings or note Permit/State requirements:			+/- 0.2	+/- 3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: Units
03 10 13	9.40						

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

FIELD COMMENTS

Sample Appearance: ~~milky~~ Light brown (DG) Odor: none Color: lt brown Other:

Weather Conditions (required daily, or as conditions change): Direction/Speed: ~~SSW~~ (DG) 20 mph SW Outlook: rain Precipitation: Y or N

Specific Comments (including purge/well volume calculations if required):

E. Outfall collected @ 1530

Flow over weir was negligible. Water puddled behind weir ~~was~~ (DG) seeping through concrete and trickling into detention basin was sampled.

Grab sample.

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
3/10/13	D. Hamelberger	D Hamelberger	AECOM
3/10/13	Dustin Goto	DG	AECOM
3/10/13	Didier Dumas		AECOM

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample; YELLOW - Returned to Client; PINK - Field Copy

TAL-8029WM (0108)

WDSL Sh. Water FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: Concrete Channel

Site No.:

Sample Point: CC channel (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: 2

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or N

Filter Device: Y or N 0.45 µ or ____ µ (circle or fill in)

Purging Device: A- Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device: F

X-Other:

Filter Type: A-In-line Disposable, B-Pressure, C-Vacuum, X-Other

Sample Tube Type: A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other:

WELL DATA

Well Elevation (at TOC) (ft/msl)

Depth to Water (DTW) (from TOC) (ft)

Groundwater Elevation (site datum, from TOC) (ft/msl)

Total Well Depth (from TOC) (ft)

Stick Up (from ground elevation) (ft)

Casing ID (in)

Casing Material

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
	1st	1st	1st					
	2nd	2nd	2nd					
	3rd	3rd	3rd					
	4th	4th	4th					
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: ____ Units ____
03 10 13	8.80						

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

Sample Appearance: thick brown, very turbid Odor: none Color: dk brown Other:

Weather Conditions (required daily, or as conditions change): Direction/Speed: same Outlook: rain Precipitation: Y or N

Specific Comments (including purge/well volume calculations if required):

FIELD COMMENTS

~~Sampling point needs reconsidered~~ (8)

CC Channel collected @ 1450

Samples collected using pole extended to middle of channel.

Grab sample.

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
3/10/13	D. Hauschberger	D Hauschberger	AECOM
3/10/13	Dustin Goto	DJG	AECOM
3/10/13	Didier DUMAS		AECOM

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

TAL-8029WM (0108)

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: WGSL Stormwater Flipbucket (DH)

Site No.:

Sample Point: Flipbucket

Sample ID

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: 3

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or N

Filter Device: Y or N 0.45 µ or ____ µ (circle or fill in)

Purging Device: A- Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device: F

X-Other:

Filter Type: A-In-line Disposable, B-Pressure, C-Vacuum, X-Other

Sample Tube Type: A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other:

WELL DATA

Well Elevation (at TOC) (ft/msl)

Depth to Water (DTW) (from TOC) (ft)

Groundwater Elevation (site datum, from TOC) (ft/msl)

Total Well Depth (from TOC) (ft)

Stick Up (from ground elevation) (ft)

Casing ID (in)

Casing Material

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
	1st	1st						
	2nd	2nd						
	3rd	3rd						
	4th	4th						
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: ____ Units ____
03 10 13	9 20						

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

FIELD COMMENTS

Sample Appearance: brown, ~~cloudy~~ (DG) turbid Odor: none Color: lt brown Other: —

Weather Conditions (required daily, or as conditions change): Direction/Speed: 15mph SW Outlook: rainy Precipitation: Y or N

Specific Comments (including purge/well volume calculations if required):

Sample Flipbucket collected @1400
Light flow from ~~F~~ flipbucket outlet ~~sample~~ grab
sampled for the complete set of ~~ST~~ (DG) H_2O
analytes. Lt. rain during sampling.

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
3/10/13	D. Harnsberger	[signature]	AECOM
3/10/13	Dustin Goto	[signature]	AECOM
3/10/13	Didier Dumas	[signature]	AECOM

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

TAL-8029WM (0108)

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: WGSL Stormwater

Site No.:

Sample Point: Access Rd Drainage (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: 4

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or N

Filter Device: Y or N 0.45 µ or ____ µ (circle or fill in)

Purging Device: A- Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device: F

X-Other:

Filter Type: A-In-line Disposable, B-Pressure, C-Vacuum, X-Other

Sample Tube Type: A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other:

WELL DATA

Well Elevation (at TOC) (ft/msl)

Depth to Water (DTW) (from TOC) (ft)

Groundwater Elevation (site datum, from TOC) (ft/msl)

Total Well Depth (from TOC) (ft)

Stick Up (from ground elevation) (ft)

Casing ID (in)

Casing Material

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
	1st	1st	1st					
	2nd	2nd	2nd					
	3rd	3rd	3rd					
	4th	4th	4th					
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: ____ Units ____
031013	940						

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

Sample Appearance: milky brown, turbid Odor: none Color: lt brown Other:

Weather Conditions (required daily, or as conditions change): Direction/Speed: 20 mph SW Outlook: rainy Precipitation: Y or N

Specific Comments (including purge/well volume calculations if required):

FIELD COMMENTS

sample Access Road Drainage collected @1410

Grab sample.

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
3/10/13	D. Hornsberger	D Hornsberger	AECOM
3/10/13	Dustin Goto	DGoto	AECOM
3/10/13	Didier Dumas		AECOM

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

TAL-8029WM (0108)

WESL Storm Water

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: Cross Drain OWS

Site No.:

Sample Point: OWS

Sample ID

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: 5

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or N

Filter Device: Y or N 0.45 µ or µ (circle or fill in)

Purging Device

Sampling Device F

A- Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Filter Type: A-In-line Disposable, B-Pressure, C-Vacuum, X-Other

X-Other:

Sample Tube Type: A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other:

WELL DATA

Well Elevation (at TOC) (ft/msl)

Depth to Water (DTW) (from TOC) (ft)

Groundwater Elevation (site datum, from TOC) (ft/msl)

Total Well Depth (from TOC) (ft)

Stick Up (from ground elevation) (ft)

Casing ID (in)

Casing Material

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
	1st	1st						
	2nd	2nd						
	3rd	3rd						
	4th	4th						
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: Units
03 10 13	9.30						

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

FIELD COMMENTS

Sample Appearance: ~~milky~~ brown Odor: none Color: lt brown Other:

Weather Conditions (required daily, or as conditions change): Direction/Speed: 20mph SW Outlook: rainy Precipitation Y or N

Specific Comments (including purge/well volume calculations if required):

sample Cross Drain OWS collected @ 1415

Sample collected directly from outfall pipe.

Grab sample.

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
3/10/13	D Hornsberger	[signature]	AECOM
3/10/13	Dustin Goto	[signature]	AECOM
3/10/13	Didier Dimas	[signature]	AECOM

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

TAL-8029WM (0108)

Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-39892-1

Login Number: 39892

List Source: TestAmerica Denver

List Number: 1

Creator: Laspe, Laura

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-39892-1

Login Number: 39892
List Number: 1
Creator: Soderblom, Tim

List Source: TestAmerica Irvine
List Creation: 03/19/13 02:30 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Job Number: 280-41536-1

Job Description: 995|Waimanalo Gulch LF

For:
Waste Management
Waimanalo Gulch Landfill
92-460 Farrington Highway
Kapolei, HI 96707

Attention: Mr. Justin Lottig

Approved for release.
Betsy A Sara
Project Manager II
5/14/2013 5:05 PM

Betsy A Sara, Project Manager II
4955 Yarrow Street, Arvada, CO, 80002
(303)736-0189
betsy.sara@testamericainc.com
05/14/2013

cc: Mr. Mark Hofferbert
Ms. Margie Thach

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is E87667.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

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CASE NARRATIVE

Client: Waste Management

Project: 995|Waimanalo Gulch LF

Report Number: 280-41536-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

This report may include reporting limits (RLs) less than TestAmerica's standard reporting limit. The reported sample results and associated reporting limits are being used specifically to meet the needs of this project. Note that data are not normally reported to these levels without qualification because they are inherently less reliable and potentially less defensible than required by the latest industry standards.

Sample Receiving

The sample was received on 04/27/2013; the sample arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 1.1C, 2.2C and 4.2C.

There was no sample collection date listed on the chain of custody for sample DB01E. The client provided a revised chain of custody on 4/26/13.

Holding Times

All holding times were met.

Method Blanks

All Method Blanks were within established control limits.

Laboratory Control Samples (LCS)

All Laboratory Control Samples were within established control limits.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD)

The method required MS/MSD could not be performed for Method 625 and Method 1664A due to insufficient sample volume, however, LCS/LCSD pairs were analyzed to demonstrate method precision and accuracy.

The Matrix Spikes and Matrix Spike Duplicates performed on samples from other clients exhibited recoveries outside control limits for Total Lead Method 200.7 and Total Phosphorus Method 365.1. Because the corresponding Laboratory Control Samples and the Method Blank samples were within control limits, these anomalies may be due to matrix interference and no corrective action was taken.

Sample DB01E was selected to fulfill the laboratory batch quality control requirements for Method 410.4. Analysis of the laboratory generated MS/MSD for this sample exhibited recoveries of Chemical Oxygen Demand (COD) below the lower control limit indicating the possible presence of a matrix interference.

All other MS and MSD samples were within established control limits.

General Comments

For samples requiring analysis at a dilution, the dilution factor has been multiplied by the Method Detection Limit (MDL) for each analyte and evaluated versus the project-specific reporting limit (PSRL). If the obtained value is below the PSRL, then the PSRL is preserved as the reporting limit for the diluted result, otherwise, the obtained value becomes the reporting limit. This is done in order to maintain the PSRL to meet permit requirements at the request of the client and to report the lowest possible RL for each analyte.

The analysis for Biochemical Oxygen Demand (BOD) was performed at TestAmerica's Honolulu facility.
TestAmerica Honolulu
99-193 Aiea Heights Drive
Suite 121
Aiea, HI 96701
Phone: 808.486.5227

The analysis for Hexavalent Chromium was performed at TestAmerica's Irvine facility.
TestAmerica Irvine
17461 Derian Avenue
Suite 100
Irvine, CA 92614
Phone: 949.261.1022

EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-41536-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
280-41536-1	**DB01E**					
Mercury		0.00016	J	0.00020	mg/L	245.1
Field pH		8.70			SU	Field Sampling
Ammonia		0.038	J	0.10	mg/L	350.1
Nitrogen, Kjeldahl		0.61		0.50	mg/L	351.2
Nitrate Nitrite as N		3.1		0.10	mg/L	353.2
Phosphorus, Total		0.46		0.050	mg/L	365.1
Chemical Oxygen Demand		32		20	mg/L	410.4
Total Suspended Solids		1100		11	mg/L	SM 2540D
Nitrogen, Total		3.7		0.10	mg/L	Total Nitrogen
Dissolved						
Chromium, hexavalent		1.6		1.0	ug/L	218.6
Total Recoverable						
Cadmium		0.0010	J	0.0050	mg/L	200.7 Rev 4.4
Iron		46		0.10	mg/L	200.7 Rev 4.4
Lead		0.025		0.0090	mg/L	200.7 Rev 4.4
Zinc		0.12		0.020	mg/L	200.7 Rev 4.4

METHOD SUMMARY

Client: Waste Management | Job Number: 280-41536-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Semivolatile Organic Compounds (GC/MS)	TAL DEN	40CFR136A 625	
Liquid-Liquid Extraction	TAL DEN		40CFR136A 625
Metals (ICP)	TAL DEN	EPA 200.7 Rev 4.4	
Preparation, Total Recoverable Metals	TAL DEN		EPA 200.7
Mercury (CVAA)	TAL DEN	EPA 245.1	
Preparation, Mercury	TAL DEN		EPA 245.1
HEM and SGT-HEM	TAL DEN	1664A 1664A	
HEM and SGT-HEM (SPE)	TAL DEN		1664A 1664A
Nitrogen, Ammonia	TAL DEN	MCAWW 350.1	
Nitrogen, Total Kjeldahl	TAL DEN	MCAWW 351.2	
Nitrogen, Total Kjeldahl	TAL DEN		MCAWW 351.2
Nitrogen, Nitrate-Nitrite	TAL DEN	MCAWW 353.2	
Phosphorus, Total	TAL DEN	EPA 365.1	
Phosphorus, Total	TAL DEN		MCAWW 365.2/365.3/365
COD	TAL DEN	MCAWW 410.4	
Solids, Total Suspended (TSS)	TAL DEN	SM SM 2540D	
Nitrogen, Total	TAL DEN	EPA Total Nitrogen	
Field Sampling	TAL DEN	EPA Field Sampling	
General Sub Contract Method	TAL HON	Subcontract	
Chromium, Hexavalent (Ion Chromatography)	TAL IRV	EPA 218.6	
Sample Filtration, Field			FIELD_FLTRD

Lab References:

TAL DEN = TestAmerica Denver

TAL HON = TestAmerica Honolulu

TAL IRV = TestAmerica Irvine

Method References:

1664A = EPA-821-98-002

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

METHOD / ANALYST SUMMARY

Client: Waste Management

Job Number: 280-41536-1

Method	Analyst	Analyst ID
40CFR136A 625	Hoffman, Michael G	MGH
EPA 200.7 Rev 4.4	Harre, John K	JKH
EPA 245.1	Fredette, Nick	NF
EPA Field Sampling	Field, Sampler	FS
1664A 1664A	Benson, Alex F	AFB
MCAWW 350.1	Elkin, David	DE
MCAWW 351.2	Woolley, Mark	MW
MCAWW 353.2	Scott, Samantha J	SJS
EPA 365.1	Scott, Samantha J	SJS
MCAWW 410.4	Bandy, Darlene F	DFB
SM SM 2540D	Woolley, Mark	MW
EPA Total Nitrogen	Sullivan, Roxanne	RS
EPA 218.6	Welch, Raquel	RW

SAMPLE SUMMARY

Client: Waste Management

Job Number: 280-41536-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-41536-1	DB01E	Water	04/24/2013 1205	04/27/2013 0930

SAMPLE RESULTS

Client: Waste Management

Job Number: 280-41536-1

Client Sample ID: **DB01E**

Lab Sample ID: 280-41536-1

Client Matrix: Water

Date Sampled: 04/24/2013 1205

Date Received: 04/27/2013 0930

625 Semivolatile Organic Compounds (GC/MS)

Analysis Method:	625	Analysis Batch:	280-172261	Instrument ID:	SMS_D
Prep Method:	625	Prep Batch:	280-171704	Lab File ID:	D7913.D
Dilution:	1.0			Initial Weight/Volume:	1052.2 mL
Analysis Date:	05/02/2013 2004			Final Weight/Volume:	1000 uL
Prep Date:	04/29/2013 1125			Injection Volume:	0.5 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Alpha-Terpineol	ND		0.0019	0.010
Benzoic acid	ND		0.0095	0.050
p-Cresol	ND		0.00024	0.010
Pentachlorophenol	ND		0.019	0.060
Phenol	ND		0.0019	0.010

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	83		50 - 120
2-Fluorobiphenyl	74		36 - 120
2-Fluorophenol	78		30 - 120
Nitrobenzene-d5	79		45 - 120
Phenol-d5	82		36 - 120
Terphenyl-d14	83		52 - 120

Client: Waste Management

Job Number: 280-41536-1

Client Sample ID: **DB01E**

Lab Sample ID: 280-41536-1

Client Matrix: Water

Date Sampled: 04/24/2013 1205

Date Received: 04/27/2013 0930

218.6 Chromium, Hexavalent (Ion Chromatography)-Dissolved

Analysis Method:	218.6	Analysis Batch:	440-101858	Instrument ID:	IC-20
	N/A	Prep Batch:	N/A	Lab File ID:	Info
Dilution:	1.0			Initial Weight/Volume:	10 mL
Analysis Date:	05/03/2013 0102			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chromium, hexavalent	1.6		0.25	1.0

Client: Waste Management

Job Number: 280-41536-1

Client Sample ID: **DB01E**

Lab Sample ID: 280-41536-1

Client Matrix: Water

Date Sampled: 04/24/2013 1205

Date Received: 04/27/2013 0930

200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	280-172260	Instrument ID:	MT_025
Prep Method:	200.7	Prep Batch:	280-171772	Lab File ID:	25A3050113.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	05/01/2013 1857			Final Weight/Volume:	50 mL
Prep Date:	05/01/2013 0800				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Arsenic	ND		0.0044	0.015
Cadmium	0.0010	J	0.00045	0.0050
Iron	46		0.022	0.10
Lead	0.025		0.0026	0.0090
Selenium	ND		0.0049	0.015
Zinc	0.12		0.0045	0.020
Silver	ND		0.00093	0.010

245.1 Mercury (CVAA)

Analysis Method:	245.1	Analysis Batch:	280-172464	Instrument ID:	MT_033
Prep Method:	245.1	Prep Batch:	280-172077	Lab File ID:	130502ac.txt
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	05/02/2013 1602			Final Weight/Volume:	30 mL
Prep Date:	05/02/2013 1200				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Mercury	0.00016	J	0.000027	0.00020

General Chemistry

Client Sample ID: **DB01E**

Lab Sample ID: 280-41536-1

Client Matrix: Water

Date Sampled: 04/24/2013 1205

Date Received: 04/27/2013 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
HEM	ND		mg/L	1.9	5.0	1.0	1664A
Analysis Batch: 280-172745	Analysis Date: 05/04/2013 1343						
Prep Batch: 280-172699	Prep Date: 05/04/2013 0923						
Ammonia	0.038	J	mg/L	0.022	0.10	1.0	350.1
Analysis Batch: 280-172662	Analysis Date: 05/03/2013 1514						
Nitrogen, Kjeldahl	0.61		mg/L	0.18	0.50	1.0	351.2
Analysis Batch: 280-173404	Analysis Date: 05/08/2013 2322						
Prep Batch: 280-173366	Prep Date: 05/07/2013 1721						
Nitrate Nitrite as N	3.1		mg/L	0.019	0.10	1.0	353.2
Analysis Batch: 280-173152	Analysis Date: 05/07/2013 1441						
Phosphorus, Total	0.46		mg/L	0.0050	0.050	1.0	365.1
Analysis Batch: 280-173755	Analysis Date: 05/10/2013 1436						
Prep Batch: 280-173493	Prep Date: 05/09/2013 1137						
Chemical Oxygen Demand	32		mg/L	4.1	20	1.0	410.4
Analysis Batch: 280-172873	Analysis Date: 05/06/2013 1025						
Total Suspended Solids	1100		mg/L	11	11	1.0	SM 2540D
Analysis Batch: 280-172222	Analysis Date: 05/01/2013 1705						
Nitrogen, Total	3.7		mg/L	0.042	0.10	1.0	Total Nitrogen
Analysis Batch: 280-173626	Analysis Date: 05/10/2013 0729						

Field Service / Mobile Lab

Client Sample ID: **DB01E**

Lab Sample ID: 280-41536-1

Client Matrix: Water

Date Sampled: 04/24/2013 1205

Date Received: 04/27/2013 0930

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed Date Prepared
Field pH	8.70		SU	1.0	Field Sampling	280-171762	04/24/2013 1205

DATA REPORTING QUALIFIERS

Client: Waste Management

Job Number: 280-41536-1

Lab Section	Qualifier	Description
GC/MS Semi VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals		
	F	MS/MSD Recovery or RPD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
General Chemistry		
	F	MS/MSD Recovery or RPD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: Waste Management

Job Number: 280-41536-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 280-171704					
LCS 280-171704/2-A	Lab Control Sample	T	Water	625	
LCSD 280-171704/3-A	Lab Control Sample Duplicate	T	Water	625	
MB 280-171704/1-A	Method Blank	T	Water	625	
280-41536-1	DB01E	T	Water	625	
Analysis Batch:280-172261					
LCS 280-171704/2-A	Lab Control Sample	T	Water	625	280-171704
LCSD 280-171704/3-A	Lab Control Sample Duplicate	T	Water	625	280-171704
MB 280-171704/1-A	Method Blank	T	Water	625	280-171704
280-41536-1	DB01E	T	Water	625	280-171704

Report Basis

T = Total

Client: Waste Management

Job Number: 280-41536-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-171772					
LCS 280-171772/2-A	Lab Control Sample	R	Water	200.7	
MB 280-171772/1-A	Method Blank	R	Water	200.7	
280-41483-A-1-B MS	Matrix Spike	R	Water	200.7	
280-41483-A-1-C MSD	Matrix Spike Duplicate	R	Water	200.7	
280-41536-1	DB01E	R	Water	200.7	
Prep Batch: 280-172077					
LCS 280-172077/2-A	Lab Control Sample	T	Water	245.1	
MB 280-172077/1-A	Method Blank	T	Water	245.1	
280-41536-1	DB01E	T	Water	245.1	
280-41536-H-3-C MS	Matrix Spike	T	Water	245.1	
280-41536-H-3-D MSD	Matrix Spike Duplicate	T	Water	245.1	
Analysis Batch:280-172260					
LCS 280-171772/2-A	Lab Control Sample	R	Water	200.7 Rev 4.4	280-171772
MB 280-171772/1-A	Method Blank	R	Water	200.7 Rev 4.4	280-171772
280-41483-A-1-B MS	Matrix Spike	R	Water	200.7 Rev 4.4	280-171772
280-41483-A-1-C MSD	Matrix Spike Duplicate	R	Water	200.7 Rev 4.4	280-171772
280-41536-1	DB01E	R	Water	200.7 Rev 4.4	280-171772
Analysis Batch:280-172464					
LCS 280-172077/2-A	Lab Control Sample	T	Water	245.1	280-172077
MB 280-172077/1-A	Method Blank	T	Water	245.1	280-172077
280-41536-1	DB01E	T	Water	245.1	280-172077
280-41536-H-3-C MS	Matrix Spike	T	Water	245.1	280-172077
280-41536-H-3-D MSD	Matrix Spike Duplicate	T	Water	245.1	280-172077

Report Basis

R = Total Recoverable

T = Total

Field Service / Mobile Lab

Analysis Batch:280-171762					
280-41536-1	DB01E	T	Water	Field Sampling	

Report Basis

T = Total

Client: Waste Management

Job Number: 280-41536-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-172222					
LCS 280-172222/1	Lab Control Sample	T	Water	SM 2540D	
LCSD 280-172222/2	Lab Control Sample Duplicate	T	Water	SM 2540D	
MB 280-172222/3	Method Blank	T	Water	SM 2540D	
280-41536-1	DB01E	T	Water	SM 2540D	
280-41536-E-4 DU	Duplicate	T	Water	SM 2540D	
Analysis Batch:280-172662					
LCS 280-172662/19	Lab Control Sample	T	Water	350.1	
LCSD 280-172662/20	Lab Control Sample Duplicate	T	Water	350.1	
MB 280-172662/21	Method Blank	T	Water	350.1	
280-41536-1	DB01E	T	Water	350.1	
280-41536-1MS	Matrix Spike	T	Water	350.1	
280-41536-1MSD	Matrix Spike Duplicate	T	Water	350.1	
Prep Batch: 280-172699					
LCS 280-172699/2-A	Lab Control Sample	T	Water	1664A	
LCSD 280-172699/3-A	Lab Control Sample Duplicate	T	Water	1664A	
MB 280-172699/1-A	Method Blank	T	Water	1664A	
280-41536-1	DB01E	T	Water	1664A	
Analysis Batch:280-172745					
LCS 280-172699/2-A	Lab Control Sample	T	Water	1664A	280-172699
LCSD 280-172699/3-A	Lab Control Sample Duplicate	T	Water	1664A	280-172699
MB 280-172699/1-A	Method Blank	T	Water	1664A	280-172699
280-41536-1	DB01E	T	Water	1664A	280-172699
Analysis Batch:280-172873					
LCS 280-172873/3	Lab Control Sample	T	Water	410.4	
LCSD 280-172873/4	Lab Control Sample Duplicate	T	Water	410.4	
MB 280-172873/5	Method Blank	T	Water	410.4	
280-41536-1	DB01E	T	Water	410.4	
280-41536-F-4 MS	Matrix Spike	T	Water	410.4	
280-41536-F-4 MSD	Matrix Spike Duplicate	T	Water	410.4	

Client: Waste Management

Job Number: 280-41536-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-173152					
LCS 280-173152/22	Lab Control Sample	T	Water	353.2	
LCS 280-173152/96	Lab Control Sample	T	Water	353.2	
LCSD 280-173152/23	Lab Control Sample Duplicate	T	Water	353.2	
LCSD 280-173152/67	Lab Control Sample Duplicate	T	Water	353.2	
MB 280-173152/21	Method Blank	T	Water	353.2	
MB 280-173152/65	Method Blank	T	Water	353.2	
MB 280-173152/95	Method Blank	T	Water	353.2	
280-41408-B-3 DU	Duplicate	T	Water	353.2	
280-41474-P-1 MS	Matrix Spike	T	Water	353.2	
280-41474-P-1 MSD	Matrix Spike Duplicate	T	Water	353.2	
280-41536-1	DB01E	T	Water	353.2	
Prep Batch: 280-173366					
LCS 280-173366/1-A	Lab Control Sample	T	Water	351.2	
LCSD 280-173366/2-A	Lab Control Sample Duplicate	T	Water	351.2	
MB 280-173366/3-A	Method Blank	T	Water	351.2	
580-38276-A-1-B MS	Matrix Spike	T	Water	351.2	
580-38276-A-1-C MSD	Matrix Spike Duplicate	T	Water	351.2	
280-41536-1	DB01E	T	Water	351.2	
Analysis Batch:280-173404					
LCS 280-173366/1-A	Lab Control Sample	T	Water	351.2	280-173366
LCSD 280-173366/2-A	Lab Control Sample Duplicate	T	Water	351.2	280-173366
MB 280-173366/3-A	Method Blank	T	Water	351.2	280-173366
580-38276-A-1-B MS	Matrix Spike	T	Water	351.2	280-173366
580-38276-A-1-C MSD	Matrix Spike Duplicate	T	Water	351.2	280-173366
280-41536-1	DB01E	T	Water	351.2	280-173366
Prep Batch: 280-173493					
LCS 280-173493/9-A	Lab Control Sample	T	Water	365.2/365.3/365	
LCSD 280-173493/10-A	Lab Control Sample Duplicate	T	Water	365.2/365.3/365	
MB 280-173493/11-A	Method Blank	T	Water	365.2/365.3/365	
280-41536-1	DB01E	T	Water	365.2/365.3/365	
280-41650-B-2-B MS	Matrix Spike	T	Water	365.2/365.3/365	
280-41650-B-2-C MSD	Matrix Spike Duplicate	T	Water	365.2/365.3/365	
Analysis Batch:280-173626					
MB 280-173626/1	Method Blank	T	Water	Total Nitrogen	
280-41536-1	DB01E	T	Water	Total Nitrogen	

Client: Waste Management

Job Number: 280-41536-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-173755					
LCS 280-173493/9-A	Lab Control Sample	T	Water	365.1	280-173493
LCSD 280-173493/10-A	Lab Control Sample Duplicate	T	Water	365.1	280-173493
MB 280-173493/11-A	Method Blank	T	Water	365.1	280-173493
280-41536-1	DB01E	T	Water	365.1	280-173493
280-41650-B-2-B MS	Matrix Spike	T	Water	365.1	280-173493
280-41650-B-2-C MSD	Matrix Spike Duplicate	T	Water	365.1	280-173493

Report Basis

T = Total

HPLC/IC				
Analysis Batch:440-101858				
LCS 440-101858/2	Lab Control Sample	T	Water	218.6
MB 440-101858/3	Method Blank	T	Water	218.6
280-41536-1	DB01E	D	Water	218.6
440-45251-M-1 MS	Matrix Spike	T	Water	218.6
440-45251-M-1 MSD	Matrix Spike Duplicate	T	Water	218.6

Report Basis

D = Dissolved

T = Total

Client: Waste Management

Job Number: 280-41536-1

Surrogate Recovery Report

625 Semivolatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	TBP %Rec	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
280-41536-1	DB01E	83	74	78	79	82	83
MB 280-171704/1-A		80	70	85	83	86	104
LCS 280-171704/2-A		92	71	89	85	90	101
LCSD 280-171704/3-A		87	71	83	83	84	99

Surrogate	Acceptance Limits
TBP = 2,4,6-Tribromophenol	50-120
FBP = 2-Fluorobiphenyl	36-120
2FP = 2-Fluorophenol	30-120
NBZ = Nitrobenzene-d5	45-120
PHL = Phenol-d5	36-120
TPH = Terphenyl-d14	52-120

Client: Waste Management

Job Number: 280-41536-1

Method Blank - Batch: 280-171704

Method: 625
Preparation: 625

Lab Sample ID:	MB 280-171704/1-A	Analysis Batch:	280-172261	Instrument ID:	SMS_D
Client Matrix:	Water	Prep Batch:	280-171704	Lab File ID:	D7892.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	05/02/2013 1042	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	04/29/2013 1125			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Alpha-Terpineol	ND		0.0020	0.010
Benzoic acid	ND		0.010	0.050
p-Cresol	ND		0.00025	0.010
Pentachlorophenol	ND		0.020	0.060
Phenol	ND		0.0020	0.010

Surrogate	% Rec	Acceptance Limits
2,4,6-Tribromophenol	80	50 - 120
2-Fluorobiphenyl	70	36 - 120
2-Fluorophenol	85	30 - 120
Nitrobenzene-d5	83	45 - 120
Phenol-d5	86	36 - 120
Terphenyl-d14	104	52 - 120

Client: Waste Management

Job Number: 280-41536-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-171704

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-171704/2-A	Analysis Batch:	280-172261	Instrument ID:	SMS_D
Client Matrix:	Water	Prep Batch:	280-171704	Lab File ID:	D7893.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	05/02/2013 1109	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	04/29/2013 1125			Injection Volume:	0.5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-171704/3-A	Analysis Batch:	280-172261	Instrument ID:	SMS_D
Client Matrix:	Water	Prep Batch:	280-171704	Lab File ID:	D7894.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	05/02/2013 1136	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	04/29/2013 1125			Injection Volume:	0.5 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
1,2,4-Trichlorobenzene	72	71	44 - 120	2	35		
1,2-Dichlorobenzene	72	70	32 - 120	3	42		
1,3-Dichlorobenzene	70	68	23 - 120	2	47		
1,4-Dichlorobenzene	69	68	24 - 120	3	49		
2,2'-Oxybis(1-chloropropane)	81	77	37 - 120	5	30		
2,4,6-Trichlorophenol	90	88	51 - 120	2	30		
2,4-Dichlorophenol	92	89	46 - 120	3	30		
2,4-Dimethylphenol	78	71	44 - 119	9	35		
2,4-Dinitrophenol	88	84	20 - 121	5	61		
2,4-Dinitrotoluene	101	98	57 - 120	3	35		
2,6-Dinitrotoluene	97	92	56 - 120	5	30		
2-Chloronaphthalene	81	78	60 - 118	4	30		
2-Chlorophenol	93	85	34 - 120	8	30		
2-Methylphenol	83	82	38 - 120	1	35		
2-Nitrophenol	89	87	47 - 120	2	30		
3,3'-Dichlorobenzidine	48	54	18 - 120	10	50	J	J
4,6-Dinitro-2-methylphenol	102	96	40 - 120	6	55		
4-Bromophenyl phenyl ether	97	92	53 - 120	5	34		
4-Chloro-3-methylphenol	90	90	57 - 120	0	30		
4-Chlorophenyl phenyl ether	93	90	51 - 120	4	30		
4-Nitrophenol	86	83	53 - 120	3	42		
Acenaphthene	82	81	47 - 120	1	30		
Acenaphthylene	88	85	33 - 120	4	30		
Anthracene	96	92	52 - 120	5	30		
Benzidine	51	56	10 - 218	9	50	J	J
Benzo[a]anthracene	94	92	54 - 120	2	30		
Benzo[a]pyrene	85	81	39 - 120	5	73		
Benzo[b]fluoranthene	93	87	51 - 120	6	90		
Benzo[g,h,i]perylene	87	84	48 - 120	4	64		
Benzo[k]fluoranthene	90	90	49 - 120	1	50		
Bis(2-chloroethoxy)methane	86	84	50 - 120	3	30		
Bis(2-chloroethyl)ether	84	83	35 - 120	1	30		
Bis(2-ethylhexyl) phthalate	88	88	56 - 120	0	30		
Butyl benzyl phthalate	98	96	53 - 120	2	30		
Chrysene	92	90	51 - 120	1	30		
Dibenz(a,h)anthracene	74	69	45 - 120	7	78		

Client: Waste Management

Job Number: 280-41536-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-171704

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-171704/2-A	Analysis Batch:	280-172261	Instrument ID:	SMS_D
Client Matrix:	Water	Prep Batch:	280-171704	Lab File ID:	D7893.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	05/02/2013 1109	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	04/29/2013 1125			Injection Volume:	0.5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-171704/3-A	Analysis Batch:	280-172261	Instrument ID:	SMS_D
Client Matrix:	Water	Prep Batch:	280-171704	Lab File ID:	D7894.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	05/02/2013 1136	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	04/29/2013 1125			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Diethyl phthalate	94	92	59 - 114	2	30		
Dimethyl phthalate	94	91	58 - 112	3	30		
Di-n-butyl phthalate	99	95	57 - 118	5	30		
Di-n-octyl phthalate	94	93	56 - 120	1	30		
Fluoranthene	98	94	58 - 120	5	30		
Fluorene	90	86	59 - 120	4	30		
Hexachlorobenzene	93	87	53 - 120	7	30		
Hexachlorobutadiene	67	66	27 - 116	2	41		
Hexachlorocyclopentadiene	24	24	10 - 120	1	82	J	J
Hexachloroethane	67	64	40 - 113	6	52		
Indeno[1,2,3-cd]pyrene	85	84	50 - 120	1	73		
Isophorone	85	84	50 - 120	2	30		
Naphthalene	79	76	37 - 120	5	30		
Nitrobenzene	85	83	46 - 120	2	30		
N-Nitrosodimethylamine	84	79	37 - 120	6	30		
N-Nitrosodi-n-propylamine	86	83	50 - 120	3	30		
N-Nitrosodiphenylamine	91	88	46 - 203	4	50		
p-Cresol	94	91	42 - 120	3	39		
Pentachlorophenol	93	90	46 - 120	3	30		
Phenanthrene	98	93	54 - 120	6	30		
Phenol	91	86	37 - 112	5	30		
Pyrene	95	94	55 - 115	1	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
2,4,6-Tribromophenol	92	87	50 - 120
2-Fluorobiphenyl	71	71	36 - 120
2-Fluorophenol	89	83	30 - 120
Nitrobenzene-d5	85	83	45 - 120
Phenol-d5	90	84	36 - 120
Terphenyl-d14	101	99	52 - 120

Client: Waste Management

Job Number: 280-41536-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-171704

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-171704/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-171704/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	05/02/2013 1109			Analysis Date:	05/02/2013 1136
Prep Date:	04/29/2013 1125			Prep Date:	04/29/2013 1125
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual		LCSD Result/Qual	
1,2,4-Trichlorobenzene	0.0800	0.0800	0.0579		0.0569	
1,2-Dichlorobenzene	0.0800	0.0800	0.0574		0.0557	
1,3-Dichlorobenzene	0.0800	0.0800	0.0558		0.0547	
1,4-Dichlorobenzene	0.0800	0.0800	0.0555		0.0542	
2,2'-Oxybis(1-chloropropane)	0.0800	0.0800	0.0647		0.0614	
2,4,6-Trichlorophenol	0.0800	0.0800	0.0719		0.0703	
2,4-Dichlorophenol	0.0800	0.0800	0.0735		0.0712	
2,4-Dimethylphenol	0.0800	0.0800	0.0623		0.0568	
2,4-Dinitrophenol	0.0800	0.0800	0.0706		0.0670	
2,4-Dinitrotoluene	0.0800	0.0800	0.0805		0.0785	
2,6-Dinitrotoluene	0.0800	0.0800	0.0774		0.0739	
2-Chloronaphthalene	0.0800	0.0800	0.0651		0.0627	
2-Chlorophenol	0.0800	0.0800	0.0742		0.0684	
2-Methylphenol	0.0800	0.0800	0.0666		0.0660	
2-Nitrophenol	0.0800	0.0800	0.0712		0.0698	
3,3'-Dichlorobenzidine	0.0800	0.0800	0.0388	J	0.0430	J
4,6-Dinitro-2-methylphenol	0.0800	0.0800	0.0815		0.0768	
4-Bromophenyl phenyl ether	0.0800	0.0800	0.0775		0.0737	
4-Chloro-3-methylphenol	0.0800	0.0800	0.0720		0.0720	
4-Chlorophenyl phenyl ether	0.0800	0.0800	0.0743		0.0716	
4-Nitrophenol	0.0800	0.0800	0.0687		0.0666	
Acenaphthene	0.0800	0.0800	0.0653		0.0646	
Acenaphthylene	0.0800	0.0800	0.0701		0.0677	
Anthracene	0.0800	0.0800	0.0771		0.0735	
Benzidine	0.200	0.200	0.102	J	0.112	J
Benzo[a]anthracene	0.0800	0.0800	0.0752		0.0738	
Benzo[a]pyrene	0.0800	0.0800	0.0681		0.0651	
Benzo[b]fluoranthene	0.0800	0.0800	0.0740		0.0698	
Benzo[g,h,i]perylene	0.0800	0.0800	0.0696		0.0672	
Benzo[k]fluoranthene	0.0800	0.0800	0.0719		0.0723	
Bis(2-chloroethoxy)methane	0.0800	0.0800	0.0690		0.0668	
Bis(2-chloroethyl)ether	0.0800	0.0800	0.0672		0.0663	
Bis(2-ethylhexyl) phthalate	0.0800	0.0800	0.0706		0.0707	
Butyl benzyl phthalate	0.0800	0.0800	0.0782		0.0766	
Chrysene	0.0800	0.0800	0.0733		0.0724	
Dibenz(a,h)anthracene	0.0800	0.0800	0.0588		0.0549	
Diethyl phthalate	0.0800	0.0800	0.0749		0.0737	
Dimethyl phthalate	0.0800	0.0800	0.0755		0.0729	
Di-n-butyl phthalate	0.0800	0.0800	0.0795		0.0757	

Client: Waste Management

Job Number: 280-41536-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-171704

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-171704/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-171704/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	05/02/2013 1109			Analysis Date:	05/02/2013 1136
Prep Date:	04/29/2013 1125			Prep Date:	04/29/2013 1125
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual		LCSD Result/Qual	
Di-n-octyl phthalate	0.0800	0.0800	0.0752		0.0743	
Fluoranthene	0.0800	0.0800	0.0787		0.0748	
Fluorene	0.0800	0.0800	0.0716		0.0686	
Hexachlorobenzene	0.0800	0.0800	0.0740		0.0694	
Hexachlorobutadiene	0.0800	0.0800	0.0537		0.0527	
Hexachlorocyclopentadiene	0.0800	0.0800	0.0192	J	0.0191	J
Hexachloroethane	0.0800	0.0800	0.0540		0.0511	
Indeno[1,2,3-cd]pyrene	0.0800	0.0800	0.0676		0.0671	
Isophorone	0.0800	0.0800	0.0681		0.0670	
Naphthalene	0.0800	0.0800	0.0634		0.0606	
Nitrobenzene	0.0800	0.0800	0.0681		0.0667	
N-Nitrosodimethylamine	0.0800	0.0800	0.0672		0.0634	
N-Nitrosodi-n-propylamine	0.0800	0.0800	0.0685		0.0664	
N-Nitrosodiphenylamine	0.0683	0.0683	0.0623		0.0598	
p-Cresol	0.160	0.160	0.150		0.145	
Pentachlorophenol	0.0800	0.0800	0.0744		0.0723	
Phenanthrene	0.0800	0.0800	0.0787		0.0743	
Phenol	0.0800	0.0800	0.0726		0.0691	
Pyrene	0.0800	0.0800	0.0760		0.0750	

Client: Waste Management

Job Number: 280-41536-1

Method Blank - Batch: 440-101858

Method: 218.6
Preparation: N/A

Lab Sample ID:	MB 440-101858/3	Analysis Batch:	440-101858	Instrument ID:	IC-20
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Info
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	05/02/2013 0913	Units:	ug/L	Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Chromium, hexavalent	ND		0.25	1.0

Lab Control Sample - Batch: 440-101858

Method: 218.6
Preparation: N/A

Lab Sample ID:	LCS 440-101858/2	Analysis Batch:	440-101858	Instrument ID:	IC-20
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Info
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	05/02/2013 0859	Units:	ug/L	Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chromium, hexavalent	50.0	49.4	99	90 - 110	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 440-101858

Method: 218.6
Preparation: N/A

MS Lab Sample ID:	440-45251-M-1 MS	Analysis Batch:	440-101858	Instrument ID:	IC-20
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Info
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	05/02/2013 2242			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	440-45251-M-1 MSD	Analysis Batch:	440-101858	Instrument ID:	IC-20
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Info
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	05/02/2013 2256			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Chromium, hexavalent	99	100	90 - 110	2	10		

Client: Waste Management

Job Number: 280-41536-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 440-101858

Method: 218.6
Preparation: N/A

MS Lab Sample ID:	440-45251-M-1 MS	Units:	ug/L	MSD Lab Sample ID:	440-45251-M-1 MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	05/02/2013 2242			Analysis Date:	05/02/2013 2256
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Chromium, hexavalent	ND	50.0	50.0	49.4	50.1

Client: Waste Management

Job Number: 280-41536-1

Method Blank - Batch: 280-171772

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	MB 280-171772/1-A	Analysis Batch:	280-172260	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-171772	Lab File ID:	25A3050113.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	05/01/2013 1824	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	05/01/2013 0800				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Arsenic	ND		0.0044	0.015
Cadmium	ND		0.00045	0.0050
Iron	ND		0.022	0.10
Lead	ND		0.0026	0.0090
Selenium	ND		0.0049	0.015
Zinc	ND		0.0045	0.020
Silver	ND		0.00093	0.010

Lab Control Sample - Batch: 280-171772

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	LCS 280-171772/2-A	Analysis Batch:	280-172260	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-171772	Lab File ID:	25A3050113.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	05/01/2013 1827	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	05/01/2013 0800				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	1.00	0.996	100	88 - 110	
Cadmium	0.100	0.105	105	88 - 111	
Iron	1.00	0.956	96	89 - 115	
Lead	0.500	0.499	100	89 - 110	
Selenium	2.00	2.11	106	85 - 112	
Zinc	0.500	0.521	104	85 - 111	
Silver	0.0500	0.0499	100	85 - 115	

Client: Waste Management

Job Number: 280-41536-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-171772

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-41483-A-1-B MS	Analysis Batch:	280-172260	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-171772	Lab File ID:	25A3050113.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	05/01/2013 1834			Final Weight/Volume:	50 mL
Prep Date:	05/01/2013 0800				
Leach Date:	N/A				

MSD Lab Sample ID:	280-41483-A-1-C MSD	Analysis Batch:	280-172260	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-171772	Lab File ID:	25A3050113.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	05/01/2013 1836			Final Weight/Volume:	50 mL
Prep Date:	05/01/2013 0800				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Arsenic	99	95	88 - 110	4	20		
Cadmium	103	99	88 - 111	4	20		
Iron	93	89	89 - 115	4	20		
Lead	91	88	89 - 110	3	20		F
Selenium	106	102	85 - 112	4	20		
Zinc	104	99	85 - 111	5	20		
Silver	99	94	85 - 115	5	20		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-171772

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-41483-A-1-B MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	05/01/2013 1834		
Prep Date:	05/01/2013 0800		
Leach Date:	N/A		

MSD Lab Sample ID:	280-41483-A-1-C MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	05/01/2013 1836
Prep Date:	05/01/2013 0800
Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual	
Arsenic	ND		1.00	1.00	0.988	0.951	
Cadmium	ND		0.100	0.100	0.103	0.0989	
Iron	0.31		1.00	1.00	1.24	1.20	
Lead	ND		0.500	0.500	0.457	0.442	F
Selenium	ND		2.00	2.00	2.12	2.04	
Zinc	0.017	J	0.500	0.500	0.536	0.512	
Silver	ND		0.0500	0.0500	0.0495	0.0470	

Client: Waste Management

Job Number: 280-41536-1

Method Blank - Batch: 280-172077

Method: 245.1
Preparation: 245.1

Lab Sample ID:	MB 280-172077/1-A	Analysis Batch:	280-172464	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-172077	Lab File ID:	130502ac.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	05/02/2013 1557	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	05/02/2013 1200				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000027	0.00020

Lab Control Sample - Batch: 280-172077

Method: 245.1
Preparation: 245.1

Lab Sample ID:	LCS 280-172077/2-A	Analysis Batch:	280-172464	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-172077	Lab File ID:	130502ac.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	05/02/2013 1600	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	05/02/2013 1200				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00502	100	90 - 110	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-172077

Method: 245.1
Preparation: 245.1

MS Lab Sample ID:	280-41536-H-3-C MS	Analysis Batch:	280-172464	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-172077	Lab File ID:	130502ac.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	05/02/2013 1609			Final Weight/Volume:	30 mL
Prep Date:	05/02/2013 1200				
Leach Date:	N/A				

MSD Lab Sample ID:	280-41536-H-3-D MSD	Analysis Batch:	280-172464	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-172077	Lab File ID:	130502ac.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	05/02/2013 1611			Final Weight/Volume:	30 mL
Prep Date:	05/02/2013 1200				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	99	100	80 - 120	1	10		

Client: Waste Management

Job Number: 280-41536-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-172077

Method: 245.1
Preparation: 245.1

MS Lab Sample ID:	280-41536-H-3-C MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	05/02/2013 1609		
Prep Date:	05/02/2013 1200		
Leach Date:	N/A		

MSD Lab Sample ID:	280-41536-H-3-D MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	05/02/2013 1611
Prep Date:	05/02/2013 1200
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Mercury	0.00065	0.00500	0.00500	0.00559	0.00563

Client: Waste Management

Job Number: 280-41536-1

Method Blank - Batch: 280-172699

Method: 1664A
Preparation: 1664A

Lab Sample ID:	MB 280-172699/1-A	Analysis Batch:	280-172745	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	280-172699	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	05/04/2013 1343	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	05/04/2013 0923				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
HEM	ND		1.6	5.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-172699

Method: 1664A
Preparation: 1664A

LCS Lab Sample ID:	LCS 280-172699/2-A	Analysis Batch:	280-172745	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	280-172699	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	05/04/2013 1343	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	05/04/2013 0923				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-172699/3-A	Analysis Batch:	280-172745	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	280-172699	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	05/04/2013 1343	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	05/04/2013 0923				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
HEM	91	91	81 - 107	0	22		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-172699

Method: 1664A
Preparation: 1664A

LCS Lab Sample ID:	LCS 280-172699/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-172699/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	05/04/2013 1343			Analysis Date:	05/04/2013 1343
Prep Date:	05/04/2013 0923			Prep Date:	05/04/2013 0923
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
HEM	40.0	40.0	36.3	36.4

Client: Waste Management

Job Number: 280-41536-1

Method Blank - Batch: 280-172662

Method: 350.1
Preparation: N/A

Lab Sample ID:	MB 280-172662/21	Analysis Batch:	280-172662	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\050313A.R
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	05/03/2013 1357	Units:	mg/L	Final Weight/Volume:	10 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Ammonia	ND		0.022	0.10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-172662

Method: 350.1
Preparation: N/A

LCS Lab Sample ID:	LCS 280-172662/19	Analysis Batch:	280-172662	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\050313A.R
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	05/03/2013 1353	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-172662/20	Analysis Batch:	280-172662	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\050313A.R
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	05/03/2013 1355	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Ammonia	100	100	90 - 110	0	10		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-172662

Method: 350.1
Preparation: N/A

LCS Lab Sample ID:	LCS 280-172662/19	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-172662/20
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	05/03/2013 1353			Analysis Date:	05/03/2013 1355
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Ammonia	2.50	2.50	2.51	2.50

Client: Waste Management

Job Number: 280-41536-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-172662

Method: 350.1
Preparation: N/A

MS Lab Sample ID:	280-41536-1	Analysis Batch:	280-172662	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\050313A.R
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	05/03/2013 1517			Final Weight/Volume:	20 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-41536-1	Analysis Batch:	280-172662	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\050313A.R
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	05/03/2013 1519			Final Weight/Volume:	20 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Ammonia	104	103	90 - 110	1	10		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-172662

Method: 350.1
Preparation: N/A

MS Lab Sample ID:	280-41536-1	Units: mg/L	
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	05/03/2013 1517		
Prep Date:	N/A		
Leach Date:	N/A		

MSD Lab Sample ID:	280-41536-1
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	05/03/2013 1519
Prep Date:	N/A
Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Ammonia	0.038	J	1.00	1.00	1.08	1.07

Client: Waste Management

Job Number: 280-41536-1

Method Blank - Batch: 280-173366

Method: 351.2
Preparation: 351.2

Lab Sample ID:	MB 280-173366/3-A	Analysis Batch:	280-173404	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-173366	Lab File ID:	050813TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	05/08/2013 2306	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	05/07/2013 1721				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrogen, Kjeldahl	ND		0.18	0.50

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-173366

Method: 351.2
Preparation: 351.2

LCS Lab Sample ID:	LCS 280-173366/1-A	Analysis Batch:	280-173404	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-173366	Lab File ID:	050813TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	05/08/2013 2304	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	05/07/2013 1721				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-173366/2-A	Analysis Batch:	280-173404	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-173366	Lab File ID:	050813TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	05/08/2013 2305	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	05/07/2013 1721				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Nitrogen, Kjeldahl	95	96	90 - 110	1	25		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-173366

Method: 351.2
Preparation: 351.2

LCS Lab Sample ID:	LCS 280-173366/1-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-173366/2-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	05/08/2013 2304			Analysis Date:	05/08/2013 2305
Prep Date:	05/07/2013 1721			Prep Date:	05/07/2013 1721
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Nitrogen, Kjeldahl	6.00	6.00	5.70	5.74

Client: Waste Management

Job Number: 280-41536-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-173366

Method: 351.2
Preparation: 351.2

MS Lab Sample ID:	580-38276-A-1-B MS	Analysis Batch:	280-173404	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-173366	Lab File ID:	050813TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	05/08/2013 2315			Final Weight/Volume:	25 mL
Prep Date:	05/07/2013 1721				
Leach Date:	N/A				

MSD Lab Sample ID:	580-38276-A-1-C MSD	Analysis Batch:	280-173404	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-173366	Lab File ID:	050813TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	05/08/2013 2319			Final Weight/Volume:	25 mL
Prep Date:	05/07/2013 1721				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Nitrogen, Kjeldahl	94	96	90 - 110	2	25		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-173366

Method: 351.2
Preparation: 351.2

MS Lab Sample ID:	580-38276-A-1-B MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	05/08/2013 2315		
Prep Date:	05/07/2013 1721		
Leach Date:	N/A		

MSD Lab Sample ID:	580-38276-A-1-C MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	05/08/2013 2319
Prep Date:	05/07/2013 1721
Leach Date:	N/A

	Sample		MS Spike	MSD Spike	MS	MSD
Analyte	Result/Qual		Amount	Amount	Result/Qual	Result/Qual
Nitrogen, Kjeldahl	0.38	J	3.00	3.00	3.20	3.27

Client: Waste Management

Job Number: 280-41536-1

Method Blank - Batch: 280-173152

Method: 353.2
Preparation: N/A

Lab Sample ID:	MB 280-173152/21	Analysis Batch:	280-173152	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0507NXNT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	05/07/2013 1350	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrate Nitrite as N	ND		0.019	0.10

Method Blank - Batch: 280-173152

Method: 353.2
Preparation: N/A

Lab Sample ID:	MB 280-173152/65	Analysis Batch:	280-173152	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0507NXNT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	05/07/2013 1456	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrate Nitrite as N	ND		0.019	0.10

Method Blank - Batch: 280-173152

Method: 353.2
Preparation: N/A

Lab Sample ID:	MB 280-173152/95	Analysis Batch:	280-173152	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0507NXNT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	05/07/2013 1541	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrate Nitrite as N	ND		0.019	0.10

Client: Waste Management

Job Number: 280-41536-1

Method Reporting Limit Check - Batch: 280-173152

Method: 353.2
Preparation: N/A

Lab Sample ID:	MRL 280-173152/18	Analysis Batch:	280-173152	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0507NXNT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	05/07/2013 1345	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate Nitrite as N	0.100	0.0890	89	50 - 150	J

Lab Control Sample - Batch: 280-173152

Method: 353.2
Preparation: N/A

Lab Sample ID:	LCS 280-173152/96	Analysis Batch:	280-173152	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0507NXNT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	05/07/2013 1542	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate Nitrite as N	5.00	5.35	107	90 - 110	

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-173152

Method: 353.2
Preparation: N/A

LCS Lab Sample ID:	LCS 280-173152/22	Analysis Batch:	280-173152	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0507NXNT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	05/07/2013 1351	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-173152/23	Analysis Batch:	280-173152	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0507NXNT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	05/07/2013 1353	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Nitrate Nitrite as N	103	104	90 - 110	1	10		

Client: Waste Management

Job Number: 280-41536-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-173152

Method: 353.2
Preparation: N/A

LCS Lab Sample ID:	LCS 280-173152/22	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-173152/23
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	05/07/2013 1351			Analysis Date:	05/07/2013 1353
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Nitrate Nitrite as N	5.00	5.00	5.16	5.20

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-173152

Method: 353.2
Preparation: N/A

MS Lab Sample ID:	280-41474-P-1 MS	Analysis Batch:	280-173152	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0507NXNT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	05/07/2013 1412			Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-41474-P-1 MSD	Analysis Batch:	280-173152	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0507NXNT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	05/07/2013 1414			Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Nitrate Nitrite as N	104	103	90 - 110	1	10		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-173152

Method: 353.2
Preparation: N/A

MS Lab Sample ID:	280-41474-P-1 MS	Units:	mg/L	MSD Lab Sample ID:	280-41474-P-1 MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	05/07/2013 1412			Analysis Date:	05/07/2013 1414
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Nitrate Nitrite as N	ND	4.00	4.00	4.16	4.12

Client: Waste Management

Job Number: 280-41536-1

Duplicate - Batch: 280-173152

Method: 353.2
Preparation: N/A

Lab Sample ID:	280-41408-B-3 DU	Analysis Batch:	280-173152	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0507NXNT
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	05/07/2013 1548	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Nitrate Nitrite as N	6.0	5.98	0.2	20	

Client: Waste Management

Job Number: 280-41536-1

Method Blank - Batch: 280-173493

Method: 365.1
Preparation: 365.2/365.3/365

Lab Sample ID:	MB 280-173493/11-A	Analysis Batch:	280-173755	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-173493	Lab File ID:	051013tphos.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50.0 mL
Analysis Date:	05/10/2013 1414	Units:	mg/L	Final Weight/Volume:	50.0 mL
Prep Date:	05/09/2013 1137				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Phosphorus, Total	ND		0.0050	0.050

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-173493

Method: 365.1
Preparation: 365.2/365.3/365

LCS Lab Sample ID:	LCS 280-173493/9-A	Analysis Batch:	280-173755	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-173493	Lab File ID:	051013tphos.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50.0 mL
Analysis Date:	05/10/2013 1414	Units:	mg/L	Final Weight/Volume:	50.0 mL
Prep Date:	05/09/2013 1137				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-173493/10-A	Analysis Batch:	280-173755	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-173493	Lab File ID:	051013tphos.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50.0 mL
Analysis Date:	05/10/2013 1459	Units:	mg/L	Final Weight/Volume:	50.0 mL
Prep Date:	05/09/2013 1137				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Phosphorus, Total	99	99	90 - 110	0	10		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-173493

Method: 365.1
Preparation: 365.2/365.3/365

LCS Lab Sample ID:	LCS 280-173493/9-A	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	05/10/2013 1414		
Prep Date:	05/09/2013 1137		
Leach Date:	N/A		

LCSD Lab Sample ID:	LCSD 280-173493/10-A
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	05/10/2013 1459
Prep Date:	05/09/2013 1137
Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Phosphorus, Total	0.500	0.500	0.493	0.494

Client: Waste Management

Job Number: 280-41536-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-173493

Method: 365.1
Preparation: 365.2/365.3/365

MS Lab Sample ID:	280-41650-B-2-B MS	Analysis Batch:	280-173755	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-173493	Lab File ID:	051013tphos.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50.0 mL
Analysis Date:	05/10/2013 1440			Final Weight/Volume:	50.0 mL
Prep Date:	05/09/2013 1137				
Leach Date:	N/A				

MSD Lab Sample ID:	280-41650-B-2-C MSD	Analysis Batch:	280-173755	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-173493	Lab File ID:	051013tphos.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50.0 mL
Analysis Date:	05/10/2013 1440			Final Weight/Volume:	50.0 mL
Prep Date:	05/09/2013 1137				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Phosphorus, Total	66	70	90 - 110	6	10	F	F

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-173493

Method: 365.1
Preparation: 365.2/365.3/365

MS Lab Sample ID:	280-41650-B-2-B MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	05/10/2013 1440		
Prep Date:	05/09/2013 1137		
Leach Date:	N/A		

MSD Lab Sample ID:	280-41650-B-2-C MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	05/10/2013 1440
Prep Date:	05/09/2013 1137
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Phosphorus, Total	ND	0.500	0.500	0.330	F	0.349	F

Client: Waste Management

Job Number: 280-41536-1

Method Blank - Batch: 280-172873

Method: 410.4
Preparation: N/A

Lab Sample ID:	MB 280-172873/5	Analysis Batch:	280-172873	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2 mL
Analysis Date:	05/06/2013 1025	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Chemical Oxygen Demand	ND		4.1	20

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-172873

Method: 410.4
Preparation: N/A

LCS Lab Sample ID:	LCS 280-172873/3	Analysis Batch:	280-172873	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	05/06/2013 1025	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-172873/4	Analysis Batch:	280-172873	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	05/06/2013 1025	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Chemical Oxygen Demand	104	102	90 - 110	2	11		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-172873

Method: 410.4
Preparation: N/A

LCS Lab Sample ID:	LCS 280-172873/3	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-172873/4
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	05/06/2013 1025			Analysis Date:	05/06/2013 1025
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Chemical Oxygen Demand	100	100	104	102

Client: Waste Management

Job Number: 280-41536-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-172873

Method: 410.4
Preparation: N/A

MS Lab Sample ID:	280-41536-F-4 MS	Analysis Batch:	280-172873	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	05/06/2013 1025			Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-41536-F-4 MSD	Analysis Batch:	280-172873	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	05/06/2013 1025			Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Chemical Oxygen Demand	77	80	90 - 110	2	11	F	F

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-172873

Method: 410.4
Preparation: N/A

MS Lab Sample ID:	280-41536-F-4 MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	05/06/2013 1025		
Prep Date:	N/A		
Leach Date:	N/A		

MSD Lab Sample ID:	280-41536-F-4 MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	05/06/2013 1025
Prep Date:	N/A
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Chemical Oxygen Demand	41	50.0	50.0	79.6	F	81.3	F

Client: Waste Management

Job Number: 280-41536-1

Method Blank - Batch: 280-172222

Method: SM 2540D
Preparation: N/A

Lab Sample ID:	MB 280-172222/3	Analysis Batch:	280-172222	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	05/01/2013 1705	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Total Suspended Solids	ND		1.1	4.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-172222

Method: SM 2540D
Preparation: N/A

LCS Lab Sample ID:	LCS 280-172222/1	Analysis Batch:	280-172222	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	05/01/2013 1705	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-172222/2	Analysis Batch:	280-172222	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	05/01/2013 1705	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Total Suspended Solids	90	91	86 - 114	1	20		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-172222

Method: SM 2540D
Preparation: N/A

LCS Lab Sample ID:	LCS 280-172222/1	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-172222/2
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	05/01/2013 1705			Analysis Date:	05/01/2013 1705
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Total Suspended Solids	100	100	90.0	91.0

Client: Waste Management

Job Number: 280-41536-1

Duplicate - Batch: 280-172222

Method: SM 2540D
Preparation: N/A

Lab Sample ID:	280-41536-E-4 DU	Analysis Batch:	280-172222	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	75 mL
Analysis Date:	05/01/2013 1705	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Suspended Solids	270	287	7	10	

Client: Waste Management

Job Number: 280-41536-1

Method Blank - Batch: 280-173626

Method: Total Nitrogen
Preparation: N/A

Lab Sample ID:	MB 280-173626/1	Analysis Batch:	280-173626	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	05/10/2013 0729	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrogen, Total	ND		0.042	0.10

Client: Waste Management

Job Number: 280-41536-1

Laboratory Chronicle

Lab ID: **280-41536-1** **Client ID:** **DB01E**

Sample Date/Time: 04/24/2013 12:05 Received Date/Time: 04/27/2013 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	280-41536-C-1-A		280-172261	280-171704	04/29/2013 11:25	1	TAL DEN	DFB
A:625	280-41536-C-1-A		280-172261	280-171704	05/02/2013 20:04	1	TAL DEN	MGH
A:218.6	280-41536-I-1		440-101858		05/03/2013 01:02	1	TAL IRV	RW
P:200.7	280-41536-H-1-A		280-172260	280-171772	05/01/2013 08:00	1	TAL DEN	JA
A:200.7 Rev 4.4	280-41536-H-1-A		280-172260	280-171772	05/01/2013 18:57	1	TAL DEN	JKH
P:245.1	280-41536-H-1-B		280-172464	280-172077	05/02/2013 12:00	1	TAL DEN	NF
A:245.1	280-41536-H-1-B		280-172464	280-172077	05/02/2013 16:02	1	TAL DEN	NF
P:1664A	280-41536-A-1-A		280-172745	280-172699	05/04/2013 09:23	1	TAL DEN	AFB
A:1664A	280-41536-A-1-A		280-172745	280-172699	05/04/2013 13:43	1	TAL DEN	AFB
A:350.1	280-41536-F-1		280-172662		05/03/2013 15:14	1	TAL DEN	DE
P:351.2	280-41536-F-1-A		280-173404	280-173366	05/07/2013 17:21	1	TAL DEN	MW
A:351.2	280-41536-F-1-A		280-173404	280-173366	05/08/2013 23:22	1	TAL DEN	MW
A:353.2	280-41536-G-1		280-173152		05/07/2013 14:41	1	TAL DEN	SJS
P:365.2/365.3/365	280-41536-F-1-B		280-173755	280-173493	05/09/2013 11:37	1	TAL DEN	SJS
A:365.1	280-41536-F-1-B		280-173755	280-173493	05/10/2013 14:36	1	TAL DEN	SJS
A:410.4	280-41536-G-1		280-172873		05/06/2013 10:25	1	TAL DEN	DFB
A:SM 2540D	280-41536-E-1		280-172222		05/01/2013 17:05	1	TAL DEN	MW
A:Total Nitrogen	280-41536-A-1		280-173626		05/10/2013 07:29	1	TAL DEN	RS
A:Field Sampling	280-41536-A-1		280-171762		04/24/2013 12:05	1	TAL DEN	FS

Lab ID: **280-41536-1 MS** **Client ID:** **DB01E**

Sample Date/Time: 04/24/2013 12:05 Received Date/Time: 04/27/2013 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:350.1	280-41536-F-1 MS		280-172662		05/03/2013 15:17	1	TAL DEN	DE

Lab ID: **280-41536-1 MSD** **Client ID:** **DB01E**

Sample Date/Time: 04/24/2013 12:05 Received Date/Time: 04/27/2013 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:350.1	280-41536-F-1 MSD		280-172662		05/03/2013 15:19	1	TAL DEN	DE

Client: Waste Management

Job Number: 280-41536-1

Laboratory Chronicle

Lab ID: **MB** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	MB 280-171704/1-A		280-172261	280-171704	04/29/2013 11:25	1	TAL DEN	DFB
A:625	MB 280-171704/1-A		280-172261	280-171704	05/02/2013 10:42	1	TAL DEN	MGH
A:218.6	MB 440-101858/3		440-101858		05/02/2013 09:13	1	TAL IRV	RW
P:200.7	MB 280-171772/1-A		280-172260	280-171772	05/01/2013 08:00	1	TAL DEN	JA
A:200.7 Rev 4.4	MB 280-171772/1-A		280-172260	280-171772	05/01/2013 18:24	1	TAL DEN	JKH
P:245.1	MB 280-172077/1-A		280-172464	280-172077	05/02/2013 12:00	1	TAL DEN	NF
A:245.1	MB 280-172077/1-A		280-172464	280-172077	05/02/2013 15:57	1	TAL DEN	NF
P:1664A	MB 280-172699/1-A		280-172745	280-172699	05/04/2013 09:23	1	TAL DEN	AFB
A:1664A	MB 280-172699/1-A		280-172745	280-172699	05/04/2013 13:43	1	TAL DEN	AFB
A:350.1	MB 280-172662/21		280-172662		05/03/2013 13:57	1	TAL DEN	DE
P:351.2	MB 280-173366/3-A		280-173404	280-173366	05/07/2013 17:21	1	TAL DEN	MW
A:351.2	MB 280-173366/3-A		280-173404	280-173366	05/08/2013 23:06	1	TAL DEN	MW
A:353.2	MB 280-173152/21		280-173152		05/07/2013 13:50	1	TAL DEN	SJS
A:353.2	MB 280-173152/65		280-173152		05/07/2013 14:56	1	TAL DEN	SJS
A:353.2	MB 280-173152/95		280-173152		05/07/2013 15:41	1	TAL DEN	SJS
P:365.2/365.3/365	MB 280-173493/11-A		280-173755	280-173493	05/09/2013 11:37	1	TAL DEN	SJS
A:365.1	MB 280-173493/11-A		280-173755	280-173493	05/10/2013 14:14	1	TAL DEN	SJS
A:410.4	MB 280-172873/5		280-172873		05/06/2013 10:25	1	TAL DEN	DFB
A:SM 2540D	MB 280-172222/3		280-172222		05/01/2013 17:05	1	TAL DEN	MW
A:Total Nitrogen	MB 280-173626/1		280-173626		05/10/2013 07:29	1	TAL DEN	RS

Client: Waste Management

Job Number: 280-41536-1

Laboratory Chronicle

Lab ID: **LCS** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	LCS 280-171704/2-A		280-172261	280-171704	04/29/2013 11:25	1	TAL DEN	DFB
A:625	LCS 280-171704/2-A		280-172261	280-171704	05/02/2013 11:09	1	TAL DEN	MGH
A:218.6	LCS 440-101858/2		440-101858		05/02/2013 08:59	1	TAL IRV	RW
P:200.7	LCS 280-171772/2-A		280-172260	280-171772	05/01/2013 08:00	1	TAL DEN	JA
A:200.7 Rev 4.4	LCS 280-171772/2-A		280-172260	280-171772	05/01/2013 18:27	1	TAL DEN	JKH
P:245.1	LCS 280-172077/2-A		280-172464	280-172077	05/02/2013 12:00	1	TAL DEN	NF
A:245.1	LCS 280-172077/2-A		280-172464	280-172077	05/02/2013 16:00	1	TAL DEN	NF
P:1664A	LCS 280-172699/2-A		280-172745	280-172699	05/04/2013 09:23	1	TAL DEN	AFB
A:1664A	LCS 280-172699/2-A		280-172745	280-172699	05/04/2013 13:43	1	TAL DEN	AFB
A:350.1	LCS 280-172662/19		280-172662		05/03/2013 13:53	1	TAL DEN	DE
P:351.2	LCS 280-173366/1-A		280-173404	280-173366	05/07/2013 17:21	1	TAL DEN	MW
A:351.2	LCS 280-173366/1-A		280-173404	280-173366	05/08/2013 23:04	1	TAL DEN	MW
A:353.2	LCS 280-173152/22		280-173152		05/07/2013 13:51	1	TAL DEN	SJS
A:353.2	LCS 280-173152/96		280-173152		05/07/2013 15:42	1	TAL DEN	SJS
P:365.2/365.3/365	LCS 280-173493/9-A		280-173755	280-173493	05/09/2013 11:37	1	TAL DEN	SJS
A:365.1	LCS 280-173493/9-A		280-173755	280-173493	05/10/2013 14:14	1	TAL DEN	SJS
A:410.4	LCS 280-172873/3		280-172873		05/06/2013 10:25	1	TAL DEN	DFB
A:SM 2540D	LCS 280-172222/1		280-172222		05/01/2013 17:05	1	TAL DEN	MW

Lab ID: **LCSD** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	LCSD 280-171704/3-A		280-172261	280-171704	04/29/2013 11:25	1	TAL DEN	DFB
A:625	LCSD 280-171704/3-A		280-172261	280-171704	05/02/2013 11:36	1	TAL DEN	MGH
P:1664A	LCSD 280-172699/3-A		280-172745	280-172699	05/04/2013 09:23	1	TAL DEN	AFB
A:1664A	LCSD 280-172699/3-A		280-172745	280-172699	05/04/2013 13:43	1	TAL DEN	AFB
A:350.1	LCSD 280-172662/20		280-172662		05/03/2013 13:55	1	TAL DEN	DE
P:351.2	LCSD 280-173366/2-A		280-173404	280-173366	05/07/2013 17:21	1	TAL DEN	MW
A:351.2	LCSD 280-173366/2-A		280-173404	280-173366	05/08/2013 23:05	1	TAL DEN	MW
A:353.2	LCSD 280-173152/23		280-173152		05/07/2013 13:53	1	TAL DEN	SJS
A:353.2	LCSD 280-173152/67		280-173152		05/07/2013 14:59	1	TAL DEN	SJS
P:365.2/365.3/365	LCSD 280-173493/10-A		280-173755	280-173493	05/09/2013 11:37	1	TAL DEN	SJS
A:365.1	LCSD 280-173493/10-A		280-173755	280-173493	05/10/2013 14:59	1	TAL DEN	SJS
A:410.4	LCSD 280-172873/4		280-172873		05/06/2013 10:25	1	TAL DEN	DFB
A:SM 2540D	LCSD 280-172222/2		280-172222		05/01/2013 17:05	1	TAL DEN	MW

Client: Waste Management

Job Number: 280-41536-1

Laboratory Chronicle

Lab ID: **MRL** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:353.2	MRL 280-173152/18		280-173152		05/07/2013 13:45	1	TAL DEN	SJS

Lab ID: **MS** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:218.6	440-45251-M-1 MS		440-101858		05/02/2013 22:42	1	TAL IRV	RW
P:200.7	280-41483-A-1-B MS		280-172260	280-171772	05/01/2013 08:00	1	TAL DEN	JA
A:200.7 Rev 4.4	280-41483-A-1-B MS		280-172260	280-171772	05/01/2013 18:34	1	TAL DEN	JKH
P:245.1	280-41536-H-3-C MS		280-172464	280-172077	05/02/2013 12:00	1	TAL DEN	NF
A:245.1	280-41536-H-3-C MS		280-172464	280-172077	05/02/2013 16:09	1	TAL DEN	NF
P:351.2	580-38276-A-1-B MS		280-173404	280-173366	05/07/2013 17:21	1	TAL DEN	MW
A:351.2	580-38276-A-1-B MS		280-173404	280-173366	05/08/2013 23:15	1	TAL DEN	MW
A:353.2	280-41474-P-1 MS		280-173152		05/07/2013 14:12	1	TAL DEN	SJS
P:365.2/365.3/365	280-41650-B-2-B MS		280-173755	280-173493	05/09/2013 11:37	1	TAL DEN	SJS
A:365.1	280-41650-B-2-B MS		280-173755	280-173493	05/10/2013 14:40	1	TAL DEN	SJS
A:410.4	280-41536-F-4 MS		280-172873		05/06/2013 10:25	1	TAL DEN	DFB

Lab ID: **MSD** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:218.6	440-45251-M-1 MSD		440-101858		05/02/2013 22:56	1	TAL IRV	RW
P:200.7	280-41483-A-1-C MSD		280-172260	280-171772	05/01/2013 08:00	1	TAL DEN	JA
A:200.7 Rev 4.4	280-41483-A-1-C MSD		280-172260	280-171772	05/01/2013 18:36	1	TAL DEN	JKH
P:245.1	280-41536-H-3-D MSD		280-172464	280-172077	05/02/2013 12:00	1	TAL DEN	NF
A:245.1	280-41536-H-3-D MSD		280-172464	280-172077	05/02/2013 16:11	1	TAL DEN	NF
P:351.2	580-38276-A-1-C MSD		280-173404	280-173366	05/07/2013 17:21	1	TAL DEN	MW
A:351.2	580-38276-A-1-C MSD		280-173404	280-173366	05/08/2013 23:19	1	TAL DEN	MW
A:353.2	280-41474-P-1 MSD		280-173152		05/07/2013 14:14	1	TAL DEN	SJS
P:365.2/365.3/365	280-41650-B-2-C MSD		280-173755	280-173493	05/09/2013 11:37	1	TAL DEN	SJS
A:365.1	280-41650-B-2-C MSD		280-173755	280-173493	05/10/2013 14:40	1	TAL DEN	SJS
A:410.4	280-41536-F-4 MSD		280-172873		05/06/2013 10:25	1	TAL DEN	DFB

Client: Waste Management

Job Number: 280-41536-1

Laboratory Chronicle

Lab ID: **DU** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:353.2	280-41408-B-3 DU		280-173152		05/07/2013 15:48	1	TAL DEN	SJS
A:SM 2540D	280-41536-E-4 DU		280-172222		05/01/2013 17:05	1	TAL DEN	MW

Lab References:

TAL DEN = TestAmerica Denver

TAL IRV = TestAmerica Irvine

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Honolulu
99-193 Aiea Heights Drive, Suite 121
Aiea, HI 96701
Tel: 808-486-5227

TestAmerica Job ID: HWE0001
Client Project/Site: 60287037.02
Client Project Description: AECOM, WGSL STORMWATER

For:
TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002

Attn: Betsy Sarah

Authorized for release by:
5/6/2013 10:50:13 AM

Kristie Reilly
Project Manager
Kristie.Brachmann@testamericainc.com

LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWE0001

Job ID: HWE0001

Laboratory: TestAmerica Honolulu

Narrative

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory unless otherwise stated in the report. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. TestAmerica Analytical Testing Corporation certifies that the analytical results contained herein apply only to the specific sample(s) analyzed.

The Chain(s) of Custody are included and are an integral part of this report. This entire report was reviewed and approved for release.

If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-(808)486-5227

LABORATORY REPORT

At sample receipt, the cooler/sample was 1.2 degrees C.
NELAC states that samples which require thermal preservation shall be considered acceptable if the arrival temperature is within 2 degrees C of the required temperature or the method specified range. For samples with a temperature requirement of 4 degrees C, an arrival temperature from 0 degrees C to 6 degrees C meets specifications. Samples that are delivered to the laboratory on the same day that they are collected may not meet these criteria. In these cases, the samples are considered acceptable if there is evidence that the chilling process has begun, such as arrival on ice.

The reported results were obtained in compliance with the 2003 NELAC standards unless otherwise noted.

Sample Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWE0001

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
HWE0001-01	280-41536-1-1/DB01E	Water - NonPotable	04/24/13 12:05	04/24/13 14:30

Detection Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWE0001

Client Sample ID: 280-41536-1-1/DB01E — Lab Sample ID: HWE0001-01

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
BOD - 5 Day	2.44		2.00		mg/L	1.00		SM5210B	Total

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWE0001

Client Sample ID: 280-41536-1-1/DB01E

Lab Sample ID: HWE0001-01

Date Collected: 04/24/13 12:05

Matrix: Water - NonPotable

Date Received: 04/24/13 14:30

Method: SM5210B - General Chemistry Parameters

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
BOD - 5 Day	2.44		2.00		mg/L		04/25/13 14:57	04/30/13 15:12	1.00

QC Sample Results

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWE0001

Method: SM5210B - General Chemistry Parameters

Lab Sample ID: 13D0030-BLK1 — **Client Sample ID: Method Blank**
Matrix: Water - NonPotable — **Prep Type: Total**
Analysis Batch: 13D0030 — **Prep Batch: 13D0030_P**

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
BOD - 5 Day	ND		2.00		mg/L		04/25/13 14:39	04/30/13 14:55	1.00

Lab Sample ID: 13D0030-BS1 — **Client Sample ID: Lab Control Sample**
Matrix: Water - NonPotable — **Prep Type: Total**
Analysis Batch: 13D0030 — **Prep Batch: 13D0030_P**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
BOD - 5 Day			198	182		mg/L		92	85 - 115		

Lab Sample ID: 13D0030-DUP1 — **Client Sample ID: Duplicate**
Matrix: Water - NonPotable — **Prep Type: Total**
Analysis Batch: 13D0030 — **Prep Batch: 13D0030_P**

Analyte	Sample Result	Sample Qualifier		Duplicate Result	Duplicate Qualifier	Unit	D			RPD	RPD Limit
BOD - 5 Day	2.66			2.93		mg/L				10	20

QC Association Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWE0001

WetChem

Analysis Batch: 13D0030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
13D0030-BLK1	Method Blank	Total	Water - NonPotable	SM5210B	13D0030_P
13D0030-BS1	Lab Control Sample	Total	Water - NonPotable	SM5210B	13D0030_P
13D0030-DUP1	Duplicate	Total	Water - NonPotable	SM5210B	13D0030_P
HWE0001-01	280-41536-1-1/DB01E	Total	Water - NonPotable	SM5210B	13D0030_P

Prep Batch: 13D0030_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
13D0030-BLK1	Method Blank	Total	Water - NonPotable	Default Prep GenChem	
13D0030-BS1	Lab Control Sample	Total	Water - NonPotable	Default Prep GenChem	
13D0030-DUP1	Duplicate	Total	Water - NonPotable	Default Prep GenChem	
HWE0001-01	280-41536-1-1/DB01E	Total	Water - NonPotable	Default Prep GenChem	

Lab Chronicle

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWE0001

Client Sample ID: 280-41536-1-1/DB01E

Lab Sample ID: HWE0001-01

Date Collected: 04/24/13 12:05

Matrix: Water - NonPotable

Date Received: 04/24/13 14:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Default Prep		1.00	13D0030_P	04/25/13 14:57	NK	TAL HON
Total	Analysis	GenChem SM5210B		1.00	13D0030	04/30/13 15:12	NK	TAL HON

Laboratory References:

TAL HON = TestAmerica Honolulu, 99-193 Aiea Heights Drive, Suite 121, Aiea, HI 96701, TEL 808-486-5227

Certification Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWE0001

Laboratory: TestAmerica Honolulu

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Florida	NELAP	4	E87907	05-30-13
Hawaii	State Program	9	N/A	06-28-13
USDA	Federal		HON-S-206	01-31-15

Method Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWE0001

Method	Method Description	Protocol	Laboratory
SM5210B	General Chemistry Parameters		TAL HON

Protocol References:

Laboratory References:

TAL HON = TestAmerica Honolulu, 99-193 Aiea Heights Drive, Suite 121, Aiea, HI 96701, TEL 808-486-5227

[redacted]

Chain of Custody Record

TAL-4124-280 (0508)

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

HWE0001

~~HWD0086~~ KR 5/1/13

Client: Waste Management/AECOM

Address: 1001 Bishop St., Suite 1600

City: Honolulu | State: HI | Zip Code: 96813

Project Name and Location (State): WGSL Stormwater

Contract/Purchase Order/Quote No.: 60287037.02

Project Manager: Mark Hofferbert

Telephone Number (Area Code)/Fax Number: 808-356-5317 F: 808-523-8950

Site Contact: Justin Loftig

Lab Contact: Betsy Sara

Carrier/Waybill Number:

Date: 4-24-13

Lab Number:

Chain of Custody Number: 168564

Page 4 of 4

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		Analysis (Attach list if more space is needed): 1664 Oil & Grease	SM 2540 TSS	625 SVOCs*	410.4 COD	365.1 T. Phos	350.1 Ammonia	353.2 NO2-NO3	SM 4500 NT. Nitrogen	200.7 245.1 Metals**	SM5210B BOD	218.6 Cr VI	TKN	Special Instructions/ Conditions of Receipt
DB01E	1205			X			2	4	1						X	X	X	X	X	X	X	X	X	X	X	X	HWE0001-01 ~~HWD0086-04~~ KR 5/1/13
DB01E	1140						2								X												*a-terpineol, benzoic acid, p-cresol, pentachlorophenol, phenol
																											**As, Cd, Fe, Pb, Hg, Se, Ag, Zn

MB

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☒ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☒ 14 Days ☐ 21 Days ☐ Other ____

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By: [signature]	4-24-13	1430	1. Received By: Kristie Reilly [signature] 1.2°C intact wet ice	4/24/13	14:30
2. Relinquished By:			2. Received By:		
3. Relinquished By:			3. Received By:		

Comments: BOD - ASAP TAT in HNL, All other samples To Denver TA // Both listed are same sample but O+G collected first

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: DB01E - WGSL

Site No.: 995 Sample Point: DB01E (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment... Dedicated: Y or N

Filter Device: Y or N 0.45 µ or µ (circle or fill in)

Purging Device: A-Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device

X-Other:

Filter Type: A-In-line Disposable, B-Pressure, C-Vacuum, X-Other

Sample Tube Type: A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other:

WELL DATA

Well Elevation (at TOC) (ft/msl)

Depth to Water (DTW) (from TOC) (ft)

Groundwater Elevation (site datum, from TOC) (ft/msl)

Total Well Depth (from TOC) (ft)

Stick Up (from ground elevation) (ft)

Casing ID (in)

Casing Material

Note: Total Well Depth, Stick Up, Casing Id. etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

	Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm@25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
1st									
2nd									
3rd									
4th									
Suggested range for 3 consec. readings or note Permit/State requirements:			+/- 0.2	+/- 3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: Units
042413	7.81						

Final Field Readings are required (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.

Sample Appearance: Cloudy Odor: none Color: slight brown Solid:

Weather Conditions (required daily, or as conditions change): Direction/Speed: calm Outlook: clear Precipitation: Y or N

Specific Comments (including purge/well volume calculations if required):

FIELD COMMENTS

Collect Sample @ 1140 (Oil + Grease) - Grab
1205 (All others) - Aliquot

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
4/24/13	Lauren Molina	[signature]	AECOM

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

TAL-8029WM (0108)

TestAmerica

Rush TAT Confirmation (Initial/Date) _____

Sample Receipt Checklist

Client Name: TA Denver (AECOM project)

Date/ Time Received: 4/24/13 14:30

Received By: KR

Matrices: AQ

Carrier: AECOM

Airbill# :

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Chain of Custody present?	Yes ☒	No ☐	☐
Chain of Custody Signed when relinquished and received?	Yes ☒	No ☐	
Chain of Custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sample containers on ice?	Yes ☒	No ☐	Type: wet
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Water - VOA Vials have Zero Headspace?	Yes ☐	No ☐	No VOA vials present: ☒
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Checked: ☒
pH Adjusted?	Yes ☐	No ☒	Final pH:
Encores / MI-VOC / 5035 Vials Present?	Yes ☐	No ☒	Location:
Sample Filtration Needed?	Yes ☐	No ☒	Filtered in Field: ☐
Dry Weight Corrected Results?	Yes ☐	No ☒	Take Action: ☐
DODQSM / QAPP Project?	Yes ☐	No ☒	Type:

Temperature Blank Present? Yes ☐ No ☒

Sample Container Temperature: 1.2 °C

Comments/ Sampling Handling Notes:

TA Honolulu to perform BOD + CrVI preservation only.

Chain of Custody Record

TAL-4124-280 (0508)

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client: Waste Management/AECOM	Project Manager: Mark Hollenbert	Date: 4-24-13	Chain of Custody Number: 168564
Address: 1001 Bishop St. Suite 1600	Telephone Number (Area Code)/Fax Number: 808-356-5317 F: 808-523-8950	Lab Number:	Page 1 of 1
City: Honolulu; State: HI; Zip Code: 96813	Site Contact: Justin Lothin	Lab Contact: Betsy Sara	
Project Name and Location (State): WGSL Stormwater	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.: 60287037.07			

Analysis (Attach list if more space is needed)

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	1664 oil & grease	SM 2540D TSS	625 SVOCs*	410.4 COD	353.1 T-Phos	350.1 Ammonia	353.2 NO2-NO3	SM 4500 NH3	200.7 245.1 Metals	6010B BOD	310.6 Cr VI	TVS
DBOIE MB	~~4-24-13~~ 1205	1205		X			2	4	1				X	X	X	X	X	X	X	X	X	X	X	X
DBOIE MB	~~4-24-13~~ 1440	1205					2						X											

Special Instructions/Conditions of Receipt

*a-trichlorobenzene and p-isopropyltoluene [illegible]

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☒ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☒ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: [signature]	4-24-13	1430	1. Received By		
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments: ROD - ASAP TAT in HNL, All other samples to Denver TA // Both listed are same sample but D+G collected first

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: DB01E-WGSL

Site No.: 995 Sample Point: DB01E (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or N

Filter Device: Y or N 0.45 µ or ____ µ (circle or fill in)

Purging Device ____ A- Submersible Pump B-Peristaltic Pump C-QED Bladder Pump D-Bailer E-Piston Pump F-Dipper/Bottle

Sampling Device ____

X-Other: ____

Filter Type: ____ A-In-line Disposable B-Pressure C-Vacuum X-Other ____

Sample Tube Type: ____ A-Teflon B-Stainless Steel C-PVC D-Polypropylene X-Other: ____

WELL DATA

Well Elevation (at TOC) ____ (ft/msl) Depth to Water (DTW) (from TOC) ____ (ft) Groundwater Elevation (site datum, from TOC) ____ (ft/msl)

Total Well Depth (from TOC) ____ (ft) Stick Up (from ground elevation) ____ (ft) Casing ID ____ (in) Casing Material ____

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by State/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
	1st	1st						
	2nd	2nd						
	3rd	3rd						
	4th	4th						
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: ____ Units ____
04 24 13	8.70						

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

FIELD COMMENTS

Sample Appearance: cloudy Odor: none Color: slight brown Other: ____

Weather Conditions (required daily, or as conditions change): Direction/Speed: calm Outlook: cloud Precipitation: Y or N

Specific Comments (including purge/well volume calculations if required):

pH Meter: YSI 10A, SN: JCW754 calibrated with 4-7-10 buffer solutions at 0935.

Collect Sample @ 1140 (oil + Grease - Grab
1205 (all other) - composite

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
4/24/13	Mark Bigelow	[signature]	AECOM

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

TAL-8029WM (0108)

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
Waste Management/AECOM	Mark Hofferbert	4-24-13	168564

Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page
1001 Bishop St., Suite 1600	808-356-5317 F: 808-523-8950		4 of 4

City	State	Zip Code	Site Contact	Lab Contact
Honolulu	HI	96813	Justin Loftig	Betsy Sara

Project Name and Location (State)	Carrier/Waybill Number
WGSL Stormwater	

Contract/Purchase Order/Quote No.: 60287037.02

Analysis (Attach list if more space is needed)

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		1664 Oil & Grease	SM 2540D TSS	625 SVOCs*	410.4 COD	365.1 T. Phos	350.1 Ammonia	353.2 NO_2-NO_3	SM 4500 NT. Nitrogen	200.7 24S.1 Metals**	SM5210B BOD	218.6 Cr VI	TKN	Special Instructions/ Conditions of Receipt
DB01E	1205			X			2	4	1						X	X	X	X	X	X	X	X	X	X	X	X	*a-terpineol, benzoic acid, p-cresol, pentachlorophenol, phenol
DB01E	1140						2								X												
																											**As, Cd, Fe, Pb, Hg, Se, Ag, Zn

MB

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☒ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☒ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: Mark Hofferbert	4-24-13	1430	1. Received By: Kristie Reilly Kristie 1-2°C intact wet ice	4/24/13	14:30
2. Relinquished By: Kristie	4/25/13	11:20	2. Received By: [signature]	4/27/13	0930
3. Relinquished By			3. Received By		

Comments: BOD - ASAP TAT in HNL, All other samples To Denver TA // Both listed are same sample but O+G collected first

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: DB01E - WGSL

Site No.: 995 Sample Point: DB01E (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment . . . Dedicated: Y or N

Purging Device ____ A-Submersible Pump B-Peristaltic Pump C-QED Bladder Pump D-Bailer E-Piston Pump F-Dipper/Bottle

Sampling Device ____

X-Other: ____

Filter Device: Y or N 0.45 µ or ____ µ (circle or fill in)

Filter Type: ____ A-In-line Disposable B-Pressure C-Vacuum X-Other ____

Sample Tube Type: ____ A-Teflon B-Stainless Steel C-PVC D-Polypropylene X-Other: ____

WELL DATA

Well Elevation (at TOC) ____ (ft/msl)

Depth to Water (DTW) (from TOC) ____ (ft)

Groundwater Elevation (site datum, from TOC) ____ (ft/msl)

Total Well Depth (from TOC) ____ (ft)

Stick Up (from ground elevation) ____ (ft)

Casing ID ____ (in)

Casing Material ____

Note: Total Well Depth, Stick Up, Casing Id. etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm@25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
	1st	1st	1st					
	2nd	2nd	2nd					
	3rd	3rd	3rd					
	4th	4th	4th					
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site.* ***If more fields above are needed, use separate sheet or form.***

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: ____ Units ____
04 24 13	7.81						

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

Sample Appearance: Cloudy Odor: none Color: slight brown Other: ____

Weather Conditions (required daily, or as conditions change): Direction/Speed: calm Outlook: clear Precipitation: Y or N

Specific Comments (including purge/well volume calculations if required):

FIELD COMMENTS

Collect Sample @ 1140 (oil + Grease) - Grab
1205 (All others) - Aliquot

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
4/24/13	Lauren Molina	[signature]	AECOM

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

TAL-8029WM (0108)

Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-41536-1

Login Number: 41536

List Source: TestAmerica Denver

List Number: 1

Creator: Broander, Laura

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	False	Refer to job narrative for details
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	N/A	Shipped from Hawaii
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-41536-1

Login Number: 41536
List Number: 1
Creator: King, Ronald

List Source: TestAmerica Irvine
List Creation: 04/30/13 02:10 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Job Number: 280-47997-1

Job Description: 995|Waimanalo Gulch LF

For:
Waste Management
Waimanalo Gulch Landfill
92-460 Farrington Highway
Kapolei, HI 96707

Attention: Mr. Justin Lottig

Approved for release.
Betsy A Sara
Project Manager II
11/6/2013 9:42 AM

Betsy A Sara, Project Manager II
4955 Yarrow Street, Arvada, CO, 80002
(303)736-0189
betsy.sara@testamericainc.com
11/06/2013

cc: Mr. Mark Hofferbert
Ms. Margie Thach

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is E87667.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

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CASE NARRATIVE

Client: Waste Management

Project: 995|Waimanalo Gulch LF

Report Number: 280-47997-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

This report may include reporting limits (RLs) less than TestAmerica's standard reporting limit. The reported sample results and associated reporting limits are being used specifically to meet the needs of this project. Note that data are not normally reported to these levels without qualification because they are inherently less reliable and potentially less defensible than required by the latest industry standards.

Sample Receiving

The sample was received on 10/17/2013; the sample arrived in good condition and on ice. The temperatures of the cooler at receipt were 1.4º C and 2.6º C.

Holding Times

Method 218.6 requires samples to be preserved to a pH in the range of 9.3-9.7. The sample DB01E was received with insufficient preservation at a pH of 8.7. The sample was preserved to the appropriate pH in the laboratory and data was flagged with H qualifier.

All other holding times were met.

Method Blanks

Total Phosphorus Method 365.1 was detected in the Method Blank below the project established reporting limit. No corrective action is taken for any values in Method Blanks that are below the requested reporting limits. The Method Blank data are included at the end of this report.

All other Method Blanks were within established control limits.

Laboratory Control Samples (LCS)

All Laboratory Control Samples were within established control limits.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD)

The Matrix Spike and Matrix Spike Duplicate performed on a sample from another client exhibited a recovery outside control limits for Benzidine Method 625. Because the corresponding Laboratory Control Sample and the Method Blank sample were within control limits, this anomaly may be due to matrix interference and no corrective action was taken.

The Matrix Spikes and Matrix Spike Duplicates performed on samples from other clients exhibited recoveries outside control limits for Total Arsenic Method 200.7, HEM Method 1664A and Nitrate+Nitrite Method 353.2. Because the corresponding Laboratory Control Samples and the Method Blank samples were within control limits, these anomalies may be due to matrix interference and no corrective action was taken.

The percent recoveries and/or the relative percent difference of the MS/MSD performed on a sample from another client were outside control limits for Total Iron Method 200.7 because the sample concentration was greater than four times the spike amount.

Sample DB01E was selected to fulfill the laboratory batch quality control requirements for Method 351.2. Analysis of the laboratory generated MS/MSD for this sample exhibited recoveries of Total Kjeldahl Nitrogen (TKN) below the lower control limit indicating the possible presence of a matrix interference.

The percent recoveries and/or the relative percent difference of the MS/MSD performed on sample DB01E were outside control limits for Total Phosphorus Method 365.1 because the sample concentration was greater than four times the spike amount.

All other MS and MSD samples were within established control limits.

Metals

The Method 200.7 initial calibration verification (ICV) for analytical batch 197097 recovered above the upper control criteria for Total Arsenic. The associated sample was non-detect for Total Arsenic, therefore, the data have been reported.

General Comments

For samples requiring analysis at a dilution, the dilution factor has been multiplied by the Method Detection Limit (MDL) for each analyte and evaluated versus the project-specific reporting limit (PSRL). If the obtained value is below the PSRL, then the PSRL is preserved as the reporting limit for the diluted result, otherwise, the obtained value becomes the reporting limit. This is done in order to maintain the PSRL to meet permit requirements at the request of the client and to report the lowest possible RL for each analyte.

The analysis for Oil/Grease Method 1664A was performed by TestAmerica Buffalo. Their address and phone number are:
TestAmerica Buffalo
10 Hazelwood Drive, Suite 106
Amherst, NY 14228
716-691-2600

The analysis for Biochemical Oxygen Demand (BOD) was performed at TestAmerica's Honolulu facility.
TestAmerica Honolulu
99-193 Aiea Heights Drive
Suite 121
Aiea, HI 96701
Phone: 808.486.5227

The analysis for Hexavalent Chromium was performed at TestAmerica's Irvine facility.
TestAmerica Irvine
17461 Derian Avenue
Suite 100
Irvine, CA 92614
Phone: 949.261.1022

EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-47997-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
280-47997-1	**DB01E**					
Mercury		0.00012	J	0.00020	mg/L	245.1
Field pH		8.69			SU	Field Sampling
HEM		4.5	J	5.0	mg/L	1664A
Ammonia		0.24		0.10	mg/L	350.1
Nitrogen, Kjeldahl		5.5		0.50	mg/L	351.2
Nitrate Nitrite as N		4.0		0.10	mg/L	353.2
Phosphorus, Total		0.31	B	0.050	mg/L	365.1
Chemical Oxygen Demand		86		41	mg/L	410.4
Total Suspended Solids		11000		28	mg/L	SM 2540D
Nitrogen, Total		9.5		0.10	mg/L	Total Nitrogen
Dissolved						
Chromium, hexavalent		1.6	H	1.0	ug/L	218.6
Total Recoverable						
Cadmium		0.0014	J	0.0050	mg/L	200.7 Rev 4.4
Iron		94		0.10	mg/L	200.7 Rev 4.4
Lead		0.029		0.0090	mg/L	200.7 Rev 4.4
Zinc		0.24		0.020	mg/L	200.7 Rev 4.4

METHOD SUMMARY

Client: Waste Management

Job Number: 280-47997-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Semivolatile Organic Compounds (GC/MS)	TAL DEN	40CFR136A 625	
Liquid-Liquid Extraction	TAL DEN		40CFR136A 625
Metals (ICP)	TAL DEN	EPA 200.7 Rev 4.4	
Preparation, Total Recoverable Metals	TAL DEN		EPA 200.7
Mercury (CVAA)	TAL DEN	EPA 245.1	
Preparation, Mercury	TAL DEN		EPA 245.1
Nitrogen, Ammonia	TAL DEN	MCAWW 350.1	
Nitrogen, Total Kjeldahl	TAL DEN	MCAWW 351.2	
Nitrogen, Total Kjeldahl	TAL DEN		MCAWW 351.2
Nitrogen, Nitrate-Nitrite	TAL DEN	MCAWW 353.2	
Phosphorus, Total	TAL DEN	EPA 365.1	
Phosphorus, Total	TAL DEN		MCAWW 365.2/365.3/365
COD	TAL DEN	MCAWW 410.4	
Solids, Total Suspended (TSS)	TAL DEN	SM SM 2540D	
Nitrogen, Total	TAL DEN	EPA Total Nitrogen	
Field Sampling	TAL DEN	EPA Field Sampling	
HEM and SGT-HEM	TAL BUF	1664A 1664A	
HEM and SGT-HEM (SPE)	TAL BUF		1664A 1664A
General Sub Contract Method	TAL HON	Subcontract	
Chromium, Hexavalent (Ion Chromatography)	TAL IRV	EPA 218.6	
Sample Filtration, Field			FIELD_FLTRD

Lab References:

TAL BUF = TestAmerica Buffalo

TAL DEN = TestAmerica Denver

TAL HON = TestAmerica Honolulu

TAL IRV = TestAmerica Irvine

Method References:

1664A = EPA-821-98-002

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

METHOD / ANALYST SUMMARY

Client: Waste Management

Job Number: 280-47997-1

Method	Analyst	Analyst ID
40CFR136A 625	Hoffman, Michael G	MGH
EPA 200.7 Rev 4.4	Harre, John K	JKH
EPA 245.1	Mooney, Joseph C	JM
EPA Field Sampling	Field, Sampler	FS
1664A 1664A	Leader, Michael D	MDL
MCAWW 350.1	Elkin, David M	DME
MCAWW 351.2	Graham, Shane M	SMG
MCAWW 353.2	Ayala, Delaina V	DVA
EPA 365.1	Schwemin, Andrew J	AJS
MCAWW 410.4	Bandy, Darlene F	DFB
SM SM 2540D	Neeley, Beth A	BAN
EPA Total Nitrogen	Sullivan, Roxanne K	RKS
EPA 218.6	Cruz, Nallely	NC

SAMPLE SUMMARY

Client: Waste Management

Job Number: 280-47997-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-47997-1	DB01E	Water	10/14/2013 1429	10/17/2013 0900

SAMPLE RESULTS

Client: Waste Management

Job Number: 280-47997-1

Client Sample ID: **DB01E**

Lab Sample ID: 280-47997-1

Client Matrix: Water

Date Sampled: 10/14/2013 1429

Date Received: 10/17/2013 0900

625 Semivolatile Organic Compounds (GC/MS)

Analysis Method:	625	Analysis Batch:	280-197377	Instrument ID:	SMS_Y
Prep Method:	625	Prep Batch:	280-196449	Lab File ID:	Y7141.D
Dilution:	1.0			Initial Weight/Volume:	1042.8 mL
Analysis Date:	10/24/2013 0025			Final Weight/Volume:	1000 uL
Prep Date:	10/17/2013 1450			Injection Volume:	0.5 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Alpha-Terpineol	ND		0.0019	0.010
Benzoic acid	ND		0.0096	0.050
p-Cresol	ND		0.00024	0.010
Pentachlorophenol	ND		0.019	0.060
Phenol	ND		0.0019	0.010

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	87		50 - 120
2-Fluorobiphenyl	88		36 - 120
2-Fluorophenol	87		30 - 120
Nitrobenzene-d5	95		45 - 120
Phenol-d5	94		36 - 120
Terphenyl-d14	65		41 - 120

Client: Waste Management

Job Number: 280-47997-1

Client Sample ID: **DB01E**

Lab Sample ID: 280-47997-1

Client Matrix: Water

Date Sampled: 10/14/2013 1429

Date Received: 10/17/2013 0900

218.6 Chromium, Hexavalent (Ion Chromatography)-Dissolved

Analysis Method:	218.6	Analysis Batch:	440-140708	Instrument ID:	IC-20
	N/A	Prep Batch:	N/A	Lab File ID:	Info 2_TAIIRVIC20_Hexa
Dilution:	1.0			Initial Weight/Volume:	10 mL
Analysis Date:	10/29/2013 1717			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1000 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chromium, hexavalent	1.6	H	0.25	1.0

Client: Waste Management

Job Number: 280-47997-1

Client Sample ID: **DB01E**

Lab Sample ID: 280-47997-1

Client Matrix: Water

Date Sampled: 10/14/2013 1429

Date Received: 10/17/2013 0900

200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	280-197097	Instrument ID:	MT_025
Prep Method:	200.7	Prep Batch:	280-196539	Lab File ID:	25A3102113.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	10/21/2013 1754			Final Weight/Volume:	50 mL
Prep Date:	10/18/2013 1230				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Arsenic	ND	^	0.0044	0.015
Cadmium	0.0014	J	0.00045	0.0050
Iron	94		0.022	0.10
Lead	0.029		0.0026	0.0090
Selenium	ND		0.0049	0.015
Zinc	0.24		0.0045	0.020
Silver	ND		0.00093	0.010

245.1 Mercury (CVAA)

Analysis Method:	245.1	Analysis Batch:	280-197376	Instrument ID:	MT_034
Prep Method:	245.1	Prep Batch:	280-196510	Lab File ID:	131022taa.txt
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	10/22/2013 1259			Final Weight/Volume:	30 mL
Prep Date:	10/22/2013 0930				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Mercury	0.00012	J	0.000027	0.00020

General Chemistry

Client Sample ID: **DB01E**

Lab Sample ID: 280-47997-1 Date Sampled: 10/14/2013 1429
Client Matrix: Water Date Received: 10/17/2013 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
HEM	4.5	J	mg/L	1.5	5.0	1.0	1664A
Analysis Batch: 480-147350	Analysis Date: 10/24/2013 1539						
Prep Batch: 480-147342	Prep Date: 10/24/2013 0800						
Ammonia	0.24		mg/L	0.022	0.10	1.0	350.1
Analysis Batch: 280-198533	Analysis Date: 10/30/2013 1226						
Nitrogen, Kjeldahl	5.5		mg/L	0.18	0.50	1.0	351.2
Analysis Batch: 280-197411	Analysis Date: 10/23/2013 1253						
Prep Batch: 280-197210	Prep Date: 10/22/2013 1418						
Nitrate Nitrite as N	4.0		mg/L	0.019	0.10	1.0	353.2
Analysis Batch: 280-197962	Analysis Date: 10/26/2013 1504						
Phosphorus, Total	0.31	B	mg/L	0.050	0.050	10	365.1
Analysis Batch: 280-196799	Analysis Date: 10/19/2013 1112						
Prep Batch: 280-196719	Prep Date: 10/18/2013 1452						
Chemical Oxygen Demand	86		mg/L	41	41	10	410.4
Analysis Batch: 280-198188	Analysis Date: 10/28/2013 1836						
Total Suspended Solids	11000		mg/L	28	28	1.0	SM 2540D
Analysis Batch: 280-196898	Analysis Date: 10/21/2013 0907						
Nitrogen, Total	9.5		mg/L	0.042	0.10	1.0	Total Nitrogen
Analysis Batch: 280-198675	Analysis Date: 10/31/2013 1026						

Field Service / Mobile Lab

Client Sample ID: **DB01E**

Lab Sample ID: 280-47997-1

Client Matrix: Water

Date Sampled: 10/14/2013 1429

Date Received: 10/17/2013 0900

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed Date Prepared
Field pH	8.69		SU	1.0	Field Sampling	280-196501	10/14/2013 1429

DATA REPORTING QUALIFIERS

Client: Waste Management

Job Number: 280-47997-1

Lab Section	Qualifier	Description
GC/MS Semi VOA		
	F	MS/MSD Recovery or RPD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
HPLC/IC		
	H	Sample was prepped or analyzed beyond the specified holding time
Metals		
	^	Instrument related QC exceeds the control limits
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	F	MS/MSD Recovery or RPD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
General Chemistry		
	B	Compound was found in the blank and sample.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	F	MS/MSD Recovery or RPD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: Waste Management

Job Number: 280-47997-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 280-196449					
LCS 280-196449/2-A	Lab Control Sample	T	Water	625	
MB 280-196449/1-A	Method Blank	T	Water	625	
280-47897-I-5-A DU	Duplicate	T	Water	625	
280-47897-E-5-A MS	Matrix Spike	T	Water	625	
280-47997-1	DB01E	T	Water	625	
Analysis Batch:280-197377					
LCS 280-196449/2-A	Lab Control Sample	T	Water	625	280-196449
MB 280-196449/1-A	Method Blank	T	Water	625	280-196449
280-47897-I-5-A DU	Duplicate	T	Water	625	280-196449
280-47897-E-5-A MS	Matrix Spike	T	Water	625	280-196449
280-47997-1	DB01E	T	Water	625	280-196449

Report Basis

T = Total

Client: Waste Management

Job Number: 280-47997-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-196510					
LCS 280-196510/2-A	Lab Control Sample	T	Water	245.1	
MB 280-196510/1-A	Method Blank	T	Water	245.1	
280-47970-B-1-C MS	Matrix Spike	T	Water	245.1	
280-47970-B-1-D MSD	Matrix Spike Duplicate	T	Water	245.1	
280-47997-1	DB01E	T	Water	245.1	
Prep Batch: 280-196539					
LCS 280-196539/2-A	Lab Control Sample	R	Water	200.7	
MB 280-196539/1-A	Method Blank	R	Water	200.7	
280-47997-1	DB01E	R	Water	200.7	
280-48010-A-1-B MS	Matrix Spike	R	Water	200.7	
280-48010-A-1-C MSD	Matrix Spike Duplicate	R	Water	200.7	
Analysis Batch:280-197097					
LCS 280-196539/2-A	Lab Control Sample	R	Water	200.7 Rev 4.4	280-196539
MB 280-196539/1-A	Method Blank	R	Water	200.7 Rev 4.4	280-196539
280-47997-1	DB01E	R	Water	200.7 Rev 4.4	280-196539
280-48010-A-1-B MS	Matrix Spike	R	Water	200.7 Rev 4.4	280-196539
280-48010-A-1-C MSD	Matrix Spike Duplicate	R	Water	200.7 Rev 4.4	280-196539
Analysis Batch:280-197376					
LCS 280-196510/2-A	Lab Control Sample	T	Water	245.1	280-196510
MB 280-196510/1-A	Method Blank	T	Water	245.1	280-196510
280-47970-B-1-C MS	Matrix Spike	T	Water	245.1	280-196510
280-47970-B-1-D MSD	Matrix Spike Duplicate	T	Water	245.1	280-196510
280-47997-1	DB01E	T	Water	245.1	280-196510

Report Basis

R = Total Recoverable

T = Total

Field Service / Mobile Lab

Analysis Batch:280-196501					
280-47997-1	DB01E	T	Water	Field Sampling	

Report Basis

T = Total

Client: Waste Management

Job Number: 280-47997-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Prep Batch: 480-147342					
LCS 480-147342/2-A	Lab Control Sample	T	Water	1664A	
MB 480-147342/1-A	Method Blank	T	Water	1664A	
280-47997-1	DB01E	T	Water	1664A	
480-48115-C-3-A MS	Matrix Spike	T	Water	1664A	
Analysis Batch:480-147350					
LCS 480-147342/2-A	Lab Control Sample	T	Water	1664A	480-147342
MB 480-147342/1-A	Method Blank	T	Water	1664A	480-147342
280-47997-1	DB01E	T	Water	1664A	480-147342
480-48115-C-3-A MS	Matrix Spike	T	Water	1664A	480-147342
Prep Batch: 280-196719					
LCS 280-196719/3-A	Lab Control Sample	T	Water	365.2/365.3/365	
LCSD 280-196719/4-A	Lab Control Sample Duplicate	T	Water	365.2/365.3/365	
MB 280-196719/5-A	Method Blank	T	Water	365.2/365.3/365	
280-47997-E-1-B MSMS	Matrix Spike	T	Water	365.2/365.3/365	
280-47997-E-1-C MSDMSD	Matrix Spike Duplicate	T	Water	365.2/365.3/365	
280-47997-1	DB01E	T	Water	365.2/365.3/365	
Analysis Batch:280-196799					
LCS 280-196719/3-A	Lab Control Sample	T	Water	365.1	280-196719
LCSD 280-196719/4-A	Lab Control Sample Duplicate	T	Water	365.1	280-196719
MB 280-196719/5-A	Method Blank	T	Water	365.1	280-196719
280-47997-E-1-B MSMS	Matrix Spike	T	Water	365.1	280-196719
280-47997-E-1-C MSDMSD	Matrix Spike Duplicate	T	Water	365.1	280-196719
280-47997-1	DB01E	T	Water	365.1	280-196719
Analysis Batch:280-196898					
LCS 280-196898/2	Lab Control Sample	T	Water	SM 2540D	
LCSD 280-196898/3	Lab Control Sample Duplicate	T	Water	SM 2540D	
MB 280-196898/1	Method Blank	T	Water	SM 2540D	
280-47898-A-2 DU	Duplicate	T	Water	SM 2540D	
280-47997-1	DB01E	T	Water	SM 2540D	
Prep Batch: 280-197210					
LCS 280-197210/2-A	Lab Control Sample	T	Water	351.2	
LCSD 280-197210/3-A	Lab Control Sample Duplicate	T	Water	351.2	
MB 280-197210/1-A	Method Blank	T	Water	351.2	
280-47997-1	DB01E	T	Water	351.2	
280-47997-1MS	Matrix Spike	T	Water	351.2	
280-47997-1MSD	Matrix Spike Duplicate	T	Water	351.2	

Client: Waste Management

Job Number: 280-47997-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-197411					
LCS 280-197210/2-A	Lab Control Sample	T	Water	351.2	280-197210
LCSD 280-197210/3-A	Lab Control Sample Duplicate	T	Water	351.2	280-197210
MB 280-197210/1-A	Method Blank	T	Water	351.2	280-197210
280-47997-1	DB01E	T	Water	351.2	280-197210
280-47997-1MS	Matrix Spike	T	Water	351.2	280-197210
280-47997-1MSD	Matrix Spike Duplicate	T	Water	351.2	280-197210
Analysis Batch:280-197962					
LCS 280-197962/101	Lab Control Sample	T	Water	353.2	
LCSD 280-197962/102	Lab Control Sample Duplicate	T	Water	353.2	
MB 280-197962/100	Method Blank	T	Water	353.2	
280-47997-1	DB01E	T	Water	353.2	
280-48007-G-1 MS	Matrix Spike	T	Water	353.2	
280-48007-G-1 MSD	Matrix Spike Duplicate	T	Water	353.2	
Analysis Batch:280-198188					
LCS 280-198188/3	Lab Control Sample	T	Water	410.4	
LCSD 280-198188/4	Lab Control Sample Duplicate	T	Water	410.4	
MB 280-198188/5	Method Blank	T	Water	410.4	
280-47997-1	DB01E	T	Water	410.4	
280-47998-D-1 MS	Matrix Spike	T	Water	410.4	
280-47998-D-1 MSD	Matrix Spike Duplicate	T	Water	410.4	
Analysis Batch:280-198533					
LCS 280-198533/19	Lab Control Sample	T	Water	350.1	
LCS 280-198533/58	Lab Control Sample	T	Water	350.1	
LCSD 280-198533/20	Lab Control Sample Duplicate	T	Water	350.1	
LCSD 280-198533/59	Lab Control Sample Duplicate	T	Water	350.1	
MB 280-198533/21	Method Blank	T	Water	350.1	
MB 280-198533/60	Method Blank	T	Water	350.1	
280-47997-1	DB01E	T	Water	350.1	
280-48145-E-1 MS	Matrix Spike	T	Water	350.1	
280-48145-E-1 MSD	Matrix Spike Duplicate	T	Water	350.1	
Analysis Batch:280-198675					
MB 280-198675/1	Method Blank	T	Water	Total Nitrogen	
280-47997-1	DB01E	T	Water	Total Nitrogen	

Report Basis

T = Total

Client: Waste Management

Job Number: 280-47997-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
HPLC/IC					
Analysis Batch:440-140708					
LCS 440-140708/2	Lab Control Sample	T	Water	218.6	
MB 440-140708/3	Method Blank	T	Water	218.6	
280-47997-1	DB01E	D	Water	218.6	
440-60223-A-2 MS	Matrix Spike	D	Water	218.6	
440-60223-A-2 MSD	Matrix Spike Duplicate	D	Water	218.6	

Report Basis

D = Dissolved

T = Total

Client: Waste Management

Job Number: 280-47997-1

Surrogate Recovery Report

625 Semivolatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	TBP %Rec	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
280-47997-1	DB01E	87	88	87	95	94	65
MB 280-196449/1-A		82	87	92	95	96	100
LCS 280-196449/2-A		93	90	91	96	96	96
280-47897-E-5-A MS		92	97	85	100	96	104
280-47897-I-5-A DU		92	89	87	93	92	91

Surrogate	Acceptance Limits
TBP = 2,4,6-Tribromophenol	50-120
FBP = 2-Fluorobiphenyl	36-120
2FP = 2-Fluorophenol	30-120
NBZ = Nitrobenzene-d5	45-120
PHL = Phenol-d5	36-120
TPH = Terphenyl-d14	41-120

Client: Waste Management

Job Number: 280-47997-1

Method Blank - Batch: 280-196449

Method: 625
Preparation: 625

Lab Sample ID:	MB 280-196449/1-A	Analysis Batch:	280-197377	Instrument ID:	SMS_Y
Client Matrix:	Water	Prep Batch:	280-196449	Lab File ID:	Y7131.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	10/23/2013 1948	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	10/17/2013 1450			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Alpha-Terpineol	ND		0.0020	0.010
Benzoic acid	ND		0.010	0.050
p-Cresol	ND		0.00025	0.010
Pentachlorophenol	ND		0.020	0.060
Phenol	ND		0.0020	0.010

Surrogate	% Rec	Acceptance Limits
2,4,6-Tribromophenol	82	50 - 120
2-Fluorobiphenyl	87	36 - 120
2-Fluorophenol	92	30 - 120
Nitrobenzene-d5	95	45 - 120
Phenol-d5	96	36 - 120
Terphenyl-d14	100	41 - 120

Client: Waste Management

Job Number: 280-47997-1

Lab Control Sample - Batch: 280-196449

Method: 625
Preparation: 625

Lab Sample ID:	LCS 280-196449/2-A	Analysis Batch:	280-197377	Instrument ID:	SMS_Y
Client Matrix:	Water	Prep Batch:	280-196449	Lab File ID:	Y7117.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	10/23/2013 1322	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	10/17/2013 1450			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,2,4-Trichlorobenzene	0.0800	0.0583	73	44 - 120	
1,2-Dichlorobenzene	0.0800	0.0580	72	32 - 120	
1,3-Dichlorobenzene	0.0800	0.0550	69	23 - 120	
1,4-Dichlorobenzene	0.0800	0.0566	71	24 - 120	
2,2'-Oxybis(1-chloropropane)	0.0800	0.0791	99	37 - 120	
2,4,6-Trichlorophenol	0.0800	0.0686	86	51 - 120	
2,4-Dichlorophenol	0.0800	0.0680	85	46 - 120	
2,4-Dimethylphenol	0.0800	0.0495	62	44 - 119	
2,4-Dinitrophenol	0.160	0.146	91	20 - 121	
2,4-Dinitrotoluene	0.0800	0.0713	89	57 - 120	
2,6-Dinitrotoluene	0.0800	0.0691	86	56 - 120	
2-Chloronaphthalene	0.0800	0.0658	82	60 - 118	
2-Chlorophenol	0.0800	0.0700	87	34 - 120	
2-Methylphenol	0.0800	0.0697	87	38 - 120	
2-Nitrophenol	0.0800	0.0703	88	47 - 120	
3,3'-Dichlorobenzidine	0.0800	0.0383	48	18 - 120	J
4,6-Dinitro-2-methylphenol	0.160	0.159	99	40 - 120	
4-Bromophenyl phenyl ether	0.0800	0.0690	86	53 - 120	
4-Chloro-3-methylphenol	0.0800	0.0709	89	57 - 120	
4-Chlorophenyl phenyl ether	0.0800	0.0678	85	51 - 120	
4-Nitrophenol	0.160	0.140	87	53 - 120	
Acenaphthene	0.0800	0.0671	84	47 - 120	
Acenaphthylene	0.0800	0.0646	81	33 - 120	
Anthracene	0.0800	0.0695	87	52 - 120	
Benzidine	0.0800	ND	31	10 - 218	
Benzo[a]anthracene	0.0800	0.0704	88	54 - 120	
Benzo[a]pyrene	0.0800	0.0684	86	39 - 120	
Benzo[b]fluoranthene	0.0800	0.0705	88	51 - 120	
Benzo[g,h,i]perylene	0.0800	0.0718	90	48 - 120	
Benzo[k]fluoranthene	0.0800	0.0732	91	49 - 120	
Bis(2-chloroethoxy)methane	0.0800	0.0707	88	50 - 120	
Bis(2-chloroethyl)ether	0.0800	0.0768	96	35 - 120	
Bis(2-ethylhexyl) phthalate	0.0800	0.0708	89	56 - 120	
Butyl benzyl phthalate	0.0800	0.0694	87	53 - 120	
Chrysene	0.0800	0.0721	90	51 - 120	
Dibenz(a,h)anthracene	0.0800	0.0720	90	45 - 120	
Diethyl phthalate	0.0800	0.0706	88	59 - 114	
Dimethyl phthalate	0.0800	0.0710	89	58 - 112	
Di-n-butyl phthalate	0.0800	0.0716	89	57 - 118	
Di-n-octyl phthalate	0.0800	0.0715	89	56 - 120	
Fluoranthene	0.0800	0.0734	92	58 - 120	
Fluorene	0.0800	0.0691	86	59 - 120	
Hexachlorobenzene	0.0800	0.0683	85	53 - 120	
Hexachlorobutadiene	0.0800	0.0531	66	27 - 116	
Hexachlorocyclopentadiene	0.0800	0.0111	14	10 - 120	J
Hexachloroethane	0.0800	0.0531	66	40 - 113	

Client: Waste Management

Job Number: 280-47997-1

Lab Control Sample - Batch: 280-196449

Method: 625
Preparation: 625

Lab Sample ID:	LCS 280-196449/2-A	Analysis Batch:	280-197377	Instrument ID:	SMS_Y
Client Matrix:	Water	Prep Batch:	280-196449	Lab File ID:	Y7117.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	10/23/2013 1322	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	10/17/2013 1450			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Indeno[1,2,3-cd]pyrene	0.0800	0.0696	87	50 - 120	
Isophorone	0.0800	0.0698	87	50 - 120	
Naphthalene	0.0800	0.0671	84	37 - 120	
n-Decane	0.0800	0.0538	67	28 - 120	
Nitrobenzene	0.0800	0.0728	91	46 - 120	
N-Nitrosodimethylamine	0.0800	0.0720	90	37 - 120	
N-Nitrosodi-n-propylamine	0.0800	0.0731	91	50 - 120	
N-Nitrosodiphenylamine	0.0800	0.0694	87	46 - 203	
p-Cresol	0.0800	0.0708	89	42 - 120	
Pentachlorophenol	0.160	0.139	87	46 - 120	
Phenanthrene	0.0800	0.0723	90	54 - 120	
Phenol	0.0800	0.0730	91	37 - 112	
Pyrene	0.0800	0.0710	89	55 - 115	

Surrogate	% Rec	Acceptance Limits
2,4,6-Tribromophenol	93	50 - 120
2-Fluorobiphenyl	90	36 - 120
2-Fluorophenol	91	30 - 120
Nitrobenzene-d5	96	45 - 120
Phenol-d5	96	36 - 120
Terphenyl-d14	96	41 - 120

Client: Waste Management

Job Number: 280-47997-1

Matrix Spike - Batch: 280-196449

Method: 625
Preparation: 625

Lab Sample ID:	280-47897-E-5-A MS	Analysis Batch:	280-197377	Instrument ID:	SMS_Y
Client Matrix:	Water	Prep Batch:	280-196449	Lab File ID:	Y7140.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1022.2 mL
Analysis Date:	10/23/2013 2357	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	10/17/2013 1450			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
1,2,4-Trichlorobenzene	ND	0.0783	0.0631	81	44 - 120	
1,2-Dichlorobenzene	ND	0.0783	0.0596	76	32 - 120	
1,3-Dichlorobenzene	ND	0.0783	0.0569	73	23 - 120	
1,4-Dichlorobenzene	ND	0.0783	0.0584	75	24 - 120	
2,2'-Oxybis(1-chloropropane)	ND	0.0783	0.0796	102	37 - 120	
2,4,6-Trichlorophenol	ND	0.0783	0.0696	89	51 - 120	
2,4-Dichlorophenol	ND	0.0783	0.0710	91	46 - 120	
2,4-Dimethylphenol	ND	0.0783	0.0573	73	44 - 119	
2,4-Dinitrophenol	ND	0.157	0.124	79	20 - 121	
2,4-Dinitrotoluene	ND	0.0783	0.0753	96	57 - 120	
2,6-Dinitrotoluene	ND	0.0783	0.0743	95	56 - 120	
2-Chloronaphthalene	ND	0.0783	0.0704	90	60 - 118	
2-Chlorophenol	ND	0.0783	0.0686	88	34 - 120	
2-Methylphenol	ND	0.0783	0.0685	87	38 - 120	
2-Nitrophenol	ND	0.0783	0.0710	91	47 - 120	
3,3'-Dichlorobenzidine	ND	0.0783	0.0157	20	18 - 120	J
4,6-Dinitro-2-methylphenol	ND	0.157	0.144	92	40 - 120	
4-Bromophenyl phenyl ether	ND	0.0783	0.0749	96	53 - 120	
4-Chloro-3-methylphenol	ND	0.0783	0.0753	96	57 - 120	
4-Chlorophenyl phenyl ether	ND	0.0783	0.0743	95	51 - 120	
4-Nitrophenol	ND	0.157	0.145	92	53 - 120	
Acenaphthene	ND	0.0783	0.0713	91	47 - 120	
Acenaphthylene	ND	0.0783	0.0683	87	33 - 120	
Anthracene	ND	0.0783	0.0731	93	52 - 120	
Benzidine	ND	0.0783	ND	0	10 - 218	F
Benzo[a]anthracene	ND	0.0783	0.0748	96	54 - 120	
Benzo[a]pyrene	ND	0.0783	0.0727	93	39 - 120	
Benzo[b]fluoranthene	ND	0.0783	0.0752	96	51 - 120	
Benzo[g,h,i]perylene	ND	0.0783	0.0725	93	48 - 120	
Benzo[k]fluoranthene	ND	0.0783	0.0766	98	49 - 120	
Bis(2-chloroethoxy)methane	ND	0.0783	0.0745	95	50 - 120	
Bis(2-chloroethyl)ether	ND	0.0783	0.0789	101	35 - 120	
Bis(2-ethylhexyl) phthalate	ND	0.0783	0.0789	101	56 - 120	
Butyl benzyl phthalate	ND	0.0783	0.0768	98	53 - 120	
Chrysene	ND	0.0783	0.0746	95	51 - 120	
Dibenz(a,h)anthracene	ND	0.0783	0.0746	95	45 - 120	
Diethyl phthalate	ND	0.0783	0.0740	95	59 - 114	
Dimethyl phthalate	ND	0.0783	0.0741	95	58 - 112	
Di-n-butyl phthalate	ND	0.0783	0.0764	98	57 - 118	
Di-n-octyl phthalate	ND	0.0783	0.0791	101	56 - 120	

Client: Waste Management

Job Number: 280-47997-1

Matrix Spike - Batch: 280-196449

Method: 625
Preparation: 625

Lab Sample ID:	280-47897-E-5-A MS	Analysis Batch:	280-197377	Instrument ID:	SMS_Y
Client Matrix:	Water	Prep Batch:	280-196449	Lab File ID:	Y7140.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1022.2 mL
Analysis Date:	10/23/2013 2357	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	10/17/2013 1450			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Fluoranthene	ND	0.0783	0.0773	99	58 - 120	
Fluorene	ND	0.0783	0.0735	94	59 - 120	
Hexachlorobenzene	ND	0.0783	0.0726	93	53 - 120	
Hexachlorobutadiene	ND	0.0783	0.0563	72	27 - 116	
Hexachlorocyclopentadiene	ND	0.0783	0.0240	31	10 - 120	J
Hexachloroethane	ND	0.0783	0.0535	68	40 - 113	
Indeno[1,2,3-cd]pyrene	ND	0.0783	0.0717	92	50 - 120	
Isophorone	ND	0.0783	0.0738	94	50 - 120	
Naphthalene	ND	0.0783	0.0708	91	37 - 120	
n-Decane	ND	0.0783	0.0523	67	28 - 120	
Nitrobenzene	ND	0.0783	0.0766	98	46 - 120	
N-Nitrosodimethylamine	ND	0.0783	0.0713	91	37 - 120	
N-Nitrosodi-n-propylamine	ND	0.0783	0.0761	97	50 - 120	
N-Nitrosodiphenylamine	ND	0.0783	0.0596	76	46 - 203	
p-Cresol	ND	0.0783	0.0712	91	42 - 120	
Pentachlorophenol	ND	0.157	0.155	99	46 - 120	
Phenanthrene	ND	0.0783	0.0753	96	54 - 120	
Phenol	ND	0.0783	0.0713	91	37 - 112	
Pyrene	ND	0.0783	0.0768	98	55 - 115	

Surrogate	% Rec	Acceptance Limits
2,4,6-Tribromophenol	92	50 - 120
2-Fluorobiphenyl	97	36 - 120
2-Fluorophenol	85	30 - 120
Nitrobenzene-d5	100	45 - 120
Phenol-d5	96	36 - 120
Terphenyl-d14	104	41 - 120

Client: Waste Management

Job Number: 280-47997-1

Duplicate - Batch: 280-196449

Method: 625
Preparation: 625

Lab Sample ID:	280-47897-I-5-A DU	Analysis Batch:	280-197377	Instrument ID:	SMS_Y
Client Matrix:	Water	Prep Batch:	280-196449	Lab File ID:	Y7138.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1031 mL
Analysis Date:	10/23/2013 2302	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	10/17/2013 1450			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Alpha-Terpineol	ND	ND	NC		
Benzoic acid	ND	ND	NC		
p-Cresol	ND	ND	NC		
Pentachlorophenol	ND	ND	NC		
Phenol	ND	ND	NC		

Surrogate	% Rec	Acceptance Limits
2,4,6-Tribromophenol	92	50 - 120
2-Fluorobiphenyl	89	36 - 120
2-Fluorophenol	87	30 - 120
Nitrobenzene-d5	93	45 - 120
Phenol-d5	92	36 - 120
Terphenyl-d14	91	41 - 120

Client: Waste Management

Job Number: 280-47997-1

Method Blank - Batch: 440-140708

Method: 218.6
Preparation: N/A

Lab Sample ID:	MB 440-140708/3	Analysis Batch:	440-140708	Instrument ID:	IC-20
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Info 2_TAIIRVIC20_Hexav
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	10/29/2013 0545	Units:	ug/L	Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1000 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Chromium, hexavalent	ND		0.25	1.0

Lab Control Sample - Batch: 440-140708

Method: 218.6
Preparation: N/A

Lab Sample ID:	LCS 440-140708/2	Analysis Batch:	440-140708	Instrument ID:	IC-20
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Info 2_TAIIRVIC20_Hexav
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	10/29/2013 0532	Units:	ug/L	Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1000 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chromium, hexavalent	50.0	50.0	100	90 - 110	

Method Reporting Limit Check - Batch: 440-140708

Method: 218.6
Preparation: N/A

Lab Sample ID:	MRL 440-140708/4	Analysis Batch:	440-140708	Instrument ID:	IC-20
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Info 2_TAIIRVIC20_Hexav
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	10/29/2013 0558	Units:	ug/L	Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1000 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chromium, hexavalent	1.00	1.23	123	50 - 150	

Client: Waste Management

Job Number: 280-47997-1

Method Blank - Batch: 280-196539

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	MB 280-196539/1-A	Analysis Batch:	280-197097	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-196539	Lab File ID:	25A3102113.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	10/21/2013 1740	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	10/18/2013 1230				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Arsenic	ND	^	0.0044	0.015
Cadmium	ND		0.00045	0.0050
Iron	ND		0.022	0.10
Lead	ND		0.0026	0.0090
Selenium	ND		0.0049	0.015
Zinc	ND		0.0045	0.020
Silver	ND		0.00093	0.010

Lab Control Sample - Batch: 280-196539

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	LCS 280-196539/2-A	Analysis Batch:	280-197097	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-196539	Lab File ID:	25A3102113.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	10/21/2013 1742	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	10/18/2013 1230				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	1.00	1.09	109	88 - 110	^
Cadmium	0.100	0.108	108	88 - 111	
Iron	1.00	0.989	99	89 - 115	
Lead	0.500	0.504	101	89 - 110	
Selenium	2.00	2.08	104	85 - 112	
Zinc	0.500	0.502	100	85 - 111	
Silver	0.0500	0.0500	100	85 - 115	

Client: Waste Management

Job Number: 280-47997-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-196539

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-48010-A-1-B MS	Analysis Batch:	280-197097	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-196539	Lab File ID:	25A3102113.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	10/21/2013 1749			Final Weight/Volume:	50 mL
Prep Date:	10/18/2013 1230				
Leach Date:	N/A				

MSD Lab Sample ID:	280-48010-A-1-C MSD	Analysis Batch:	280-197097	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-196539	Lab File ID:	25A3102113.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	10/21/2013 1752			Final Weight/Volume:	50 mL
Prep Date:	10/18/2013 1230				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Arsenic	114	112	88 - 110	1	20	^ F	^ F
Cadmium	109	108	88 - 111	1	20		
Iron	57	49	89 - 115	1	20	4	4
Lead	96	95	89 - 110	1	20		
Selenium	108	107	85 - 112	1	20		
Zinc	97	96	85 - 111	1	20		
Silver	105	103	85 - 115	2	20		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-196539

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-48010-A-1-B MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	10/21/2013 1749		
Prep Date:	10/18/2013 1230		
Leach Date:	N/A		

MSD Lab Sample ID:	280-48010-A-1-C MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	10/21/2013 1752
Prep Date:	10/18/2013 1230
Leach Date:	N/A

	Sample		MS Spike	MSD Spike	MS		MSD	
Analyte	Result/Qual		Amount	Amount	Result/Qual		Result/Qual	
Arsenic	ND		1.00	1.00	1.14	^ F	1.12	^ F
Cadmium	0.0011	J	0.100	0.100	0.110		0.109	
Iron	9.3		1.00	1.00	9.91	4	9.84	4
Lead	ND		0.500	0.500	0.478		0.473	
Selenium	ND		2.00	2.00	2.17		2.14	
Zinc	0.035		0.500	0.500	0.520		0.515	
Silver	ND		0.0500	0.0500	0.0525		0.0516	

Client: Waste Management

Job Number: 280-47997-1

Method Blank - Batch: 280-196510

Method: 245.1
Preparation: 245.1

Lab Sample ID:	MB 280-196510/1-A	Analysis Batch:	280-197376	Instrument ID:	MT_034
Client Matrix:	Water	Prep Batch:	280-196510	Lab File ID:	131022taa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/22/2013 1241	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	10/22/2013 0930				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000027	0.00020

Lab Control Sample - Batch: 280-196510

Method: 245.1
Preparation: 245.1

Lab Sample ID:	LCS 280-196510/2-A	Analysis Batch:	280-197376	Instrument ID:	MT_034
Client Matrix:	Water	Prep Batch:	280-196510	Lab File ID:	131022taa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/22/2013 1243	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	10/22/2013 0930				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00512	102	90 - 110	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-196510

Method: 245.1
Preparation: 245.1

MS Lab Sample ID:	280-47970-B-1-C MS	Analysis Batch:	280-197376	Instrument ID:	MT_034
Client Matrix:	Water	Prep Batch:	280-196510	Lab File ID:	131022taa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/22/2013 1250			Final Weight/Volume:	30 mL
Prep Date:	10/22/2013 0930				
Leach Date:	N/A				

MSD Lab Sample ID:	280-47970-B-1-D MSD	Analysis Batch:	280-197376	Instrument ID:	MT_034
Client Matrix:	Water	Prep Batch:	280-196510	Lab File ID:	131022taa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/22/2013 1252			Final Weight/Volume:	30 mL
Prep Date:	10/22/2013 0930				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	101	100	80 - 120	0	10		

Client: Waste Management

Job Number: 280-47997-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-196510

Method: 245.1
Preparation: 245.1

MS Lab Sample ID:	280-47970-B-1-C MS	Units: mg/L	
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	10/22/2013 1250		
Prep Date:	10/22/2013 0930		
Leach Date:	N/A		

MSD Lab Sample ID:	280-47970-B-1-D MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	10/22/2013 1252
Prep Date:	10/22/2013 0930
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Mercury	ND	0.00500	0.00500	0.00503	0.00502

Client: Waste Management

Job Number: 280-47997-1

Method Blank - Batch: 480-147342

Method: 1664A
Preparation: 1664A

Lab Sample ID:	MB 480-147342/1-A	Analysis Batch:	480-147350	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	480-147342	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	10/24/2013 1539	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	10/24/2013 0800				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
HEM	ND		1.4	5.0

Lab Control Sample - Batch: 480-147342

Method: 1664A
Preparation: 1664A

Lab Sample ID:	LCS 480-147342/2-A	Analysis Batch:	480-147350	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	480-147342	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	10/24/2013 1539	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	10/24/2013 0800				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
HEM	40.0	32.1	80	78 - 114	

Matrix Spike - Batch: 480-147342

Method: 1664A
Preparation: 1664A

Lab Sample ID:	480-48115-C-3-A MS	Analysis Batch:	480-147350	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	480-147342	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	10/24/2013 1539	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	10/24/2013 0800				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
HEM	ND	20.0	31.3	157	78 - 114	F

Client: Waste Management

Job Number: 280-47997-1

Method Blank - Batch: 280-198533

Method: 350.1
Preparation: N/A

Lab Sample ID:	MB 280-198533/21	Analysis Batch:	280-198533	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\103013A.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	10/30/2013 1051	Units:	mg/L	Final Weight/Volume:	10 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Ammonia	ND		0.022	0.10

Method Blank - Batch: 280-198533

Method: 350.1
Preparation: N/A

Lab Sample ID:	MB 280-198533/60	Analysis Batch:	280-198533	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\103013A.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	10/30/2013 1222	Units:	mg/L	Final Weight/Volume:	10 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Ammonia	ND		0.022	0.10

Client: Waste Management

Job Number: 280-47997-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-198533

Method: 350.1
Preparation: N/A

LCS Lab Sample ID:	LCS 280-198533/19	Analysis Batch:	280-198533	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\103013A.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	10/30/2013 1046	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-198533/20	Analysis Batch:	280-198533	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\103013A.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	10/30/2013 1048	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Ammonia	100	100	90 - 110	0	10		

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-198533

Method: 350.1
Preparation: N/A

LCS Lab Sample ID:	LCS 280-198533/58	Analysis Batch:	280-198533	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\103013A.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	10/30/2013 1217	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-198533/59	Analysis Batch:	280-198533	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\103013A.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	10/30/2013 1219	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Ammonia	102	102	90 - 110	0	10		

Client: Waste Management

Job Number: 280-47997-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-198533

Method: 350.1
Preparation: N/A

LCS Lab Sample ID:	LCS 280-198533/19	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-198533/20
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/30/2013 1046			Analysis Date:	10/30/2013 1048
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Ammonia	2.50	2.50	2.49	2.49

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-198533

Method: 350.1
Preparation: N/A

LCS Lab Sample ID:	LCS 280-198533/58	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-198533/59
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/30/2013 1217			Analysis Date:	10/30/2013 1219
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Ammonia	2.50	2.50	2.54	2.54

Client: Waste Management

Job Number: 280-47997-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-198533

Method: 350.1
Preparation: N/A

MS Lab Sample ID:	280-48145-E-1 MS	Analysis Batch:	280-198533	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\103013A.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	10/30/2013 1149			Final Weight/Volume:	20 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-48145-E-1 MSD	Analysis Batch:	280-198533	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\103013A.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	10/30/2013 1151			Final Weight/Volume:	20 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Ammonia	105	106	90 - 110	1	10		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-198533

Method: 350.1
Preparation: N/A

MS Lab Sample ID:	280-48145-E-1 MS	Units: mg/L	
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	10/30/2013 1149		
Prep Date:	N/A		
Leach Date:	N/A		

MSD Lab Sample ID:	280-48145-E-1 MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	10/30/2013 1151
Prep Date:	N/A
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Ammonia	ND	1.00	1.00	1.05	1.06

Client: Waste Management

Job Number: 280-47997-1

Method Blank - Batch: 280-197210

Method: 351.2
Preparation: 351.2

Lab Sample ID:	MB 280-197210/1-A	Analysis Batch:	280-197411	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-197210	Lab File ID:	102413.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	10/23/2013 1252	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	10/22/2013 1418				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrogen, Kjeldahl	ND		0.18	0.50

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-197210

Method: 351.2
Preparation: 351.2

LCS Lab Sample ID:	LCS 280-197210/2-A	Analysis Batch:	280-197411	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-197210	Lab File ID:	102413.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	10/23/2013 1249	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	10/22/2013 1418				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-197210/3-A	Analysis Batch:	280-197411	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-197210	Lab File ID:	102413.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	10/23/2013 1251	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	10/22/2013 1418				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Nitrogen, Kjeldahl	94	95	90 - 110	1	25		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-197210

Method: 351.2
Preparation: 351.2

LCS Lab Sample ID:	LCS 280-197210/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-197210/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/23/2013 1249			Analysis Date:	10/23/2013 1251
Prep Date:	10/22/2013 1418			Prep Date:	10/22/2013 1418
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Nitrogen, Kjeldahl	6.00	6.00	5.64	5.68

Client: Waste Management

Job Number: 280-47997-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-197210

Method: 351.2
Preparation: 351.2

MS Lab Sample ID:	280-47997-1	Analysis Batch:	280-197411	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-197210	Lab File ID:	102413.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	10/23/2013 1254			Final Weight/Volume:	25 mL
Prep Date:	10/22/2013 1418				
Leach Date:	N/A				

MSD Lab Sample ID:	280-47997-1	Analysis Batch:	280-197411	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-197210	Lab File ID:	102413.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	10/23/2013 1259			Final Weight/Volume:	25 mL
Prep Date:	10/22/2013 1418				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Nitrogen, Kjeldahl	81	78	90 - 110	1	25	F	F

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-197210

Method: 351.2
Preparation: 351.2

MS Lab Sample ID:	280-47997-1	Units: mg/L	
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	10/23/2013 1254		
Prep Date:	10/22/2013 1418		
Leach Date:	N/A		

MSD Lab Sample ID:	280-47997-1
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	10/23/2013 1259
Prep Date:	10/22/2013 1418
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Nitrogen, Kjeldahl	5.5	3.00	3.00	7.89	F	7.80	F

Client: Waste Management

Job Number: 280-47997-1

Method Blank - Batch: 280-197962

Method: 353.2
Preparation: N/A

Lab Sample ID:	MB 280-197962/100	Analysis Batch:	280-197962	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1026NXNA.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	10/26/2013 1440	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrate Nitrite as N	ND		0.019	0.10

Method Reporting Limit Check - Batch: 280-197962

Method: 353.2
Preparation: N/A

Lab Sample ID:	MRL 280-197962/18	Analysis Batch:	280-197962	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1026NXNA.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/26/2013 1236	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate Nitrite as N	0.100	0.124	124	50 - 150	

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-197962

Method: 353.2
Preparation: N/A

LCS Lab Sample ID:	LCS 280-197962/101	Analysis Batch:	280-197962	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1026NXNA.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/26/2013 1441	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-197962/102	Analysis Batch:	280-197962	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1026NXNA.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/26/2013 1443	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Nitrate Nitrite as N	94	95	90 - 110	2	10		

Client: Waste Management

Job Number: 280-47997-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-197962

Method: 353.2
Preparation: N/A

LCS Lab Sample ID:	LCS 280-197962/101	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-197962/102
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/26/2013 1441			Analysis Date:	10/26/2013 1443
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Nitrate Nitrite as N	5.00	5.00	4.70	4.77

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-197962

Method: 353.2
Preparation: N/A

MS Lab Sample ID:	280-48007-G-1 MS	Analysis Batch:	280-197962	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1026NXNA.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/26/2013 1455			Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-48007-G-1 MSD	Analysis Batch:	280-197962	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1026NXNA.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/26/2013 1456			Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Nitrate Nitrite as N	80	76	90 - 110	5	10	F	F

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-197962

Method: 353.2
Preparation: N/A

MS Lab Sample ID:	280-48007-G-1 MS	Units:	mg/L	MSD Lab Sample ID:	280-48007-G-1 MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/26/2013 1455			Analysis Date:	10/26/2013 1456
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Nitrate Nitrite as N	0.22	4.00	4.00	3.41	F	3.24	F

Client: Waste Management

Job Number: 280-47997-1

Method Blank - Batch: 280-196719

Method: 365.1
Preparation: 365.2/365.3/365

Lab Sample ID:	MB 280-196719/5-A	Analysis Batch:	280-196799	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-196719	Lab File ID:	101913TPHOS.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	10/19/2013 0926	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	10/18/2013 1452				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Phosphorus, Total	0.00662	J	0.0050	0.050

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-196719

Method: 365.1
Preparation: 365.2/365.3/365

LCS Lab Sample ID:	LCS 280-196719/3-A	Analysis Batch:	280-196799	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-196719	Lab File ID:	101913TPHOS.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	10/19/2013 0926	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	10/18/2013 1452				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-196719/4-A	Analysis Batch:	280-196799	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-196719	Lab File ID:	101913TPHOS.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	10/19/2013 0926	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	10/18/2013 1452				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Phosphorus, Total	104	107	90 - 110	3	10		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-196719

Method: 365.1
Preparation: 365.2/365.3/365

LCS Lab Sample ID:	LCS 280-196719/3-A	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	10/19/2013 0926		
Prep Date:	10/18/2013 1452		
Leach Date:	N/A		

LCSD Lab Sample ID:	LCSD 280-196719/4-A
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	10/19/2013 0926
Prep Date:	10/18/2013 1452
Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Phosphorus, Total	0.500	0.500	0.518	0.535

Client: Waste Management

Job Number: 280-47997-1

Matrix Spike - Batch: 280-196719

Method: 365.1
Preparation: 365.2/365.3/365

Lab Sample ID:	280-47997-E-1-B MS	Analysis Batch:	280-196799	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-196719	Lab File ID:	101913TPHOS.xls
Dilution:	10	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	10/19/2013 1112	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	10/18/2013 1452				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Phosphorus, Total	10	0.500	0.402	-1987	90 - 110	4

Client: Waste Management

Job Number: 280-47997-1

Method Blank - Batch: 280-198188

Method: 410.4
Preparation: N/A

Lab Sample ID:	MB 280-198188/5	Analysis Batch:	280-198188	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2 mL
Analysis Date:	10/28/2013 1836	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Chemical Oxygen Demand	ND		4.1	20

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-198188

Method: 410.4
Preparation: N/A

LCS Lab Sample ID:	LCS 280-198188/3	Analysis Batch:	280-198188	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2013 1836	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-198188/4	Analysis Batch:	280-198188	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2013 1836	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Chemical Oxygen Demand	101	99	90 - 110	2	11		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-198188

Method: 410.4
Preparation: N/A

LCS Lab Sample ID:	LCS 280-198188/3	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-198188/4
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/28/2013 1836			Analysis Date:	10/28/2013 1836
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Chemical Oxygen Demand	100	100	101	99.3

Client: Waste Management

Job Number: 280-47997-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-198188

Method: 410.4
Preparation: N/A

MS Lab Sample ID:	280-47998-D-1 MS	Analysis Batch:	280-198188	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2013 1836			Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-47998-D-1 MSD	Analysis Batch:	280-198188	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2013 1836			Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Chemical Oxygen Demand	95	91	90 - 110	5	11		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-198188

Method: 410.4
Preparation: N/A

MS Lab Sample ID:	280-47998-D-1 MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	10/28/2013 1836		
Prep Date:	N/A		
Leach Date:	N/A		

MSD Lab Sample ID:	280-47998-D-1 MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	10/28/2013 1836
Prep Date:	N/A
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Chemical Oxygen Demand	ND	50.0	50.0	47.6	45.3

Client: Waste Management

Job Number: 280-47997-1

Method Blank - Batch: 280-196898

Method: SM 2540D
Preparation: N/A

Lab Sample ID:	MB 280-196898/1	Analysis Batch:	280-196898	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	10/21/2013 0907	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Total Suspended Solids	ND		1.1	4.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-196898

Method: SM 2540D
Preparation: N/A

LCS Lab Sample ID:	LCS 280-196898/2	Analysis Batch:	280-196898	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/21/2013 0907	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-196898/3	Analysis Batch:	280-196898	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/21/2013 0907	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Total Suspended Solids	86	99	86 - 114	14	20		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-196898

Method: SM 2540D
Preparation: N/A

LCS Lab Sample ID:	LCS 280-196898/2	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-196898/3
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/21/2013 0907			Analysis Date:	10/21/2013 0907
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Total Suspended Solids	100	100	86.0	99.0

Client: Waste Management

Job Number: 280-47997-1

Duplicate - Batch: 280-196898

Method: SM 2540D
Preparation: N/A

Lab Sample ID:	280-47898-A-2 DU	Analysis Batch:	280-196898	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	10/21/2013 0907	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Suspended Solids	5.6	5.60	0	10	

Client: Waste Management

Job Number: 280-47997-1

Method Blank - Batch: 280-198675

Method: Total Nitrogen
Preparation: N/A

Lab Sample ID:	MB 280-198675/1	Analysis Batch:	280-198675	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	10/31/2013 1026	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrogen, Total	ND		0.042	0.10

Client: Waste Management

Job Number: 280-47997-1

Laboratory Chronicle

Lab ID: **280-47997-1** **Client ID:** **DB01E**

Sample Date/Time: 10/14/2013 14:29 Received Date/Time: 10/17/2013 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	280-47997-C-1-A		280-197377	280-196449	10/17/2013 14:50	1	TAL DEN	JJW
A:625	280-47997-C-1-A		280-197377	280-196449	10/24/2013 00:25	1	TAL DEN	MGH
A:218.6	280-47997-H-1		440-140708		10/29/2013 17:17	1	TAL IRV	NC
P:200.7	280-47997-G-1-B		280-197097	280-196539	10/18/2013 12:30	1	TAL DEN	LLB
A:200.7 Rev 4.4	280-47997-G-1-B		280-197097	280-196539	10/21/2013 17:54	1	TAL DEN	JKH
P:245.1	280-47997-G-1-A		280-197376	280-196510	10/22/2013 09:30	1	TAL DEN	CRR
A:245.1	280-47997-G-1-A		280-197376	280-196510	10/22/2013 12:59	1	TAL DEN	JM
P:1664A	280-47997-A-1-A		480-147350	480-147342	10/24/2013 08:00	1	TAL BUF	MDL
A:1664A	280-47997-A-1-A		480-147350	480-147342	10/24/2013 15:39	1	TAL BUF	MDL
A:350.1	280-47997-F-1		280-198533		10/30/2013 12:26	1	TAL DEN	DME
P:351.2	280-47997-E-1-D		280-197411	280-197210	10/22/2013 14:18	1	TAL DEN	SMG
A:351.2	280-47997-E-1-D		280-197411	280-197210	10/23/2013 12:53	1	TAL DEN	SMG
A:353.2	280-47997-E-1		280-197962		10/26/2013 15:04	1	TAL DEN	DVA
P:365.2/365.3/365	280-47997-E-1-A		280-196799	280-196719	10/18/2013 14:52	10	TAL DEN	AJS
A:365.1	280-47997-E-1-A		280-196799	280-196719	10/19/2013 11:12	10	TAL DEN	AJS
A:410.4	280-47997-E-1		280-198188		10/28/2013 18:36	10	TAL DEN	DFB
A:SM 2540D	280-47997-I-1		280-196898		10/21/2013 09:07	1	TAL DEN	BAN
A:Total Nitrogen	280-47997-A-1		280-198675		10/31/2013 10:26	1	TAL DEN	RKS
A:Field Sampling	280-47997-A-1		280-196501		10/14/2013 14:29	1	TAL DEN	FS

Lab ID: **280-47997-1 MS** **Client ID:** **DB01E**

Sample Date/Time: 10/14/2013 14:29 Received Date/Time: 10/17/2013 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:351.2	280-47997-E-1-E MS		280-197411	280-197210	10/22/2013 14:18	1	TAL DEN	SMG
A:351.2	280-47997-E-1-E MS		280-197411	280-197210	10/23/2013 12:54	1	TAL DEN	SMG
P:365.2/365.3/365	280-47997-E-1-B MS		280-196799	280-196719	10/18/2013 14:52	10	TAL DEN	AJS
A:365.1	280-47997-E-1-B MS		280-196799	280-196719	10/19/2013 11:12	10	TAL DEN	AJS

Lab ID: **280-47997-1 MSD** **Client ID:** **DB01E**

Sample Date/Time: 10/14/2013 14:29 Received Date/Time: 10/17/2013 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:351.2	280-47997-E-1-F MSD		280-197411	280-197210	10/22/2013 14:18	1	TAL DEN	SMG
A:351.2	280-47997-E-1-F MSD		280-197411	280-197210	10/23/2013 12:59	1	TAL DEN	SMG
P:365.2/365.3/365	280-47997-E-1-C MSD		280-196799	280-196719	10/18/2013 14:52	10	TAL DEN	AJS
A:365.1	280-47997-E-1-C MSD		280-196799	280-196719	10/19/2013 11:12	10	TAL DEN	AJS

Client: Waste Management

Job Number: 280-47997-1

Laboratory Chronicle

Lab ID: **MB** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	MB 280-196449/1-A		280-197377	280-196449	10/17/2013 14:50	1	TAL DEN	JJW
A:625	MB 280-196449/1-A		280-197377	280-196449	10/23/2013 19:48	1	TAL DEN	MGH
A:218.6	MB 440-140708/3		440-140708		10/29/2013 05:45	1	TAL IRV	NC
P:200.7	MB 280-196539/1-A		280-197097	280-196539	10/18/2013 12:30	1	TAL DEN	LLB
A:200.7 Rev 4.4	MB 280-196539/1-A		280-197097	280-196539	10/21/2013 17:40	1	TAL DEN	JKH
P:245.1	MB 280-196510/1-A		280-197376	280-196510	10/22/2013 09:30	1	TAL DEN	CRR
A:245.1	MB 280-196510/1-A		280-197376	280-196510	10/22/2013 12:41	1	TAL DEN	JM
P:1664A	MB 480-147342/1-A		480-147350	480-147342	10/24/2013 08:00	1	TAL BUF	MDL
A:1664A	MB 480-147342/1-A		480-147350	480-147342	10/24/2013 15:39	1	TAL BUF	MDL
A:350.1	MB 280-198533/21		280-198533		10/30/2013 10:51	1	TAL DEN	DME
A:350.1	MB 280-198533/60		280-198533		10/30/2013 12:22	1	TAL DEN	DME
P:351.2	MB 280-197210/1-A		280-197411	280-197210	10/22/2013 14:18	1	TAL DEN	SMG
A:351.2	MB 280-197210/1-A		280-197411	280-197210	10/23/2013 12:52	1	TAL DEN	SMG
A:353.2	MB 280-197962/100		280-197962		10/26/2013 14:40	1	TAL DEN	DVA
P:365.2/365.3/365	MB 280-196719/5-A		280-196799	280-196719	10/18/2013 14:52	1	TAL DEN	AJS
A:365.1	MB 280-196719/5-A		280-196799	280-196719	10/19/2013 09:26	1	TAL DEN	AJS
A:410.4	MB 280-198188/5		280-198188		10/28/2013 18:36	1	TAL DEN	DFB
A:SM 2540D	MB 280-196898/1		280-196898		10/21/2013 09:07	1	TAL DEN	BAN
A:Total Nitrogen	MB 280-198675/1		280-198675		10/31/2013 10:26	1	TAL DEN	RKS

Client: Waste Management

Job Number: 280-47997-1

Laboratory Chronicle

Lab ID: **LCS** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	LCS 280-196449/2-A		280-197377	280-196449	10/17/2013 14:50	1	TAL DEN	JJW
A:625	LCS 280-196449/2-A		280-197377	280-196449	10/23/2013 13:22	1	TAL DEN	MGH
A:218.6	LCS 440-140708/2		440-140708		10/29/2013 05:32	1	TAL IRV	NC
P:200.7	LCS 280-196539/2-A		280-197097	280-196539	10/18/2013 12:30	1	TAL DEN	LLB
A:200.7 Rev 4.4	LCS 280-196539/2-A		280-197097	280-196539	10/21/2013 17:42	1	TAL DEN	JKH
P:245.1	LCS 280-196510/2-A		280-197376	280-196510	10/22/2013 09:30	1	TAL DEN	CRR
A:245.1	LCS 280-196510/2-A		280-197376	280-196510	10/22/2013 12:43	1	TAL DEN	JM
P:1664A	LCS 480-147342/2-A		480-147350	480-147342	10/24/2013 08:00	1	TAL BUF	MDL
A:1664A	LCS 480-147342/2-A		480-147350	480-147342	10/24/2013 15:39	1	TAL BUF	MDL
A:350.1	LCS 280-198533/19		280-198533		10/30/2013 10:46	1	TAL DEN	DME
A:350.1	LCS 280-198533/58		280-198533		10/30/2013 12:17	1	TAL DEN	DME
P:351.2	LCS 280-197210/2-A		280-197411	280-197210	10/22/2013 14:18	1	TAL DEN	SMG
A:351.2	LCS 280-197210/2-A		280-197411	280-197210	10/23/2013 12:49	1	TAL DEN	SMG
A:353.2	LCS 280-197962/101		280-197962		10/26/2013 14:41	1	TAL DEN	DVA
P:365.2/365.3/365	LCS 280-196719/3-A		280-196799	280-196719	10/18/2013 14:52	1	TAL DEN	AJS
A:365.1	LCS 280-196719/3-A		280-196799	280-196719	10/19/2013 09:26	1	TAL DEN	AJS
A:410.4	LCS 280-198188/3		280-198188		10/28/2013 18:36	1	TAL DEN	DFB
A:SM 2540D	LCS 280-196898/2		280-196898		10/21/2013 09:07	1	TAL DEN	BAN

Lab ID: **LCSD** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:350.1	LCSD 280-198533/20		280-198533		10/30/2013 10:48	1	TAL DEN	DME
A:350.1	LCSD 280-198533/59		280-198533		10/30/2013 12:19	1	TAL DEN	DME
P:351.2	LCSD 280-197210/3-A		280-197411	280-197210	10/22/2013 14:18	1	TAL DEN	SMG
A:351.2	LCSD 280-197210/3-A		280-197411	280-197210	10/23/2013 12:51	1	TAL DEN	SMG
A:353.2	LCSD 280-197962/102		280-197962		10/26/2013 14:43	1	TAL DEN	DVA
P:365.2/365.3/365	LCSD 280-196719/4-A		280-196799	280-196719	10/18/2013 14:52	1	TAL DEN	AJS
A:365.1	LCSD 280-196719/4-A		280-196799	280-196719	10/19/2013 09:26	1	TAL DEN	AJS
A:410.4	LCSD 280-198188/4		280-198188		10/28/2013 18:36	1	TAL DEN	DFB
A:SM 2540D	LCSD 280-196898/3		280-196898		10/21/2013 09:07	1	TAL DEN	BAN

Client: Waste Management

Job Number: 280-47997-1

Laboratory Chronicle

Lab ID: **MRL** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:218.6	MRL 440-140708/4		440-140708		10/29/2013 05:58	1	TAL IRV	NC
A:353.2	MRL 280-197962/18		280-197962		10/26/2013 12:36	1	TAL DEN	DVA

Lab ID: **MS** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	280-47897-E-5-A MS		280-197377	280-196449	10/17/2013 14:50	1	TAL DEN	JJW
A:625	280-47897-E-5-A MS		280-197377	280-196449	10/23/2013 23:57	1	TAL DEN	MGH
A:218.6	440-60223-A-2 MS		440-140708		10/29/2013 16:51	1	TAL IRV	NC
P:200.7	280-48010-A-1-B MS		280-197097	280-196539	10/18/2013 12:30	1	TAL DEN	LLB
A:200.7 Rev 4.4	280-48010-A-1-B MS		280-197097	280-196539	10/21/2013 17:49	1	TAL DEN	JKH
P:245.1	280-47970-B-1-C MS		280-197376	280-196510	10/22/2013 09:30	1	TAL DEN	CRR
A:245.1	280-47970-B-1-C MS		280-197376	280-196510	10/22/2013 12:50	1	TAL DEN	JM
P:1664A	480-48115-C-3-A MS		480-147350	480-147342	10/24/2013 08:00	1	TAL BUF	MDL
A:1664A	480-48115-C-3-A MS		480-147350	480-147342	10/24/2013 15:39	1	TAL BUF	MDL
A:350.1	280-48145-E-1 MS		280-198533		10/30/2013 11:49	1	TAL DEN	DME
A:353.2	280-48007-G-1 MS		280-197962		10/26/2013 14:55	1	TAL DEN	DVA
A:410.4	280-47998-D-1 MS		280-198188		10/28/2013 18:36	1	TAL DEN	DFB

Lab ID: **MSD** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:218.6	440-60223-A-2 MSD		440-140708		10/29/2013 17:04	1	TAL IRV	NC
P:200.7	280-48010-A-1-C MSD		280-197097	280-196539	10/18/2013 12:30	1	TAL DEN	LLB
A:200.7 Rev 4.4	280-48010-A-1-C MSD		280-197097	280-196539	10/21/2013 17:52	1	TAL DEN	JKH
P:245.1	280-47970-B-1-D MSD		280-197376	280-196510	10/22/2013 09:30	1	TAL DEN	CRR
A:245.1	280-47970-B-1-D MSD		280-197376	280-196510	10/22/2013 12:52	1	TAL DEN	JM
A:350.1	280-48145-E-1 MSD		280-198533		10/30/2013 11:51	1	TAL DEN	DME
A:353.2	280-48007-G-1 MSD		280-197962		10/26/2013 14:56	1	TAL DEN	DVA
A:410.4	280-47998-D-1 MSD		280-198188		10/28/2013 18:36	1	TAL DEN	DFB

Client: Waste Management

Job Number: 280-47997-1

Laboratory Chronicle

Lab ID: **DU** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	280-47897-I-5-A DU		280-197377	280-196449	10/17/2013 14:50	1	TAL DEN	JJW
A:625	280-47897-I-5-A DU		280-197377	280-196449	10/23/2013 23:02	1	TAL DEN	MGH
A:SM 2540D	280-47898-A-2 DU		280-196898		10/21/2013 09:07	1	TAL DEN	BAN

Lab References:

TAL BUF = TestAmerica Buffalo

TAL DEN = TestAmerica Denver

TAL IRV = TestAmerica Irvine

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Honolulu
1946 Young St. Suite 400A
Honolulu, HI 96826
Tel: 808-486-5227

TestAmerica Job ID: HWJ0074
Client Project/Site: 60287037.02
Client Project Description: AECOM, WGSL STORMWATER

For:
TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002

Attn: Betsy Sara

Authorized for release by:
10/28/2013 3:06:18 PM

Kristie Reilly, Project Manager
808-486-5227
Kristie.Brachmann@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWJ0074

Qualifiers

WetChem

Qualifier	Qualifier Description
R4	Due to the low levels of analyte in the sample, the duplicate RPD calculation does not provide useful information.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWJ0074

Job ID: HWJ0074

Laboratory: TestAmerica Honolulu

Narrative

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory unless otherwise stated in the report. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. TestAmerica Analytical Testing Corporation certifies that the analytical results contained herein apply only to the specific sample(s) analyzed.

The Chain(s) of Custody are included and are an integral part of this report. This entire report was reviewed and approved for release.

If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-(808)486-5227

LABORATORY REPORT

At sample receipt, the cooler/sample was 14.8 degrees C.
NELAC states that samples which require thermal preservation shall be considered acceptable if the arrival temperature is within 2 degrees C of the required temperature or the method specified range. For samples with a temperature requirement of 4 degrees C, an arrival temperature from 0 degrees C to 6 degrees C meets specifications. Samples that are delivered to the laboratory on the same day that they are collected may not meet these criteria. In these cases, the samples are considered acceptable if there is evidence that the chilling process has begun, such as arrival on ice.

The reported results were obtained in compliance with the 2003 NELAC standards unless otherwise noted.

Sample Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWJ0074

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
HWJ0074-01	280-47997-1 / DB01E	Water - NonPotable	10/14/13 14:29	10/14/13 16:20

Detection Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWJ0074

Client Sample ID: 280-47997-1 / DB01E

Lab Sample ID: HWJ0074-01

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
BOD - 5 Day	67.1		2.00		mg/L	1.00		SM5210B	Total

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWJ0074

Client Sample ID: 280-47997-1 / DB01E

Lab Sample ID: HWJ0074-01

Date Collected: 10/14/13 14:29

Matrix: Water - NonPotable

Date Received: 10/14/13 16:20

Method: SM5210B - General Chemistry Parameters

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
BOD - 5 Day	67.1		2.00		mg/L		10/15/13 13:57	10/20/13 10:15	1.00

QC Sample Results

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWJ0074

Method: SM5210B - General Chemistry Parameters

Lab Sample ID: 13J0021-BLK1 — **Client Sample ID: Method Blank**
Matrix: Water - NonPotable — **Prep Type: Total**
Analysis Batch: 13J0021 — **Prep Batch: 13J0021_P**

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
BOD - 5 Day	ND		2.00		mg/L		10/15/13 13:38	10/20/13 09:56	1.00

Lab Sample ID: 13J0021-BS1 — **Client Sample ID: Lab Control Sample**
Matrix: Water - NonPotable — **Prep Type: Total**
Analysis Batch: 13J0021 — **Prep Batch: 13J0021_P**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
BOD - 5 Day			198	186		mg/L		94	85 - 115		

Lab Sample ID: 13J0021-DUP1 — **Client Sample ID: Duplicate**
Matrix: Water - NonPotable — **Prep Type: Total**
Analysis Batch: 13J0021 — **Prep Batch: 13J0021_P**

Analyte	Sample Result	Sample Qualifier		Duplicate Result	Duplicate Qualifier	Unit	D			RPD	RPD Limit
BOD - 5 Day	1.98			1.52	R4	mg/L				26	20

QC Association Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWJ0074

WetChem

Analysis Batch: 13J0021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
13J0021-BLK1	Method Blank	Total	Water - NonPotable	SM5210B	13J0021_P
13J0021-BS1	Lab Control Sample	Total	Water - NonPotable	SM5210B	13J0021_P
13J0021-DUP1	Duplicate	Total	Water - NonPotable	SM5210B	13J0021_P
HWJ0074-01	280-47997-1 / DB01E	Total	Water - NonPotable	SM5210B	13J0021_P

Prep Batch: 13J0021_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
13J0021-BLK1	Method Blank	Total	Water - NonPotable	Default Prep GenChem	
13J0021-BS1	Lab Control Sample	Total	Water - NonPotable	Default Prep GenChem	
13J0021-DUP1	Duplicate	Total	Water - NonPotable	Default Prep GenChem	
HWJ0074-01	280-47997-1 / DB01E	Total	Water - NonPotable	Default Prep GenChem	

Lab Chronicle

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWJ0074

Client Sample ID: 280-47997-1 / DB01E
Date Collected: 10/14/13 14:29
Date Received: 10/14/13 16:20

Lab Sample ID: HWJ0074-01
Matrix: Water - NonPotable

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Default Prep		1.00	13J0021_P	10/15/13 13:57	NK	TAL HON
Total	Analysis	GenChem SM5210B		1.00	13J0021	10/20/13 10:15	NK	TAL HON

Laboratory References:

TAL HON = TestAmerica Honolulu, 1946 Young St. Suite 400A, Honolulu, HI 96826, TEL 808-486-5227

Certification Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWJ0074

Laboratory: TestAmerica Honolulu

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Florida	NELAP	4	E87907	06-30-14
Hawaii	State Program	9	N/A	06-28-14
USDA	Federal		HON-S-206	01-31-15

Method Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWJ0074

Method	Method Description	Protocol	Laboratory
SM5210B	General Chemistry Parameters		TAL HON

Protocol References:

Laboratory References:

TAL HON = TestAmerica Honolulu, 1946 Young St. Suite 400A, Honolulu, HI 96826, TEL 808-486-5227

Chain of Custody Record

TAL-4124-280 (0508)

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client: Waste Management / AECOM	Project Manager: Mark Hofferbert	Date	Chain of Custody Number: 168565
Address: 1001 Bishop St. Suite 1600	Telephone Number (Area Code)/Fax Number: 808-356-5317 F: 808-523-8950	Lab Number	Page _____ of _____
City: Honolulu; State: HI; Zip Code: 96813	Site Contact: Justin Lotting	Lab Contact: Betsy Gara	
Project Name and Location (State): West Stormwater	Carrier/Waybill Number		
Contract/Purchase Order/Quote No.: 60387037.02			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	1664 Oil & Grease	SM2540D TSS	625 SVOC*	410.4 COD	365.1 T. Phos	350.1 Ammonia	353.2 NO2-NO3	SM4500 T. Nitrogen	200.7, 245.1 Metals**	SM5520B BOD	218.6 CrVI	TKN	Special Instructions/ Conditions of Receipt
DB01-E	10/14/13	1429		X			4	4	1				X	X	X	X	X	X	X	X	X	X	X	X	*carbazole, benzoic acid, p-cresol, pentachlorophenol, phenol
																									** As, Cd, Fe, Pb, Hg, Se, Ag, Zn

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☒ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☒ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

1. Relinquished By: Marie Thach	Date: 10/14/13	Time: 1620	1. Received By: Nina Kim	Date: 10/14/13	Time: 1620
2. Relinquished By:	Date:	Time:	2. Received By:	Date:	Time:
3. Relinquished By:	Date:	Time:	3. Received By:	Date:	Time:

Cooler wet ice 14.8C Intact

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: WASL

Site No.:

Sample Point: DB01-8 (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment... Dedicated: Y or N — Filter Device: Y or N — 0.45 µ or ____ µ (circle or fill in)

Purging Device: A-Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device

X-Other:

Filter Type: A-In-line Disposable, B-Pressure, C-Vacuum, X-Other

Sample Tube Type: A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other:

WELL DATA

Well Elevation (at TOC) (ft/msl) — Depth to Water (DTW) (from TOC) (ft) — Groundwater Elevation (site datum, from TOC) (ft/msl)

Total Well Depth (from TOC) (ft) — Stick Up (from ground elevation) (ft) — Casing ID (in) — Casing Material

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

	Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm@25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
1st									
2nd									
3rd									
4th									
Suggested range for 3 consec. readings or note Permit/State requirements:			+/- 0.2	+/- 3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site.* ***If more fileds above are needed, use separate sheet or form.***

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: ____ Units ____
10 14 13	8.69						

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

FIELD COMMENTS

Sample Appearance: very turbid — Odor: none — Color: brown — Other: foam + scum

Weather Conditions (required daily, or as conditions change): Direction/Speed: NA — Outlook: cloudy — Precipitation: (Y) or N

Specific Comments (including purge/well volume calculations if required):

	Sample time	flow
oil + grease	1429	1L/sec
Aliquot A	1432	1L/sec
Aliquot B	1448	1L/sec
Aliquot C	1503	1L/sec
Aliquot D	1518	1L/sec

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
10, 14, 13	Margie Trach	Margie Trach	AECOM
10, 14, 13	Michelle Wong	Michelle Wong	AECOM

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

TAL-8029WM (0108)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Destination Laboratory _____

Destination Laboratory PM (if known) _____

Drop Shipment Receipt Checklist

Client Name: AECOM Date/ Time Received: 10/14/13 1620

Received By: Nina Kim

Matrices: Aqo Carrier: Hand Airbill# :

Shipping container/cooler in good condition?	Yes	✓	No		Not Present ☐
Chain of Custody present?	Yes	✓	No		
Chain of Custody Signed when relinquished and received?	Yes	✓	No		
Cooler opened at TestAmerica Honolulu?	Yes	✓	No		
Sample containers matched to COC at TestAmerica Honolulu?	Yes	✓	No		
Any sample containers obviously broken/damaged upon receipt?	Yes		No	✓	
Sample containers on ice?	Yes	✓	No		Type: Wet
Custody seals present? If so, location? (Cooler, sample containers?)	Yes		No	✓	
Custody seals intact?	Yes		No		
Water - VOA Vials have Zero Headspace?	Yes		No		No VOA vials present: ✓
Water - pH acceptable upon receipt?	Yes		No		Not Checked: ✓
pH Adjusted?	Yes		No	✓	Final pH:
Encores / MI-VOC / 5035 Vials Present?	Yes		No	✓	
Sample Filtration Needed?	Yes		No	✓	Filtered in Field: ☐
DODQSM / QAPP Project (if known)?	Yes		No	✓	Type:
Temperature Blank Present?	Yes		No	✓	
Sample Container Temperature: 14.8 °C					
Samples drop shipped on ice?	Yes	✓	No		Type: Wet

Date of drop shipment: _____

Comments/ Sampling Handling Notes:

280-47997 Chain of Custody

Sampler ID _____

Temperature on Receipt 1.4 Area

Drinking Water? Yes ☐ No ☐ 1R3 10/17

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-

Client	Project Manager	Date	Chain of Custody Number
Waste Management / AECOM	Mark Hofferbert		168565

Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page ___ of ___
1001 Bishop St. Suite 1600	808-356-5317 F: 808-523-8950		

City	State	Zip Code	Site Contact	Lab Contact
Honolulu	HI	96813	Justin Lottig	Betsy Gara

Project Name and Location (State)	Carrier/Waybill Number
WGSL Stormwater	

Contract/Purchase Order/Quote No.: 60287037.02

Analysis (Attach list if more space is needed)

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Matrix: Aqueous	Matrix: Sed.	Matrix: Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	1664 Oil & Grease	SM2540D TSS	625 SVOC*	410.4 COD	365.1 T. Phos	350.1 Ammonia	353.2 NO_2-NO_3	SM4500N T. Nitrogen	200.7, 245.1 Metals	SM5210B BOD	218.6 CrVI	TKN	Special Instructions/ Conditions of Receipt
DB01-E	10/14/13	1429		X			4	4	1				X	X	X	X	X	X	X	X	X	X	X	X	*anterpineol, benzoic acid, p-cresol, pentachlorophenol, phenol
																									** As, Cd, Fe, Pb, Hg, Se, Ag, Zn

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☒ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☒ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: Margie Thach	10/14/13	1620	1. Received By: Nina Kim — Cooler wet Ice 14.8C Intact	10/14/13	1620
2. Relinquished By: Kristie Reilly	10/15/13	11:00	2. Received By:	10/17/13	900
3. Relinquished By:			3. Received By:		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: WGSL

Site No.:

Sample Point: DB01-E
Sample ID

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment . . Dedicated: Y or N

Filter Device: Y or N 0.45 µ or _____ µ (circle or fill in)

Purging Device ____ A-Submersible Pump B-Peristaltic Pump C-QED Bladder Pump D-Bailer E-Piston Pump F-Dipper/Bottle

Sampling Device ____

X-Other: _____

Filter Type: ____ A-In-line Disposable B-Pressure C-Vacuum X-Other _____

Sample Tube Type: ____ A-Teflon B-Stainless Steel C-PVC D-Polypropylene X-Other: _____

WELL DATA

Well Elevation (at TOC) _____ (ft/msl)

Depth to Water (DTW) (from TOC) _____ (ft)

Groundwater Elevation (site datum, from TOC) _____ (ft/msl)

Total Well Depth (from TOC) _____ (ft)

Stick Up (from ground elevation) _____ (ft)

Casing ID _____ (in)

Casing Material _____

Note Total Well Depth, Stick Up, Casing Id. etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm@25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
	1st	1st	1st					
	2nd	2nd	2nd					
	3rd	3rd	3rd					
	4th	4th	4th					
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State) These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site.* ***If more fileds above are needed, use separate sheet or form.***

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: _____ Units _____
10 14 13	8.69						

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

FIELD COMMENTS

Sample Appearance: very turbid Odor: none Color: brown Other: foam + scum

Weather Conditions (required daily, or as conditions change): Direction/Speed: NA Outlook: cloudy Precipitation: (Y) or N

Specific Comments (including purge/well volume calculations if required):

	Sample time	flow
oil + grease	1429	1L/sec
Aliquot A	1432	1L/sec
Aliquot B	1448	1L/sec
Aliquot C	1503	1L/sec
Aliquot D	1518	1L/sec

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
10, 14, 13	Margie Thach	Margie Thach	AECOM
10, 14, 13	Michelle Wong	Michelle Wong	AECOM

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

TAL-8029WM (0108)

Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-47997-1

Login Number: 47997

List Source: TestAmerica Denver

List Number: 1

Creator: Roman, Alex F

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	BLANK
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	N/A	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-47997-1

Login Number: 47997
List Number: 1
Creator: Goliszek, Gregory T

List Source: TestAmerica Buffalo
List Creation: 10/18/13 09:45 PM

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.2 #2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-47997-1

Login Number: 47997
List Number: 1
Creator: Sung, Hubert

List Source: TestAmerica Irvine
List Creation: 10/22/13 11:50 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	False	COC is not fileld out
COC is filled out with all pertinent information.	False	COC is not fille dout
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	False	COC not filled out, please see scanned in email and shipping order
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	False	Please see scanned in documents
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Job Number: 280-49949-2

Job Description: 995|Waimanalo Gulch LF

For:
Waste Management
Waimanalo Gulch Landfill
92-460 Farrington Highway
Kapolei, HI 96707

Attention: Mr. Justin Lottig

Approved for release.
Betsy A Sara
Project Manager II
12/31/2013 1:15 PM

Betsy A Sara, Project Manager II
4955 Yarrow Street, Arvada, CO, 80002
(303)736-0189
betsy.sara@testamericainc.com
12/31/2013

cc: Mr. Mark Hofferbert
Ms. Margie Thach

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is E87667.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

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CASE NARRATIVE

Client: Waste Management

Project: 995|Waimanalo Gulch LF

Report Number: 280-49949-2

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

This report may include reporting limits (RLs) less than TestAmerica's standard reporting limit. The reported sample results and associated reporting limits are being used specifically to meet the needs of this project. Note that data are not normally reported to these levels without qualification because they are inherently less reliable and potentially less defensible than required by the latest industry standards.

Sample Receiving

The sample was received on 12/04/2013; the sample arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 0.8º C and 1.2º C.

Holding Times

All holding times were met.

Method Blanks

Total Phosphorus Method 365.1 and Chemical Oxygen Demand (COD) Method 410.4 were detected in the Method Blanks below the project established reporting limits. No corrective action is taken for any values in Method Blanks that are below the requested reporting limits. The Method Blank data are included at the end of this report.

All other Method Blanks were within established control limits.

Laboratory Control Samples (LCS)

All Laboratory Control Samples were within established control limits.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD)

The method required MS/MSD could not be performed for Method 625 due to insufficient sample volume, however, a LCS/LCSD pair was analyzed to demonstrate method precision and accuracy.

Sample DB01-W was selected to fulfill the laboratory batch quality control requirements for Method 218.6. Analysis of the laboratory generated MS/MSD for this sample exhibited recoveries of Hexavalent Chromium below the lower control limit indicating the possible presence of a matrix interference.

Sample FLIP BUCKET was selected to fulfill the laboratory batch quality control requirements for Method 350.1. Analysis of the laboratory generated MS/MSD for this sample exhibited recoveries of Ammonia above control limit indicating the possible presence of a matrix interference.

The Matrix Spike and Matrix Spike Duplicate performed on a sample from another client exhibited a recovery outside control limits for Total Kjeldahl Nitrogen (TKN) Method 351.2. Because the corresponding Laboratory Control Sample and the Method Blank sample were within control limits, this anomaly may be due to matrix interference and no corrective action was taken.

All other MS and MSD samples were within established control limits.

General Comments

For samples requiring analysis at a dilution, the dilution factor has been multiplied by the Method Detection Limit (MDL) for each analyte and evaluated versus the project-specific reporting limit (PSRL). If the obtained value is below the PSRL, then the PSRL is preserved as the reporting limit for the diluted result, otherwise, the obtained value becomes the reporting limit. This is done in order to maintain the PSRL to meet permit requirements at the request of the client and to report the lowest possible RL for each analyte.

The analysis for Oil/Grease Method 1664A was performed by TestAmerica Buffalo. Their address and phone number are:

TestAmerica Buffalo
10 Hazelwood Drive, Suite 106
Amherst, NY 14228
716-691-2600

The analysis for Biochemical Oxygen Demand (BOD) was performed by TestAmerica Honolulu. Their address and phone number are:
TestAmerica Honolulu
1946 Young Street
Suite 400A
Honolulu, HI 96826
Phone: 808.486.5227

The analysis for Hexavalent Chromium was performed at TestAmerica's Irvine facility.
TestAmerica Irvine
17461 Derian Avenue
Suite 100
Irvine, CA 92614
Phone: 949.261.1022

EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-49949-2

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
280-49949-2	**DB01-W**					
Field pH		8.22			SU	Field Sampling
Ammonia		0.17		0.10	mg/L	350.1
Nitrogen, Kjeldahl		0.84		0.50	mg/L	351.2
Nitrate Nitrite as N		3.7		0.10	mg/L	353.2
Phosphorus, Total		0.71	B	0.050	mg/L	365.1
Chemical Oxygen Demand		28	B	20	mg/L	410.4
Total Suspended Solids		160		4.0	mg/L	SM 2540D
Nitrogen, Total		4.5		0.10	mg/L	Total Nitrogen
Total Recoverable						
Cadmium		0.00063	J	0.0050	mg/L	200.7 Rev 4.4
Iron		12		0.10	mg/L	200.7 Rev 4.4
Lead		0.0026	J	0.0090	mg/L	200.7 Rev 4.4
Zinc		0.039		0.020	mg/L	200.7 Rev 4.4

METHOD SUMMARY

Client: Waste Management

Job Number: 280-49949-2

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Semivolatile Organic Compounds (GC/MS)	TAL DEN	40CFR136A 625	
Liquid-Liquid Extraction	TAL DEN		40CFR136A 625
Metals (ICP)	TAL DEN	EPA 200.7 Rev 4.4	
Preparation, Total Recoverable Metals	TAL DEN		EPA 200.7
Mercury (CVAA)	TAL DEN	EPA 245.1	
Preparation, Mercury	TAL DEN		EPA 245.1
Nitrogen, Ammonia	TAL DEN	MCAWW 350.1	
Nitrogen, Total Kjeldahl	TAL DEN	MCAWW 351.2	
Nitrogen, Total Kjeldahl	TAL DEN		MCAWW 351.2
Nitrogen, Nitrate-Nitrite	TAL DEN	MCAWW 353.2	
Phosphorus, Total	TAL DEN	EPA 365.1	
Phosphorus, Total	TAL DEN		MCAWW 365.2/365.3/365
COD	TAL DEN	MCAWW 410.4	
Solids, Total Suspended (TSS)	TAL DEN	SM SM 2540D	
Nitrogen, Total	TAL DEN	EPA Total Nitrogen	
Field Sampling	TAL DEN	EPA Field Sampling	
HEM and SGT-HEM	TAL BUF	1664A 1664A	
HEM and SGT-HEM (SPE)	TAL BUF		1664A 1664A
General Sub Contract Method	TAL HON	Subcontract	
Chromium, Hexavalent (Ion Chromatography)	TAL IRV	EPA 218.6	
Sample Filtration, Field			FIELD_FLTRD

Lab References:

TAL BUF = TestAmerica Buffalo

TAL DEN = TestAmerica Denver

TAL HON = TestAmerica Honolulu

TAL IRV = TestAmerica Irvine

Method References:

1664A = EPA-821-98-002

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

METHOD / ANALYST SUMMARY

Client: Waste Management

Job Number: 280-49949-2

Method	Analyst	Analyst ID
40CFR136A 625	Hoffman, Michael G	MGH
EPA 200.7 Rev 4.4	Harre, John K	JKH
EPA 245.1	Mooney, Joseph C	JM
EPA Field Sampling	Field, Sampler	FS
1664A 1664A	Wolfe, Larry A	LAW
MCAWW 350.1	Newcome, Robin S	RSN
MCAWW 351.2	Graham, Shane M	SMG
MCAWW 353.2	Ayala, Delaina V	DVA
EPA 365.1	Schwemin, Andrew J	AJS
MCAWW 410.4	Benson, Alex F	AFB
SM SM 2540D	Neeley, Beth A	BAN
EPA Total Nitrogen	Elkin, David M	DME
EPA 218.6	Nikbakht-Sangari, Maryam	MN

SAMPLE SUMMARY

Client: Waste Management

Job Number: 280-49949-2

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-49949-2	DB01-W	Water	12/01/2013 1150	12/04/2013 1015

SAMPLE RESULTS

Client: Waste Management

Job Number: 280-49949-2

Client Sample ID: **DB01-W**

Lab Sample ID: 280-49949-2

Client Matrix: Water

Date Sampled: 12/01/2013 1150

Date Received: 12/04/2013 1015

625 Semivolatile Organic Compounds (GC/MS)

Analysis Method:	625	Analysis Batch:	280-204676	Instrument ID:	SMS_D
Prep Method:	625	Prep Batch:	280-204135	Lab File ID:	D2772.D
Dilution:	1.0			Initial Weight/Volume:	1049.4 mL
Analysis Date:	12/11/2013 0016			Final Weight/Volume:	1000 uL
Prep Date:	12/06/2013 1143			Injection Volume:	0.5 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Alpha-Terpineol	ND		0.0019	0.010
Benzoic acid	ND		0.0095	0.050
p-Cresol	ND		0.00024	0.010
Pentachlorophenol	ND		0.019	0.060
Phenol	ND		0.0019	0.010

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	94		50 - 120
2-Fluorobiphenyl	89		36 - 120
2-Fluorophenol	87		30 - 120
Nitrobenzene-d5	93		45 - 120
Phenol-d5	90		36 - 120
Terphenyl-d14	46		41 - 120

Client: Waste Management

Job Number: 280-49949-2

Client Sample ID: **DB01-W**

Lab Sample ID: 280-49949-2

Client Matrix: Water

Date Sampled: 12/01/2013 1150

Date Received: 12/04/2013 1015

218.6 Chromium, Hexavalent (Ion Chromatography)-Dissolved

Analysis Method:	218.6	Analysis Batch:	440-149568	Instrument ID:	IC-20
	N/A	Prep Batch:	N/A	Lab File ID:	Info 2_TAIIRVIC20_Hexa
Dilution:	1.0			Initial Weight/Volume:	10 mL
Analysis Date:	12/11/2013 0020			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1000 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chromium, hexavalent	ND		0.25	1.0

Client: Waste Management

Job Number: 280-49949-2

Client Sample ID: **DB01-W**

Lab Sample ID: 280-49949-2

Client Matrix: Water

Date Sampled: 12/01/2013 1150

Date Received: 12/04/2013 1015

200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	280-204169	Instrument ID:	MT_025
Prep Method:	200.7	Prep Batch:	280-203880	Lab File ID:	25A5120513.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/06/2013 0509			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1200				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Arsenic	ND		0.0044	0.015
Cadmium	0.00063	J	0.00045	0.0050
Iron	12		0.022	0.10
Lead	0.0026	J	0.0026	0.0090
Selenium	ND		0.0049	0.015
Zinc	0.039		0.0045	0.020
Silver	ND		0.00093	0.010

245.1 Mercury (CVAA)

Analysis Method:	245.1	Analysis Batch:	280-204789	Instrument ID:	MT_033
Prep Method:	245.1	Prep Batch:	280-203956	Lab File ID:	131210aa.txt
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	12/10/2013 1705			Final Weight/Volume:	30 mL
Prep Date:	12/10/2013 1245				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Mercury	ND		0.000027	0.00020

General Chemistry

Client Sample ID: **DB01-W**

Lab Sample ID: 280-49949-2 Date Sampled: 12/01/2013 1150
Client Matrix: Water Date Received: 12/04/2013 1015

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
HEM	ND		mg/L	1.4	5.0	1.0	1664A
Analysis Batch: 480-157407	Analysis Date: 12/13/2013 0609						
Prep Batch: 480-157405	Prep Date: 12/13/2013 0544						
Ammonia	0.17		mg/L	0.022	0.10	1.0	350.1
Analysis Batch: 280-205469	Analysis Date: 12/16/2013 1434						
Nitrogen, Kjeldahl	0.84		mg/L	0.18	0.50	1.0	351.2
Analysis Batch: 280-205498	Analysis Date: 12/12/2013 1137						
Prep Batch: 280-204304	Prep Date: 12/07/2013 1336						
Nitrate Nitrite as N	3.7		mg/L	0.019	0.10	1.0	353.2
Analysis Batch: 280-205861	Analysis Date: 12/18/2013 2106						
Phosphorus, Total	0.71	B	mg/L	0.0050	0.050	1.0	365.1
Analysis Batch: 280-204275	Analysis Date: 12/06/2013 1704						
Prep Batch: 280-204056	Prep Date: 12/05/2013 1539						
Chemical Oxygen Demand	28	B	mg/L	4.1	20	1.0	410.4
Analysis Batch: 280-204293	Analysis Date: 12/07/2013 1028						
Total Suspended Solids	160		mg/L	1.8	4.0	1.0	SM 2540D
Analysis Batch: 280-203909	Analysis Date: 12/05/2013 0755						
Nitrogen, Total	4.5		mg/L	0.042	0.10	1.0	Total Nitrogen
Analysis Batch: 280-206110	Analysis Date: 12/20/2013 1033						

Field Service / Mobile Lab

Client Sample ID: **DB01-W**

Lab Sample ID: 280-49949-2

Client Matrix: Water

Date Sampled: 12/01/2013 1150

Date Received: 12/04/2013 1015

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed Date Prepared
Field pH	8.22		SU	1.0	Field Sampling	280-203962	12/01/2013 1150

DATA REPORTING QUALIFIERS

Client: Waste Management

Job Number: 280-49949-2

Lab Section	Qualifier	Description
GC/MS Semi VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
HPLC/IC		
	F	MS/MSD Recovery or RPD exceeds the control limits
Metals		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
General Chemistry		
	B	Compound was found in the blank and sample.
	F	MS/MSD Recovery or RPD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: Waste Management

Job Number: 280-49949-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 280-204135					
LCS 280-204135/2-A	Lab Control Sample	T	Water	625	
LCSD 280-204135/3-A	Lab Control Sample Duplicate	T	Water	625	
MB 280-204135/1-A	Method Blank	T	Water	625	
280-49949-2	DB01-W	T	Water	625	
Analysis Batch:280-204676					
LCS 280-204135/2-A	Lab Control Sample	T	Water	625	280-204135
LCSD 280-204135/3-A	Lab Control Sample Duplicate	T	Water	625	280-204135
MB 280-204135/1-A	Method Blank	T	Water	625	280-204135
280-49949-2	DB01-W	T	Water	625	280-204135

Report Basis

T = Total

Client: Waste Management

Job Number: 280-49949-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-203880					
LCS 280-203880/2-A	Lab Control Sample	R	Water	200.7	
MB 280-203880/1-A	Method Blank	R	Water	200.7	
280-49917-E-1-B MS	Matrix Spike	R	Water	200.7	
280-49917-E-1-C MSD	Matrix Spike Duplicate	R	Water	200.7	
280-49949-2	DB01-W	R	Water	200.7	
Prep Batch: 280-203956					
LCS 280-203956/2-A	Lab Control Sample	T	Water	245.1	
MB 280-203956/1-A	Method Blank	T	Water	245.1	
280-49949-2	DB01-W	T	Water	245.1	
280-49949-2MS	Matrix Spike	T	Water	245.1	
280-49949-2MSD	Matrix Spike Duplicate	T	Water	245.1	
Analysis Batch:280-204169					
LCS 280-203880/2-A	Lab Control Sample	R	Water	200.7 Rev 4.4	280-203880
MB 280-203880/1-A	Method Blank	R	Water	200.7 Rev 4.4	280-203880
280-49917-E-1-B MS	Matrix Spike	R	Water	200.7 Rev 4.4	280-203880
280-49917-E-1-C MSD	Matrix Spike Duplicate	R	Water	200.7 Rev 4.4	280-203880
280-49949-2	DB01-W	R	Water	200.7 Rev 4.4	280-203880
Analysis Batch:280-204789					
LCS 280-203956/2-A	Lab Control Sample	T	Water	245.1	280-203956
MB 280-203956/1-A	Method Blank	T	Water	245.1	280-203956
280-49949-2	DB01-W	T	Water	245.1	280-203956
280-49949-2MS	Matrix Spike	T	Water	245.1	280-203956
280-49949-2MSD	Matrix Spike Duplicate	T	Water	245.1	280-203956

Report Basis

R = Total Recoverable

T = Total

Field Service / Mobile Lab

Analysis Batch:280-203962					
280-49949-2	DB01-W	T	Water	Field Sampling	

Report Basis

T = Total

Client: Waste Management

Job Number: 280-49949-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Prep Batch: 480-157405					
LCS 480-157405/2-A	Lab Control Sample	T	Water	1664A	
MB 480-157405/1-A	Method Blank	T	Water	1664A	
280-49949-2	DB01-W	T	Water	1664A	
480-51654-B-1-A MS	Matrix Spike	T	Water	1664A	
Analysis Batch:480-157407					
LCS 480-157405/2-A	Lab Control Sample	T	Water	1664A	480-157405
MB 480-157405/1-A	Method Blank	T	Water	1664A	480-157405
280-49949-2	DB01-W	T	Water	1664A	480-157405
480-51654-B-1-A MS	Matrix Spike	T	Water	1664A	480-157405
Analysis Batch:280-203909					
LCS 280-203909/2	Lab Control Sample	T	Water	SM 2540D	
LCSD 280-203909/3	Lab Control Sample Duplicate	T	Water	SM 2540D	
MB 280-203909/1	Method Blank	T	Water	SM 2540D	
280-49940-A-1 DU	Duplicate	T	Water	SM 2540D	
280-49949-2	DB01-W	T	Water	SM 2540D	
Prep Batch: 280-204056					
LCS 280-204056/3-A	Lab Control Sample	T	Water	365.2/365.3/365	
LCSD 280-204056/4-A	Lab Control Sample Duplicate	T	Water	365.2/365.3/365	
MB 280-204056/5-A	Method Blank	T	Water	365.2/365.3/365	
280-49949-2	DB01-W	T	Water	365.2/365.3/365	
Analysis Batch:280-204275					
LCS 280-204056/3-A	Lab Control Sample	T	Water	365.1	280-204056
LCSD 280-204056/4-A	Lab Control Sample Duplicate	T	Water	365.1	280-204056
MB 280-204056/5-A	Method Blank	T	Water	365.1	280-204056
280-49949-2	DB01-W	T	Water	365.1	280-204056
Analysis Batch:280-204293					
LCS 280-204293/3	Lab Control Sample	T	Water	410.4	
LCSD 280-204293/4	Lab Control Sample Duplicate	T	Water	410.4	
MB 280-204293/5	Method Blank	T	Water	410.4	
280-49949-2	DB01-W	T	Water	410.4	
280-49975-C-1 MS	Matrix Spike	T	Water	410.4	
280-49975-C-1 MSD	Matrix Spike Duplicate	T	Water	410.4	
Prep Batch: 280-204304					
LCS 280-204304/2-A	Lab Control Sample	T	Water	351.2	
LCSD 280-204304/3-A	Lab Control Sample Duplicate	T	Water	351.2	
MB 280-204304/1-A	Method Blank	T	Water	351.2	
550-15341-C-1-C MS	Matrix Spike	T	Water	351.2	
550-15341-C-1-D MSD	Matrix Spike Duplicate	T	Water	351.2	
280-49949-2	DB01-W	T	Water	351.2	

Client: Waste Management

Job Number: 280-49949-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-205469					
LCS 280-205469/102	Lab Control Sample	T	Water	350.1	
LCSD 280-205469/103	Lab Control Sample Duplicate	T	Water	350.1	
MB 280-205469/104	Method Blank	T	Water	350.1	
280-49949-F-1 MS	Matrix Spike	T	Water	350.1	
280-49949-F-1 MSD	Matrix Spike Duplicate	T	Water	350.1	
280-49949-2	DB01-W	T	Water	350.1	
Analysis Batch:280-205498					
LCS 280-204304/2-A	Lab Control Sample	T	Water	351.2	280-204304
LCSD 280-204304/3-A	Lab Control Sample Duplicate	T	Water	351.2	280-204304
MB 280-204304/1-A	Method Blank	T	Water	351.2	280-204304
550-15341-C-1-C MS	Matrix Spike	T	Water	351.2	280-204304
550-15341-C-1-D MSD	Matrix Spike Duplicate	T	Water	351.2	280-204304
280-49949-2	DB01-W	T	Water	351.2	280-204304
Analysis Batch:280-205861					
LCS 280-205861/155	Lab Control Sample	T	Water	353.2	
LCS 280-205861/97	Lab Control Sample	T	Water	353.2	
LCSD 280-205861/156	Lab Control Sample Duplicate	T	Water	353.2	
LCSD 280-205861/98	Lab Control Sample Duplicate	T	Water	353.2	
MB 280-205861/154	Method Blank	T	Water	353.2	
MB 280-205861/96	Method Blank	T	Water	353.2	
280-49949-F-1 MS	Matrix Spike	T	Water	353.2	
280-49949-F-1 MSD	Matrix Spike Duplicate	T	Water	353.2	
280-49949-2	DB01-W	T	Water	353.2	
Analysis Batch:280-206110					
MB 280-206110/1	Method Blank	T	Water	Total Nitrogen	
280-49949-2	DB01-W	T	Water	Total Nitrogen	

Report Basis

T = Total

Client: Waste Management

Job Number: 280-49949-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
HPLC/IC					
Analysis Batch:440-149568					
LCS 440-149568/2	Lab Control Sample	T	Water	218.6	
MB 440-149568/3	Method Blank	T	Water	218.6	
280-49949-2	DB01-W	D	Water	218.6	
280-49949-2MS	Matrix Spike	D	Water	218.6	
280-49949-2MSD	Matrix Spike Duplicate	D	Water	218.6	

Report Basis

D = Dissolved

T = Total

Client: Waste Management

Job Number: 280-49949-2

Surrogate Recovery Report

625 Semivolatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	TBP %Rec	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
280-49949-2	DB01-W	94	89	87	93	90	46
MB 280-204135/1-A		75	83	84	89	85	99
LCS 280-204135/2-A		91	91	90	93	93	99
LCSD 280-204135/3-A		93	92	86	90	89	97

Surrogate	Acceptance Limits
TBP = 2,4,6-Tribromophenol	50-120
FBP = 2-Fluorobiphenyl	36-120
2FP = 2-Fluorophenol	30-120
NBZ = Nitrobenzene-d5	45-120
PHL = Phenol-d5	36-120
TPH = Terphenyl-d14	41-120

Client: Waste Management

Job Number: 280-49949-2

Method Blank - Batch: 280-204135

Method: 625
Preparation: 625

Lab Sample ID:	MB 280-204135/1-A	Analysis Batch:	280-204676	Instrument ID:	SMS_D
Client Matrix:	Water	Prep Batch:	280-204135	Lab File ID:	D2753.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	12/10/2013 1529	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	12/06/2013 1143			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Alpha-Terpineol	ND		0.0020	0.010
Benzoic acid	ND		0.010	0.050
p-Cresol	ND		0.00025	0.010
Pentachlorophenol	ND		0.020	0.060
Phenol	ND		0.0020	0.010

Surrogate	% Rec	Acceptance Limits
2,4,6-Tribromophenol	75	50 - 120
2-Fluorobiphenyl	83	36 - 120
2-Fluorophenol	84	30 - 120
Nitrobenzene-d5	89	45 - 120
Phenol-d5	85	36 - 120
Terphenyl-d14	99	41 - 120

Client: Waste Management

Job Number: 280-49949-2

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-204135

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-204135/2-A	Analysis Batch:	280-204676	Instrument ID:	SMS_D
Client Matrix:	Water	Prep Batch:	280-204135	Lab File ID:	D2754.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	12/10/2013 1557	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	12/06/2013 1143			Injection Volume:	0.5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-204135/3-A	Analysis Batch:	280-204676	Instrument ID:	SMS_D
Client Matrix:	Water	Prep Batch:	280-204135	Lab File ID:	D2755.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	12/10/2013 1625	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	12/06/2013 1143			Injection Volume:	0.5 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
1,2,4-Trichlorobenzene	71	73	44 - 120	3	35		
1,2-Dichlorobenzene	66	69	32 - 120	5	42		
1,3-Dichlorobenzene	62	65	23 - 120	3	47		
1,4-Dichlorobenzene	63	66	24 - 120	4	49		
2,2'-Oxybis(1-chloropropane)	89	89	37 - 120	0	30		
2,4,6-Trichlorophenol	94	93	51 - 120	0	30		
2,4-Dichlorophenol	96	94	46 - 120	2	30		
2,4-Dimethylphenol	72	69	44 - 119	5	35		
2,4-Dinitrophenol	89	94	20 - 121	5	61		
2,4-Dinitrotoluene	97	99	57 - 120	2	35		
2,6-Dinitrotoluene	94	99	56 - 120	5	30		
2-Chloronaphthalene	84	86	60 - 118	2	30		
2-Chlorophenol	91	90	34 - 120	0	30		
2-Methylphenol	89	86	38 - 120	4	35		
2-Nitrophenol	98	97	47 - 120	1	30		
3,3'-Dichlorobenzidine	35	39	18 - 120	11	50	J	J
4,6-Dinitro-2-methylphenol	103	108	40 - 120	5	55		
4-Bromophenyl phenyl ether	90	93	53 - 120	4	34		
4-Chloro-3-methylphenol	94	96	57 - 120	2	30		
4-Chlorophenyl phenyl ether	87	91	51 - 120	4	30		
4-Nitrophenol	82	85	53 - 120	4	42		
Acenaphthene	85	88	47 - 120	3	30		
Acenaphthylene	83	85	33 - 120	3	30		
Anthracene	88	88	52 - 120	0	30		
Benzidine	40	37	10 - 218	8	50		
Benzo[a]anthracene	93	92	54 - 120	1	30		
Benzo[a]pyrene	94	93	39 - 120	2	73		
Benzo[b]fluoranthene	97	97	51 - 120	1	90		
Benzo[g,h,i]perylene	92	93	48 - 120	1	64		
Benzo[k]fluoranthene	92	92	49 - 120	1	50		
Bis(2-chloroethoxy)methane	91	91	50 - 120	0	30		
Bis(2-chloroethyl)ether	87	86	35 - 120	1	30		
Bis(2-ethylhexyl) phthalate	94	95	56 - 120	1	30		
Butyl benzyl phthalate	98	98	53 - 120	0	30		
Chrysene	91	92	51 - 120	1	30		
Dibenz(a,h)anthracene	99	96	45 - 120	3	78		

Client: Waste Management

Job Number: 280-49949-2

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-204135

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-204135/2-A	Analysis Batch:	280-204676	Instrument ID:	SMS_D
Client Matrix:	Water	Prep Batch:	280-204135	Lab File ID:	D2754.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	12/10/2013 1557	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	12/06/2013 1143			Injection Volume:	0.5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-204135/3-A	Analysis Batch:	280-204676	Instrument ID:	SMS_D
Client Matrix:	Water	Prep Batch:	280-204135	Lab File ID:	D2755.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	12/10/2013 1625	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	12/06/2013 1143			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Diethyl phthalate	94	94	59 - 114	1	30		
Dimethyl phthalate	93	95	58 - 112	2	30		
Di-n-butyl phthalate	93	94	57 - 118	0	30		
Di-n-octyl phthalate	99	98	56 - 120	1	30		
Fluoranthene	91	93	58 - 120	2	30		
Fluorene	87	90	59 - 120	4	30		
Hexachlorobenzene	90	88	53 - 120	2	30		
Hexachlorobutadiene	60	66	27 - 116	8	41		
Hexachlorocyclopentadiene	23	20	10 - 120	16	82	J	J
Hexachloroethane	56	61	40 - 113	8	52		
Indeno[1,2,3-cd]pyrene	95	95	50 - 120	0	73		
Isophorone	86	85	50 - 120	1	30		
Naphthalene	78	81	37 - 120	4	30		
n-Decane	51	54	28 - 120	6	61		
Nitrobenzene	91	89	46 - 120	2	30		
N-Nitrosodimethylamine	87	87	37 - 120	1	30		
N-Nitrosodi-n-propylamine	91	90	50 - 120	1	30		
N-Nitrosodiphenylamine	81	81	46 - 203	1	50		
p-Cresol	89	90	42 - 120	1	39		
Pentachlorophenol	72	73	46 - 120	2	30		
Phenanthrene	90	90	54 - 120	0	30		
Phenol	91	89	37 - 112	2	30		
Pyrene	94	94	55 - 115	1	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
2,4,6-Tribromophenol	91	93	50 - 120
2-Fluorobiphenyl	91	92	36 - 120
2-Fluorophenol	90	86	30 - 120
Nitrobenzene-d5	93	90	45 - 120
Phenol-d5	93	89	36 - 120
Terphenyl-d14	99	97	41 - 120

Client: Waste Management

Job Number: 280-49949-2

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-204135

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-204135/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-204135/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/10/2013 1557			Analysis Date:	12/10/2013 1625
Prep Date:	12/06/2013 1143			Prep Date:	12/06/2013 1143
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual		LCSD Result/Qual	
1,2,4-Trichlorobenzene	0.0800	0.0800	0.0570		0.0588	
1,2-Dichlorobenzene	0.0800	0.0800	0.0525		0.0554	
1,3-Dichlorobenzene	0.0800	0.0800	0.0499		0.0516	
1,4-Dichlorobenzene	0.0800	0.0800	0.0506		0.0527	
2,2'-Oxybis(1-chloropropane)	0.0800	0.0800	0.0708		0.0709	
2,4,6-Trichlorophenol	0.0800	0.0800	0.0749		0.0748	
2,4-Dichlorophenol	0.0800	0.0800	0.0765		0.0753	
2,4-Dimethylphenol	0.0800	0.0800	0.0579		0.0550	
2,4-Dinitrophenol	0.160	0.160	0.142		0.150	
2,4-Dinitrotoluene	0.0800	0.0800	0.0780		0.0795	
2,6-Dinitrotoluene	0.0800	0.0800	0.0754		0.0791	
2-Chloronaphthalene	0.0800	0.0800	0.0671		0.0685	
2-Chlorophenol	0.0800	0.0800	0.0726		0.0722	
2-Methylphenol	0.0800	0.0800	0.0712		0.0686	
2-Nitrophenol	0.0800	0.0800	0.0783		0.0776	
3,3'-Dichlorobenzidine	0.0800	0.0800	0.0279	J	0.0311	J
4,6-Dinitro-2-methylphenol	0.160	0.160	0.165		0.173	
4-Bromophenyl phenyl ether	0.0800	0.0800	0.0718		0.0745	
4-Chloro-3-methylphenol	0.0800	0.0800	0.0752		0.0765	
4-Chlorophenyl phenyl ether	0.0800	0.0800	0.0699		0.0729	
4-Nitrophenol	0.160	0.160	0.131		0.136	
Acenaphthene	0.0800	0.0800	0.0679		0.0703	
Acenaphthylene	0.0800	0.0800	0.0661		0.0684	
Anthracene	0.0800	0.0800	0.0706		0.0708	
Benzidine	0.0800	0.0800	ND		ND	
Benzo[a]anthracene	0.0800	0.0800	0.0740		0.0732	
Benzo[a]pyrene	0.0800	0.0800	0.0752		0.0740	
Benzo[b]fluoranthene	0.0800	0.0800	0.0780		0.0774	
Benzo[g,h,i]perylene	0.0800	0.0800	0.0740		0.0744	
Benzo[k]fluoranthene	0.0800	0.0800	0.0740		0.0734	
Bis(2-chloroethoxy)methane	0.0800	0.0800	0.0724		0.0728	
Bis(2-chloroethyl)ether	0.0800	0.0800	0.0696		0.0690	
Bis(2-ethylhexyl) phthalate	0.0800	0.0800	0.0756		0.0763	
Butyl benzyl phthalate	0.0800	0.0800	0.0783		0.0782	
Chrysene	0.0800	0.0800	0.0726		0.0732	
Dibenz(a,h)anthracene	0.0800	0.0800	0.0788		0.0766	
Diethyl phthalate	0.0800	0.0800	0.0749		0.0754	
Dimethyl phthalate	0.0800	0.0800	0.0747		0.0762	
Di-n-butyl phthalate	0.0800	0.0800	0.0747		0.0748	

Client: Waste Management

Job Number: 280-49949-2

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-204135

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-204135/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-204135/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/10/2013 1557			Analysis Date:	12/10/2013 1625
Prep Date:	12/06/2013 1143			Prep Date:	12/06/2013 1143
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual		LCSD Result/Qual	
Di-n-octyl phthalate	0.0800	0.0800	0.0789		0.0784	
Fluoranthene	0.0800	0.0800	0.0728		0.0746	
Fluorene	0.0800	0.0800	0.0692		0.0718	
Hexachlorobenzene	0.0800	0.0800	0.0720		0.0704	
Hexachlorobutadiene	0.0800	0.0800	0.0484		0.0525	
Hexachlorocyclopentadiene	0.0800	0.0800	0.0183	J	0.0157	J
Hexachloroethane	0.0800	0.0800	0.0448		0.0486	
Indeno[1,2,3-cd]pyrene	0.0800	0.0800	0.0758		0.0756	
Isophorone	0.0800	0.0800	0.0686		0.0682	
Naphthalene	0.0800	0.0800	0.0624		0.0648	
n-Decane	0.0800	0.0800	0.0407		0.0432	
Nitrobenzene	0.0800	0.0800	0.0731		0.0715	
N-Nitrosodimethylamine	0.0800	0.0800	0.0699		0.0693	
N-Nitrosodi-n-propylamine	0.0800	0.0800	0.0731		0.0723	
N-Nitrosodiphenylamine	0.0800	0.0800	0.0651		0.0644	
p-Cresol	0.0800	0.0800	0.0712		0.0722	
Pentachlorophenol	0.160	0.160	0.115		0.117	
Phenanthrene	0.0800	0.0800	0.0719		0.0718	
Phenol	0.0800	0.0800	0.0729		0.0715	
Pyrene	0.0800	0.0800	0.0750		0.0756	

Client: Waste Management

Job Number: 280-49949-2

Method Blank - Batch: 440-149568

Method: 218.6
Preparation: N/A

Lab Sample ID:	MB 440-149568/3	Analysis Batch:	440-149568	Instrument ID:	IC-20
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Info 2_TAIIRVIC20_Hexav
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	12/10/2013 0701	Units:	ug/L	Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1000 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Chromium, hexavalent	ND		0.25	1.0

Lab Control Sample - Batch: 440-149568

Method: 218.6
Preparation: N/A

Lab Sample ID:	LCS 440-149568/2	Analysis Batch:	440-149568	Instrument ID:	IC-20
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Info 2_TAIIRVIC20_Hexav
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	12/10/2013 0629	Units:	ug/L	Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1000 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chromium, hexavalent	50.0	47.7	95	90 - 110	

Method Reporting Limit Check - Batch: 440-149568

Method: 218.6
Preparation: N/A

Lab Sample ID:	MRL 440-149568/4	Analysis Batch:	440-149568	Instrument ID:	IC-20
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Info 2_TAIIRVIC20_Hexav
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	12/10/2013 0713	Units:	ug/L	Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1000 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chromium, hexavalent	1.00	1.16	116	50 - 150	

Client: Waste Management

Job Number: 280-49949-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 440-149568

Method: 218.6
Preparation: N/A

MS Lab Sample ID:	280-49949-2	Analysis Batch:	440-149568	Instrument ID:	IC-20
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Info 2_TAIIRVIC20_Hexav
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	12/11/2013 0033			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1000 uL
Leach Date:	N/A				

MSD Lab Sample ID:	280-49949-2	Analysis Batch:	440-149568	Instrument ID:	IC-20
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Info 2_TAIIRVIC20_Hexav
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	12/11/2013 0046			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1000 uL
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Chromium, hexavalent	0	0	90 - 110	NC	10	F	F

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 440-149568

Method: 218.6
Preparation: N/A

MS Lab Sample ID:	280-49949-2	Units:	ug/L	MSD Lab Sample ID:	280-49949-2
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/11/2013 0033			Analysis Date:	12/11/2013 0046
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Chromium, hexavalent	ND	50.0	50.0	ND	F	ND	F

Client: Waste Management

Job Number: 280-49949-2

Method Blank - Batch: 280-203880

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	MB 280-203880/1-A	Analysis Batch:	280-204169	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-203880	Lab File ID:	25A5120513.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/06/2013 0428	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1200				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Arsenic	ND		0.0044	0.015
Cadmium	ND		0.00045	0.0050
Iron	ND		0.022	0.10
Lead	ND		0.0026	0.0090
Selenium	ND		0.0049	0.015
Zinc	ND		0.0045	0.020
Silver	ND		0.00093	0.010

Lab Control Sample - Batch: 280-203880

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	LCS 280-203880/2-A	Analysis Batch:	280-204169	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-203880	Lab File ID:	25A5120513.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/06/2013 0431	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1200				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	1.00	1.04	104	88 - 110	
Cadmium	0.100	0.107	107	88 - 111	
Iron	1.00	0.927	93	89 - 115	
Lead	0.500	0.489	98	89 - 110	
Selenium	2.00	2.14	107	85 - 112	
Zinc	0.500	0.455	91	85 - 111	
Silver	0.0500	0.0518	104	85 - 115	

Client: Waste Management

Job Number: 280-49949-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-203880

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-49917-E-1-B MS	Analysis Batch:	280-204169	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-203880	Lab File ID:	25A5120513.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/06/2013 0438			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1200				
Leach Date:	N/A				

MSD Lab Sample ID:	280-49917-E-1-C MSD	Analysis Batch:	280-204169	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-203880	Lab File ID:	25A5120513.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/06/2013 0440			Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1200				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Arsenic	107	108	88 - 110	1	20		
Cadmium	108	110	88 - 111	1	20		
Iron	91	96	89 - 115	2	20		
Lead	95	96	89 - 110	1	20		
Selenium	108	109	85 - 112	1	20		
Zinc	90	90	85 - 111	0	20		
Silver	106	107	85 - 115	1	20		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-203880

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-49917-E-1-B MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	12/06/2013 0438		
Prep Date:	12/05/2013 1200		
Leach Date:	N/A		

MSD Lab Sample ID:	280-49917-E-1-C MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	12/06/2013 0440
Prep Date:	12/05/2013 1200
Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Arsenic	0.0066	J	1.00	1.00	1.08	1.09
Cadmium	ND		0.100	0.100	0.108	0.110
Iron	1.4		1.00	1.00	2.27	2.33
Lead	ND		0.500	0.500	0.476	0.480
Selenium	ND		2.00	2.00	2.17	2.18
Zinc	0.010	J	0.500	0.500	0.462	0.462
Silver	ND		0.0500	0.0500	0.0530	0.0535

Client: Waste Management

Job Number: 280-49949-2

Method Blank - Batch: 280-203956

Method: 245.1
Preparation: 245.1

Lab Sample ID:	MB 280-203956/1-A	Analysis Batch:	280-204789	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-203956	Lab File ID:	131210aa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	12/10/2013 1659	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	12/10/2013 1245				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000027	0.00020

Lab Control Sample - Batch: 280-203956

Method: 245.1
Preparation: 245.1

Lab Sample ID:	LCS 280-203956/2-A	Analysis Batch:	280-204789	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-203956	Lab File ID:	131210aa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	12/10/2013 1701	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	12/10/2013 1245				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00512	102	90 - 110	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-203956

Method: 245.1
Preparation: 245.1

MS Lab Sample ID:	280-49949-2	Analysis Batch:	280-204789	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-203956	Lab File ID:	131210aa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	12/10/2013 1712			Final Weight/Volume:	30 mL
Prep Date:	12/10/2013 1245				
Leach Date:	N/A				

MSD Lab Sample ID:	280-49949-2	Analysis Batch:	280-204789	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-203956	Lab File ID:	131210aa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	12/10/2013 1715			Final Weight/Volume:	30 mL
Prep Date:	12/10/2013 1245				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	102	103	80 - 120	1	10		

Client: Waste Management

Job Number: 280-49949-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-203956

Method: 245.1
Preparation: 245.1

MS Lab Sample ID:	280-49949-2	Units:	mg/L	MSD Lab Sample ID:	280-49949-2
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/10/2013 1712			Analysis Date:	12/10/2013 1715
Prep Date:	12/10/2013 1245			Prep Date:	12/10/2013 1245
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Mercury	ND	0.00500	0.00500	0.00512	0.00516

Client: Waste Management

Job Number: 280-49949-2

Method Blank - Batch: 480-157405

Method: 1664A
Preparation: 1664A

Lab Sample ID:	MB 480-157405/1-A	Analysis Batch:	480-157407	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	480-157405	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	12/13/2013 0609	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	12/13/2013 0544				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
HEM	ND		1.4	5.0

Lab Control Sample - Batch: 480-157405

Method: 1664A
Preparation: 1664A

Lab Sample ID:	LCS 480-157405/2-A	Analysis Batch:	480-157407	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	480-157405	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	12/13/2013 0609	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	12/13/2013 0544				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
HEM	40.0	37.4	93	78 - 114	

Matrix Spike - Batch: 480-157405

Method: 1664A
Preparation: 1664A

Lab Sample ID:	480-51654-B-1-A MS	Analysis Batch:	480-157407	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	480-157405	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	12/13/2013 0609	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	12/13/2013 0544				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
HEM	ND	20.0	17.8	89	78 - 114	

Client: Waste Management

Job Number: 280-49949-2

Method Blank - Batch: 280-205469

Method: 350.1
Preparation: N/A

Lab Sample ID:	MB 280-205469/104	Analysis Batch:	280-205469	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\121613.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	12/16/2013 1425	Units:	mg/L	Final Weight/Volume:	10 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Ammonia	ND		0.022	0.10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-205469

Method: 350.1
Preparation: N/A

LCS Lab Sample ID:	LCS 280-205469/102	Analysis Batch:	280-205469	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\121613.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/16/2013 1420	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-205469/103	Analysis Batch:	280-205469	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\121613.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/16/2013 1422	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Ammonia	108	108	90 - 110	0	10		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-205469

Method: 350.1
Preparation: N/A

LCS Lab Sample ID:	LCS 280-205469/102	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-205469/103
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/16/2013 1420			Analysis Date:	12/16/2013 1422
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Ammonia	2.50	2.50	2.70	2.71

Client: Waste Management

Job Number: 280-49949-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-205469

Method: 350.1
Preparation: N/A

MS Lab Sample ID:	280-49949-F-1 MS	Analysis Batch:	280-205469	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\121613.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	20 mL
Analysis Date:	12/16/2013 1429			Final Weight/Volume:	20 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-49949-F-1 MSD	Analysis Batch:	280-205469	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\121613.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	20 mL
Analysis Date:	12/16/2013 1432			Final Weight/Volume:	20 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Ammonia	116	118	90 - 110	1	10	F	F

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-205469

Method: 350.1
Preparation: N/A

MS Lab Sample ID:	280-49949-F-1 MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	12/16/2013 1429		
Prep Date:	N/A		
Leach Date:	N/A		

MSD Lab Sample ID:	280-49949-F-1 MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	12/16/2013 1432
Prep Date:	N/A
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Ammonia	0.16	1.00	1.00	1.31	F	1.33	F

Client: Waste Management

Job Number: 280-49949-2

Method Blank - Batch: 280-204304

Method: 351.2
Preparation: 351.2

Lab Sample ID:	MB 280-204304/1-A	Analysis Batch:	280-205498	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-204304	Lab File ID:	121213.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	12/12/2013 1102	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	12/07/2013 1336				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrogen, Kjeldahl	ND		0.18	0.50

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-204304

Method: 351.2
Preparation: 351.2

LCS Lab Sample ID:	LCS 280-204304/2-A	Analysis Batch:	280-205498	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-204304	Lab File ID:	121213.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	12/12/2013 1059	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	12/07/2013 1336				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-204304/3-A	Analysis Batch:	280-205498	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-204304	Lab File ID:	121213.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	12/12/2013 1101	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	12/07/2013 1336				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Nitrogen, Kjeldahl	96	97	90 - 110	1	25		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-204304

Method: 351.2
Preparation: 351.2

LCS Lab Sample ID:	LCS 280-204304/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-204304/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/12/2013 1059			Analysis Date:	12/12/2013 1101
Prep Date:	12/07/2013 1336			Prep Date:	12/07/2013 1336
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Nitrogen, Kjeldahl	6.00	6.00	5.77	5.84

Client: Waste Management

Job Number: 280-49949-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-204304

Method: 351.2
Preparation: 351.2

MS Lab Sample ID:	550-15341-C-1-C MS	Analysis Batch:	280-205498	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-204304	Lab File ID:	121213.tab
Dilution:	2.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	12/12/2013 1107			Final Weight/Volume:	25 mL
Prep Date:	12/07/2013 1336				
Leach Date:	N/A				

MSD Lab Sample ID:	550-15341-C-1-D MSD	Analysis Batch:	280-205498	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-204304	Lab File ID:	121213.tab
Dilution:	2.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	12/12/2013 1108			Final Weight/Volume:	25 mL
Prep Date:	12/07/2013 1336				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Nitrogen, Kjeldahl	63	104	90 - 110	13	25	F	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-204304

Method: 351.2
Preparation: 351.2

MS Lab Sample ID:	550-15341-C-1-C MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	2.0		
Analysis Date:	12/12/2013 1107		
Prep Date:	12/07/2013 1336		
Leach Date:	N/A		

MSD Lab Sample ID:	550-15341-C-1-D MSD
Client Matrix:	Water
Dilution:	2.0
Analysis Date:	12/12/2013 1108
Prep Date:	12/07/2013 1336
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual
Nitrogen, Kjeldahl	6.6	3.00	3.00	8.55	F	9.77

Client: Waste Management

Job Number: 280-49949-2

Method Blank - Batch: 280-205861

Method: 353.2
Preparation: N/A

Lab Sample ID:	MB 280-205861/96	Analysis Batch:	280-205861	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1218NXNS.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/18/2013 1911	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrate Nitrite as N	ND		0.019	0.10

Method Blank - Batch: 280-205861

Method: 353.2
Preparation: N/A

Lab Sample ID:	MB 280-205861/154	Analysis Batch:	280-205861	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1218NXNS.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/18/2013 2045	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrate Nitrite as N	ND		0.019	0.10

Method Reporting Limit Check - Batch: 280-205861

Method: 353.2
Preparation: N/A

Lab Sample ID:	MRL 280-205861/18	Analysis Batch:	280-205861	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1218NXNS.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/18/2013 1700	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate Nitrite as N	0.100	0.106	106	50 - 150	

Client: Waste Management

Job Number: 280-49949-2

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-205861

Method: 353.2
Preparation: N/A

LCS Lab Sample ID:	LCS 280-205861/97	Analysis Batch:	280-205861	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1218NXNS.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/18/2013 1913	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-205861/98	Analysis Batch:	280-205861	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1218NXNS.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/18/2013 1914	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Nitrate Nitrite as N	100	97	90 - 110	2	10		

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-205861

Method: 353.2
Preparation: N/A

LCS Lab Sample ID:	LCS 280-205861/155	Analysis Batch:	280-205861	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1218NXNS.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/18/2013 2047	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-205861/156	Analysis Batch:	280-205861	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1218NXNS.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/18/2013 2048	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Nitrate Nitrite as N	100	100	90 - 110	0	10		

Client: Waste Management

Job Number: 280-49949-2

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-205861

Method: 353.2
Preparation: N/A

LCS Lab Sample ID:	LCS 280-205861/97	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-205861/98
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/18/2013 1913			Analysis Date:	12/18/2013 1914
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Nitrate Nitrite as N	5.00	5.00	4.98	4.87

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-205861

Method: 353.2
Preparation: N/A

LCS Lab Sample ID:	LCS 280-205861/155	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-205861/156
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/18/2013 2047			Analysis Date:	12/18/2013 2048
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Nitrate Nitrite as N	5.00	5.00	5.00	5.01

Client: Waste Management

Job Number: 280-49949-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-205861

Method: 353.2
Preparation: N/A

MS Lab Sample ID:	280-49949-F-1 MS	Analysis Batch:	280-205861	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1218NXNS.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	12/18/2013 2024			Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-49949-F-1 MSD	Analysis Batch:	280-205861	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1218NXNS.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	12/18/2013 2026			Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Nitrate Nitrite as N	106	104	90 - 110	2	10		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-205861

Method: 353.2
Preparation: N/A

MS Lab Sample ID:	280-49949-F-1 MS	Units:	mg/L	MSD Lab Sample ID:	280-49949-F-1 MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/18/2013 2024			Analysis Date:	12/18/2013 2026
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Nitrate Nitrite as N	0.81	4.00	4.00	5.06	4.96

Client: Waste Management

Job Number: 280-49949-2

Method Blank - Batch: 280-204056

Method: 365.1
Preparation: 365.2/365.3/365

Lab Sample ID:	MB 280-204056/5-A	Analysis Batch:	280-204275	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-204056	Lab File ID:	120613TPHOS A.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/06/2013 1656	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1539				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Phosphorus, Total	0.00745	J	0.0050	0.050

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-204056

Method: 365.1
Preparation: 365.2/365.3/365

LCS Lab Sample ID:	LCS 280-204056/3-A	Analysis Batch:	280-204275	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-204056	Lab File ID:	120613TPHOS A.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/06/2013 1656	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1539				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-204056/4-A	Analysis Batch:	280-204275	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-204056	Lab File ID:	120613TPHOS A.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/06/2013 1656	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/05/2013 1539				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Phosphorus, Total	103	105	90 - 110	2	10		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-204056

Method: 365.1
Preparation: 365.2/365.3/365

LCS Lab Sample ID:	LCS 280-204056/3-A	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	12/06/2013 1656		
Prep Date:	12/05/2013 1539		
Leach Date:	N/A		

LCSD Lab Sample ID:	LCSD 280-204056/4-A
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	12/06/2013 1656
Prep Date:	12/05/2013 1539
Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Phosphorus, Total	0.500	0.500	0.516	0.525

Client: Waste Management

Job Number: 280-49949-2

Method Blank - Batch: 280-204293

Method: 410.4
Preparation: N/A

Lab Sample ID:	MB 280-204293/5	Analysis Batch:	280-204293	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2 mL
Analysis Date:	12/07/2013 1028	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Chemical Oxygen Demand	6.18	J	4.1	20

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-204293

Method: 410.4
Preparation: N/A

LCS Lab Sample ID:	LCS 280-204293/3	Analysis Batch:	280-204293	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/07/2013 1028	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-204293/4	Analysis Batch:	280-204293	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/07/2013 1028	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Chemical Oxygen Demand	103	103	90 - 110	0	11		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-204293

Method: 410.4
Preparation: N/A

LCS Lab Sample ID:	LCS 280-204293/3	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-204293/4
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/07/2013 1028			Analysis Date:	12/07/2013 1028
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Chemical Oxygen Demand	100	100	103	103

Client: Waste Management

Job Number: 280-49949-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-204293

Method: 410.4
Preparation: N/A

MS Lab Sample ID:	280-49975-C-1 MS	Analysis Batch:	280-204293	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/07/2013 1028			Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-49975-C-1 MSD	Analysis Batch:	280-204293	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/07/2013 1028			Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Chemical Oxygen Demand	103	102	90 - 110	1	11		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-204293

Method: 410.4
Preparation: N/A

MS Lab Sample ID:	280-49975-C-1 MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	12/07/2013 1028		
Prep Date:	N/A		
Leach Date:	N/A		

MSD Lab Sample ID:	280-49975-C-1 MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	12/07/2013 1028
Prep Date:	N/A
Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Chemical Oxygen Demand	8.3	J	50.0	50.0	60.0	59.4

Client: Waste Management

Job Number: 280-49949-2

Method Blank - Batch: 280-203909

Method: SM 2540D
Preparation: N/A

Lab Sample ID:	MB 280-203909/1	Analysis Batch:	280-203909	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	12/05/2013 0755	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Total Suspended Solids	ND		1.1	4.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-203909

Method: SM 2540D
Preparation: N/A

LCS Lab Sample ID:	LCS 280-203909/2	Analysis Batch:	280-203909	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/05/2013 0755	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-203909/3	Analysis Batch:	280-203909	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/05/2013 0755	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Total Suspended Solids	91	97	86 - 114	6	20		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-203909

Method: SM 2540D
Preparation: N/A

LCS Lab Sample ID:	LCS 280-203909/2	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-203909/3
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/05/2013 0755			Analysis Date:	12/05/2013 0755
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Total Suspended Solids	100	100	91.0	97.0

Client: Waste Management

Job Number: 280-49949-2

Duplicate - Batch: 280-203909

Method: SM 2540D
Preparation: N/A

Lab Sample ID:	280-49940-A-1 DU	Analysis Batch:	280-203909	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	12/05/2013 0755	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Suspended Solids	19	18.0	4	10	

Client: Waste Management

Job Number: 280-49949-2

Method Blank - Batch: 280-206110

Method: Total Nitrogen
Preparation: N/A

Lab Sample ID:	MB 280-206110/1	Analysis Batch:	280-206110	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/20/2013 1029	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrogen, Total	ND		0.042	0.10

Client: Waste Management

Job Number: 280-49949-2

Laboratory Chronicle

Lab ID: **280-49949-2** **Client ID:** **DB01-W**

Sample Date/Time: 12/01/2013 11:50 Received Date/Time: 12/04/2013 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	280-49949-C-2-A		280-204676	280-204135	12/06/2013 11:43	1	TAL DEN	JJW
A:625	280-49949-C-2-A		280-204676	280-204135	12/11/2013 00:16	1	TAL DEN	MGH
A:218.6	280-49949-J-2		440-149568		12/11/2013 00:20	1	TAL IRV	MN
P:200.7	280-49949-A-2-A		280-204169	280-203880	12/05/2013 12:00	1	TAL DEN	LLB
A:200.7 Rev 4.4	280-49949-A-2-A		280-204169	280-203880	12/06/2013 05:09	1	TAL DEN	JKH
P:245.1	280-49949-H-2-A		280-204789	280-203956	12/10/2013 12:45	1	TAL DEN	JM
A:245.1	280-49949-H-2-A		280-204789	280-203956	12/10/2013 17:05	1	TAL DEN	JM
P:1664A	280-49949-B-2-A		480-157407	480-157405	12/13/2013 05:44	1	TAL BUF	LAW
A:1664A	280-49949-B-2-A		480-157407	480-157405	12/13/2013 06:09	1	TAL BUF	LAW
A:350.1	280-49949-F-2		280-205469		12/16/2013 14:34	1	TAL DEN	RSN
P:351.2	280-49949-F-2-B		280-205498	280-204304	12/07/2013 13:36	1	TAL DEN	SMG
A:351.2	280-49949-F-2-B		280-205498	280-204304	12/12/2013 11:37	1	TAL DEN	SMG
A:353.2	280-49949-F-2		280-205861		12/18/2013 21:06	1	TAL DEN	DVA
P:365.2/365.3/365	280-49949-F-2-A		280-204275	280-204056	12/05/2013 15:39	1	TAL DEN	AJS
A:365.1	280-49949-F-2-A		280-204275	280-204056	12/06/2013 17:04	1	TAL DEN	AJS
A:410.4	280-49949-F-2		280-204293		12/07/2013 10:28	1	TAL DEN	AFB
A:SM 2540D	280-49949-E-2		280-203909		12/05/2013 07:55	1	TAL DEN	BAN
A:Total Nitrogen	280-49949-A-2		280-206110		12/20/2013 10:33	1	TAL DEN	DME
A:Field Sampling	280-49949-A-2		280-203962		12/01/2013 11:50	1	TAL DEN	FS

Lab ID: **280-49949-2 MS** **Client ID:** **DB01-W**

Sample Date/Time: 12/01/2013 11:50 Received Date/Time: 12/04/2013 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:218.6	280-49949-J-2 MS		440-149568		12/11/2013 00:33	1	TAL IRV	MN
P:245.1	280-49949-H-2-B MS		280-204789	280-203956	12/10/2013 12:45	1	TAL DEN	JM
A:245.1	280-49949-H-2-B MS		280-204789	280-203956	12/10/2013 17:12	1	TAL DEN	JM

Lab ID: **280-49949-2 MSD** **Client ID:** **DB01-W**

Sample Date/Time: 12/01/2013 11:50 Received Date/Time: 12/04/2013 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:218.6	280-49949-J-2 MSD		440-149568		12/11/2013 00:46	1	TAL IRV	MN
P:245.1	280-49949-H-2-C MSD		280-204789	280-203956	12/10/2013 12:45	1	TAL DEN	JM
A:245.1	280-49949-H-2-C MSD		280-204789	280-203956	12/10/2013 17:15	1	TAL DEN	JM

Client: Waste Management

Job Number: 280-49949-2

Laboratory Chronicle

Lab ID: **MB** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	MB 280-204135/1-A		280-204676	280-204135	12/06/2013 11:43	1	TAL DEN	JJW
A:625	MB 280-204135/1-A		280-204676	280-204135	12/10/2013 15:29	1	TAL DEN	MGH
A:218.6	MB 440-149568/3		440-149568		12/10/2013 07:01	1	TAL IRV	MN
P:200.7	MB 280-203880/1-A		280-204169	280-203880	12/05/2013 12:00	1	TAL DEN	LLB
A:200.7 Rev 4.4	MB 280-203880/1-A		280-204169	280-203880	12/06/2013 04:28	1	TAL DEN	JKH
P:245.1	MB 280-203956/1-A		280-204789	280-203956	12/10/2013 12:45	1	TAL DEN	JM
A:245.1	MB 280-203956/1-A		280-204789	280-203956	12/10/2013 16:59	1	TAL DEN	JM
P:1664A	MB 480-157405/1-A		480-157407	480-157405	12/13/2013 05:44	1	TAL BUF	LAW
A:1664A	MB 480-157405/1-A		480-157407	480-157405	12/13/2013 06:09	1	TAL BUF	LAW
A:350.1	MB 280-205469/104		280-205469		12/16/2013 14:25	1	TAL DEN	RSN
P:351.2	MB 280-204304/1-A		280-205498	280-204304	12/07/2013 13:36	1	TAL DEN	SMG
A:351.2	MB 280-204304/1-A		280-205498	280-204304	12/12/2013 11:02	1	TAL DEN	SMG
A:353.2	MB 280-205861/96		280-205861		12/18/2013 19:11	1	TAL DEN	DVA
A:353.2	MB 280-205861/154		280-205861		12/18/2013 20:45	1	TAL DEN	DVA
P:365.2/365.3/365	MB 280-204056/5-A		280-204275	280-204056	12/05/2013 15:39	1	TAL DEN	AJS
A:365.1	MB 280-204056/5-A		280-204275	280-204056	12/06/2013 16:56	1	TAL DEN	AJS
A:410.4	MB 280-204293/5		280-204293		12/07/2013 10:28	1	TAL DEN	AFB
A:SM 2540D	MB 280-203909/1		280-203909		12/05/2013 07:55	1	TAL DEN	BAN
A:Total Nitrogen	MB 280-206110/1		280-206110		12/20/2013 10:29	1	TAL DEN	DME

Client: Waste Management

Job Number: 280-49949-2

Laboratory Chronicle

Lab ID: **LCS** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	LCS 280-204135/2-A		280-204676	280-204135	12/06/2013 11:43	1	TAL DEN	JJW
A:625	LCS 280-204135/2-A		280-204676	280-204135	12/10/2013 15:57	1	TAL DEN	MGH
A:218.6	LCS 440-149568/2		440-149568		12/10/2013 06:29	1	TAL IRV	MN
P:200.7	LCS 280-203880/2-A		280-204169	280-203880	12/05/2013 12:00	1	TAL DEN	LLB
A:200.7 Rev 4.4	LCS 280-203880/2-A		280-204169	280-203880	12/06/2013 04:31	1	TAL DEN	JKH
P:245.1	LCS 280-203956/2-A		280-204789	280-203956	12/10/2013 12:45	1	TAL DEN	JM
A:245.1	LCS 280-203956/2-A		280-204789	280-203956	12/10/2013 17:01	1	TAL DEN	JM
P:1664A	LCS 480-157405/2-A		480-157407	480-157405	12/13/2013 05:44	1	TAL BUF	LAW
A:1664A	LCS 480-157405/2-A		480-157407	480-157405	12/13/2013 06:09	1	TAL BUF	LAW
A:350.1	LCS 280-205469/102		280-205469		12/16/2013 14:20	1	TAL DEN	RSN
P:351.2	LCS 280-204304/2-A		280-205498	280-204304	12/07/2013 13:36	1	TAL DEN	SMG
A:351.2	LCS 280-204304/2-A		280-205498	280-204304	12/12/2013 10:59	1	TAL DEN	SMG
A:353.2	LCS 280-205861/97		280-205861		12/18/2013 19:13	1	TAL DEN	DVA
A:353.2	LCS 280-205861/155		280-205861		12/18/2013 20:47	1	TAL DEN	DVA
P:365.2/365.3/365	LCS 280-204056/3-A		280-204275	280-204056	12/05/2013 15:39	1	TAL DEN	AJS
A:365.1	LCS 280-204056/3-A		280-204275	280-204056	12/06/2013 16:56	1	TAL DEN	AJS
A:410.4	LCS 280-204293/3		280-204293		12/07/2013 10:28	1	TAL DEN	AFB
A:SM 2540D	LCS 280-203909/2		280-203909		12/05/2013 07:55	1	TAL DEN	BAN

Lab ID: **LCSD** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	LCSD 280-204135/3-A		280-204676	280-204135	12/06/2013 11:43	1	TAL DEN	JJW
A:625	LCSD 280-204135/3-A		280-204676	280-204135	12/10/2013 16:25	1	TAL DEN	MGH
A:350.1	LCSD 280-205469/103		280-205469		12/16/2013 14:22	1	TAL DEN	RSN
P:351.2	LCSD 280-204304/3-A		280-205498	280-204304	12/07/2013 13:36	1	TAL DEN	SMG
A:351.2	LCSD 280-204304/3-A		280-205498	280-204304	12/12/2013 11:01	1	TAL DEN	SMG
A:353.2	LCSD 280-205861/98		280-205861		12/18/2013 19:14	1	TAL DEN	DVA
A:353.2	LCSD 280-205861/156		280-205861		12/18/2013 20:48	1	TAL DEN	DVA
P:365.2/365.3/365	LCSD 280-204056/4-A		280-204275	280-204056	12/05/2013 15:39	1	TAL DEN	AJS
A:365.1	LCSD 280-204056/4-A		280-204275	280-204056	12/06/2013 16:56	1	TAL DEN	AJS
A:410.4	LCSD 280-204293/4		280-204293		12/07/2013 10:28	1	TAL DEN	AFB
A:SM 2540D	LCSD 280-203909/3		280-203909		12/05/2013 07:55	1	TAL DEN	BAN

Client: Waste Management

Job Number: 280-49949-2

Laboratory Chronicle

Lab ID: **MRL** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:218.6	MRL 440-149568/4		440-149568		12/10/2013 07:13	1	TAL IRV	MN
A:353.2	MRL 280-205861/18		280-205861		12/18/2013 17:00	1	TAL DEN	DVA

Lab ID: **MS** **Client ID:** **N/A**

Sample Date/Time: 12/03/2013 14:30 Received Date/Time: 12/04/2013 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:200.7	280-49917-E-1-B MS		280-204169	280-203880	12/05/2013 12:00	1	TAL DEN	LLB
A:200.7 Rev 4.4	280-49917-E-1-B MS		280-204169	280-203880	12/06/2013 04:38	1	TAL DEN	JKH
P:1664A	480-51654-B-1-A MS		480-157407	480-157405	12/13/2013 05:44	1	TAL BUF	LAW
A:1664A	480-51654-B-1-A MS		480-157407	480-157405	12/13/2013 06:09	1	TAL BUF	LAW
A:350.1	280-49949-F-1 MS		280-205469		12/16/2013 14:29	1	TAL DEN	RSN
P:351.2	550-15341-C-1-C MS		280-205498	280-204304	12/07/2013 13:36	2	TAL DEN	SMG
A:351.2	550-15341-C-1-C MS		280-205498	280-204304	12/12/2013 11:07	2	TAL DEN	SMG
A:353.2	280-49949-F-1 MS		280-205861		12/18/2013 20:24	1	TAL DEN	DVA
A:410.4	280-49975-C-1 MS		280-204293		12/07/2013 10:28	1	TAL DEN	AFB

Lab ID: **MSD** **Client ID:** **N/A**

Sample Date/Time: 12/03/2013 14:30 Received Date/Time: 12/04/2013 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:200.7	280-49917-E-1-C MSD		280-204169	280-203880	12/05/2013 12:00	1	TAL DEN	LLB
A:200.7 Rev 4.4	280-49917-E-1-C MSD		280-204169	280-203880	12/06/2013 04:40	1	TAL DEN	JKH
A:350.1	280-49949-F-1 MSD		280-205469		12/16/2013 14:32	1	TAL DEN	RSN
P:351.2	550-15341-C-1-D MSD		280-205498	280-204304	12/07/2013 13:36	2	TAL DEN	SMG
A:351.2	550-15341-C-1-D MSD		280-205498	280-204304	12/12/2013 11:08	2	TAL DEN	SMG
A:353.2	280-49949-F-1 MSD		280-205861		12/18/2013 20:26	1	TAL DEN	DVA
A:410.4	280-49975-C-1 MSD		280-204293		12/07/2013 10:28	1	TAL DEN	AFB

Client: Waste Management

Job Number: 280-49949-2

Laboratory Chronicle

Lab ID: **DU** **Client ID:** **N/A**

Sample Date/Time: 12/03/2013 11:40 Received Date/Time: 12/04/2013 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:SM 2540D	280-49940-A-1 DU		280-203909		12/05/2013 07:55	1	TAL DEN	BAN

Lab References:

TAL BUF = TestAmerica Buffalo

TAL DEN = TestAmerica Denver

TAL IRV = TestAmerica Irvine

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Honolulu
1946 Young St. Suite 400A
Honolulu, HI 96826
Tel: 808-486-5227

TestAmerica Job ID: HWL0006
Client Project/Site: 60287037.02
Client Project Description: AECOM, WGSL STORMWATER

For:
TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002

Attn: Betsy Sara

Kristie Reilly

Authorized for release by:
12/19/2013 3:38:06 PM

Kristie Reilly, Project Manager
808-486-5227
Kristie.Brachmann@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWL0006

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWL0006

Job ID: HWL0006

Laboratory: TestAmerica Honolulu

Narrative

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory unless otherwise stated in the report. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. TestAmerica Analytical Testing Corporation certifies that the analytical results contained herein apply only to the specific sample(s) analyzed.

The Chain(s) of Custody are included and are an integral part of this report. This entire report was reviewed and approved for release.

If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-(808)486-5227

LABORATORY REPORT

At sample receipt, the cooler/sample was 5.8 degrees C.
NELAC states that samples which require thermal preservation shall be considered acceptable if the arrival temperature is within 2 degrees C of the required temperature or the method specified range. For samples with a temperature requirement of 4 degrees C, an arrival temperature from 0 degrees C to 6 degrees C meets specifications. Samples that are delivered to the laboratory on the same day that they are collected may not meet these criteria. In these cases, the samples are considered acceptable if there is evidence that the chilling process has begun, such as arrival on ice.

The reported results were obtained in compliance with the 2003 NELAC standards unless otherwise noted.

Sample Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWL0006

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
HWL0006-01	DB01-W	Water - NonPotable	12/01/13 11:50	12/02/13 10:18

Detection Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWL0006

Client Sample ID: DB01-W

Lab Sample ID: HWL0006-01

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
BOD - 5 Day	3.82		2.00		mg/L	1.00		SM5210B	Total

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWL0006

Client Sample ID: DB01-W

Date Collected: 12/01/13 11:50
Date Received: 12/02/13 10:18

Lab Sample ID: HWL0006-01

Matrix: Water - NonPotable

Method: SM5210B - General Chemistry Parameters

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
BOD - 5 Day	3.82		2.00		mg/L		12/02/13 10:58	12/07/13 09:52	1.00

QC Sample Results

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWL0006

Method: SM5210B - General Chemistry Parameters

Lab Sample ID: 13L0007-BLK1 — **Client Sample ID: Method Blank**
Matrix: Water - NonPotable — **Prep Type: Total**
Analysis Batch: 13L0007 — **Prep Batch: 13L0007_P**

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
BOD - 5 Day	ND		2.00		mg/L		12/02/13 10:25	12/07/13 09:34	1.00

Lab Sample ID: 13L0007-BS1 — **Client Sample ID: Lab Control Sample**
Matrix: Water - NonPotable — **Prep Type: Total**
Analysis Batch: 13L0007 — **Prep Batch: 13L0007_P**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
BOD - 5 Day			198	178		mg/L		90	85 - 115		

Lab Sample ID: 13L0007-DUP1 — **Client Sample ID: Duplicate**
Matrix: Water - NonPotable — **Prep Type: Total**
Analysis Batch: 13L0007 — **Prep Batch: 13L0007_P**

Analyte	Sample Result	Sample Qualifier		Duplicate Result	Duplicate Qualifier	Unit	D			RPD	RPD Limit
BOD - 5 Day	25.4			25.7		mg/L				0.9	20

QC Association Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWL0006

WetChem

Analysis Batch: 13L0007

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
13L0007-BLK1	Method Blank	Total	Water - NonPotable	SM5210B	13L0007_P
13L0007-BS1	Lab Control Sample	Total	Water - NonPotable	SM5210B	13L0007_P
13L0007-DUP1	Duplicate	Total	Water - NonPotable	SM5210B	13L0007_P
HWL0006-01	DB01-W	Total	Water - NonPotable	SM5210B	13L0007_P

Prep Batch: 13L0007_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
13L0007-BLK1	Method Blank	Total	Water - NonPotable	Default Prep GenChem	
13L0007-BS1	Lab Control Sample	Total	Water - NonPotable	Default Prep GenChem	
13L0007-DUP1	Duplicate	Total	Water - NonPotable	Default Prep GenChem	
HWL0006-01	DB01-W	Total	Water - NonPotable	Default Prep GenChem	

Lab Chronicle

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWL0006

Client Sample ID: DB01-W

Date Collected: 12/01/13 11:50
Date Received: 12/02/13 10:18

Lab Sample ID: HWL0006-01

Matrix: Water - NonPotable

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Default Prep		1.00	13L0007_P	12/02/13 10:58	NK	TAL HON
Total	Analysis	GenChem SM5210B		1.00	13L0007	12/07/13 09:52	NK	TAL HON

Laboratory References:

TAL HON = TestAmerica Honolulu, 1946 Young St. Suite 400A, Honolulu, HI 96826, TEL 808-486-5227

Certification Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWL0006

Laboratory: TestAmerica Honolulu

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Florida	NELAP	4	E87907	06-30-14
Hawaii	State Program	9	N/A	06-28-14
USDA	Federal		HON-S-206	01-31-15

Method Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWL0006

Method	Method Description	Protocol	Laboratory
SM5210B	General Chemistry Parameters		TAL HON

Protocol References:

Laboratory References:

TAL HON = TestAmerica Honolulu, 1946 Young St. Suite 400A, Honolulu, HI 96826, TEL 808-486-5227

Chain of Custody Record

TAL-4124-280 (0508)

Sampler ID _____

Temperature on Receipt 5.8°C

Drinking Water? Yes ☐ No ☐

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HWL0006

Client: Waste Management / AECOM	Project Manager: Mark Hofferbert	Date:	Chain of Custody Number: 168568
Address: 1001 Bishop St. Suite 1600	Telephone Number (Area Code)/Fax Number: 808-356-5317 F: 808-523-8450	Lab Number:	Page ____ of ____
City: Honolulu,	State: HI	Zip Code: 96813	Site Contact: Justin Lottig
Lab Contact: Betsy Sara			
Project Name and Location (State): WGSL StormWater	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.: 60287037.02			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	Zn/Ac/NaOH	Analysis (Attach list if more space is needed): 1664 Oil Tannin	SM 2540 TSS	625 SVOC*	410.4 COD	365.1 T. Phos	350.1 Ammonia	353.2 NO2-NO3	SM 45DDN T. NO3	200.7, 245.1 Alk	SM 5210B BOD	218.6 Cr VI	TKN	Special Instructions/ Conditions of Receipt
DB01-W	12/01/13	11:50		X			4	4	1				X	X	X	X	X	X	X	X	X	X	X	X	* a-terpineol, benzoic acid, p-cresol, pentachlorophenol, phenol
																									** As, Cd, Fe, Pb, Hg, Se, Ag, Zn

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☒ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☒ 14 Days ☐ 21 Days ☐ Other ____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: Margie Thach [signature] AECOM	12/02/13	1018	1. Received By: Kristie Reilly [signature]	12/2/13	10:18
2. Relinquished By: Kristie Reilly [signature]	12/2/13	12:35	2. Received By:		
3. Relinquished By:			3. Received By:		

Comments: drop ship at TA-HNL to TA-DNV. BOD and CrVI preservation at TA-HNL

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: WEEL-DB01W

Site No.: ~~DB01E~~ Sample Point: ~~D~~ D B 0 1 W (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment . . . Dedicated: Y or N

Filter Device: Y or N 0.45 µ or µ (circle or fill in)

Purging Device: A-Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device:

X-Other:

Filter Type: A-In-line Disposable, B-Pressure, C-Vacuum, X-Other

Sample Tube Type: A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other:

WELL DATA

Well Elevation (at TOC) (ft/msl)

Depth to Water (DTW) (from TOC) (ft)

Groundwater Elevation (site datum, from TOC) (ft/msl)

Total Well Depth (from TOC) (ft)

Stick Up (from ground elevation) (ft)

Casing ID (in)

Casing Material

Note: Total Well Depth, Stick Up, Casing Id. etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm@25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
	1st	1st						
	2nd	2nd						
	3rd	3rd						
	4th	4th						
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site.* ***If more fileds above are needed, use separate sheet or form.***

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: Units
12 01 13	8.22						

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

FIELD COMMENTS

Sample Appearance: Murky Odor: None Color: Brown Other:

Weather Conditions (required daily, or as conditions change): Direction/Speed: light Outlook: Cloudy Precipitation: Y or N

Specific Comments (including purge/well volume calculations if required): Flow Measurements

	Sample Time	pH	
A/oil & Grease	11:50	8.22	4 in
B	12:05	7.22	4 in
C	12:21	8.15	4.5 in
D	12:35	7.93	4.5 in

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
12/01/13	Didier Dumas	[signature]	AECOM
12/01/13	Michelle Wong	Michelle Wong	AECOM

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

TAL-8029WM (0108)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Destination Laboratory Denver

Destination Laboratory PM (if known) _____

Drop Shipment Receipt Checklist

Client Name: Waste Management / AECOM **Date/ Time Received:** 12/2/13 10:18

Received By: K. Reilly

Matrices: AQ **Carrier:** client **Airbill# :**

Shipping container/cooler in good condition?	Yes	☒	No	☐	Not Present ☐
Chain of Custody present?	Yes	☒	No	☐	
Chain of Custody Signed when relinquished and received?	Yes	☒	No	☐	
Cooler opened at TestAmerica Honolulu?	Yes	☒	No	☐	
[illegible] at TestAmerica Honolulu?	Yes	☒	No	☐	
Any sample containers obviously broken/damaged upon receipt?	Yes	☐	No	☒	
Sample containers on ice?	Yes	☒	No	☐	Type: wet
Custody seals present? If so, location? (Cooler, sample containers?)	Yes	☐	No	☒	
Custody seals intact?	Yes	☐	No	☐	
Water - VOA Vials have Zero Headspace?	Yes	☐	No	☐	No VOA vials present: ☒
Water - pH acceptable upon receipt?	Yes	☐	No	☐	Not Checked: ☒
* pH Adjusted?	Yes	☐	No	☐	Final pH:
Encores / MI-VOC / 5035 Vials Present?	Yes	☐	No	☒	
Sample Filtration Needed?	* Yes	☐	No	☐	Filtered in Field: ☐
DODQSM / QAPP Project (if known)?	Yes	☐	No	☐	Type:

Temperature Blank Present? Yes ☐ No ☒

Sample Container Temperature: 5.8 °C

Samples drop shipped on ice? Yes ☒ No ☐ Type: wet

Date of drop shipment: 12/2/13

Comments/ Sampling Handling Notes:

Aliquot for Cr VI analysis filtered and preserved at TA Hon.

Chain of Custody Record

Sampler ID _____

Temperature on Receipt 5.8°C

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client: Waste Management / AECOM	Project Manager: Mark Hofferbert	Date:	Chain of Custody Number: 168568
Address: 1001 Bishop St. Suite 1600	Telephone Number (Area Code)/Fax Number: 808-356-5317 F: 808-523-8950	Lab Number:	Page ____ of ____
City: Honolulu, State: HI, Zip Code: 96813	Site Contact: Justin Lottig	Lab Contact: Betsy Sara	
Project Name and Location (State): WGSL StormWater	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.: 60287037.02			

Analysis (Attach list if more space is needed)*

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	1664 Oil & Grease	SM 2540D TSS	625 8VOCs*	410.4 COD	365.1 T.Phos	350.1 Ammonia	353.2 NO2-NO3	SM 4500N T.Nitrogen	200.7-245.1 Metals**	SM 5210B BOD	218.6 CrVI	TKN	Special Instructions/ Conditions of Receipt
DB01-W	12/01/13	11:50		X			4	4	1				X	X	X	X	X	X	X	X	X	X	X	X	* a-terpineol, benzoic acid, p-cresol, pentachlorophenol, phenol
																									** As, Cd, Fe, Pb, Hg, Se, Ag, Zn

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☒ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☒ 14 Days ☐ 21 Days ☐ Other ____

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By: Margie Thach [signature] AECOM	12/02/13	1018	1. Received By: Kristie Reilly [signature]	12/2/13	10:18
2. Relinquished By: Kristie Reilly [signature]	12/2/13	12:35	2. Received By: [signature] OT	12/4/13	1015
3. Relinquished By:			3. Received By:		

Comments: drop ship at TA-HNL to TA-DNV. BOD and CrVI preservation at TA-HNL

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: WGSL-DB01W

Site No.: ~~DB01E~~ MW Sample Point: ~~D~~ MW DB01W Sample ID

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: _____

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment... Dedicated: Y or N

Filter Device: Y or N 0.45 µ or _____ µ (circle or fill in)

Purging Device: A-Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device:

X-Other:

Filter Type: A-In-line Disposable, B-Pressure, C-Vacuum, X-Other

Sample Tube Type: A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other:

WELL DATA

Well Elevation (at TOC) _____ (ft/msl) Depth to Water (DTW) (from TOC) _____ (ft) Groundwater Elevation (site datum, from TOC) _____ (ft/msl)

Total Well Depth (from TOC) _____ (ft) Stick Up (from ground elevation) _____ (ft) Casing ID _____ (in) Casing Material _____

Note: Total Well Depth, Stick Up, Casing Id, etc are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm@25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
	1st	1st						
	2nd	2nd						
	3rd	3rd						
	4th	4th						
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State) These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: _____ Units _____
12 01 13	8 22						

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

FIELD COMMENTS

Sample Appearance: Murky Odor: None Color: Brown Other: _____

Weather Conditions (required daily, or as conditions change): Direction/Speed: light Outlook: Cloudy Precipitation: Y or ~~N~~

Specific Comments (including purge/well volume calculations if required): Flow Measurements

	Sample Time	pH	
A/Oil & Grease	11:50	8.22	4 in
B	12:05	8.22	4 in
C	12:21	8.15	4.5 in
D	12:35	7.93	4.5 in

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
12/01/13	Didier Dumas	[signature]	AECOM
12/01/13	Michelle Wong	Michelle Wong	AECOM

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

TAL-8029WM (0108)

Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-49949-2

Login Number: 49949

List Source: TestAmerica Denver

List Number: 1

Creator: O'Tormey, Stephanie R

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	FIELD LEFT BLANK
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-49949-2

Login Number: 49949
List Number: 1
Creator: Robison, Zachary J

List Source: TestAmerica Buffalo
List Creation: 12/09/13 03:03 PM

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.4 C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-49949-2

Login Number: 49949
List Number: 1
Creator: Sung, Hubert

List Source: TestAmerica Irvine
List Creation: 12/06/13 04:27 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Job Number: 280-50453-2

Job Description: 995|Waimanalo Gulch LF

For:
Waste Management
Waimanalo Gulch Landfill
92-460 Farrington Highway
Kapolei, HI 96707

Attention: Mr. Justin Lottig

Approved for release.
Betsy A Sara
Project Manager II
1/9/2014 9:08 AM

Betsy A Sara, Project Manager II
4955 Yarrow Street, Arvada, CO, 80002
(303)736-0189
betsy.sara@testamericainc.com
01/09/2014

cc: Mr. Mark Hofferbert
Ms. Margie Thach

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is E87667.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

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CASE NARRATIVE

Client: Waste Management

Project: 995|Waimanalo Gulch LF

Report Number: 280-50453-2

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

This report may include reporting limits (RLs) less than TestAmerica's standard reporting limit. The reported sample results and associated reporting limits are being used specifically to meet the needs of this project. Note that data are not normally reported to these levels without qualification because they are inherently less reliable and potentially less defensible than required by the latest industry standards.

Sample Receiving

The sample was received on 12/18/2013; the sample arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 2.0 º C and 3.4º C.

The sample collection time on the chain of custody for sample DB01-E did not match the collection times on the containers. The time on the chain of custody is listed as 12:14 and it is listed as 13:10 on the containers. The sample was logged per the chain of custody. The client was notified on 12/19/2013.

Holding Times

All holding times were met.

Method Blanks

Total Selenium Method 200.7, Total Phosphorus Method 365.1 and Chemical Oxygen Demand (COD) Method 410.4 were detected in the Method Blanks below the project established reporting limits. No corrective action is taken for any values in Method Blanks that are below the requested reporting limits. The Method Blank data are included at the end of this report.

All other Method Blanks were within established control limits.

Laboratory Control Samples (LCS)

The Method 200.7 LCS for Total Cadmium was above control limits. Because the data are considered to be biased high and all associated samples were non-detect for Total Cadmium, corrective action was deemed unnecessary.

All other Laboratory Control Samples were within established control limits.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD)

The method required MS/MSD could not be performed for Method 625 due to insufficient sample volume, however, a LCS/LCSD pair was analyzed to demonstrate method precision and accuracy.

Sample FLIPBUCKET (280-50453-1) was selected to fulfill the laboratory batch quality control requirements for Method 351.2. Analysis of the laboratory generated MS/MSD for this sample exhibited recoveries of Total Kjeldahl Nitrogen (TKN) below the lower control limit indicating the possible presence of a matrix interference.

The Matrix Spike and Matrix Spike Duplicate performed on a sample from another client exhibited recoveries outside control limits for Total Arsenic and Total Cadmium Method 200.7. Because the corresponding Laboratory Control Sample and the Method Blank sample were within control limits, this anomaly may be due to matrix interference and no corrective action was taken.

All other MS and MSD samples were within established control limits.

General Comments

For samples requiring analysis at a dilution, the dilution factor has been multiplied by the Method Detection Limit (MDL) for each analyte and evaluated versus the project-specific reporting limit (PSRL). If the obtained value is below the PSRL, then the PSRL is preserved as the reporting limit for the diluted result, otherwise, the obtained value becomes the reporting limit. This is done in order to maintain the

PSRL to meet permit requirements at the request of the client and to report the lowest possible RL for each analyte.

The analysis for Oil/Grease Method 1664A was performed by TestAmerica Buffalo. Their address and phone number are:
TestAmerica Buffalo
10 Hazelwood Drive, Suite 106
Amherst, NY 14228
716-691-2600

The analysis for Biochemical Oxygen Demand (BOD) was performed by TestAmerica Honolulu. Their address and phone number are:
TestAmerica Honolulu
1946 Young Street
Suite 400A
Honolulu, HI 96826
Phone: 808.486.5227

The analysis for Hexavalent Chromium was performed at TestAmerica's Irvine facility.
TestAmerica Irvine
17461 Derian Avenue
Suite 100
Irvine, CA 92614
Phone: 949.261.1022

EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-50453-2

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
280-50453-2	**DB01-E**					
Field pH		8.60			SU	Field Sampling
Ammonia		0.23		0.10	mg/L	350.1
Nitrogen, Kjeldahl		0.95		0.50	mg/L	351.2
Nitrate Nitrite as N		2.8		0.10	mg/L	353.2
Phosphorus, Total		0.35	B	0.050	mg/L	365.1
Chemical Oxygen Demand		30	B	20	mg/L	410.4
Total Suspended Solids		74		4.0	mg/L	SM 2540D
Nitrogen, Total		3.8		0.10	mg/L	Total Nitrogen
Dissolved						
Chromium, hexavalent		2.0		1.0	ug/L	218.6
Total Recoverable						
Iron		5.1		0.10	mg/L	200.7 Rev 4.4
Lead		0.0026	J	0.0090	mg/L	200.7 Rev 4.4
Zinc		0.023		0.020	mg/L	200.7 Rev 4.4

METHOD SUMMARY

Client: Waste Management

Job Number: 280-50453-2

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Semivolatile Organic Compounds (GC/MS)	TAL DEN	40CFR136A 625	
Liquid-Liquid Extraction	TAL DEN		40CFR136A 625
Metals (ICP)	TAL DEN	EPA 200.7 Rev 4.4	
Preparation, Total Recoverable Metals	TAL DEN		EPA 200.7
Mercury (CVAA)	TAL DEN	EPA 245.1	
Preparation, Mercury	TAL DEN		EPA 245.1
Nitrogen, Ammonia	TAL DEN	MCAWW 350.1	
Nitrogen, Total Kjeldahl	TAL DEN	MCAWW 351.2	
Nitrogen, Total Kjeldahl	TAL DEN		MCAWW 351.2
Nitrogen, Nitrate-Nitrite	TAL DEN	MCAWW 353.2	
Phosphorus, Total	TAL DEN	EPA 365.1	
Phosphorus, Total	TAL DEN		MCAWW 365.2/365.3/365
COD	TAL DEN	MCAWW 410.4	
Solids, Total Suspended (TSS)	TAL DEN	SM SM 2540D	
Nitrogen, Total	TAL DEN	EPA Total Nitrogen	
Field Sampling	TAL DEN	EPA Field Sampling	
HEM and SGT-HEM	TAL BUF	1664A 1664A	
HEM and SGT-HEM (SPE)	TAL BUF		1664A 1664A
General Sub Contract Method	TAL HON	Subcontract	
Chromium, Hexavalent (Ion Chromatography)	TAL IRV	EPA 218.6	
Sample Filtration, Field			FIELD_FLTRD

Lab References:

TAL BUF = TestAmerica Buffalo

TAL DEN = TestAmerica Denver

TAL HON = TestAmerica Honolulu

TAL IRV = TestAmerica Irvine

Method References:

1664A = EPA-821-98-002

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

METHOD / ANALYST SUMMARY

Client: Waste Management

Job Number: 280-50453-2

Method	Analyst	Analyst ID
40CFR136A 625	Williams, Teresa L	TLW
EPA 200.7 Rev 4.4	Scott, Samantha J	SJS
EPA 245.1	Mooney, Joseph C	JM
EPA Field Sampling	Field, Sampler	FS
1664A 1664A	Bubb, Richard M	RMB
MCAWW 350.1	Newcome, Robin S	RSN
MCAWW 351.2	Woolley, Mark -	MW1
MCAWW 353.2	Ayala, Delaina V	DVA
EPA 365.1	Schwemin, Andrew J	AJS
MCAWW 410.4	Benson, Alex F	AFB
SM SM 2540D	Neeley, Beth A	BAN
EPA Total Nitrogen	Sullivan, Roxanne K	RKS
EPA 218.6	Welch, Raquel	RW

SAMPLE SUMMARY

Client: Waste Management

Job Number: 280-50453-2

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-50453-2	DB01-E	Water	12/15/2013 1214	12/18/2013 1030

SAMPLE RESULTS

Client: Waste Management

Job Number: 280-50453-2

Client Sample ID: **DB01-E**

Lab Sample ID: 280-50453-2

Client Matrix: Water

Date Sampled: 12/15/2013 1214

Date Received: 12/18/2013 1030

625 Semivolatile Organic Compounds (GC/MS)

Analysis Method:	625	Analysis Batch:	280-206695	Instrument ID:	SMS_K
Prep Method:	625	Prep Batch:	280-206102	Lab File ID:	K5093.D
Dilution:	1.0			Initial Weight/Volume:	1050.6 mL
Analysis Date:	12/27/2013 0425			Final Weight/Volume:	1000 uL
Prep Date:	12/20/2013 1034			Injection Volume:	0.5 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Alpha-Terpineol	ND		0.0019	0.010
Benzoic acid	ND		0.0095	0.050
p-Cresol	ND		0.00024	0.010
Pentachlorophenol	ND		0.019	0.060
Phenol	ND		0.0019	0.010

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	102		50 - 120
2-Fluorobiphenyl	89		36 - 120
2-Fluorophenol	97		30 - 120
Nitrobenzene-d5	100		45 - 120
Phenol-d5	99		36 - 120
Terphenyl-d14	61		41 - 120

Client: Waste Management

Job Number: 280-50453-2

Client Sample ID: **DB01-E**

Lab Sample ID: 280-50453-2

Client Matrix: Water

Date Sampled: 12/15/2013 1214

Date Received: 12/18/2013 1030

218.6 Chromium, Hexavalent (Ion Chromatography)-Dissolved

Analysis Method:	218.6	Analysis Batch:	440-152190	Instrument ID:	IC-20
	N/A	Prep Batch:	N/A	Lab File ID:	Info 2_TAIIRVIC20_Hexa
Dilution:	1.0			Initial Weight/Volume:	10 mL
Analysis Date:	12/23/2013 1821			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1000 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chromium, hexavalent	2.0		0.25	1.0

Client: Waste Management

Job Number: 280-50453-2

Client Sample ID: **DB01-E**

Lab Sample ID: 280-50453-2

Client Matrix: Water

Date Sampled: 12/15/2013 1214

Date Received: 12/18/2013 1030

200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	280-206558	Instrument ID:	MT_026
Prep Method:	200.7	Prep Batch:	280-206058	Lab File ID:	26a03122313z.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2013 2202			Final Weight/Volume:	50 mL
Prep Date:	12/20/2013 1215				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Arsenic	ND		0.0044	0.015
Cadmium	ND	*	0.00045	0.0050
Iron	5.1		0.022	0.10
Lead	0.0026	J	0.0026	0.0090
Zinc	0.023		0.0045	0.020
Silver	ND		0.00093	0.010

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	280-206761	Instrument ID:	MT_026
Prep Method:	200.7	Prep Batch:	280-206058	Lab File ID:	26a04122613.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/27/2013 0112			Final Weight/Volume:	50 mL
Prep Date:	12/20/2013 1215				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Selenium	ND		0.0049	0.015

245.1 Mercury (CVAA)

Analysis Method:	245.1	Analysis Batch:	280-206361	Instrument ID:	MT_033
Prep Method:	245.1	Prep Batch:	280-205953	Lab File ID:	131220aa.txt
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	12/20/2013 1444			Final Weight/Volume:	30 mL
Prep Date:	12/20/2013 0935				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Mercury	ND		0.000027	0.00020

General Chemistry

Client Sample ID: **DB01-E**

Lab Sample ID: 280-50453-2 Date Sampled: 12/15/2013 1214
Client Matrix: Water Date Received: 12/18/2013 1030

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
HEM	ND		mg/L	1.4	5.0	1.0	1664A
Analysis Batch: 480-159350	Analysis Date: 12/24/2013 1851						
Prep Batch: 480-159349	Prep Date: 12/24/2013 1851						
Ammonia	0.23		mg/L	0.022	0.10	1.0	350.1
Analysis Batch: 280-207019	Analysis Date: 12/30/2013 1538						
Nitrogen, Kjeldahl	0.95		mg/L	0.18	0.50	1.0	351.2
Analysis Batch: 280-207314	Analysis Date: 01/02/2014 2044						
Prep Batch: 280-207179	Prep Date: 01/02/2014 0817						
Nitrate Nitrite as N	2.8		mg/L	0.019	0.10	1.0	353.2
Analysis Batch: 280-207152	Analysis Date: 12/31/2013 1604						
Phosphorus, Total	0.35	B	mg/L	0.0050	0.050	1.0	365.1
Analysis Batch: 280-206889	Analysis Date: 12/28/2013 1122						
Prep Batch: 280-206702	Prep Date: 12/26/2013 1710						
Chemical Oxygen Demand	30	B	mg/L	4.1	20	1.0	410.4
Analysis Batch: 280-205961	Analysis Date: 12/19/2013 1725						
Total Suspended Solids	74		mg/L	1.1	4.0	1.0	SM 2540D
Analysis Batch: 280-205879	Analysis Date: 12/19/2013 0748						
Nitrogen, Total	3.8		mg/L	0.042	0.10	1.0	Total Nitrogen
Analysis Batch: 280-207342	Analysis Date: 01/03/2014 0847						

Field Service / Mobile Lab

Client Sample ID: **DB01-E**

Lab Sample ID: 280-50453-2

Client Matrix: Water

Date Sampled: 12/15/2013 1214

Date Received: 12/18/2013 1030

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed Date Prepared
Field pH	8.60		SU	1.0	Field Sampling	280-205900	12/15/2013 1214

DATA REPORTING QUALIFIERS

Client: Waste Management

Job Number: 280-50453-2

Lab Section	Qualifier	Description
GC/MS Semi VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals		
	F1	MS and/or MSD Recovery exceeds the control limits
	*	Recovery or RPD exceeds control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
General Chemistry		
	B	Compound was found in the blank and sample.
	F1	MS and/or MSD Recovery exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

QUALITY CONTROL RESULTS

Client: Waste Management

Job Number: 280-50453-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 280-206102					
LCS 280-206102/2-A	Lab Control Sample	T	Water	625	
LCSD 280-206102/3-A	Lab Control Sample Duplicate	T	Water	625	
MB 280-206102/1-A	Method Blank	T	Water	625	
280-50453-2	DB01-E	T	Water	625	
Analysis Batch:280-206695					
LCS 280-206102/2-A	Lab Control Sample	T	Water	625	280-206102
LCSD 280-206102/3-A	Lab Control Sample Duplicate	T	Water	625	280-206102
MB 280-206102/1-A	Method Blank	T	Water	625	280-206102
280-50453-2	DB01-E	T	Water	625	280-206102

Report Basis

T = Total

Client: Waste Management

Job Number: 280-50453-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-205953					
LCS 280-205953/2-A	Lab Control Sample	T	Water	245.1	
MB 280-205953/1-A	Method Blank	T	Water	245.1	
280-50429-B-1-B MS	Matrix Spike	T	Water	245.1	
280-50429-B-1-C MSD	Matrix Spike Duplicate	T	Water	245.1	
280-50453-2	DB01-E	T	Water	245.1	
Prep Batch: 280-206058					
LCS 280-206058/2-A	Lab Control Sample	R	Water	200.7	
MB 280-206058/1-A	Method Blank	R	Water	200.7	
280-50429-A-1-A MS	Matrix Spike	R	Water	200.7	
280-50429-A-1-B MSD	Matrix Spike Duplicate	R	Water	200.7	
280-50453-2	DB01-E	R	Water	200.7	
Analysis Batch:280-206361					
LCS 280-205953/2-A	Lab Control Sample	T	Water	245.1	280-205953
MB 280-205953/1-A	Method Blank	T	Water	245.1	280-205953
280-50429-B-1-B MS	Matrix Spike	T	Water	245.1	280-205953
280-50429-B-1-C MSD	Matrix Spike Duplicate	T	Water	245.1	280-205953
280-50453-2	DB01-E	T	Water	245.1	280-205953
Analysis Batch:280-206558					
LCS 280-206058/2-A	Lab Control Sample	R	Water	200.7 Rev 4.4	280-206058
MB 280-206058/1-A	Method Blank	R	Water	200.7 Rev 4.4	280-206058
280-50429-A-1-A MS	Matrix Spike	R	Water	200.7 Rev 4.4	280-206058
280-50429-A-1-B MSD	Matrix Spike Duplicate	R	Water	200.7 Rev 4.4	280-206058
280-50453-2	DB01-E	R	Water	200.7 Rev 4.4	280-206058
Analysis Batch:280-206761					
LCS 280-206058/2-A	Lab Control Sample	R	Water	200.7 Rev 4.4	280-206058
MB 280-206058/1-A	Method Blank	R	Water	200.7 Rev 4.4	280-206058
280-50429-A-1-A MS	Matrix Spike	R	Water	200.7 Rev 4.4	280-206058
280-50429-A-1-B MSD	Matrix Spike Duplicate	R	Water	200.7 Rev 4.4	280-206058
280-50453-2	DB01-E	R	Water	200.7 Rev 4.4	280-206058

Report Basis

R = Total Recoverable

T = Total

Client: Waste Management

Job Number: 280-50453-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Field Service / Mobile Lab					
Analysis Batch:280-205900					
280-50453-2	DB01-E	T	Water	Field Sampling	

Report Basis

T = Total

Client: Waste Management

Job Number: 280-50453-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Prep Batch: 480-159349					
LCS 480-159349/2-A	Lab Control Sample	T	Water	1664A	
MB 480-159349/1-A	Method Blank	T	Water	1664A	
280-50311-B-1-A MS	Matrix Spike	T	Water	1664A	
280-50453-2	DB01-E	T	Water	1664A	
Analysis Batch:480-159350					
LCS 480-159349/2-A	Lab Control Sample	T	Water	1664A	480-159349
MB 480-159349/1-A	Method Blank	T	Water	1664A	480-159349
280-50311-B-1-A MS	Matrix Spike	T	Water	1664A	480-159349
280-50453-2	DB01-E	T	Water	1664A	480-159349
Analysis Batch:280-205879					
LCS 280-205879/2	Lab Control Sample	T	Water	SM 2540D	
LCSD 280-205879/3	Lab Control Sample Duplicate	T	Water	SM 2540D	
MB 280-205879/1	Method Blank	T	Water	SM 2540D	
280-50437-A-1 DU	Duplicate	T	Water	SM 2540D	
280-50453-2	DB01-E	T	Water	SM 2540D	
Analysis Batch:280-205961					
LCS 280-205961/3	Lab Control Sample	T	Water	410.4	
LCSD 280-205961/4	Lab Control Sample Duplicate	T	Water	410.4	
MB 280-205961/5	Method Blank	T	Water	410.4	
280-50320-D-1 MS	Matrix Spike	T	Water	410.4	
280-50320-D-1 MSD	Matrix Spike Duplicate	T	Water	410.4	
280-50453-2	DB01-E	T	Water	410.4	
Prep Batch: 280-206702					
LCS 280-206702/3-A	Lab Control Sample	T	Water	365.2/365.3/365	
LCSD 280-206702/4-A	Lab Control Sample Duplicate	T	Water	365.2/365.3/365	
MB 280-206702/5-A	Method Blank	T	Water	365.2/365.3/365	
280-50453-F-1-B MS	Matrix Spike	T	Water	365.2/365.3/365	
280-50453-F-1-C MSD	Matrix Spike Duplicate	T	Water	365.2/365.3/365	
280-50453-2	DB01-E	T	Water	365.2/365.3/365	
Analysis Batch:280-206889					
LCS 280-206702/3-A	Lab Control Sample	T	Water	365.1	280-206702
LCSD 280-206702/4-A	Lab Control Sample Duplicate	T	Water	365.1	280-206702
MB 280-206702/5-A	Method Blank	T	Water	365.1	280-206702
280-50453-F-1-B MS	Matrix Spike	T	Water	365.1	280-206702
280-50453-F-1-C MSD	Matrix Spike Duplicate	T	Water	365.1	280-206702
280-50453-2	DB01-E	T	Water	365.1	280-206702

Client: Waste Management

Job Number: 280-50453-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-207019					
LCS 280-207019/103	Lab Control Sample	T	Water	350.1	
LCSD 280-207019/104	Lab Control Sample Duplicate	T	Water	350.1	
MB 280-207019/105	Method Blank	T	Water	350.1	
280-50453-2	DB01-E	T	Water	350.1	
280-50453-2MS	Matrix Spike	T	Water	350.1	
280-50453-2MSD	Matrix Spike Duplicate	T	Water	350.1	
Analysis Batch:280-207152					
LCS 280-207152/28	Lab Control Sample	T	Water	353.2	
LCSD 280-207152/29	Lab Control Sample Duplicate	T	Water	353.2	
MB 280-207152/27	Method Blank	T	Water	353.2	
280-50221-H-2 MS	Matrix Spike	T	Water	353.2	
280-50221-H-2 MSD	Matrix Spike Duplicate	T	Water	353.2	
280-50453-2	DB01-E	T	Water	353.2	
Prep Batch: 280-207179					
LCS 280-207179/2-A	Lab Control Sample	T	Water	351.2	
LCSD 280-207179/3-A	Lab Control Sample Duplicate	T	Water	351.2	
MB 280-207179/1-A	Method Blank	T	Water	351.2	
280-50453-F-1-E MS	Matrix Spike	T	Water	351.2	
280-50453-F-1-F MSD	Matrix Spike Duplicate	T	Water	351.2	
280-50453-2	DB01-E	T	Water	351.2	
Analysis Batch:280-207314					
LCS 280-207179/2-A	Lab Control Sample	T	Water	351.2	280-207179
LCSD 280-207179/3-A	Lab Control Sample Duplicate	T	Water	351.2	280-207179
MB 280-207179/1-A	Method Blank	T	Water	351.2	280-207179
280-50453-F-1-E MS	Matrix Spike	T	Water	351.2	280-207179
280-50453-F-1-F MSD	Matrix Spike Duplicate	T	Water	351.2	280-207179
280-50453-2	DB01-E	T	Water	351.2	280-207179
Analysis Batch:280-207342					
MB 280-207342/1	Method Blank	T	Water	Total Nitrogen	
280-50453-2	DB01-E	T	Water	Total Nitrogen	

Report Basis

T = Total

Client: Waste Management

Job Number: 280-50453-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
HPLC/IC					
Analysis Batch:440-152190					
280-50453-2	DB01-E	D	Water	218.6	

Report Basis
D = Dissolved

Client: Waste Management

Job Number: 280-50453-2

Surrogate Recovery Report

625 Semivolatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	TBP %Rec	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
280-50453-2	DB01-E	102	89	97	100	99	61
MB 280-206102/1-A		93	89	97	100	101	102
LCS 280-206102/2-A		102	95	99	103	100	99
LCSD 280-206102/3-A		101	93	94	99	95	98

Surrogate	Acceptance Limits
TBP = 2,4,6-Tribromophenol	50-120
FBP = 2-Fluorobiphenyl	36-120
2FP = 2-Fluorophenol	30-120
NBZ = Nitrobenzene-d5	45-120
PHL = Phenol-d5	36-120
TPH = Terphenyl-d14	41-120

Client: Waste Management

Job Number: 280-50453-2

Method Blank - Batch: 280-206102

Method: 625
Preparation: 625

Lab Sample ID:	MB 280-206102/1-A	Analysis Batch:	280-206695	Instrument ID:	SMS_K
Client Matrix:	Water	Prep Batch:	280-206102	Lab File ID:	K5088.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	12/27/2013 0206	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	12/20/2013 1034			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Alpha-Terpineol	ND		0.0020	0.010
Benzoic acid	ND		0.010	0.050
p-Cresol	ND		0.00025	0.010
Pentachlorophenol	ND		0.020	0.060
Phenol	ND		0.0020	0.010

Surrogate	% Rec	Acceptance Limits
2,4,6-Tribromophenol	93	50 - 120
2-Fluorobiphenyl	89	36 - 120
2-Fluorophenol	97	30 - 120
Nitrobenzene-d5	100	45 - 120
Phenol-d5	101	36 - 120
Terphenyl-d14	102	41 - 120

Client: Waste Management

Job Number: 280-50453-2

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-206102

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-206102/2-A	Analysis Batch:	280-206695	Instrument ID:	SMS_K
Client Matrix:	Water	Prep Batch:	280-206102	Lab File ID:	K5071.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	12/26/2013 1814	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	12/20/2013 1034			Injection Volume:	0.5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-206102/3-A	Analysis Batch:	280-206695	Instrument ID:	SMS_K
Client Matrix:	Water	Prep Batch:	280-206102	Lab File ID:	K5072.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	12/26/2013 1842	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	12/20/2013 1034			Injection Volume:	0.5 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
1,2,4-Trichlorobenzene	85	80	44 - 120	6	35		
1,2-Dichlorobenzene	83	77	32 - 120	7	42		
1,3-Dichlorobenzene	80	73	23 - 120	10	47		
1,4-Dichlorobenzene	80	73	24 - 120	9	49		
2,2'-Oxybis(1-chloropropane)	104	103	37 - 120	2	30		
2,4,6-Trichlorophenol	100	98	51 - 120	2	30		
2,4-Dichlorophenol	99	95	46 - 120	4	30		
2,4-Dimethylphenol	74	72	44 - 119	3	35		
2,4-Dinitrophenol	99	98	20 - 121	1	61		
2,4-Dinitrotoluene	105	104	57 - 120	1	35		
2,6-Dinitrotoluene	99	101	56 - 120	1	30		
2-Chloronaphthalene	91	89	60 - 118	3	30		
2-Chlorophenol	100	95	34 - 120	4	30		
2-Methylphenol	94	92	38 - 120	2	35		
2-Nitrophenol	108	103	47 - 120	5	30		
3,3'-Dichlorobenzidine	59	55	18 - 120	7	50	J	J
4,6-Dinitro-2-methylphenol	106	104	40 - 120	2	55		
4-Bromophenyl phenyl ether	93	91	53 - 120	3	34		
4-Chloro-3-methylphenol	99	95	57 - 120	4	30		
4-Chlorophenyl phenyl ether	93	91	51 - 120	2	30		
4-Nitrophenol	98	96	53 - 120	2	42		
Acenaphthene	92	91	47 - 120	2	30		
Acenaphthylene	93	92	33 - 120	1	30		
Anthracene	91	88	52 - 120	3	30		
Benzidine	33	31	10 - 218	7	50		
Benzo[a]anthracene	94	93	54 - 120	1	30		
Benzo[a]pyrene	94	93	39 - 120	1	73		
Benzo[b]fluoranthene	98	97	51 - 120	1	90		
Benzo[g,h,i]perylene	97	97	48 - 120	0	64		
Benzo[k]fluoranthene	94	92	49 - 120	3	50		
Bis(2-chloroethoxy)methane	99	97	50 - 120	2	30		
Bis(2-chloroethyl)ether	103	98	35 - 120	5	30		
Bis(2-ethylhexyl) phthalate	103	101	56 - 120	2	30		
Butyl benzyl phthalate	101	100	53 - 120	1	30		
Chrysene	94	92	51 - 120	2	30		
Dibenz(a,h)anthracene	100	99	45 - 120	1	78		

Client: Waste Management

Job Number: 280-50453-2

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-206102

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-206102/2-A	Analysis Batch:	280-206695	Instrument ID:	SMS_K
Client Matrix:	Water	Prep Batch:	280-206102	Lab File ID:	K5071.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	12/26/2013 1814	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	12/20/2013 1034			Injection Volume:	0.5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-206102/3-A	Analysis Batch:	280-206695	Instrument ID:	SMS_K
Client Matrix:	Water	Prep Batch:	280-206102	Lab File ID:	K5072.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	12/26/2013 1842	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	12/20/2013 1034			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Diethyl phthalate	98	97	59 - 114	0	30		
Dimethyl phthalate	99	98	58 - 112	1	30		
Di-n-butyl phthalate	97	95	57 - 118	2	30		
Di-n-octyl phthalate	98	96	56 - 120	2	30		
Fluoranthene	96	93	58 - 120	3	30		
Fluorene	94	92	59 - 120	2	30		
Hexachlorobenzene	94	90	53 - 120	4	30		
Hexachlorobutadiene	77	71	27 - 116	8	41		
Hexachlorocyclopentadiene	26	32	10 - 120	21	82	J	J
Hexachloroethane	75	68	40 - 113	10	52		
Indeno[1,2,3-cd]pyrene	119	93	50 - 120	24	73		
Isophorone	101	96	50 - 120	5	30		
Naphthalene	91	86	37 - 120	6	30		
n-Decane	72	65	28 - 120	10	61		
Nitrobenzene	102	99	46 - 120	2	30		
N-Nitrosodimethylamine	101	97	37 - 120	4	30		
N-Nitrosodi-n-propylamine	100	97	50 - 120	3	30		
N-Nitrosodiphenylamine	91	91	46 - 203	0	50		
p-Cresol	97	94	42 - 120	4	39		
Pentachlorophenol	85	81	46 - 120	5	30		
Phenanthrene	92	90	54 - 120	2	30		
Phenol	100	97	37 - 112	3	30		
Pyrene	92	92	55 - 115	1	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
2,4,6-Tribromophenol	102	101	50 - 120
2-Fluorobiphenyl	95	93	36 - 120
2-Fluorophenol	99	94	30 - 120
Nitrobenzene-d5	103	99	45 - 120
Phenol-d5	100	95	36 - 120
Terphenyl-d14	99	98	41 - 120

Client: Waste Management

Job Number: 280-50453-2

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-206102

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-206102/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-206102/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/26/2013 1814			Analysis Date:	12/26/2013 1842
Prep Date:	12/20/2013 1034			Prep Date:	12/20/2013 1034
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual		LCSD Result/Qual	
1,2,4-Trichlorobenzene	0.0800	0.0800	0.0682		0.0643	
1,2-Dichlorobenzene	0.0800	0.0800	0.0663		0.0617	
1,3-Dichlorobenzene	0.0800	0.0800	0.0644		0.0585	
1,4-Dichlorobenzene	0.0800	0.0800	0.0643		0.0588	
2,2'-Oxybis(1-chloropropane)	0.0800	0.0800	0.0836		0.0822	
2,4,6-Trichlorophenol	0.0800	0.0800	0.0802		0.0786	
2,4-Dichlorophenol	0.0800	0.0800	0.0793		0.0762	
2,4-Dimethylphenol	0.0800	0.0800	0.0594		0.0574	
2,4-Dinitrophenol	0.160	0.160	0.158		0.157	
2,4-Dinitrotoluene	0.0800	0.0800	0.0841		0.0832	
2,6-Dinitrotoluene	0.0800	0.0800	0.0795		0.0807	
2-Chloronaphthalene	0.0800	0.0800	0.0729		0.0709	
2-Chlorophenol	0.0800	0.0800	0.0797		0.0762	
2-Methylphenol	0.0800	0.0800	0.0754		0.0739	
2-Nitrophenol	0.0800	0.0800	0.0864		0.0824	
3,3'-Dichlorobenzidine	0.0800	0.0800	0.0473	J	0.0441	J
4,6-Dinitro-2-methylphenol	0.160	0.160	0.170		0.167	
4-Bromophenyl phenyl ether	0.0800	0.0800	0.0746		0.0727	
4-Chloro-3-methylphenol	0.0800	0.0800	0.0789		0.0759	
4-Chlorophenyl phenyl ether	0.0800	0.0800	0.0744		0.0729	
4-Nitrophenol	0.160	0.160	0.157		0.154	
Acenaphthene	0.0800	0.0800	0.0740		0.0724	
Acenaphthylene	0.0800	0.0800	0.0748		0.0739	
Anthracene	0.0800	0.0800	0.0730		0.0707	
Benzidine	0.0800	0.0800	ND		ND	
Benzo[a]anthracene	0.0800	0.0800	0.0752		0.0747	
Benzo[a]pyrene	0.0800	0.0800	0.0756		0.0745	
Benzo[b]fluoranthene	0.0800	0.0800	0.0783		0.0775	
Benzo[g,h,i]perylene	0.0800	0.0800	0.0778		0.0777	
Benzo[k]fluoranthene	0.0800	0.0800	0.0755		0.0736	
Bis(2-chloroethoxy)methane	0.0800	0.0800	0.0789		0.0772	
Bis(2-chloroethyl)ether	0.0800	0.0800	0.0826		0.0787	
Bis(2-ethylhexyl) phthalate	0.0800	0.0800	0.0826		0.0810	
Butyl benzyl phthalate	0.0800	0.0800	0.0806		0.0796	
Chrysene	0.0800	0.0800	0.0751		0.0740	
Dibenz(a,h)anthracene	0.0800	0.0800	0.0801		0.0793	
Diethyl phthalate	0.0800	0.0800	0.0781		0.0778	
Dimethyl phthalate	0.0800	0.0800	0.0793		0.0786	
Di-n-butyl phthalate	0.0800	0.0800	0.0777		0.0759	

Client: Waste Management

Job Number: 280-50453-2

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-206102

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-206102/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-206102/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/26/2013 1814			Analysis Date:	12/26/2013 1842
Prep Date:	12/20/2013 1034			Prep Date:	12/20/2013 1034
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual		LCSD Result/Qual	
Di-n-octyl phthalate	0.0800	0.0800	0.0784		0.0769	
Fluoranthene	0.0800	0.0800	0.0767		0.0748	
Fluorene	0.0800	0.0800	0.0751		0.0735	
Hexachlorobenzene	0.0800	0.0800	0.0749		0.0717	
Hexachlorobutadiene	0.0800	0.0800	0.0617		0.0569	
Hexachlorocyclopentadiene	0.0800	0.0800	0.0210	J	0.0259	J
Hexachloroethane	0.0800	0.0800	0.0603		0.0545	
Indeno[1,2,3-cd]pyrene	0.0800	0.0800	0.0948		0.0741	
Isophorone	0.0800	0.0800	0.0806		0.0767	
Naphthalene	0.0800	0.0800	0.0727		0.0688	
n-Decane	0.0800	0.0800	0.0573		0.0520	
Nitrobenzene	0.0800	0.0800	0.0813		0.0794	
N-Nitrosodimethylamine	0.0800	0.0800	0.0808		0.0773	
N-Nitrosodi-n-propylamine	0.0800	0.0800	0.0801		0.0779	
N-Nitrosodiphenylamine	0.0800	0.0800	0.0728		0.0729	
p-Cresol	0.0800	0.0800	0.0780		0.0748	
Pentachlorophenol	0.160	0.160	0.136		0.129	
Phenanthrene	0.0800	0.0800	0.0739		0.0723	
Phenol	0.0800	0.0800	0.0800		0.0778	
Pyrene	0.0800	0.0800	0.0732		0.0737	

Client: Waste Management

Job Number: 280-50453-2

Method Blank - Batch: 280-206058

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	MB 280-206058/1-A	Analysis Batch:	280-206558	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-206058	Lab File ID:	26a03122313z.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2013 2131	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/20/2013 1215				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Arsenic	ND		0.0044	0.015
Cadmium	ND		0.00045	0.0050
Iron	ND		0.022	0.10
Lead	ND		0.0026	0.0090
Zinc	ND		0.0045	0.020
Silver	ND		0.00093	0.010

Method Blank - Batch: 280-206058

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	MB 280-206058/1-A	Analysis Batch:	280-206761	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-206058	Lab File ID:	26a04122613.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/27/2013 0041	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/20/2013 1215				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Selenium	0.0111	J	0.0049	0.015

Client: Waste Management

Job Number: 280-50453-2

Lab Control Sample - Batch: 280-206058

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	LCS 280-206058/2-A	Analysis Batch:	280-206558	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-206058	Lab File ID:	26a03122313z.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2013 2134	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/20/2013 1215				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	1.00	1.09	109	88 - 110	
Cadmium	0.100	0.113	113	88 - 111	*
Iron	1.00	0.935	93	89 - 115	
Lead	0.500	0.537	107	89 - 110	
Zinc	0.500	0.521	104	85 - 111	
Silver	0.0500	0.0555	111	85 - 115	

Lab Control Sample - Batch: 280-206058

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	LCS 280-206058/2-A	Analysis Batch:	280-206761	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-206058	Lab File ID:	26a04122613.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/27/2013 0044	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/20/2013 1215				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Selenium	2.00	2.18	109	85 - 112	

Client: Waste Management

Job Number: 280-50453-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-206058

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-50429-A-1-A MS	Analysis Batch:	280-206558	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-206058	Lab File ID:	26a03122313z.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2013 2141			Final Weight/Volume:	50 mL
Prep Date:	12/20/2013 1215				
Leach Date:	N/A				

MSD Lab Sample ID:	280-50429-A-1-B MSD	Analysis Batch:	280-206558	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-206058	Lab File ID:	26a03122313z.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/23/2013 2143			Final Weight/Volume:	50 mL
Prep Date:	12/20/2013 1215				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Arsenic	112	112	88 - 110	0	20	F1	F1
Cadmium	113	112	88 - 111	1	20	F1	F1
Iron	97	95	89 - 115	1	20		
Lead	105	105	89 - 110	0	20		
Zinc	103	102	85 - 111	1	20		
Silver	114	113	85 - 115	1	20		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-206058

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-50429-A-1-A MS	Analysis Batch:	280-206761	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-206058	Lab File ID:	26a04122613.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/27/2013 0051			Final Weight/Volume:	50 mL
Prep Date:	12/20/2013 1215				
Leach Date:	N/A				

MSD Lab Sample ID:	280-50429-A-1-B MSD	Analysis Batch:	280-206761	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-206058	Lab File ID:	26a04122613.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/27/2013 0053			Final Weight/Volume:	50 mL
Prep Date:	12/20/2013 1215				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Selenium	110	107	85 - 112	3	20		

Client: Waste Management

Job Number: 280-50453-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-206058

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-50429-A-1-A MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	12/23/2013 2141		
Prep Date:	12/20/2013 1215		
Leach Date:	N/A		

MSD Lab Sample ID:	280-50429-A-1-B MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	12/23/2013 2143
Prep Date:	12/20/2013 1215
Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Arsenic	ND		1.00	1.00	1.12	F1	1.12	F1
Cadmium	ND		0.100	0.100	0.113	F1	0.112	F1
Iron	0.14		1.00	1.00	1.11		1.09	
Lead	ND		0.500	0.500	0.526		0.524	
Zinc	0.0052	J	0.500	0.500	0.521		0.516	
Silver	ND		0.0500	0.0500	0.0568		0.0565	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-206058

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-50429-A-1-A MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	12/27/2013 0051		
Prep Date:	12/20/2013 1215		
Leach Date:	N/A		

MSD Lab Sample ID:	280-50429-A-1-B MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	12/27/2013 0053
Prep Date:	12/20/2013 1215
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Selenium	ND	2.00	2.00	2.21	2.14

Client: Waste Management

Job Number: 280-50453-2

Method Blank - Batch: 280-205953

Method: 245.1
Preparation: 245.1

Lab Sample ID:	MB 280-205953/1-A	Analysis Batch:	280-206361	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-205953	Lab File ID:	131220aa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	12/20/2013 1411	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	12/20/2013 0935				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000027	0.00020

Lab Control Sample - Batch: 280-205953

Method: 245.1
Preparation: 245.1

Lab Sample ID:	LCS 280-205953/2-A	Analysis Batch:	280-206361	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-205953	Lab File ID:	131220aa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	12/20/2013 1414	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	12/20/2013 0935				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00479	96	90 - 110	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-205953

Method: 245.1
Preparation: 245.1

MS Lab Sample ID:	280-50429-B-1-B MS	Analysis Batch:	280-206361	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-205953	Lab File ID:	131220aa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	12/20/2013 1423			Final Weight/Volume:	30 mL
Prep Date:	12/20/2013 0935				
Leach Date:	N/A				

MSD Lab Sample ID:	280-50429-B-1-C MSD	Analysis Batch:	280-206361	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-205953	Lab File ID:	131220aa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	12/20/2013 1425			Final Weight/Volume:	30 mL
Prep Date:	12/20/2013 0935				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	95	95	80 - 120	0	10		

Client: Waste Management

Job Number: 280-50453-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-205953

Method: 245.1
Preparation: 245.1

MS Lab Sample ID:	280-50429-B-1-B MS	Units: mg/L	
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	12/20/2013 1423		
Prep Date:	12/20/2013 0935		
Leach Date:	N/A		

MSD Lab Sample ID:	280-50429-B-1-C MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	12/20/2013 1425
Prep Date:	12/20/2013 0935
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Mercury	ND	0.00500	0.00500	0.00475	0.00477

Client: Waste Management

Job Number: 280-50453-2

Method Blank - Batch: 480-159349

Method: 1664A
Preparation: 1664A

Lab Sample ID:	MB 480-159349/1-A	Analysis Batch:	480-159350	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	480-159349	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	12/24/2013 1851	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	12/24/2013 1851				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
HEM	ND		1.4	5.0

Lab Control Sample - Batch: 480-159349

Method: 1664A
Preparation: 1664A

Lab Sample ID:	LCS 480-159349/2-A	Analysis Batch:	480-159350	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	480-159349	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	12/24/2013 1851	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	12/24/2013 1851				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
HEM	40.0	41.7	104	78 - 114	

Matrix Spike - Batch: 480-159349

Method: 1664A
Preparation: 1664A

Lab Sample ID:	280-50311-B-1-A MS	Analysis Batch:	480-159350	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	480-159349	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1010 mL
Analysis Date:	12/24/2013 1851	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	12/24/2013 1851				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
HEM	ND	19.8	19.5	99	78 - 114	

Client: Waste Management

Job Number: 280-50453-2

Method Blank - Batch: 280-207019

Method: 350.1
Preparation: N/A

Lab Sample ID:	MB 280-207019/105	Analysis Batch:	280-207019	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\123013B.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	12/30/2013 1453	Units:	mg/L	Final Weight/Volume:	10 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Ammonia	ND		0.022	0.10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-207019

Method: 350.1
Preparation: N/A

LCS Lab Sample ID:	LCS 280-207019/103	Analysis Batch:	280-207019	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\123013B.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/30/2013 1449	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-207019/104	Analysis Batch:	280-207019	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\123013B.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/30/2013 1451	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Ammonia	103	104	90 - 110	1	10		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-207019

Method: 350.1
Preparation: N/A

LCS Lab Sample ID:	LCS 280-207019/103	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-207019/104
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/30/2013 1449			Analysis Date:	12/30/2013 1451
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Ammonia	2.50	2.50	2.58	2.60

Client: Waste Management

Job Number: 280-50453-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-207019

Method: 350.1
Preparation: N/A

MS Lab Sample ID:	280-50453-2	Analysis Batch:	280-207019	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\123013B.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	12/30/2013 1540			Final Weight/Volume:	10 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-50453-2	Analysis Batch:	280-207019	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\123013B.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	12/30/2013 1542			Final Weight/Volume:	10 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Ammonia	103	104	90 - 110	1	10		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-207019

Method: 350.1
Preparation: N/A

MS Lab Sample ID:	280-50453-2	Units:	mg/L	MSD Lab Sample ID:	280-50453-2
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/30/2013 1540			Analysis Date:	12/30/2013 1542
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Ammonia	0.23	1.00	1.00	1.26	1.27

Client: Waste Management

Job Number: 280-50453-2

Method Blank - Batch: 280-207179

Method: 351.2
Preparation: 351.2

Lab Sample ID:	MB 280-207179/1-A	Analysis Batch:	280-207314	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-207179	Lab File ID:	010214TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	01/02/2014 2010	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	01/02/2014 0817				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrogen, Kjeldahl	ND		0.18	0.50

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-207179

Method: 351.2
Preparation: 351.2

LCS Lab Sample ID:	LCS 280-207179/2-A	Analysis Batch:	280-207314	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-207179	Lab File ID:	010214TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	01/02/2014 2008	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	01/02/2014 0817				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-207179/3-A	Analysis Batch:	280-207314	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-207179	Lab File ID:	010214TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	01/02/2014 2009	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	01/02/2014 0817				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Nitrogen, Kjeldahl	96	95	90 - 110	1	25		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-207179

Method: 351.2
Preparation: 351.2

LCS Lab Sample ID:	LCS 280-207179/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-207179/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/02/2014 2008			Analysis Date:	01/02/2014 2009
Prep Date:	01/02/2014 0817			Prep Date:	01/02/2014 0817
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Nitrogen, Kjeldahl	6.00	6.00	5.76	5.68

Client: Waste Management

Job Number: 280-50453-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-207179

Method: 351.2
Preparation: 351.2

MS Lab Sample ID:	280-50453-F-1-E MS	Analysis Batch:	280-207314	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-207179	Lab File ID:	010214TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	01/02/2014 2041			Final Weight/Volume:	25 mL
Prep Date:	01/02/2014 0817				
Leach Date:	N/A				

MSD Lab Sample ID:	280-50453-F-1-F MSD	Analysis Batch:	280-207314	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-207179	Lab File ID:	010214TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	01/02/2014 2043			Final Weight/Volume:	25 mL
Prep Date:	01/02/2014 0817				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Nitrogen, Kjeldahl	74	75	90 - 110	0	25	F1	F1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-207179

Method: 351.2
Preparation: 351.2

MS Lab Sample ID:	280-50453-F-1-E MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	01/02/2014 2041		
Prep Date:	01/02/2014 0817		
Leach Date:	N/A		

MSD Lab Sample ID:	280-50453-F-1-F MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	01/02/2014 2043
Prep Date:	01/02/2014 0817
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Nitrogen, Kjeldahl	6.4	3.00	3.00	8.61	F1	8.62	F1

Client: Waste Management

Job Number: 280-50453-2

Method Blank - Batch: 280-207152

Method: 353.2
Preparation: N/A

Lab Sample ID:	MB 280-207152/27	Analysis Batch:	280-207152	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1231NXNA.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	12/31/2013 1520	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrate Nitrite as N	ND		0.019	0.10

Method Reporting Limit Check - Batch: 280-207152

Method: 353.2
Preparation: N/A

Lab Sample ID:	MRL 280-207152/18	Analysis Batch:	280-207152	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1231NXNA.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/31/2013 1507	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate Nitrite as N	0.100	0.0758	76	50 - 150	J

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-207152

Method: 353.2
Preparation: N/A

LCS Lab Sample ID:	LCS 280-207152/28	Analysis Batch:	280-207152	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1231NXNA.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/31/2013 1522	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-207152/29	Analysis Batch:	280-207152	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1231NXNA.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/31/2013 1523	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Nitrate Nitrite as N	102	103	90 - 110	1	10		

Client: Waste Management

Job Number: 280-50453-2

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-207152

Method: 353.2
Preparation: N/A

LCS Lab Sample ID:	LCS 280-207152/28	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-207152/29
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/31/2013 1522			Analysis Date:	12/31/2013 1523
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Nitrate Nitrite as N	5.00	5.00	5.10	5.14

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-207152

Method: 353.2
Preparation: N/A

MS Lab Sample ID:	280-50221-H-2 MS	Analysis Batch:	280-207152	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1231NXNA.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	12/31/2013 1537			Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				
MSD Lab Sample ID:	280-50221-H-2 MSD	Analysis Batch:	280-207152	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\1231NXNA.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	12/31/2013 1538			Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Nitrate Nitrite as N	99	99	90 - 110	0	10		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-207152

Method: 353.2
Preparation: N/A

MS Lab Sample ID:	280-50221-H-2 MS	Units:	mg/L	MSD Lab Sample ID:	280-50221-H-2 MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/31/2013 1537			Analysis Date:	12/31/2013 1538
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Nitrate Nitrite as N	1.5	4.00	4.00	5.43	5.41

Client: Waste Management

Job Number: 280-50453-2

Method Blank - Batch: 280-206702

Method: 365.1
Preparation: 365.2/365.3/365

Lab Sample ID:	MB 280-206702/5-A	Analysis Batch:	280-206889	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-206702	Lab File ID:	122813TPHOSa.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/28/2013 1122	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/26/2013 1710				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Phosphorus, Total	0.00916	J	0.0050	0.050

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-206702

Method: 365.1
Preparation: 365.2/365.3/365

LCS Lab Sample ID:	LCS 280-206702/3-A	Analysis Batch:	280-206889	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-206702	Lab File ID:	122813TPHOSa.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/28/2013 1118	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/26/2013 1710				
Leach Date:	N/A				
LCSD Lab Sample ID:	LCSD 280-206702/4-A	Analysis Batch:	280-206889	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-206702	Lab File ID:	122813TPHOSa.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/28/2013 1122	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/26/2013 1710				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Phosphorus, Total	106	107	90 - 110	1	10		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-206702

Method: 365.1
Preparation: 365.2/365.3/365

LCS Lab Sample ID:	LCS 280-206702/3-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-206702/4-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/28/2013 1118			Analysis Date:	12/28/2013 1122
Prep Date:	12/26/2013 1710			Prep Date:	12/26/2013 1710
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Phosphorus, Total	0.500	0.500	0.530	0.534

Client: Waste Management

Job Number: 280-50453-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-206702

Method: 365.1
Preparation: 365.2/365.3/365

MS Lab Sample ID:	280-50453-F-1-B MS	Analysis Batch:	280-206889	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-206702	Lab File ID:	122813TPHOSa.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/28/2013 1122			Final Weight/Volume:	50 mL
Prep Date:	12/26/2013 1710				
Leach Date:	N/A				

MSD Lab Sample ID:	280-50453-F-1-C MSD	Analysis Batch:	280-206889	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-206702	Lab File ID:	122813TPHOSa.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/28/2013 1122			Final Weight/Volume:	50 mL
Prep Date:	12/26/2013 1710				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Phosphorus, Total	100	97	90 - 110	1	10		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-206702

Method: 365.1
Preparation: 365.2/365.3/365

MS Lab Sample ID:	280-50453-F-1-B MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	12/28/2013 1122		
Prep Date:	12/26/2013 1710		
Leach Date:	N/A		

MSD Lab Sample ID:	280-50453-F-1-C MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	12/28/2013 1122
Prep Date:	12/26/2013 1710
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Phosphorus, Total	0.44	0.500	0.500	0.937	0.924

Client: Waste Management

Job Number: 280-50453-2

Method Blank - Batch: 280-205961

Method: 410.4
Preparation: N/A

Lab Sample ID:	MB 280-205961/5	Analysis Batch:	280-205961	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2 mL
Analysis Date:	12/19/2013 1312	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Chemical Oxygen Demand	6.49	J	4.1	20

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-205961

Method: 410.4
Preparation: N/A

LCS Lab Sample ID:	LCS 280-205961/3	Analysis Batch:	280-205961	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/19/2013 1312	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-205961/4	Analysis Batch:	280-205961	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/19/2013 1312	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Chemical Oxygen Demand	106	105	90 - 110	1	11		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-205961

Method: 410.4
Preparation: N/A

LCS Lab Sample ID:	LCS 280-205961/3	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-205961/4
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/19/2013 1312			Analysis Date:	12/19/2013 1312
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Chemical Oxygen Demand	100	100	106	105

Client: Waste Management

Job Number: 280-50453-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-205961

Method: 410.4
Preparation: N/A

MS Lab Sample ID:	280-50320-D-1 MS	Analysis Batch:	280-205961	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/19/2013 1312			Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-50320-D-1 MSD	Analysis Batch:	280-205961	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/19/2013 1312			Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Chemical Oxygen Demand	95	95	90 - 110	0	11		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-205961

Method: 410.4
Preparation: N/A

MS Lab Sample ID:	280-50320-D-1 MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	12/19/2013 1312		
Prep Date:	N/A		
Leach Date:	N/A		

MSD Lab Sample ID:	280-50320-D-1 MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	12/19/2013 1312
Prep Date:	N/A
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Chemical Oxygen Demand	43	50.0	50.0	91.1	91.1

Client: Waste Management

Job Number: 280-50453-2

Method Blank - Batch: 280-205879

Method: SM 2540D
Preparation: N/A

Lab Sample ID:	MB 280-205879/1	Analysis Batch:	280-205879	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	12/19/2013 0748	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Total Suspended Solids	ND		1.1	4.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-205879

Method: SM 2540D
Preparation: N/A

LCS Lab Sample ID:	LCS 280-205879/2	Analysis Batch:	280-205879	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/19/2013 0748	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-205879/3	Analysis Batch:	280-205879	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/19/2013 0748	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Total Suspended Solids	94	101	86 - 114	7	20		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-205879

Method: SM 2540D
Preparation: N/A

LCS Lab Sample ID:	LCS 280-205879/2	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-205879/3
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/19/2013 0748			Analysis Date:	12/19/2013 0748
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Total Suspended Solids	100	100	94.0	101

Client: Waste Management

Job Number: 280-50453-2

Duplicate - Batch: 280-205879

Method: SM 2540D
Preparation: N/A

Lab Sample ID:	280-50437-A-1 DU	Analysis Batch:	280-205879	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	12/19/2013 0748	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Suspended Solids	ND	ND	NC	10	

Client: Waste Management

Job Number: 280-50453-2

Method Blank - Batch: 280-207342

Method: Total Nitrogen
Preparation: N/A

Lab Sample ID:	MB 280-207342/1	Analysis Batch:	280-207342	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	01/03/2014 0847	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrogen, Total	ND		0.042	0.10

Client: Waste Management

Job Number: 280-50453-2

Laboratory Chronicle

Lab ID: **280-50453-2** **Client ID:** **DB01-E**

Sample Date/Time: 12/15/2013 12:14 Received Date/Time: 12/18/2013 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	280-50453-C-2-A		280-206695	280-206102	12/20/2013 10:34	1	TAL DEN	BMS
A:625	280-50453-C-2-A		280-206695	280-206102	12/27/2013 04:25	1	TAL DEN	TLW
A:218.6	280-50453-I-2		440-152190		12/23/2013 18:21	1	TAL IRV	RW
P:200.7	280-50453-H-2-B		280-206558	280-206058	12/20/2013 12:15	1	TAL DEN	LLB
A:200.7 Rev 4.4	280-50453-H-2-B		280-206558	280-206058	12/23/2013 22:02	1	TAL DEN	SJS
P:200.7	280-50453-H-2-B		280-206761	280-206058	12/20/2013 12:15	1	TAL DEN	LLB
A:200.7 Rev 4.4	280-50453-H-2-B		280-206761	280-206058	12/27/2013 01:12	1	TAL DEN	SJS
P:245.1	280-50453-H-2-A		280-206361	280-205953	12/20/2013 09:35	1	TAL DEN	CRR
A:245.1	280-50453-H-2-A		280-206361	280-205953	12/20/2013 14:44	1	TAL DEN	JM
P:1664A	280-50453-B-2-A		480-159350	480-159349	12/24/2013 18:51	1	TAL BUF	RMB
A:1664A	280-50453-B-2-A		480-159350	480-159349	12/24/2013 18:51	1	TAL BUF	RMB
A:350.1	280-50453-F-2		280-207019		12/30/2013 15:38	1	TAL DEN	RSN
P:351.2	280-50453-G-2-A		280-207314	280-207179	01/02/2014 08:17	1	TAL DEN	SMG
A:351.2	280-50453-G-2-A		280-207314	280-207179	01/02/2014 20:44	1	TAL DEN	MW1
A:353.2	280-50453-F-2		280-207152		12/31/2013 16:04	1	TAL DEN	DVA
P:365.2/365.3/365	280-50453-F-2-A		280-206889	280-206702	12/26/2013 17:10	1	TAL DEN	AJS
A:365.1	280-50453-F-2-A		280-206889	280-206702	12/28/2013 11:22	1	TAL DEN	AJS
A:410.4	280-50453-F-2		280-205961		12/19/2013 17:25	1	TAL DEN	AFB
A:SM 2540D	280-50453-E-2		280-205879		12/19/2013 07:48	1	TAL DEN	BAN
A:Total Nitrogen	280-50453-A-2		280-207342		01/03/2014 08:47	1	TAL DEN	RKS
A:Field Sampling	280-50453-A-2		280-205900		12/15/2013 12:14	1	TAL DEN	FS

Lab ID: **280-50453-2 MS** **Client ID:** **DB01-E**

Sample Date/Time: 12/15/2013 12:14 Received Date/Time: 12/18/2013 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:350.1	280-50453-F-2 MS		280-207019		12/30/2013 15:40	1	TAL DEN	RSN

Lab ID: **280-50453-2 MSD** **Client ID:** **DB01-E**

Sample Date/Time: 12/15/2013 12:14 Received Date/Time: 12/18/2013 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:350.1	280-50453-F-2 MSD		280-207019		12/30/2013 15:42	1	TAL DEN	RSN

Client: Waste Management

Job Number: 280-50453-2

Laboratory Chronicle

Lab ID: **MB** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	MB 280-206102/1-A		280-206695	280-206102	12/20/2013 10:34	1	TAL DEN	BMS
A:625	MB 280-206102/1-A		280-206695	280-206102	12/27/2013 02:06	1	TAL DEN	TLW
P:200.7	MB 280-206058/1-A		280-206558	280-206058	12/20/2013 12:15	1	TAL DEN	LLB
A:200.7 Rev 4.4	MB 280-206058/1-A		280-206558	280-206058	12/23/2013 21:31	1	TAL DEN	SJS
P:200.7	MB 280-206058/1-A		280-206761	280-206058	12/20/2013 12:15	1	TAL DEN	LLB
A:200.7 Rev 4.4	MB 280-206058/1-A		280-206761	280-206058	12/27/2013 00:41	1	TAL DEN	SJS
P:245.1	MB 280-205953/1-A		280-206361	280-205953	12/20/2013 09:35	1	TAL DEN	CRR
A:245.1	MB 280-205953/1-A		280-206361	280-205953	12/20/2013 14:11	1	TAL DEN	JM
P:1664A	MB 480-159349/1-A		480-159350	480-159349	12/24/2013 18:51	1	TAL BUF	RMB
A:1664A	MB 480-159349/1-A		480-159350	480-159349	12/24/2013 18:51	1	TAL BUF	RMB
A:350.1	MB 280-207019/105		280-207019		12/30/2013 14:53	1	TAL DEN	RSN
P:351.2	MB 280-207179/1-A		280-207314	280-207179	01/02/2014 08:17	1	TAL DEN	SMG
A:351.2	MB 280-207179/1-A		280-207314	280-207179	01/02/2014 20:10	1	TAL DEN	MW1
A:353.2	MB 280-207152/27		280-207152		12/31/2013 15:20	1	TAL DEN	DVA
P:365.2/365.3/365	MB 280-206702/5-A		280-206889	280-206702	12/26/2013 17:10	1	TAL DEN	AJS
A:365.1	MB 280-206702/5-A		280-206889	280-206702	12/28/2013 11:22	1	TAL DEN	AJS
A:410.4	MB 280-205961/5		280-205961		12/19/2013 13:12	1	TAL DEN	AFB
A:SM 2540D	MB 280-205879/1		280-205879		12/19/2013 07:48	1	TAL DEN	BAN
A:Total Nitrogen	MB 280-207342/1		280-207342		01/03/2014 08:47	1	TAL DEN	RKS

Client: Waste Management

Job Number: 280-50453-2

Laboratory Chronicle

Lab ID: **LCS** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	LCS 280-206102/2-A		280-206695	280-206102	12/20/2013 10:34	1	TAL DEN	BMS
A:625	LCS 280-206102/2-A		280-206695	280-206102	12/26/2013 18:14	1	TAL DEN	TLW
P:200.7	LCS 280-206058/2-A		280-206558	280-206058	12/20/2013 12:15	1	TAL DEN	LLB
A:200.7 Rev 4.4	LCS 280-206058/2-A		280-206558	280-206058	12/23/2013 21:34	1	TAL DEN	SJS
P:200.7	LCS 280-206058/2-A		280-206761	280-206058	12/20/2013 12:15	1	TAL DEN	LLB
A:200.7 Rev 4.4	LCS 280-206058/2-A		280-206761	280-206058	12/27/2013 00:44	1	TAL DEN	SJS
P:245.1	LCS 280-205953/2-A		280-206361	280-205953	12/20/2013 09:35	1	TAL DEN	CRR
A:245.1	LCS 280-205953/2-A		280-206361	280-205953	12/20/2013 14:14	1	TAL DEN	JM
P:1664A	LCS 480-159349/2-A		480-159350	480-159349	12/24/2013 18:51	1	TAL BUF	RMB
A:1664A	LCS 480-159349/2-A		480-159350	480-159349	12/24/2013 18:51	1	TAL BUF	RMB
A:350.1	LCS 280-207019/103		280-207019		12/30/2013 14:49	1	TAL DEN	RSN
P:351.2	LCS 280-207179/2-A		280-207314	280-207179	01/02/2014 08:17	1	TAL DEN	SMG
A:351.2	LCS 280-207179/2-A		280-207314	280-207179	01/02/2014 20:08	1	TAL DEN	MW1
A:353.2	LCS 280-207152/28		280-207152		12/31/2013 15:22	1	TAL DEN	DVA
P:365.2/365.3/365	LCS 280-206702/3-A		280-206889	280-206702	12/26/2013 17:10	1	TAL DEN	AJS
A:365.1	LCS 280-206702/3-A		280-206889	280-206702	12/28/2013 11:18	1	TAL DEN	AJS
A:410.4	LCS 280-205961/3		280-205961		12/19/2013 13:12	1	TAL DEN	AFB
A:SM 2540D	LCS 280-205879/2		280-205879		12/19/2013 07:48	1	TAL DEN	BAN

Lab ID: **LCSD** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	LCSD 280-206102/3-A		280-206695	280-206102	12/20/2013 10:34	1	TAL DEN	BMS
A:625	LCSD 280-206102/3-A		280-206695	280-206102	12/26/2013 18:42	1	TAL DEN	TLW
A:350.1	LCSD 280-207019/104		280-207019		12/30/2013 14:51	1	TAL DEN	RSN
P:351.2	LCSD 280-207179/3-A		280-207314	280-207179	01/02/2014 08:17	1	TAL DEN	SMG
A:351.2	LCSD 280-207179/3-A		280-207314	280-207179	01/02/2014 20:09	1	TAL DEN	MW1
A:353.2	LCSD 280-207152/29		280-207152		12/31/2013 15:23	1	TAL DEN	DVA
P:365.2/365.3/365	LCSD 280-206702/4-A		280-206889	280-206702	12/26/2013 17:10	1	TAL DEN	AJS
A:365.1	LCSD 280-206702/4-A		280-206889	280-206702	12/28/2013 11:22	1	TAL DEN	AJS
A:410.4	LCSD 280-205961/4		280-205961		12/19/2013 13:12	1	TAL DEN	AFB
A:SM 2540D	LCSD 280-205879/3		280-205879		12/19/2013 07:48	1	TAL DEN	BAN

Client: Waste Management

Job Number: 280-50453-2

Laboratory Chronicle

Lab ID: **MRL** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:353.2	MRL 280-207152/18		280-207152		12/31/2013 15:07	1	TAL DEN	DVA

Lab ID: **MS** **Client ID:** **N/A**

Sample Date/Time: 12/18/2013 10:05 Received Date/Time: 12/18/2013 13:12

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:200.7	280-50429-A-1-A MS		280-206558	280-206058	12/20/2013 12:15	1	TAL DEN	LLB
A:200.7 Rev 4.4	280-50429-A-1-A MS		280-206558	280-206058	12/23/2013 21:41	1	TAL DEN	SJS
P:200.7	280-50429-A-1-A MS		280-206761	280-206058	12/20/2013 12:15	1	TAL DEN	LLB
A:200.7 Rev 4.4	280-50429-A-1-A MS		280-206761	280-206058	12/27/2013 00:51	1	TAL DEN	SJS
P:245.1	280-50429-B-1-B MS		280-206361	280-205953	12/20/2013 09:35	1	TAL DEN	CRR
A:245.1	280-50429-B-1-B MS		280-206361	280-205953	12/20/2013 14:23	1	TAL DEN	JM
P:1664A	280-50311-B-1-A MS		480-159350	480-159349	12/24/2013 18:51	1	TAL BUF	RMB
A:1664A	280-50311-B-1-A MS		480-159350	480-159349	12/24/2013 18:51	1	TAL BUF	RMB
P:351.2	280-50453-F-1-E MS		280-207314	280-207179	01/02/2014 08:17	1	TAL DEN	SMG
A:351.2	280-50453-F-1-E MS		280-207314	280-207179	01/02/2014 20:41	1	TAL DEN	MW1
A:353.2	280-50221-H-2 MS		280-207152		12/31/2013 15:37	1	TAL DEN	DVA
P:365.2/365.3/365	280-50453-F-1-B MS		280-206889	280-206702	12/26/2013 17:10	1	TAL DEN	AJS
A:365.1	280-50453-F-1-B MS		280-206889	280-206702	12/28/2013 11:22	1	TAL DEN	AJS
A:410.4	280-50320-D-1 MS		280-205961		12/19/2013 13:12	1	TAL DEN	AFB

Client: Waste Management

Job Number: 280-50453-2

Laboratory Chronicle

Lab ID: **MSD** **Client ID:** **N/A**

Sample Date/Time: 12/18/2013 10:05 Received Date/Time: 12/18/2013 13:12

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:200.7	280-50429-A-1-B MSD		280-206558	280-206058	12/20/2013 12:15	1	TAL DEN	LLB
A:200.7 Rev 4.4	280-50429-A-1-B MSD		280-206558	280-206058	12/23/2013 21:43	1	TAL DEN	SJS
P:200.7	280-50429-A-1-B MSD		280-206761	280-206058	12/20/2013 12:15	1	TAL DEN	LLB
A:200.7 Rev 4.4	280-50429-A-1-B MSD		280-206761	280-206058	12/27/2013 00:53	1	TAL DEN	SJS
P:245.1	280-50429-B-1-C MSD		280-206361	280-205953	12/20/2013 09:35	1	TAL DEN	CRR
A:245.1	280-50429-B-1-C MSD		280-206361	280-205953	12/20/2013 14:25	1	TAL DEN	JM
P:351.2	280-50453-F-1-F MSD		280-207314	280-207179	01/02/2014 08:17	1	TAL DEN	SMG
A:351.2	280-50453-F-1-F MSD		280-207314	280-207179	01/02/2014 20:43	1	TAL DEN	MW1
A:353.2	280-50221-H-2 MSD		280-207152		12/31/2013 15:38	1	TAL DEN	DVA
P:365.2/365.3/365	280-50453-F-1-C MSD		280-206889	280-206702	12/26/2013 17:10	1	TAL DEN	AJS
A:365.1	280-50453-F-1-C MSD		280-206889	280-206702	12/28/2013 11:22	1	TAL DEN	AJS
A:410.4	280-50320-D-1 MSD		280-205961		12/19/2013 13:12	1	TAL DEN	AFB

Lab ID: **DU** **Client ID:** **N/A**

Sample Date/Time: 12/18/2013 09:12 Received Date/Time: 12/18/2013 11:07

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:SM 2540D	280-50437-A-1 DU		280-205879		12/19/2013 07:48	1	TAL DEN	BAN

Lab References:

TAL BUF = TestAmerica Buffalo

TAL DEN = TestAmerica Denver

TAL IRV = TestAmerica Irvine

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Honolulu
1946 Young St. Suite 400A
Honolulu, HI 96826
Tel: 808-486-5227

TestAmerica Job ID: HWL0055
Client Project/Site: 60287037.02
Client Project Description: AECOM, WGSL STORMWATER
Revision: 1

For:
TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002

Attn: Betsy Sara

Authorized for release by:
1/3/2014 1:17:41 PM

Kristie Reilly, Project Manager
808-486-5227
Kristie.Brachmann@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWL0055

Qualifiers

WetChem

Qualifier	Qualifier Description
L2	Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was below acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWL0055

Job ID: HWL0055

Laboratory: TestAmerica Honolulu

Narrative

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory unless otherwise stated in the report. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. TestAmerica Analytical Testing Corporation certifies that the analytical results contained herein apply only to the specific sample(s) analyzed.

The Chain(s) of Custody are included and are an integral part of this report. This entire report was reviewed and approved for release.

If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-(808)486-5227

LABORATORY REPORT

At sample receipt, the cooler/sample was 3 degrees C.
NELAC states that samples which require thermal preservation shall be considered acceptable if the arrival temperature is within 2 degrees C of the required temperature or the method specified range. For samples with a temperature requirement of 4 degrees C, an arrival temperature from 0 degrees C to 6 degrees C meets specifications. Samples that are delivered to the laboratory on the same day that they are collected may not meet these criteria. In these cases, the samples are considered acceptable if there is evidence that the chilling process has begun, such as arrival on ice.

The reported results were obtained in compliance with the 2003 NELAC standards unless otherwise noted.

The LCS in BOD batch 13L0033 which included sample HWL0055-01 was failing low. Due to the holding time and method parameters reanalysis was not possible.

Report revised 1/3/14 to correct client sample ID.

Sample Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWL0055

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
HWL0055-01	DB01-E	Water - NonPotable	12/15/13 12:14	12/16/13 08:45

Detection Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWL0055

Client Sample ID: DB01-E

Lab Sample ID: HWL0055-01

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
BOD - 5 Day	3.14		2.00		mg/L	1.00		SM5210B	Total

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWL0055

Client Sample ID: DB01-E

Date Collected: 12/15/13 12:14
Date Received: 12/16/13 08:45

Lab Sample ID: HWL0055-01

Matrix: Water - NonPotable

Method: SM5210B - General Chemistry Parameters

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
BOD - 5 Day	3.14		2.00		mg/L		12/16/13 15:21	12/21/13 08:59	1.00

QC Sample Results

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWL0055

Method: SM5210B - General Chemistry Parameters

Lab Sample ID: 13L0033-BLK1 — **Client Sample ID: Method Blank**
Matrix: Water - NonPotable — **Prep Type: Total**
Analysis Batch: 13L0033 — **Prep Batch: 13L0033_P**

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
BOD - 5 Day	ND		2.00		mg/L		12/16/13 15:10	12/21/13 08:45	1.00

Lab Sample ID: 13L0033-BS1 — **Client Sample ID: Lab Control Sample**
Matrix: Water - NonPotable — **Prep Type: Total**
Analysis Batch: 13L0033 — **Prep Batch: 13L0033_P**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
BOD - 5 Day			198	150	L2	mg/L		76	85 - 115		

Lab Sample ID: 13L0033-DUP1 — **Client Sample ID: Duplicate**
Matrix: Water - NonPotable — **Prep Type: Total**
Analysis Batch: 13L0033 — **Prep Batch: 13L0033_P**

Analyte	Sample Result	Sample Qualifier		Duplicate Result	Duplicate Qualifier	Unit	D			RPD	RPD Limit
BOD - 5 Day	33.3			32.8		mg/L				2	20

QC Association Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWL0055

WetChem

Analysis Batch: 13L0033

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
13L0033-BLK1	Method Blank	Total	Water - NonPotable	SM5210B	13L0033_P
13L0033-BS1	Lab Control Sample	Total	Water - NonPotable	SM5210B	13L0033_P
13L0033-DUP1	Duplicate	Total	Water - NonPotable	SM5210B	13L0033_P
HWL0055-01	DB01-E	Total	Water - NonPotable	SM5210B	13L0033_P

Prep Batch: 13L0033_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
13L0033-BLK1	Method Blank	Total	Water - NonPotable	Default Prep GenChem	
13L0033-BS1	Lab Control Sample	Total	Water - NonPotable	Default Prep GenChem	
13L0033-DUP1	Duplicate	Total	Water - NonPotable	Default Prep GenChem	
HWL0055-01	DB01-E	Total	Water - NonPotable	Default Prep GenChem	

Lab Chronicle

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWL0055

Client Sample ID: DB01-E

Date Collected: 12/15/13 12:14
Date Received: 12/16/13 08:45

Lab Sample ID: HWL0055-01

Matrix: Water - NonPotable

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Default Prep		1.00	13L0033_P	12/16/13 15:21	NK	TAL HON
Total	Analysis	GenChem SM5210B		1.00	13L0033	12/21/13 08:59	NK	TAL HON

Laboratory References:

TAL HON = TestAmerica Honolulu, 1946 Young St. Suite 400A, Honolulu, HI 96826, TEL 808-486-5227

Certification Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWL0055

Laboratory: TestAmerica Honolulu

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Florida	NELAP	4	E87907	06-30-14
Hawaii	State Program	9	N/A	06-28-14
USDA	Federal		HON-S-206	01-31-15

Method Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWL0055

Method	Method Description	Protocol	Laboratory
SM5210B	General Chemistry Parameters		TAL HON

Protocol References:

Laboratory References:

TAL HON = TestAmerica Honolulu, 1946 Young St. Suite 400A, Honolulu, HI 96826, TEL 808-486-5227

Chain of Custody Record

TAL-4124-280 (0508)

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

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Client	Waste Management / AECOM
Address	1001 Bishop St. Suite 1600
City	Honolulu
State	HI
Zip Code	96813
Project Name and Location (State)	WGSL Stormwater
Contract/Purchase Order/Quote No	60289037.02
Project Manager	Mark Hofferbert
Telephone Number (Area Code)/Fax Number	808-356-5317, F. 808-523-8950
Site Contact	Justin Loftig
Lab Contact	Betsy Sora
Carrier/Waybill Number	
Date	
Lab Number	HWL0055
Chain of Custody Numb	16856
Page	

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	HPSO4	HNO3	HCl	NaOH	ZnAc/NaOH	1664 Oil & Grease	SM 2540D TSS	625 SVOCs*	410.4 COD	365.1 T. Phos	350.1 Ammonia	353.2 NO2-NO3	SM4500 N T. N	200.7 245.1 Metals**	SM5210 B BOD	218.6 Cr VI	TKN	Special Instr Conditions o
DB01-E	12/15/13	~~13:10~~ 12:78 12:14		X			4	4	1				X	X	X	X	X	X	X	X	X	X	X	X	HWL0055-01

* a-terpinol, p-cresol, phenol

** As, Cd, Fe, Pb,

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☒ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retain longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☒ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

1. Relinquished By: Margie Thach	AECOM	Date 12/16/13	Time 845
2. Relinquished By: [illegible]		Date 12/16/13	Time 1210
3. Relinquished By		Date	Time

1. Received By: Kristie Reilly	Date 12/16/13	Time 8
2. Received By	Date	Time
3. Received By	Date	Time

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

260631

CMS

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1/3/2014

TestAmerica

Destination Laboratory Denver

Destination Laboratory PM (if known) _____

Drop Shipment Receipt Checklist

Client Name: Accom

Date/ Time Received: 12/16/13 845

Received By: [illegible] KR

Matrices: AQ

Carrier: Client

Airbill# :

Shipping container/cooler in good condition?	Yes ✓	No ☐	Not Present ☐
Chain of Custody present?	Yes ✓	No ☐	
Chain of Custody Signed when relinquished and received?	Yes ✓	No ☐	
Cooler opened at TestAmerica Honolulu?	Yes ✓	No ☐	
Sample containers matched to COC at TestAmerica Honolulu?	Yes ☐	No ✓	
Any sample containers obviously broken/damaged upon receipt?	Yes ☐	No ✓	
Sample containers on ice?	Yes ✓	No ☐	Type: Wet
Custody seals present? If so, location? (Cooler, sample containers?)	Yes ☐	No ✓	
Custody seals intact?	Yes ☐	No ✓	
Water - VOA Vials have Zero Headspace?	Yes ☐	No ✓ 12/16/13	No VOA vials present: ✓
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Checked: ✓
pH Adjusted?	Yes ☐	No ☐	Final pH:
Encores / MI-VOC / 5035 Vials Present?	Yes ☐	No ✓	
Sample Filtration Needed?	Yes ☐	No ✓	Filtered in Field: ☐
DODQSM / QAPP Project (if known)?	Yes ☐	No ☐	Type: _____
Temperature Blank Present?	Yes ☐	No ✓	

Sample Container Temperature: 3.0 °C

Samples drop shipped on ice?	Yes ✓	No ☐	Type: Wet

Date of drop shipment: 12/16/12

Comments/ Sampling Handling Notes:

[redacted]

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

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TAL-4124-280 (0508)

Client: Waste Management / AECOM	Project Manager: Mark Hofferbert	Date	Chain of Custody Number: 168569
Address: 1001 Bishop St. Suite 1600	Telephone Number (Area Code)/Fax Number: 808-356-5717, F: 808-523-8950	Lab Number	Page _____ of _____
City: Honolulu; State: HI; Zip Code: 96813	Site Contact: Justin Lotig	Lab Contact: Betsy Sara	
Project Name and Location (State): WESL Stormwater	Carrier/Waybill Number		
Contract/Purchase Order/Quote No.: 60287037.02			

Analysis (Attach list if more space is needed)

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	1664 Oil & Grease	SM 2540D TSS	625* SVOCs*	410.4 COD	365.1 T. Phos	350.1 Ammonia	353.2 NO2-NO3	SM4500N T. Nitrogen	200.7, 245.1 Metals	SM5210B BOD	218.6 Cr VI	TKN	Special Instructions/ Conditions of Receipt
DB01-E	12/15/13	~~13:10~~ 12:19	X				4	4	1				X	X	X	X	X	X	X	X	X	X	X	X	* a-terpinol, benzoic acid, cresol, pentachlorophenol, phenol
		12:14																							** As, Cd, Fe, Pb, Hg, Se, Ag, Zn

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☒ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☒ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

1. Relinquished By: Margie Thach AECOM	Date: 12/16/13	Time: 845	1. Received By: Kristie Reilly	Date: 12/16/13	Time: 8:45	3.0°C intact wet ice	
2. Relinquished By: [illegible]	Date: 12/16/13	Time: 1210	2. Received By: [illegible]	Date: 12/16/13	Time: 10:30		
3. Relinquished By	Date	Time	3. Received By	Date	Time		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

2.0, 3.4 IR4 MS 12-18-13

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: WGSL

Site No.:

Sample Point: DB01E (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged Mark changes, record field data, below

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment . . . Dedicated: Y or N

Filter Device: Y or N 0.45 µ or µ (circle or fill in)

Purging Device: A-Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device:

Filter Type: A-In-line Disposable, B-Pressure, C-Vacuum, X-Other

X-Other:

Sample Tube Type: A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other:

WELL DATA

Well Elevation (at TOC) (ft/msl)

Depth to Water (DTW) (from TOC) (ft)

Groundwater Elevation (site datum, from TOC) (ft/msl)

Total Well Depth (from TOC) (ft)

Stick Up (from ground elevation) (ft)

Casing ID (in)

Casing Material

Note: Total Well Depth, Stick Up, Casing Id. etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm@25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
	1st	1st	1st					
	2nd	2nd	2nd					
	3rd	3rd	3rd					
	4th	4th	4th					
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (µmhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: Units
12 15 13	8.60						

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

Sample Appearance: Turbid Odor: none Color: tan Other: floating debris

Weather Conditions (required daily, or as conditions change): Direction/Speed: NE 25 mph Outlook: Cloudy Precipitation: Y or N

Specific Comments (including purge/well volume calculations if required):

FIELD COMMENTS

Flow measurements

	East	pH	Time	West
A	4in = 1.3 ft³/sec	8.60	1214	4in = 1.3 ft³/sec
B	4in = 1.3 ft³/sec	8.07	~~1253~~ 1231	4.5in = 1.5 ft³/sec
C	4in = 1.3 ft³/sec	8.37	1245	4.5in = 1.5 ft³/sec
D	4in = 1.3 ft³/sec	8.11	1300	5in = 1.8 ft³/sec

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
12/15/13	Margie Thach	[signature]	AECOM
12/15/13	Michelle Wong	Michelle Wong	AECOM

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

TAL-8029WM (0108)

Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-50453-2

Login Number: 50453

List Source: TestAmerica Denver

List Number: 1

Creator: Dedio, Michael T

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	N/A	Yes: Preservation labels on samples match COC
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	False	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-50453-2

Login Number: 50453
List Number: 1
Creator: Goliszek, Gregory T

List Source: TestAmerica Buffalo
List Creation: 12/20/13 08:34 PM

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.4 #1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-50453-2

Login Number: 50453
List Number: 1
Creator: Kim, Guerry

List Source: TestAmerica Irvine
List Creation: 12/23/13 01:16 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Job Number: 280-50592-1

Job Description: 995|Waimanalo Gulch LF

For:
Waste Management
Waimanalo Gulch Landfill
92-460 Farrington Highway
Kapolei, HI 96707

Attention: Mr. Justin Lottig

Approved for release.
Betsy A Sara
Project Manager II
1/29/2014 1:14 PM

Betsy A Sara, Project Manager II
4955 Yarrow Street, Arvada, CO, 80002
(303)736-0189
betsy.sara@testamericainc.com
01/29/2014
Revision: 2

cc: Mr. Mark Hofferbert
Ms. Margie Thach

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is E87667.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

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CASE NARRATIVE

Client: Waste Management

Project: 995|Waimanalo Gulch LF

Report Number: 280-50592-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

This report may include reporting limits (RLs) less than TestAmerica's standard reporting limit. The reported sample results and associated reporting limits are being used specifically to meet the needs of this project. Note that data are not normally reported to these levels without qualification because they are inherently less reliable and potentially less defensible than required by the latest industry standards.

Sample Receiving

The sample was received on 12/23/2013; the sample arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 2.8º C and 2.1º C.

Holding Times

Due to an anomalous concentration relative to historical Oil/Grease in this sample, reanalysis was performed 8 days outside of the 28-day holding time. Both sets of Oil/Grease results are reported in this submission per the client's request.

All other holding times were met.

Method Blanks

Total Phosphorus Method 365.1 and Chemical Oxygen Demand (COD) Method 410.4 were detected in the Method Blanks below the project established reporting limits. No corrective action is taken for any values in Method Blanks that are below the requested reporting limits. The Method Blank data are included at the end of this report.

All other Method Blanks were within established control limits.

Laboratory Control Samples (LCS)

The Method 200.7 LCS for Total Arsenic, Total Cadmium, Total Selenium and Total Silver was above control limits. Because the data are considered to be biased high and all associated samples were non-detect for Total Arsenic, Total Cadmium, Total Selenium and Total Silver, corrective action was deemed unnecessary.

All other Laboratory Control Samples were within established control limits.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD)

The method required MS/MSD could not be performed for Method 625 due to insufficient sample volume, however, a LCS/LCSD pair was analyzed to demonstrate method precision and accuracy.

The Matrix Spikes and Matrix Spike Duplicates performed on samples from other clients exhibited MS and MSD recoveries outside control limits for Total Arsenic, Total Cadmium, Total Selenium, Total Silver Method 200.7, Total Mercury Method 245.1, Oil and Grease (HEM) Method 1664A and Total Kjeldahl Nitrogen (TKN) Method 351.2. Because the corresponding Laboratory Control Samples and the Method Blank samples were within control limits, these anomalies may be due to matrix interference and no corrective action was taken.

All other MS and MSD samples were within established control limits.

Metals

The Method 200.7 continuing calibration verification (CCV) for Total Selenium recovered above the upper control limit. The samples associated with this CCV were not detected above the reporting limit for Total Selenium; therefore, the data have been reported.

General Comments

For samples requiring analysis at a dilution, the dilution factor has been multiplied by the Method Detection Limit (MDL) for each analyte

and evaluated versus the project-specific reporting limit (PSRL). If the obtained value is below the PSRL, then the PSRL is preserved as the reporting limit for the diluted result, otherwise, the obtained value becomes the reporting limit. This is done in order to maintain the PSRL to meet permit requirements at the request of the client and to report the lowest possible RL for each analyte.

The analysis for Oil/Grease Method 1664A was performed by TestAmerica Buffalo. Their address and phone number are:
TestAmerica Buffalo
10 Hazelwood Drive, Suite 106
Amherst, NY 14228
716-691-2600

The analysis for Biochemical Oxygen Demand (BOD) was performed by TestAmerica Honolulu. Their address and phone number are:
TestAmerica Honolulu
1946 Young Street
Suite 400A
Honolulu, HI 96826
Phone: 808.486.5227

The analysis for Hexavalent Chromium was performed at TestAmerica's Irvine facility.
TestAmerica Irvine
17461 Derian Avenue
Suite 100
Irvine, CA 92614
Phone: 949.261.1022

Report Revision - 1/24/14

This submission was revised to discuss the reanalysis result for Oil/Grease for the sample DB01-W. Due to an anomalous concentration relative to historical Oil/Grease in this sample, reanalysis was performed 8 days outside of the 28-day holding time. The reanalysis result was non-detect and reflected the historical Oil/Grease result for the sample DB01-W. Per the client's request, only the original Oil/Grease result is reported in this submission.

Report Revision - 1/29/14

This submission was revised to include the Oil/Grease reanalysis for the sample DB01-W per the client's request.

EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-50592-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
280-50592-1	**DB01-W**					
Field pH		8.73			SU	Field Sampling
HEM		36		5.0	mg/L	1664A
Ammonia		0.084	J	0.10	mg/L	350.1
Nitrogen, Kjeldahl		0.93		0.50	mg/L	351.2
Nitrate Nitrite as N		3.1		0.10	mg/L	353.2
Phosphorus, Total		0.29	B	0.050	mg/L	365.1
Chemical Oxygen Demand		36	B	20	mg/L	410.4
Total Suspended Solids		15		4.0	mg/L	SM 2540D
Nitrogen, Total		4.0		0.10	mg/L	Total Nitrogen
Dissolved						
Chromium, hexavalent		2.6		1.0	ug/L	218.6
Total Recoverable						
Cadmium		0.00070	J *	0.0050	mg/L	200.7 Rev 4.4
Iron		1.8		0.10	mg/L	200.7 Rev 4.4
Zinc		0.015	J	0.020	mg/L	200.7 Rev 4.4
Silver		0.00093	J *	0.010	mg/L	200.7 Rev 4.4

METHOD SUMMARY

Client: Waste Management

Job Number: 280-50592-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Semivolatile Organic Compounds (GC/MS)	TAL DEN	40CFR136A 625	
Liquid-Liquid Extraction	TAL DEN		40CFR136A 625
Metals (ICP)	TAL DEN	EPA 200.7 Rev 4.4	
Preparation, Total Recoverable Metals	TAL DEN		EPA 200.7
Mercury (CVAA)	TAL DEN	EPA 245.1	
Preparation, Mercury	TAL DEN		EPA 245.1
Nitrogen, Ammonia	TAL DEN	MCAWW 350.1	
Nitrogen, Total Kjeldahl	TAL DEN	MCAWW 351.2	
Nitrogen, Total Kjeldahl	TAL DEN		MCAWW 351.2
Nitrogen, Nitrate-Nitrite	TAL DEN	MCAWW 353.2	
Phosphorus, Total	TAL DEN	EPA 365.1	
Phosphorus, Total	TAL DEN		MCAWW 365.2/365.3/365
COD	TAL DEN	MCAWW 410.4	
Solids, Total Suspended (TSS)	TAL DEN	SM SM 2540D	
Nitrogen, Total	TAL DEN	EPA Total Nitrogen	
Field Sampling	TAL DEN	EPA Field Sampling	
HEM and SGT-HEM	TAL BUF	1664A 1664A	
HEM and SGT-HEM (SPE)	TAL BUF		1664A 1664A
General Sub Contract Method	TAL HON	Subcontract	
Chromium, Hexavalent (Ion Chromatography)	TAL IRV	EPA 218.6	
Sample Filtration, Field			FIELD_FLTRD

Lab References:

TAL BUF = TestAmerica Buffalo

TAL DEN = TestAmerica Denver

TAL HON = TestAmerica Honolulu

TAL IRV = TestAmerica Irvine

Method References:

1664A = EPA-821-98-002

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

METHOD / ANALYST SUMMARY

Client: Waste Management

Job Number: 280-50592-1

Method	Analyst	Analyst ID
40CFR136A 625	Hoffman, Michael G	MGH
EPA 200.7 Rev 4.4	Harre, John K	JKH
EPA 245.1	Rhoades, Chris R	CRR
EPA Field Sampling	Field, Sampler	FS
1664A 1664A	Leader, Michael D	MDL
MCAWW 350.1	Newcome, Robin S	RSN
MCAWW 351.2	Woolley, Mark -	MW1
MCAWW 353.2	Ayala, Delaina V	DVA
EPA 365.1	Schwemin, Andrew J	AJS
MCAWW 410.4	Benson, Alex F	AFB
SM SM 2540D	Neeley, Beth A	BAN
EPA Total Nitrogen	Sullivan, Roxanne K	RKS
EPA 218.6	Welch, Raquel	RW

SAMPLE SUMMARY

Client: Waste Management

Job Number: 280-50592-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-50592-1	DB01-W	Water	12/19/2013 1721	12/23/2013 1100

SAMPLE RESULTS

Client: Waste Management

Job Number: 280-50592-1

Client Sample ID: **DB01-W**

Lab Sample ID: 280-50592-1

Client Matrix: Water

Date Sampled: 12/19/2013 1721

Date Received: 12/23/2013 1100

625 Semivolatile Organic Compounds (GC/MS)

Analysis Method:	625	Analysis Batch:	280-207091	Instrument ID:	SMS_D
Prep Method:	625	Prep Batch:	280-206637	Lab File ID:	D3176.D
Dilution:	1.0			Initial Weight/Volume:	1043.3 mL
Analysis Date:	01/01/2014 0122			Final Weight/Volume:	1000 uL
Prep Date:	12/26/2013 0950			Injection Volume:	0.5 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Alpha-Terpineol	ND		0.0019	0.010
Benzoic acid	ND		0.0096	0.050
p-Cresol	ND		0.00024	0.010
Pentachlorophenol	ND		0.019	0.060
Phenol	ND		0.0019	0.010

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	99		50 - 120
2-Fluorobiphenyl	88		36 - 120
2-Fluorophenol	90		30 - 120
Nitrobenzene-d5	91		45 - 120
Phenol-d5	93		36 - 120
Terphenyl-d14	73		41 - 120

Client: Waste Management

Job Number: 280-50592-1

Client Sample ID: **DB01-W**

Lab Sample ID: 280-50592-1

Client Matrix: Water

Date Sampled: 12/19/2013 1721

Date Received: 12/23/2013 1100

218.6 Chromium, Hexavalent (Ion Chromatography)-Dissolved

Analysis Method:	218.6	Analysis Batch:	440-152530	Instrument ID:	IC-16
	N/A	Prep Batch:	N/A	Lab File ID:	Info 2_TAIIRV167_Hex C
Dilution:	1.0			Initial Weight/Volume:	10 mL
Analysis Date:	12/24/2013 1724			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1000 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chromium, hexavalent	2.6		0.25	1.0

Client: Waste Management

Job Number: 280-50592-1

Client Sample ID: **DB01-W**

Lab Sample ID: 280-50592-1

Client Matrix: Water

Date Sampled: 12/19/2013 1721

Date Received: 12/23/2013 1100

200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	280-207056	Instrument ID:	MT_025
Prep Method:	200.7	Prep Batch:	280-206474	Lab File ID:	25A6123013.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/31/2013 0347			Final Weight/Volume:	50 mL
Prep Date:	12/26/2013 1215				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Arsenic	ND	*	0.0044	0.015
Cadmium	0.00070	J *	0.00045	0.0050
Iron	1.8		0.022	0.10
Selenium	ND	^ *	0.0049	0.015
Zinc	0.015	J	0.0045	0.020
Silver	0.00093	J *	0.00093	0.010

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	280-207176	Instrument ID:	MT_025
Prep Method:	200.7	Prep Batch:	280-206474	Lab File ID:	25D123113.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	12/31/2013 2221			Final Weight/Volume:	50 mL
Prep Date:	12/26/2013 1215				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Lead	ND		0.0026	0.0090

245.1 Mercury (CVAA)

Analysis Method:	245.1	Analysis Batch:	280-207141	Instrument ID:	MT_033
Prep Method:	245.1	Prep Batch:	280-206677	Lab File ID:	131231ab.txt
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	12/31/2013 1308			Final Weight/Volume:	30 mL
Prep Date:	12/31/2013 0830				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Mercury	ND		0.000027	0.00020

General Chemistry

Client Sample ID: **DB01-W**

Lab Sample ID: 280-50592-1 Date Sampled: 12/19/2013 1721
Client Matrix: Water Date Received: 12/23/2013 1100

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
HEM	36		mg/L	1.3	5.0	1.0	1664A
Analysis Batch: 480-160573	Analysis Date: 01/06/2014 1136						
Prep Batch: 480-160548	Prep Date: 01/06/2014 1001						
HEM	ND	H	mg/L	1.4	5.0	1.0	1664A
Run Type: RA Analysis Batch: 480-163153	Analysis Date: 01/24/2014 1251						
Prep Batch: 480-163150	Prep Date: 01/24/2014 1245						
Ammonia	0.084	J	mg/L	0.022	0.10	1.0	350.1
Analysis Batch: 280-207434	Analysis Date: 01/03/2014 1457						
Nitrogen, Kjeldahl	0.93		mg/L	0.18	0.50	1.0	351.2
Analysis Batch: 280-207314	Analysis Date: 01/02/2014 2025						
Prep Batch: 280-207179	Prep Date: 01/02/2014 0817						
Nitrate Nitrite as N	3.1		mg/L	0.019	0.10	1.0	353.2
Analysis Batch: 280-207852	Analysis Date: 01/08/2014 1740						
Phosphorus, Total	0.29	B	mg/L	0.0050	0.050	1.0	365.1
Analysis Batch: 280-206894	Analysis Date: 12/28/2013 1345						
Prep Batch: 280-206831	Prep Date: 12/27/2013 1521						
Chemical Oxygen Demand	36	B	mg/L	4.1	20	1.0	410.4
Analysis Batch: 280-207097	Analysis Date: 12/31/2013 1043						
Total Suspended Solids	15		mg/L	1.1	4.0	1.0	SM 2540D
Analysis Batch: 280-206463	Analysis Date: 12/24/2013 0735						
Nitrogen, Total	4.0		mg/L	0.042	0.10	1.0	Total Nitrogen
Analysis Batch: 280-207860	Analysis Date: 01/09/2014 0707						

Field Service / Mobile Lab

Client Sample ID: **DB01-W**

Lab Sample ID: 280-50592-1

Client Matrix: Water

Date Sampled: 12/19/2013 1721

Date Received: 12/23/2013 1100

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed Date Prepared
Field pH	8.73		SU	1.0	Field Sampling	280-206530	12/19/2013 1721

DATA REPORTING QUALIFIERS

Client: Waste Management

Job Number: 280-50592-1

Lab Section	Qualifier	Description
GC/MS Semi VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
HPLC/IC		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals		
	^	Instrument related QC exceeds the control limits
	F1	MS and/or MSD Recovery exceeds the control limits
	F	MS/MSD Recovery or RPD exceeds the control limits
	*	Recovery or RPD exceeds control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
General Chemistry		
	B	Compound was found in the blank and sample.
	F1	MS and/or MSD Recovery exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	H	Sample was prepped or analyzed beyond the specified holding time

QUALITY CONTROL RESULTS

Client: Waste Management

Job Number: 280-50592-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 280-206637					
LCS 280-206637/2-A	Lab Control Sample	T	Water	625	
LCSD 280-206637/3-A	Lab Control Sample Duplicate	T	Water	625	
MB 280-206637/1-A	Method Blank	T	Water	625	
280-50592-1	DB01-W	T	Water	625	
Analysis Batch:280-207091					
LCS 280-206637/2-A	Lab Control Sample	T	Water	625	280-206637
LCSD 280-206637/3-A	Lab Control Sample Duplicate	T	Water	625	280-206637
MB 280-206637/1-A	Method Blank	T	Water	625	280-206637
280-50592-1	DB01-W	T	Water	625	280-206637

Report Basis

T = Total

Client: Waste Management

Job Number: 280-50592-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-206474					
LCS 280-206474/2-A	Lab Control Sample	R	Water	200.7	
MB 280-206474/1-A	Method Blank	R	Water	200.7	
280-50592-1	DB01-W	R	Water	200.7	
280-50594-C-1-B MS	Matrix Spike	R	Water	200.7	
280-50594-C-1-C MSD	Matrix Spike Duplicate	R	Water	200.7	
Prep Batch: 280-206677					
LCS 280-206677/2-A	Lab Control Sample	T	Water	245.1	
MB 280-206677/1-A	Method Blank	T	Water	245.1	
280-50522-AA-1-H MS	Matrix Spike	T	Water	245.1	
280-50522-AA-1-I MSD	Matrix Spike Duplicate	T	Water	245.1	
280-50592-1	DB01-W	T	Water	245.1	
Analysis Batch:280-207056					
LCS 280-206474/2-A	Lab Control Sample	R	Water	200.7 Rev 4.4	280-206474
MB 280-206474/1-A	Method Blank	R	Water	200.7 Rev 4.4	280-206474
280-50592-1	DB01-W	R	Water	200.7 Rev 4.4	280-206474
280-50594-C-1-B MS	Matrix Spike	R	Water	200.7 Rev 4.4	280-206474
280-50594-C-1-C MSD	Matrix Spike Duplicate	R	Water	200.7 Rev 4.4	280-206474
Analysis Batch:280-207141					
LCS 280-206677/2-A	Lab Control Sample	T	Water	245.1	280-206677
MB 280-206677/1-A	Method Blank	T	Water	245.1	280-206677
280-50522-AA-1-H MS	Matrix Spike	T	Water	245.1	280-206677
280-50522-AA-1-I MSD	Matrix Spike Duplicate	T	Water	245.1	280-206677
280-50592-1	DB01-W	T	Water	245.1	280-206677
Analysis Batch:280-207176					
LCS 280-206474/2-A	Lab Control Sample	R	Water	200.7 Rev 4.4	280-206474
MB 280-206474/1-A	Method Blank	R	Water	200.7 Rev 4.4	280-206474
280-50592-1	DB01-W	R	Water	200.7 Rev 4.4	280-206474
280-50594-C-1-B MS	Matrix Spike	R	Water	200.7 Rev 4.4	280-206474
280-50594-C-1-C MSD	Matrix Spike Duplicate	R	Water	200.7 Rev 4.4	280-206474

Report Basis

R = Total Recoverable

T = Total

Client: Waste Management

Job Number: 280-50592-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Field Service / Mobile Lab					
Analysis Batch:280-206530					
280-50592-1	DB01-W	T	Water	Field Sampling	

Report Basis

T = Total

Client: Waste Management

Job Number: 280-50592-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Prep Batch: 480-160548					
LCS 480-160548/2-A	Lab Control Sample	T	Water	1664A	
MB 480-160548/1-A	Method Blank	T	Water	1664A	
280-50592-1	DB01-W	T	Water	1664A	
400-84806-B-1-A MS	Matrix Spike	T	Water	1664A	
Analysis Batch:480-160573					
LCS 480-160548/2-A	Lab Control Sample	T	Water	1664A	480-160548
MB 480-160548/1-A	Method Blank	T	Water	1664A	480-160548
280-50592-1	DB01-W	T	Water	1664A	480-160548
400-84806-B-1-A MS	Matrix Spike	T	Water	1664A	480-160548
Prep Batch: 480-163150					
LCS 480-163150/2-A	Lab Control Sample	T	Water	1664A	
MB 480-163150/1-A	Method Blank	T	Water	1664A	
280-50592-1RA	DB01-W	T	Water	1664A	
Analysis Batch:480-163153					
LCS 480-163150/2-A	Lab Control Sample	T	Water	1664A	480-163150
MB 480-163150/1-A	Method Blank	T	Water	1664A	480-163150
280-50592-1RA	DB01-W	T	Water	1664A	480-163150
Analysis Batch:280-206463					
LCS 280-206463/2	Lab Control Sample	T	Water	SM 2540D	
LCSD 280-206463/3	Lab Control Sample Duplicate	T	Water	SM 2540D	
MB 280-206463/1	Method Blank	T	Water	SM 2540D	
280-50592-1	DB01-W	T	Water	SM 2540D	
280-50594-A-1 DU	Duplicate	T	Water	SM 2540D	
Prep Batch: 280-206831					
LCS 280-206831/3-A	Lab Control Sample	T	Water	365.2/365.3/365	
LCSD 280-206831/4-A	Lab Control Sample Duplicate	T	Water	365.2/365.3/365	
MB 280-206831/5-A	Method Blank	T	Water	365.2/365.3/365	
280-50592-1	DB01-W	T	Water	365.2/365.3/365	
280-50592-F-2-B MS	Matrix Spike	T	Water	365.2/365.3/365	
280-50592-F-2-C MSD	Matrix Spike Duplicate	T	Water	365.2/365.3/365	
Analysis Batch:280-206894					
LCS 280-206831/3-A	Lab Control Sample	T	Water	365.1	280-206831
LCSD 280-206831/4-A	Lab Control Sample Duplicate	T	Water	365.1	280-206831
MB 280-206831/5-A	Method Blank	T	Water	365.1	280-206831
280-50592-1	DB01-W	T	Water	365.1	280-206831
280-50592-F-2-B MS	Matrix Spike	T	Water	365.1	280-206831
280-50592-F-2-C MSD	Matrix Spike Duplicate	T	Water	365.1	280-206831

Client: Waste Management

Job Number: 280-50592-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-207097					
LCS 280-207097/3	Lab Control Sample	T	Water	410.4	
LCSD 280-207097/4	Lab Control Sample Duplicate	T	Water	410.4	
MB 280-207097/5	Method Blank	T	Water	410.4	
280-50592-1	DB01-W	T	Water	410.4	
280-50599-D-1 MS	Matrix Spike	T	Water	410.4	
280-50599-D-1 MSD	Matrix Spike Duplicate	T	Water	410.4	
Prep Batch: 280-207179					
LCS 280-207179/2-A	Lab Control Sample	T	Water	351.2	
LCSD 280-207179/3-A	Lab Control Sample Duplicate	T	Water	351.2	
MB 280-207179/1-A	Method Blank	T	Water	351.2	
550-16535-C-1-B MS	Matrix Spike	T	Water	351.2	
550-16535-C-1-C MSD	Matrix Spike Duplicate	T	Water	351.2	
280-50592-1	DB01-W	T	Water	351.2	
Analysis Batch:280-207314					
LCS 280-207179/2-A	Lab Control Sample	T	Water	351.2	280-207179
LCSD 280-207179/3-A	Lab Control Sample Duplicate	T	Water	351.2	280-207179
MB 280-207179/1-A	Method Blank	T	Water	351.2	280-207179
550-16535-C-1-B MS	Matrix Spike	T	Water	351.2	280-207179
550-16535-C-1-C MSD	Matrix Spike Duplicate	T	Water	351.2	280-207179
280-50592-1	DB01-W	T	Water	351.2	280-207179
Analysis Batch:280-207434					
LCS 280-207434/101	Lab Control Sample	T	Water	350.1	
LCSD 280-207434/102	Lab Control Sample Duplicate	T	Water	350.1	
MB 280-207434/103	Method Blank	T	Water	350.1	
280-50531-B-4 MS	Matrix Spike	T	Water	350.1	
280-50531-B-4 MSD	Matrix Spike Duplicate	T	Water	350.1	
280-50592-1	DB01-W	T	Water	350.1	
Analysis Batch:280-207852					
LCS 280-207852/27	Lab Control Sample	T	Water	353.2	
LCSD 280-207852/28	Lab Control Sample Duplicate	T	Water	353.2	
MB 280-207852/26	Method Blank	T	Water	353.2	
280-50592-1	DB01-W	T	Water	353.2	
Analysis Batch:280-207860					
MB 280-207860/1	Method Blank	T	Water	Total Nitrogen	
280-50592-1	DB01-W	T	Water	Total Nitrogen	

Report Basis

T = Total

Client: Waste Management

Job Number: 280-50592-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
HPLC/IC					
Analysis Batch:440-152530					
LCS 440-152530/2	Lab Control Sample	T	Water	218.6	
MB 440-152530/3	Method Blank	T	Water	218.6	
280-50592-1	DB01-W	D	Water	218.6	
440-66099-H-1 MS	Matrix Spike	T	Water	218.6	
440-66099-H-1 MSD	Matrix Spike Duplicate	T	Water	218.6	

Report Basis

D = Dissolved

T = Total

Client: Waste Management

Job Number: 280-50592-1

Surrogate Recovery Report

625 Semivolatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	TBP %Rec	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
280-50592-1	DB01-W	99	88	90	91	93	73
MB 280-206637/1-A		94	90	96	96	97	100
LCS 280-206637/2-A		97	90	89	94	90	95
LCSD 280-206637/3-A		101	90	90	93	91	97

Surrogate	Acceptance Limits
TBP = 2,4,6-Tribromophenol	50-120
FBP = 2-Fluorobiphenyl	36-120
2FP = 2-Fluorophenol	30-120
NBZ = Nitrobenzene-d5	45-120
PHL = Phenol-d5	36-120
TPH = Terphenyl-d14	41-120

Client: Waste Management

Job Number: 280-50592-1

Method Blank - Batch: 280-206637

Method: 625
Preparation: 625

Lab Sample ID:	MB 280-206637/1-A	Analysis Batch:	280-207091	Instrument ID:	SMS_D
Client Matrix:	Water	Prep Batch:	280-206637	Lab File ID:	D3156.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	12/31/2013 1607	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	12/26/2013 0950			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Alpha-Terpineol	ND		0.0020	0.010
Benzoic acid	ND		0.010	0.050
p-Cresol	ND		0.00025	0.010
Pentachlorophenol	ND		0.020	0.060
Phenol	ND		0.0020	0.010

Surrogate	% Rec	Acceptance Limits
2,4,6-Tribromophenol	94	50 - 120
2-Fluorobiphenyl	90	36 - 120
2-Fluorophenol	96	30 - 120
Nitrobenzene-d5	96	45 - 120
Phenol-d5	97	36 - 120
Terphenyl-d14	100	41 - 120

Client: Waste Management

Job Number: 280-50592-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-206637

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-206637/2-A	Analysis Batch:	280-207091	Instrument ID:	SMS_D
Client Matrix:	Water	Prep Batch:	280-206637	Lab File ID:	D3157.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	12/31/2013 1635	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	12/26/2013 0950			Injection Volume:	0.5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-206637/3-A	Analysis Batch:	280-207091	Instrument ID:	SMS_D
Client Matrix:	Water	Prep Batch:	280-206637	Lab File ID:	D3158.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	12/31/2013 1703	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	12/26/2013 0950			Injection Volume:	0.5 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
1,2,4-Trichlorobenzene	78	78	44 - 120	1	35		
1,2-Dichlorobenzene	72	70	32 - 120	3	42		
1,3-Dichlorobenzene	68	68	23 - 120	1	47		
1,4-Dichlorobenzene	70	69	24 - 120	2	49		
2,2'-Oxybis(1-chloropropane)	88	86	37 - 120	1	30		
2,4,6-Trichlorophenol	92	94	51 - 120	2	30		
2,4-Dichlorophenol	92	94	46 - 120	2	30		
2,4-Dimethylphenol	60	66	44 - 119	8	35		
2,4-Dinitrophenol	93	96	20 - 121	4	61		
2,4-Dinitrotoluene	97	100	57 - 120	3	35		
2,6-Dinitrotoluene	96	101	56 - 120	5	30		
2-Chloronaphthalene	89	91	60 - 118	2	30		
2-Chlorophenol	91	91	34 - 120	0	30		
2-Methylphenol	88	88	38 - 120	0	35		
2-Nitrophenol	96	97	47 - 120	1	30		
3,3'-Dichlorobenzidine	51	57	18 - 120	11	50	J	J
4,6-Dinitro-2-methylphenol	103	104	40 - 120	1	55		
4-Bromophenyl phenyl ether	93	95	53 - 120	2	34		
4-Chloro-3-methylphenol	93	95	57 - 120	2	30		
4-Chlorophenyl phenyl ether	91	94	51 - 120	3	30		
4-Nitrophenol	99	101	53 - 120	2	42		
Acenaphthene	91	92	47 - 120	2	30		
Acenaphthylene	90	91	33 - 120	1	30		
Anthracene	92	95	52 - 120	3	30		
Benzidine	26	30	10 - 218	16	50		
Benzo[a]anthracene	92	95	54 - 120	3	30		
Benzo[a]pyrene	91	94	39 - 120	3	73		
Benzo[b]fluoranthene	95	97	51 - 120	3	90		
Benzo[g,h,i]perylene	92	95	48 - 120	3	64		
Benzo[k]fluoranthene	97	99	49 - 120	2	50		
Bis(2-chloroethoxy)methane	92	93	50 - 120	1	30		
Bis(2-chloroethyl)ether	93	94	35 - 120	2	30		
Bis(2-ethylhexyl) phthalate	100	106	56 - 120	5	30		
Butyl benzyl phthalate	97	100	53 - 120	3	30		
Chrysene	92	95	51 - 120	3	30		
Dibenz(a,h)anthracene	92	95	45 - 120	3	78		

Client: Waste Management

Job Number: 280-50592-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-206637

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-206637/2-A	Analysis Batch:	280-207091	Instrument ID:	SMS_D
Client Matrix:	Water	Prep Batch:	280-206637	Lab File ID:	D3157.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	12/31/2013 1635	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	12/26/2013 0950			Injection Volume:	0.5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-206637/3-A	Analysis Batch:	280-207091	Instrument ID:	SMS_D
Client Matrix:	Water	Prep Batch:	280-206637	Lab File ID:	D3158.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	12/31/2013 1703	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	12/26/2013 0950			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Diethyl phthalate	94	97	59 - 114	3	30		
Dimethyl phthalate	93	95	58 - 112	2	30		
Di-n-butyl phthalate	96	98	57 - 118	3	30		
Di-n-octyl phthalate	94	97	56 - 120	3	30		
Fluoranthene	95	96	58 - 120	1	30		
Fluorene	92	94	59 - 120	1	30		
Hexachlorobenzene	92	95	53 - 120	3	30		
Hexachlorobutadiene	74	72	27 - 116	2	41		
Hexachlorocyclopentadiene	18	24	10 - 120	28	82	J	J
Hexachloroethane	65	65	40 - 113	0	52		
Indeno[1,2,3-cd]pyrene	94	97	50 - 120	3	73		
Isophorone	90	92	50 - 120	2	30		
Naphthalene	85	86	37 - 120	0	30		
n-Decane	56	55	28 - 120	2	61		
Nitrobenzene	93	93	46 - 120	1	30		
N-Nitrosodimethylamine	89	89	37 - 120	0	30		
N-Nitrosodi-n-propylamine	92	92	50 - 120	0	30		
N-Nitrosodiphenylamine	91	92	46 - 203	1	50		
p-Cresol	90	90	42 - 120	0	39		
Pentachlorophenol	97	99	46 - 120	1	30		
Phenanthrene	93	94	54 - 120	1	30		
Phenol	91	92	37 - 112	1	30		
Pyrene	94	96	55 - 115	2	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
2,4,6-Tribromophenol	97	101	50 - 120
2-Fluorobiphenyl	90	90	36 - 120
2-Fluorophenol	89	90	30 - 120
Nitrobenzene-d5	94	93	45 - 120
Phenol-d5	90	91	36 - 120
Terphenyl-d14	95	97	41 - 120

Client: Waste Management

Job Number: 280-50592-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-206637

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-206637/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-206637/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/31/2013 1635			Analysis Date:	12/31/2013 1703
Prep Date:	12/26/2013 0950			Prep Date:	12/26/2013 0950
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual		LCSD Result/Qual	
1,2,4-Trichlorobenzene	0.0800	0.0800	0.0624		0.0628	
1,2-Dichlorobenzene	0.0800	0.0800	0.0578		0.0561	
1,3-Dichlorobenzene	0.0800	0.0800	0.0547		0.0541	
1,4-Dichlorobenzene	0.0800	0.0800	0.0563		0.0550	
2,2'-Oxybis(1-chloropropane)	0.0800	0.0800	0.0701		0.0691	
2,4,6-Trichlorophenol	0.0800	0.0800	0.0733		0.0750	
2,4-Dichlorophenol	0.0800	0.0800	0.0737		0.0750	
2,4-Dimethylphenol	0.0800	0.0800	0.0483		0.0524	
2,4-Dinitrophenol	0.160	0.160	0.148		0.154	
2,4-Dinitrotoluene	0.0800	0.0800	0.0773		0.0801	
2,6-Dinitrotoluene	0.0800	0.0800	0.0768		0.0805	
2-Chloronaphthalene	0.0800	0.0800	0.0711		0.0725	
2-Chlorophenol	0.0800	0.0800	0.0725		0.0728	
2-Methylphenol	0.0800	0.0800	0.0705		0.0705	
2-Nitrophenol	0.0800	0.0800	0.0771		0.0777	
3,3'-Dichlorobenzidine	0.0800	0.0800	0.0412	J	0.0459	J
4,6-Dinitro-2-methylphenol	0.160	0.160	0.165		0.167	
4-Bromophenyl phenyl ether	0.0800	0.0800	0.0743		0.0761	
4-Chloro-3-methylphenol	0.0800	0.0800	0.0746		0.0758	
4-Chlorophenyl phenyl ether	0.0800	0.0800	0.0730		0.0751	
4-Nitrophenol	0.160	0.160	0.159		0.162	
Acenaphthene	0.0800	0.0800	0.0726		0.0738	
Acenaphthylene	0.0800	0.0800	0.0718		0.0726	
Anthracene	0.0800	0.0800	0.0737		0.0761	
Benzidine	0.0800	0.0800	ND		ND	
Benzo[a]anthracene	0.0800	0.0800	0.0735		0.0760	
Benzo[a]pyrene	0.0800	0.0800	0.0729		0.0755	
Benzo[b]fluoranthene	0.0800	0.0800	0.0756		0.0778	
Benzo[g,h,i]perylene	0.0800	0.0800	0.0736		0.0761	
Benzo[k]fluoranthene	0.0800	0.0800	0.0778		0.0794	
Bis(2-chloroethoxy)methane	0.0800	0.0800	0.0736		0.0744	
Bis(2-chloroethyl)ether	0.0800	0.0800	0.0740		0.0756	
Bis(2-ethylhexyl) phthalate	0.0800	0.0800	0.0800		0.0844	
Butyl benzyl phthalate	0.0800	0.0800	0.0777		0.0800	
Chrysene	0.0800	0.0800	0.0738		0.0762	
Dibenz(a,h)anthracene	0.0800	0.0800	0.0736		0.0762	
Diethyl phthalate	0.0800	0.0800	0.0752		0.0777	
Dimethyl phthalate	0.0800	0.0800	0.0746		0.0759	
Di-n-butyl phthalate	0.0800	0.0800	0.0767		0.0788	

Client: Waste Management

Job Number: 280-50592-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-206637

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-206637/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-206637/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/31/2013 1635			Analysis Date:	12/31/2013 1703
Prep Date:	12/26/2013 0950			Prep Date:	12/26/2013 0950
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual		LCSD Result/Qual	
Di-n-octyl phthalate	0.0800	0.0800	0.0750		0.0772	
Fluoranthene	0.0800	0.0800	0.0757		0.0768	
Fluorene	0.0800	0.0800	0.0739		0.0750	
Hexachlorobenzene	0.0800	0.0800	0.0733		0.0759	
Hexachlorobutadiene	0.0800	0.0800	0.0589		0.0576	
Hexachlorocyclopentadiene	0.0800	0.0800	0.0147	J	0.0195	J
Hexachloroethane	0.0800	0.0800	0.0521		0.0522	
Indeno[1,2,3-cd]pyrene	0.0800	0.0800	0.0749		0.0772	
Isophorone	0.0800	0.0800	0.0722		0.0738	
Naphthalene	0.0800	0.0800	0.0682		0.0685	
n-Decane	0.0800	0.0800	0.0447		0.0439	
Nitrobenzene	0.0800	0.0800	0.0740		0.0746	
N-Nitrosodimethylamine	0.0800	0.0800	0.0710		0.0713	
N-Nitrosodi-n-propylamine	0.0800	0.0800	0.0738		0.0736	
N-Nitrosodiphenylamine	0.0800	0.0800	0.0731		0.0737	
p-Cresol	0.0800	0.0800	0.0717		0.0717	
Pentachlorophenol	0.160	0.160	0.155		0.158	
Phenanthrene	0.0800	0.0800	0.0746		0.0755	
Phenol	0.0800	0.0800	0.0726		0.0733	
Pyrene	0.0800	0.0800	0.0750		0.0768	

Client: Waste Management

Job Number: 280-50592-1

Method Blank - Batch: 440-152530

Method: 218.6
Preparation: N/A

Lab Sample ID:	MB 440-152530/3	Analysis Batch:	440-152530	Instrument ID:	IC-16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Info 2_TAIIRV167_Hex Ch
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	12/24/2013 0851	Units:	ug/L	Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1000 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Chromium, hexavalent	ND		0.25	1.0

Lab Control Sample - Batch: 440-152530

Method: 218.6
Preparation: N/A

Lab Sample ID:	LCS 440-152530/2	Analysis Batch:	440-152530	Instrument ID:	IC-16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Info 2_TAIIRV167_Hex Ch
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	12/24/2013 0837	Units:	ug/L	Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1000 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chromium, hexavalent	50.0	48.3	97	90 - 110	

Method Reporting Limit Check - Batch: 440-152530

Method: 218.6
Preparation: N/A

Lab Sample ID:	MRL 440-152530/4	Analysis Batch:	440-152530	Instrument ID:	IC-16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Info 2_TAIIRV167_Hex Ch
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	12/24/2013 0904	Units:	ug/L	Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1000 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chromium, hexavalent	1.00	0.703	70	50 - 150	J

Client: Waste Management

Job Number: 280-50592-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 440-152530

Method: 218.6
Preparation: N/A

MS Lab Sample ID:	440-66099-H-1 MS	Analysis Batch:	440-152530	Instrument ID:	IC-16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Info 2_TAIIRV167_Hex Ch
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	12/24/2013 1657			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1000 uL
Leach Date:	N/A				

MSD Lab Sample ID:	440-66099-H-1 MSD	Analysis Batch:	440-152530	Instrument ID:	IC-16
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	Info 2_TAIIRV167_Hex Ch
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	12/24/2013 1710			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1000 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Chromium, hexavalent	105	107	90 - 110	1	10		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 440-152530

Method: 218.6
Preparation: N/A

MS Lab Sample ID:	440-66099-H-1 MS	Units:	ug/L	MSD Lab Sample ID:	440-66099-H-1 MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/24/2013 1657			Analysis Date:	12/24/2013 1710
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Chromium, hexavalent	ND	50.0	50.0	52.6	53.4

Client: Waste Management

Job Number: 280-50592-1

Method Blank - Batch: 280-206474

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	MB 280-206474/1-A	Analysis Batch:	280-207056	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-206474	Lab File ID:	25A6123013.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/31/2013 0332	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/26/2013 1215				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Arsenic	ND		0.0044	0.015
Cadmium	ND		0.00045	0.0050
Iron	ND		0.022	0.10
Selenium	ND	^	0.0049	0.015
Zinc	ND		0.0045	0.020
Silver	ND		0.00093	0.010

Method Blank - Batch: 280-206474

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	MB 280-206474/1-A	Analysis Batch:	280-207176	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-206474	Lab File ID:	25D123113.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/31/2013 2207	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/26/2013 1215				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Lead	ND		0.0026	0.0090

Client: Waste Management

Job Number: 280-50592-1

Lab Control Sample - Batch: 280-206474

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	LCS 280-206474/2-A	Analysis Batch:	280-207056	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-206474	Lab File ID:	25A6123013.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/31/2013 0334	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/26/2013 1215				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	1.00	1.17	117	88 - 110	*
Cadmium	0.100	0.117	117	88 - 111	*
Iron	1.00	1.03	103	89 - 115	
Selenium	2.00	2.45	122	85 - 112	^ *
Zinc	0.500	0.506	101	85 - 111	
Silver	0.0500	0.0590	118	85 - 115	*

Lab Control Sample - Batch: 280-206474

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	LCS 280-206474/2-A	Analysis Batch:	280-207176	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-206474	Lab File ID:	25D123113.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/31/2013 2210	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/26/2013 1215				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Lead	0.500	0.513	103	89 - 110	

Client: Waste Management

Job Number: 280-50592-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-206474

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-50594-C-1-B MS	Analysis Batch:	280-207056	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-206474	Lab File ID:	25A6123013.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/31/2013 0341			Final Weight/Volume:	50 mL
Prep Date:	12/26/2013 1215				
Leach Date:	N/A				

MSD Lab Sample ID:	280-50594-C-1-C MSD	Analysis Batch:	280-207056	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-206474	Lab File ID:	25A6123013.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/31/2013 0343			Final Weight/Volume:	50 mL
Prep Date:	12/26/2013 1215				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Arsenic	114	120	88 - 110	5	20	F1	F1
Cadmium	112	117	88 - 111	5	20	F1	F1
Iron	99	102	89 - 115	2	20		
Selenium	118	123	85 - 112	4	20	^ F1	^ F1
Zinc	97	99	85 - 111	2	20		
Silver	117	120	85 - 115	3	20	F1	F1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-206474

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-50594-C-1-B MS	Analysis Batch:	280-207176	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-206474	Lab File ID:	25D123113.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/31/2013 2216			Final Weight/Volume:	50 mL
Prep Date:	12/26/2013 1215				
Leach Date:	N/A				

MSD Lab Sample ID:	280-50594-C-1-C MSD	Analysis Batch:	280-207176	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-206474	Lab File ID:	25D123113.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/31/2013 2219			Final Weight/Volume:	50 mL
Prep Date:	12/26/2013 1215				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Lead	101	100	89 - 110	0	20		

Client: Waste Management

Job Number: 280-50592-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-206474

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-50594-C-1-B MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	12/31/2013 0341		
Prep Date:	12/26/2013 1215		
Leach Date:	N/A		

MSD Lab Sample ID:	280-50594-C-1-C MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	12/31/2013 0343
Prep Date:	12/26/2013 1215
Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Arsenic	ND		1.00	1.00	1.14	F1	1.20	F1
Cadmium	0.0010	J	0.100	0.100	0.113	F1	0.119	F1
Iron	ND		1.00	1.00	0.992		1.02	
Selenium	0.0091	J	2.00	2.00	2.37	^ F1	2.47	^ F1
Zinc	0.012	J	0.500	0.500	0.496		0.507	
Silver	ND		0.0500	0.0500	0.0584	F1	0.0601	F1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-206474

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-50594-C-1-B MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	12/31/2013 2216		
Prep Date:	12/26/2013 1215		
Leach Date:	N/A		

MSD Lab Sample ID:	280-50594-C-1-C MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	12/31/2013 2219
Prep Date:	12/26/2013 1215
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Lead	ND	0.500	0.500	0.503	0.501

Client: Waste Management

Job Number: 280-50592-1

Method Blank - Batch: 280-206677

Method: 245.1
Preparation: 245.1

Lab Sample ID:	MB 280-206677/1-A	Analysis Batch:	280-207141	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-206677	Lab File ID:	131231ab.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	12/31/2013 1240	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	12/31/2013 0830				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000027	0.00020

Lab Control Sample - Batch: 280-206677

Method: 245.1
Preparation: 245.1

Lab Sample ID:	LCS 280-206677/2-A	Analysis Batch:	280-207141	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-206677	Lab File ID:	131231ab.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	12/31/2013 1242	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	12/31/2013 0830				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00514	103	90 - 110	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-206677

Method: 245.1
Preparation: 245.1

MS Lab Sample ID:	280-50522-AA-1-H MS	Analysis Batch:	280-207141	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-206677	Lab File ID:	131231ab.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	12/31/2013 1247			Final Weight/Volume:	30 mL
Prep Date:	12/31/2013 0830				
Leach Date:	N/A				

MSD Lab Sample ID:	280-50522-AA-1-I MSD	Analysis Batch:	280-207141	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-206677	Lab File ID:	131231ab.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	12/31/2013 1249			Final Weight/Volume:	30 mL
Prep Date:	12/31/2013 0830				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	57	57	80 - 120	2	10	F	F

Client: Waste Management

Job Number: 280-50592-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-206677

Method: 245.1
Preparation: 245.1

MS Lab Sample ID:	280-50522-AA-1-H MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	12/31/2013 1247		
Prep Date:	12/31/2013 0830		
Leach Date:	N/A		

MSD Lab Sample ID:	280-50522-AA-1-I MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	12/31/2013 1249
Prep Date:	12/31/2013 0830
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Mercury	ND	0.00500	0.00500	0.00287	F	0.00283	F

Client: Waste Management

Job Number: 280-50592-1

Method Blank - Batch: 480-160548

Method: 1664A
Preparation: 1664A

Lab Sample ID:	MB 480-160548/1-A	Analysis Batch:	480-160573	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	480-160548	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	01/06/2014 1136	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	01/06/2014 1001				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
HEM	ND		1.4	5.0

Lab Control Sample - Batch: 480-160548

Method: 1664A
Preparation: 1664A

Lab Sample ID:	LCS 480-160548/2-A	Analysis Batch:	480-160573	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	480-160548	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	01/06/2014 1136	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	01/06/2014 1001				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
HEM	40.0	37.4	93	78 - 114	

Matrix Spike - Batch: 480-160548

Method: 1664A
Preparation: 1664A

Lab Sample ID:	400-84806-B-1-A MS	Analysis Batch:	480-160573	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	480-160548	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	01/06/2014 1136	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	01/06/2014 1001				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
HEM	ND	20.0	8.90	44	78 - 114	F1

Client: Waste Management

Job Number: 280-50592-1

Method Blank - Batch: 480-163150

Method: 1664A
Preparation: 1664A

Lab Sample ID:	MB 480-163150/1-A	Analysis Batch:	480-163153	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	480-163150	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	01/24/2014 1251	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	01/24/2014 1245				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
HEM	ND		1.4	5.0

Lab Control Sample - Batch: 480-163150

Method: 1664A
Preparation: 1664A

Lab Sample ID:	LCS 480-163150/2-A	Analysis Batch:	480-163153	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	480-163150	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	01/24/2014 1251	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	01/24/2014 1245				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
HEM	40.0	35.5	89	78 - 114	

Client: Waste Management

Job Number: 280-50592-1

Method Blank - Batch: 280-207434

Method: 350.1
Preparation: N/A

Lab Sample ID:	MB 280-207434/103	Analysis Batch:	280-207434	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\010314.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	01/03/2014 1443	Units:	mg/L	Final Weight/Volume:	10 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Ammonia	ND		0.022	0.10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-207434

Method: 350.1
Preparation: N/A

LCS Lab Sample ID:	LCS 280-207434/101	Analysis Batch:	280-207434	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\010314.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/03/2014 1438	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				
LCSD Lab Sample ID:	LCSD 280-207434/102	Analysis Batch:	280-207434	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\010314.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/03/2014 1441	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Ammonia	107	107	90 - 110	0	10		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-207434

Method: 350.1
Preparation: N/A

LCS Lab Sample ID:	LCS 280-207434/101	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-207434/102
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/03/2014 1438			Analysis Date:	01/03/2014 1441
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Ammonia	2.50	2.50	2.69	2.68

Client: Waste Management

Job Number: 280-50592-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-207434

Method: 350.1
Preparation: N/A

MS Lab Sample ID:	280-50531-B-4 MS	Analysis Batch:	280-207434	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\010314.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	01/03/2014 1448			Final Weight/Volume:	10 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-50531-B-4 MSD	Analysis Batch:	280-207434	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\010314.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	01/03/2014 1450			Final Weight/Volume:	10 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Ammonia	105	106	90 - 110	0	10		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-207434

Method: 350.1
Preparation: N/A

MS Lab Sample ID:	280-50531-B-4 MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	01/03/2014 1448		
Prep Date:	N/A		
Leach Date:	N/A		

MSD Lab Sample ID:	280-50531-B-4 MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	01/03/2014 1450
Prep Date:	N/A
Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Ammonia	0.075	J	1.00	1.00	1.13	1.13

Client: Waste Management

Job Number: 280-50592-1

Method Blank - Batch: 280-207179

Method: 351.2
Preparation: 351.2

Lab Sample ID:	MB 280-207179/1-A	Analysis Batch:	280-207314	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-207179	Lab File ID:	010214TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	01/02/2014 2010	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	01/02/2014 0817				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrogen, Kjeldahl	ND		0.18	0.50

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-207179

Method: 351.2
Preparation: 351.2

LCS Lab Sample ID:	LCS 280-207179/2-A	Analysis Batch:	280-207314	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-207179	Lab File ID:	010214TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	01/02/2014 2008	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	01/02/2014 0817				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-207179/3-A	Analysis Batch:	280-207314	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-207179	Lab File ID:	010214TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	01/02/2014 2009	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	01/02/2014 0817				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Nitrogen, Kjeldahl	96	95	90 - 110	1	25		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-207179

Method: 351.2
Preparation: 351.2

LCS Lab Sample ID:	LCS 280-207179/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-207179/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/02/2014 2008			Analysis Date:	01/02/2014 2009
Prep Date:	01/02/2014 0817			Prep Date:	01/02/2014 0817
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Nitrogen, Kjeldahl	6.00	6.00	5.76	5.68

Client: Waste Management

Job Number: 280-50592-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-207179

Method: 351.2
Preparation: 351.2

MS Lab Sample ID:	550-16535-C-1-B MS	Analysis Batch:	280-207314	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-207179	Lab File ID:	010214TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	01/02/2014 2013			Final Weight/Volume:	25 mL
Prep Date:	01/02/2014 0817				
Leach Date:	N/A				

MSD Lab Sample ID:	550-16535-C-1-C MSD	Analysis Batch:	280-207314	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-207179	Lab File ID:	010214TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	01/02/2014 2014			Final Weight/Volume:	25 mL
Prep Date:	01/02/2014 0817				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Nitrogen, Kjeldahl	116	116	90 - 110	0	25	F1	F1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-207179

Method: 351.2
Preparation: 351.2

MS Lab Sample ID:	550-16535-C-1-B MS	Units: mg/L	
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	01/02/2014 2013		
Prep Date:	01/02/2014 0817		
Leach Date:	N/A		

MSD Lab Sample ID:	550-16535-C-1-C MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	01/02/2014 2014
Prep Date:	01/02/2014 0817
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Nitrogen, Kjeldahl	7.0	3.00	3.00	10.5	F1	10.5	F1

Client: Waste Management

Job Number: 280-50592-1

Method Blank - Batch: 280-207852

Method: 353.2
Preparation: N/A

Lab Sample ID:	MB 280-207852/26	Analysis Batch:	280-207852	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0108NXNW.R
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	01/08/2014 1714	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrate Nitrite as N	ND		0.019	0.10

Method Reporting Limit Check - Batch: 280-207852

Method: 353.2
Preparation: N/A

Lab Sample ID:	MRL 280-207852/17	Analysis Batch:	280-207852	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0108NXNW.R
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/08/2014 1701	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate Nitrite as N	0.100	0.109	109	50 - 150	

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-207852

Method: 353.2
Preparation: N/A

LCS Lab Sample ID:	LCS 280-207852/27	Analysis Batch:	280-207852	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0108NXNW.R
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/08/2014 1716	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-207852/28	Analysis Batch:	280-207852	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0108NXNW.R
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/08/2014 1717	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Nitrate Nitrite as N	101	100	90 - 110	2	10		

Client: Waste Management

Job Number: 280-50592-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-207852

Method: 353.2
Preparation: N/A

LCS Lab Sample ID:	LCS 280-207852/27	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-207852/28
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/08/2014 1716			Analysis Date:	01/08/2014 1717
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Nitrate Nitrite as N	5.00	5.00	5.07	4.99

Client: Waste Management

Job Number: 280-50592-1

Method Blank - Batch: 280-206831

Method: 365.1
Preparation: 365.2/365.3/365

Lab Sample ID:	MB 280-206831/5-A	Analysis Batch:	280-206894	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-206831	Lab File ID:	122813TPHOSb.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/28/2013 1340	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/27/2013 1521				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Phosphorus, Total	0.00807	J	0.0050	0.050

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-206831

Method: 365.1
Preparation: 365.2/365.3/365

LCS Lab Sample ID:	LCS 280-206831/3-A	Analysis Batch:	280-206894	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-206831	Lab File ID:	122813TPHOSb.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/28/2013 1345	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/27/2013 1521				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-206831/4-A	Analysis Batch:	280-206894	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-206831	Lab File ID:	122813TPHOSb.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/28/2013 1340	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	12/27/2013 1521				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Phosphorus, Total	107	109	90 - 110	2	10		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-206831

Method: 365.1
Preparation: 365.2/365.3/365

LCS Lab Sample ID:	LCS 280-206831/3-A	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	12/28/2013 1345		
Prep Date:	12/27/2013 1521		
Leach Date:	N/A		

LCSD Lab Sample ID:	LCSD 280-206831/4-A
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	12/28/2013 1340
Prep Date:	12/27/2013 1521
Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Phosphorus, Total	0.500	0.500	0.534	0.547

Client: Waste Management

Job Number: 280-50592-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-206831

Method: 365.1
Preparation: 365.2/365.3/365

MS Lab Sample ID:	280-50592-F-2-B MS	Analysis Batch:	280-206894	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-206831	Lab File ID:	122813TPHOSb.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/28/2013 1345			Final Weight/Volume:	50 mL
Prep Date:	12/27/2013 1521				
Leach Date:	N/A				

MSD Lab Sample ID:	280-50592-F-2-C MSD	Analysis Batch:	280-206894	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-206831	Lab File ID:	122813TPHOSb.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	12/28/2013 1345			Final Weight/Volume:	50 mL
Prep Date:	12/27/2013 1521				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Phosphorus, Total	107	100	90 - 110	4	10		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-206831

Method: 365.1
Preparation: 365.2/365.3/365

MS Lab Sample ID:	280-50592-F-2-B MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	12/28/2013 1345		
Prep Date:	12/27/2013 1521		
Leach Date:	N/A		

MSD Lab Sample ID:	280-50592-F-2-C MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	12/28/2013 1345
Prep Date:	12/27/2013 1521
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Phosphorus, Total	0.29	0.500	0.500	0.819	0.784

Client: Waste Management

Job Number: 280-50592-1

Method Blank - Batch: 280-207097

Method: 410.4
Preparation: N/A

Lab Sample ID:	MB 280-207097/5	Analysis Batch:	280-207097	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	2 mL
Analysis Date:	12/31/2013 1043	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Chemical Oxygen Demand	8.95	J	4.1	20

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-207097

Method: 410.4
Preparation: N/A

LCS Lab Sample ID:	LCS 280-207097/3	Analysis Batch:	280-207097	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/31/2013 1043	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-207097/4	Analysis Batch:	280-207097	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/31/2013 1043	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Chemical Oxygen Demand	105	106	90 - 110	1	11		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-207097

Method: 410.4
Preparation: N/A

LCS Lab Sample ID:	LCS 280-207097/3	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-207097/4
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/31/2013 1043			Analysis Date:	12/31/2013 1043
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Chemical Oxygen Demand	100	100	105	106

Client: Waste Management

Job Number: 280-50592-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-207097

Method: 410.4
Preparation: N/A

MS Lab Sample ID:	280-50599-D-1 MS	Analysis Batch:	280-207097	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/31/2013 1043			Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-50599-D-1 MSD	Analysis Batch:	280-207097	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/31/2013 1043			Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Chemical Oxygen Demand	92	92	90 - 110	1	11		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-207097

Method: 410.4
Preparation: N/A

MS Lab Sample ID:	280-50599-D-1 MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	12/31/2013 1043		
Prep Date:	N/A		
Leach Date:	N/A		

MSD Lab Sample ID:	280-50599-D-1 MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	12/31/2013 1043
Prep Date:	N/A
Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Chemical Oxygen Demand	13	J	50.0	50.0	59.4	59.1

Client: Waste Management

Job Number: 280-50592-1

Method Blank - Batch: 280-206463

Method: SM 2540D
Preparation: N/A

Lab Sample ID:	MB 280-206463/1	Analysis Batch:	280-206463	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	12/24/2013 0735	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Total Suspended Solids	ND		1.1	4.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-206463

Method: SM 2540D
Preparation: N/A

LCS Lab Sample ID:	LCS 280-206463/2	Analysis Batch:	280-206463	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/24/2013 0735	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-206463/3	Analysis Batch:	280-206463	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	12/24/2013 0735	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Total Suspended Solids	91	92	86 - 114	1	20		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-206463

Method: SM 2540D
Preparation: N/A

LCS Lab Sample ID:	LCS 280-206463/2	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-206463/3
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/24/2013 0735			Analysis Date:	12/24/2013 0735
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Total Suspended Solids	100	100	91.0	92.0

Client: Waste Management

Job Number: 280-50592-1

Duplicate - Batch: 280-206463

Method: SM 2540D
Preparation: N/A

Lab Sample ID:	280-50594-A-1 DU	Analysis Batch:	280-206463	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	12/24/2013 0735	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Total Suspended Solids	2.4	J	ND	NC	10	

Client: Waste Management

Job Number: 280-50592-1

Method Blank - Batch: 280-207860

Method: Total Nitrogen
Preparation: N/A

Lab Sample ID:	MB 280-207860/1	Analysis Batch:	280-207860	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	01/09/2014 0707	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrogen, Total	ND		0.042	0.10

Client: Waste Management

Job Number: 280-50592-1

Laboratory Chronicle

Lab ID: **280-50592-1** **Client ID:** **DB01-W**

Sample Date/Time: 12/19/2013 17:21 Received Date/Time: 12/23/2013 11:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	280-50592-B-1-A		280-207091	280-206637	12/26/2013 09:50	1	TAL DEN	BWJ
A:625	280-50592-B-1-A		280-207091	280-206637	01/01/2014 01:22	1	TAL DEN	MGH
A:218.6	280-50592-I-1		440-152530		12/24/2013 17:24	1	TAL IRV	RW
P:200.7	280-50592-H-1-A		280-207056	280-206474	12/26/2013 12:15	1	TAL DEN	LLB
A:200.7 Rev 4.4	280-50592-H-1-A		280-207056	280-206474	12/31/2013 03:47	1	TAL DEN	JKH
P:200.7	280-50592-H-1-A		280-207176	280-206474	12/26/2013 12:15	1	TAL DEN	LLB
A:200.7 Rev 4.4	280-50592-H-1-A		280-207176	280-206474	12/31/2013 22:21	1	TAL DEN	JKH
P:245.1	280-50592-H-1-B		280-207141	280-206677	12/31/2013 08:30	1	TAL DEN	CRR
A:245.1	280-50592-H-1-B		280-207141	280-206677	12/31/2013 13:08	1	TAL DEN	CRR
P:1664A	280-50592-C-1-A		480-160573	480-160548	01/06/2014 10:01	1	TAL BUF	MDL
A:1664A	280-50592-C-1-A		480-160573	480-160548	01/06/2014 11:36	1	TAL BUF	MDL
P:1664A	280-50592-D-1-A	RA	480-163153	480-163150	01/24/2014 12:45	1	TAL BUF	MDL
A:1664A	280-50592-D-1-A	RA	480-163153	480-163150	01/24/2014 12:51	1	TAL BUF	MDL
A:350.1	280-50592-F-1		280-207434		01/03/2014 14:57	1	TAL DEN	RSN
P:351.2	280-50592-F-1-B		280-207314	280-207179	01/02/2014 08:17	1	TAL DEN	SMG
A:351.2	280-50592-F-1-B		280-207314	280-207179	01/02/2014 20:25	1	TAL DEN	MW1
A:353.2	280-50592-F-1		280-207852		01/08/2014 17:40	1	TAL DEN	DVA
P:365.2/365.3/365	280-50592-F-1-A		280-206894	280-206831	12/27/2013 15:21	1	TAL DEN	AJS
A:365.1	280-50592-F-1-A		280-206894	280-206831	12/28/2013 13:45	1	TAL DEN	AJS
A:410.4	280-50592-F-1		280-207097		12/31/2013 10:43	1	TAL DEN	AFB
A:SM 2540D	280-50592-E-1		280-206463		12/24/2013 07:35	1	TAL DEN	BAN
A:Total Nitrogen	280-50592-A-1		280-207860		01/09/2014 07:07	1	TAL DEN	RKS
A:Field Sampling	280-50592-A-1		280-206530		12/19/2013 17:21	1	TAL DEN	FS

Client: Waste Management

Job Number: 280-50592-1

Laboratory Chronicle

Lab ID: **MB** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	MB 280-206637/1-A		280-207091	280-206637	12/26/2013 09:50	1	TAL DEN	BWJ
A:625	MB 280-206637/1-A		280-207091	280-206637	12/31/2013 16:07	1	TAL DEN	MGH
A:218.6	MB 440-152530/3		440-152530		12/24/2013 08:51	1	TAL IRV	RW
P:200.7	MB 280-206474/1-A		280-207056	280-206474	12/26/2013 12:15	1	TAL DEN	LLB
A:200.7 Rev 4.4	MB 280-206474/1-A		280-207056	280-206474	12/31/2013 03:32	1	TAL DEN	JKH
P:200.7	MB 280-206474/1-A		280-207176	280-206474	12/26/2013 12:15	1	TAL DEN	LLB
A:200.7 Rev 4.4	MB 280-206474/1-A		280-207176	280-206474	12/31/2013 22:07	1	TAL DEN	JKH
P:245.1	MB 280-206677/1-A		280-207141	280-206677	12/31/2013 08:30	1	TAL DEN	CRR
A:245.1	MB 280-206677/1-A		280-207141	280-206677	12/31/2013 12:40	1	TAL DEN	CRR
P:1664A	MB 480-160548/1-A		480-160573	480-160548	01/06/2014 10:01	1	TAL BUF	MDL
A:1664A	MB 480-160548/1-A		480-160573	480-160548	01/06/2014 11:36	1	TAL BUF	MDL
P:1664A	MB 480-163150/1-A		480-163153	480-163150	01/24/2014 12:45	1	TAL BUF	MDL
A:1664A	MB 480-163150/1-A		480-163153	480-163150	01/24/2014 12:51	1	TAL BUF	MDL
A:350.1	MB 280-207434/103		280-207434		01/03/2014 14:43	1	TAL DEN	RSN
P:351.2	MB 280-207179/1-A		280-207314	280-207179	01/02/2014 08:17	1	TAL DEN	SMG
A:351.2	MB 280-207179/1-A		280-207314	280-207179	01/02/2014 20:10	1	TAL DEN	MW1
A:353.2	MB 280-207852/26		280-207852		01/08/2014 17:14	1	TAL DEN	DVA
P:365.2/365.3/365	MB 280-206831/5-A		280-206894	280-206831	12/27/2013 15:21	1	TAL DEN	AJS
A:365.1	MB 280-206831/5-A		280-206894	280-206831	12/28/2013 13:40	1	TAL DEN	AJS
A:410.4	MB 280-207097/5		280-207097		12/31/2013 10:43	1	TAL DEN	AFB
A:SM 2540D	MB 280-206463/1		280-206463		12/24/2013 07:35	1	TAL DEN	BAN
A:Total Nitrogen	MB 280-207860/1		280-207860		01/09/2014 07:07	1	TAL DEN	RKS

Client: Waste Management

Job Number: 280-50592-1

Laboratory Chronicle

Lab ID: **LCS** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	LCS 280-206637/2-A		280-207091	280-206637	12/26/2013 09:50	1	TAL DEN	BWJ
A:625	LCS 280-206637/2-A		280-207091	280-206637	12/31/2013 16:35	1	TAL DEN	MGH
A:218.6	LCS 440-152530/2		440-152530		12/24/2013 08:37	1	TAL IRV	RW
P:200.7	LCS 280-206474/2-A		280-207056	280-206474	12/26/2013 12:15	1	TAL DEN	LLB
A:200.7 Rev 4.4	LCS 280-206474/2-A		280-207056	280-206474	12/31/2013 03:34	1	TAL DEN	JKH
P:200.7	LCS 280-206474/2-A		280-207176	280-206474	12/26/2013 12:15	1	TAL DEN	LLB
A:200.7 Rev 4.4	LCS 280-206474/2-A		280-207176	280-206474	12/31/2013 22:10	1	TAL DEN	JKH
P:245.1	LCS 280-206677/2-A		280-207141	280-206677	12/31/2013 08:30	1	TAL DEN	CRR
A:245.1	LCS 280-206677/2-A		280-207141	280-206677	12/31/2013 12:42	1	TAL DEN	CRR
P:1664A	LCS 480-160548/2-A		480-160573	480-160548	01/06/2014 10:01	1	TAL BUF	MDL
A:1664A	LCS 480-160548/2-A		480-160573	480-160548	01/06/2014 11:36	1	TAL BUF	MDL
P:1664A	LCS 480-163150/2-A		480-163153	480-163150	01/24/2014 12:45	1	TAL BUF	MDL
A:1664A	LCS 480-163150/2-A		480-163153	480-163150	01/24/2014 12:51	1	TAL BUF	MDL
A:350.1	LCS 280-207434/101		280-207434		01/03/2014 14:38	1	TAL DEN	RSN
P:351.2	LCS 280-207179/2-A		280-207314	280-207179	01/02/2014 08:17	1	TAL DEN	SMG
A:351.2	LCS 280-207179/2-A		280-207314	280-207179	01/02/2014 20:08	1	TAL DEN	MW1
A:353.2	LCS 280-207852/27		280-207852		01/08/2014 17:16	1	TAL DEN	DVA
P:365.2/365.3/365	LCS 280-206831/3-A		280-206894	280-206831	12/27/2013 15:21	1	TAL DEN	AJS
A:365.1	LCS 280-206831/3-A		280-206894	280-206831	12/28/2013 13:45	1	TAL DEN	AJS
A:410.4	LCS 280-207097/3		280-207097		12/31/2013 10:43	1	TAL DEN	AFB
A:SM 2540D	LCS 280-206463/2		280-206463		12/24/2013 07:35	1	TAL DEN	BAN

Lab ID: **LCSD** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	LCSD 280-206637/3-A		280-207091	280-206637	12/26/2013 09:50	1	TAL DEN	BWJ
A:625	LCSD 280-206637/3-A		280-207091	280-206637	12/31/2013 17:03	1	TAL DEN	MGH
A:350.1	LCSD 280-207434/102		280-207434		01/03/2014 14:41	1	TAL DEN	RSN
P:351.2	LCSD 280-207179/3-A		280-207314	280-207179	01/02/2014 08:17	1	TAL DEN	SMG
A:351.2	LCSD 280-207179/3-A		280-207314	280-207179	01/02/2014 20:09	1	TAL DEN	MW1
A:353.2	LCSD 280-207852/28		280-207852		01/08/2014 17:17	1	TAL DEN	DVA
P:365.2/365.3/365	LCSD 280-206831/4-A		280-206894	280-206831	12/27/2013 15:21	1	TAL DEN	AJS
A:365.1	LCSD 280-206831/4-A		280-206894	280-206831	12/28/2013 13:40	1	TAL DEN	AJS
A:410.4	LCSD 280-207097/4		280-207097		12/31/2013 10:43	1	TAL DEN	AFB
A:SM 2540D	LCSD 280-206463/3		280-206463		12/24/2013 07:35	1	TAL DEN	BAN

Client: Waste Management

Job Number: 280-50592-1

Laboratory Chronicle

Lab ID: **MRL** **Client ID:** **N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:218.6	MRL 440-152530/4		440-152530		12/24/2013 09:04	1	TAL IRV	RW
A:353.2	MRL 280-207852/17		280-207852		01/08/2014 17:01	1	TAL DEN	DVA

Lab ID: **MS** **Client ID:** **N/A**

Sample Date/Time: 12/17/2013 18:00 Received Date/Time: 12/24/2013 11:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:218.6	440-66099-H-1 MS		440-152530		12/24/2013 16:57	1	TAL IRV	RW
P:200.7	280-50594-C-1-B MS		280-207056	280-206474	12/26/2013 12:15	1	TAL DEN	LLB
A:200.7 Rev 4.4	280-50594-C-1-B MS		280-207056	280-206474	12/31/2013 03:41	1	TAL DEN	JKH
P:200.7	280-50594-C-1-B MS		280-207176	280-206474	12/26/2013 12:15	1	TAL DEN	LLB
A:200.7 Rev 4.4	280-50594-C-1-B MS		280-207176	280-206474	12/31/2013 22:16	1	TAL DEN	JKH
P:245.1	280-50522-AA-1-H MS		280-207141	280-206677	12/31/2013 08:30	1	TAL DEN	CRR
A:245.1	280-50522-AA-1-H MS		280-207141	280-206677	12/31/2013 12:47	1	TAL DEN	CRR
P:1664A	400-84806-B-1-A MS		480-160573	480-160548	01/06/2014 10:01	1	TAL BUF	MDL
A:1664A	400-84806-B-1-A MS		480-160573	480-160548	01/06/2014 11:36	1	TAL BUF	MDL
A:350.1	280-50531-B-4 MS		280-207434		01/03/2014 14:48	1	TAL DEN	RSN
P:351.2	550-16535-C-1-B MS		280-207314	280-207179	01/02/2014 08:17	1	TAL DEN	SMG
A:351.2	550-16535-C-1-B MS		280-207314	280-207179	01/02/2014 20:13	1	TAL DEN	MW1
P:365.2/365.3/365	280-50592-F-2-B MS		280-206894	280-206831	12/27/2013 15:21	1	TAL DEN	AJS
A:365.1	280-50592-F-2-B MS		280-206894	280-206831	12/28/2013 13:45	1	TAL DEN	AJS
A:410.4	280-50599-D-1 MS		280-207097		12/31/2013 10:43	1	TAL DEN	AFB

Client: Waste Management

Job Number: 280-50592-1

Laboratory Chronicle

Lab ID: **MSD** **Client ID:** **N/A**

Sample Date/Time: 12/17/2013 18:00 Received Date/Time: 12/24/2013 11:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:218.6	440-66099-H-1 MSD		440-152530		12/24/2013 17:10	1	TAL IRV	RW
P:200.7	280-50594-C-1-C MSD		280-207056	280-206474	12/26/2013 12:15	1	TAL DEN	LLB
A:200.7 Rev 4.4	280-50594-C-1-C MSD		280-207056	280-206474	12/31/2013 03:43	1	TAL DEN	JKH
P:200.7	280-50594-C-1-C MSD		280-207176	280-206474	12/26/2013 12:15	1	TAL DEN	LLB
A:200.7 Rev 4.4	280-50594-C-1-C MSD		280-207176	280-206474	12/31/2013 22:19	1	TAL DEN	JKH
P:245.1	280-50522-AA-1-I MSD		280-207141	280-206677	12/31/2013 08:30	1	TAL DEN	CRR
A:245.1	280-50522-AA-1-I MSD		280-207141	280-206677	12/31/2013 12:49	1	TAL DEN	CRR
A:350.1	280-50531-B-4 MSD		280-207434		01/03/2014 14:50	1	TAL DEN	RSN
P:351.2	550-16535-C-1-C MSD		280-207314	280-207179	01/02/2014 08:17	1	TAL DEN	SMG
A:351.2	550-16535-C-1-C MSD		280-207314	280-207179	01/02/2014 20:14	1	TAL DEN	MW1
P:365.2/365.3/365	280-50592-F-2-C MSD		280-206894	280-206831	12/27/2013 15:21	1	TAL DEN	AJS
A:365.1	280-50592-F-2-C MSD		280-206894	280-206831	12/28/2013 13:45	1	TAL DEN	AJS
A:410.4	280-50599-D-1 MSD		280-207097		12/31/2013 10:43	1	TAL DEN	AFB

Lab ID: **DU** **Client ID:** **N/A**

Sample Date/Time: 12/23/2013 14:00 Received Date/Time: 12/23/2013 16:14

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:SM 2540D	280-50594-A-1 DU		280-206463		12/24/2013 07:35	1	TAL DEN	BAN

Lab References:

TAL BUF = TestAmerica Buffalo

TAL DEN = TestAmerica Denver

TAL IRV = TestAmerica Irvine

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Honolulu
1946 Young St. Suite 400A
Honolulu, HI 96826
Tel: 808-486-5227

TestAmerica Job ID: HWL0091
Client Project/Site: 60287037.02
Client Project Description: AECOM, WGSL STORMWATER

For:
TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002

Attn: Betsy Sara

Authorized for release by:
1/3/2014 4:57:00 PM

Kristie Reilly, Project Manager
808-486-5227
Kristie.Brachmann@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWL0091

Qualifiers

WetChem

Qualifier	Qualifier Description
L2	Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was below acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWL0091

Job ID: HWL0091

Laboratory: TestAmerica Honolulu

Narrative

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory unless otherwise stated in the report. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. TestAmerica Analytical Testing Corporation certifies that the analytical results contained herein apply only to the specific sample(s) analyzed.

The Chain(s) of Custody are included and are an integral part of this report. This entire report was reviewed and approved for release.

If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-(808)486-5227

LABORATORY REPORT

At sample receipt, the cooler/sample was 3 degrees C.
NELAC states that samples which require thermal preservation shall be considered acceptable if the arrival temperature is within 2 degrees C of the required temperature or the method specified range. For samples with a temperature requirement of 4 degrees C, an arrival temperature from 0 degrees C to 6 degrees C meets specifications. Samples that are delivered to the laboratory on the same day that they are collected may not meet these criteria. In these cases, the samples are considered acceptable if there is evidence that the chilling process has begun, such as arrival on ice.

The reported results were obtained in compliance with the 2003 NELAC standards unless otherwise noted.

The LCS in BOD batch 13L0053 associated with samples in work order HWL0091 failed low. Due to the holding time of samples and testing parameters re-analysis was not possible.

Sample Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWL0091

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
HWL0091-01	DB01-W	Water - NonPotable	12/19/13 17:21	12/20/13 09:33

Detection Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWL0091

Client Sample ID: DB01-W

Lab Sample ID: HWL0091-01

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
BOD - 5 Day	2.60		2.00		mg/L	1.00		SM5210B	Total

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWL0091

Client Sample ID: DB01-W

Date Collected: 12/19/13 17:21
Date Received: 12/20/13 09:33

Lab Sample ID: HWL0091-01

Matrix: Water - NonPotable

Method: SM5210B - General Chemistry Parameters

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
BOD - 5 Day	2.60		2.00		mg/L		12/20/13 14:58	12/25/13 08:49	1.00

QC Sample Results

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWL0091

Method: SM5210B - General Chemistry Parameters

Lab Sample ID: 13L0053-BLK1
Matrix: Water - NonPotable
Analysis Batch: 13L0053

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 13L0053_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
BOD - 5 Day	ND		2.00		mg/L		12/20/13 14:48	12/25/13 08:33	1.00

Lab Sample ID: 13L0053-BS1
Matrix: Water - NonPotable
Analysis Batch: 13L0053

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 13L0053_P

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
BOD - 5 Day			198	152	L2	mg/L		77	85 - 115		

Lab Sample ID: 13L0053-DUP1
Matrix: Water - NonPotable
Analysis Batch: 13L0053

Client Sample ID: Duplicate
Prep Type: Total
Prep Batch: 13L0053_P

Analyte	Sample Result	Sample Qualifier		Duplicate Result	Duplicate Qualifier	Unit	D			RPD	RPD Limit
BOD - 5 Day	8.07			7.98		mg/L				1	20

QC Association Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWL0091

WetChem

Analysis Batch: 13L0053

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
13L0053-BLK1	Method Blank	Total	Water - NonPotable	SM5210B	13L0053_P
13L0053-BS1	Lab Control Sample	Total	Water - NonPotable	SM5210B	13L0053_P
13L0053-DUP1	Duplicate	Total	Water - NonPotable	SM5210B	13L0053_P
HWL0091-01	DB01-W	Total	Water - NonPotable	SM5210B	13L0053_P

Prep Batch: 13L0053_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
13L0053-BLK1	Method Blank	Total	Water - NonPotable	Default Prep GenChem	
13L0053-BS1	Lab Control Sample	Total	Water - NonPotable	Default Prep GenChem	
13L0053-DUP1	Duplicate	Total	Water - NonPotable	Default Prep GenChem	
HWL0091-01	DB01-W	Total	Water - NonPotable	Default Prep GenChem	

Lab Chronicle

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWL0091

Client Sample ID: DB01-W

Date Collected: 12/19/13 17:21
Date Received: 12/20/13 09:33

Lab Sample ID: HWL0091-01

Matrix: Water - NonPotable

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Default Prep		1.00	13L0053_P	12/20/13 14:58	NK	TAL HON
Total	Analysis	GenChem SM5210B		1.00	13L0053	12/25/13 08:49	NK	TAL HON

Laboratory References:

TAL HON = TestAmerica Honolulu, 1946 Young St. Suite 400A, Honolulu, HI 96826, TEL 808-486-5227

Certification Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWL0091

Laboratory: TestAmerica Honolulu

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Florida	NELAP	4	E87907	06-30-14
Hawaii	State Program	9	N/A	06-28-14
USDA	Federal		HON-S-206	01-31-15

Method Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HWL0091

Method	Method Description	Protocol	Laboratory
SM5210B	General Chemistry Parameters		TAL HON

Protocol References:

Laboratory References:

TAL HON = TestAmerica Honolulu, 1946 Young St. Suite 400A, Honolulu, HI 96826, TEL 808-486-5227

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sampler ID _____
Temperature on Receipt _____
Drinking Water? Yes ☐ No ☐

TAL-4124-230 (0508)

HWL0091

Client	Waste Management / AECOM
Address	1001 Bishop street, Suite 1600
City	Honolulu
State	HI
Zip Code	96813
Project Manager	Mark Hofferkert
Telephone Number (Area Code)/Fax Number	808-356-5317 F: 808-523-8950
Site Contact	Justin Lotting
Lab Contact	Betsy Sara
Carrier/Waybill Number	
Project Name and Location (State)	WGSL Stormwater
Contract/Purchase Order/Quote No.	60287037-02
Date	
Lab Number	
Chain of Custody Number	16856
Page	1 of

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	1664 oil & Grease	SM 2540D TSS	625 SVOCs*	410.4 COD	365.1 T. Phos	350.1 Ammonia	353.2 NO3-NO2	SM4500N T. Nitrogen**	200.7/245.1 Metals**	SM5210B BOD	218.6 Cr VI	TKN	Special Instr Conditions or
D301-W	12/19/13	17:21		X			4	4	1				X	X	X	X	X	X	X	X	X	X	X	X	HWL0091-01
																									*a-pinene, p-cresol, pentachlorophenol
																									** As, Cd, Fe, Pb,

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☒ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retain longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☒ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

1. Relinquished By: Margie Trach (AECOM)	Date: 12/20/13	Time: 933	1. Received By: TA Rec Rec Cust 32
2. Relinquished By: TA Rec	Date: 12/20/13	Time: 1300	2. Received By:
3. Relinquished By:	Date:	Time:	3. Received By:

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

260631

CMS
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1/3/2014

Chain of Custody Record

Sampler ID _____

Temperature on Receipt 28 IRA 12/23/13

Drinking Water? Yes ☐ No ☐

TestAme

THE LEADER IN ENVIRONME...

280-50592 Chain of Custody

TAL-4124-280 (0508)

Client: Waste Management / AECOM	Project Manager: Mark Hofferbert	Date:	Chain of Custody Number: 168567
Address: 1001 Bishop street, Suite 1600	Telephone Number (Area Code)/Fax Number: 808-356-5317 F: 808-523-8950	Lab Number:	Page 1 of 1
City: Honolulu; State: HI; Zip Code: 96813	Site Contact: Justin Lottig; Lab Contact: Betsy Sara		
Project Name and Location (State): WGSL Stormwater	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.: 60287037-02			

Analysis (Attach list if more space is needed)

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	1664 oil & Grease	SM 25400 TSS	625 SVOCs*	410.4 COD	365.1 T.Phos	350.1 Ammonia	353.2 NO_2-NO_3	SM4500NT.Nitrate**	200.7-245.1 Metals	SM5210B BOD	218.6 Cr VI	TKN	Special Instructions/ Conditions of Receipt
DB01-W	12/19/13	17:21		X			4	4	1				X	X	X	X	X	X	X	X	X	X	X	X	*a-terpineol, benzoic acid, p-cresol, pentachlorophenol, phenol
																									**Ag, Cd, Fe, Pb, Hg, Ge, Ag, Tn

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☒ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☒ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: Margie Thach [signature] AECOM	12/20/13	933	1. Received By: [signature] TA Kan Rubber Lot 32	12/20/13	933
2. Relinquished By: [signature] TA Kan	12/20/13	1300	2. Received By: [signature]	12/23/13	11:00
3. Relinquished By:			3. Received By:		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: WGSL

Site No.:

Sample Point: DB01-W (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory)

Laboratory Use Only/Lab ID:

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment . . Dedicated: Y or N

Filter Device: Y or N 0.45 µ or µ (circle or fill in)

Purging Device: A-Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device:

X-Other:

Filter Type: A-In-line Disposable, B-Pressure, C-Vacuum, X-Other

Sample Tube Type: A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other:

WELL DATA

Well Elevation (at TOC) (ft/msl)

Depth to Water (DTW) (from TOC) (ft)

Groundwater Elevation (site datum, from TOC) (ft/msl)

Total Well Depth (from TOC) (ft)

Stick Up (from ground elevation) (ft)

Casing ID (in)

Casing Material

Note: Total Well Depth, Stick Up, Casing Id. etc are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm@25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
	1st	1st						
	2nd	2nd						
	3rd	3rd						
	4th	4th						
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (µmhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: Units
121913	873						

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

Sample Appearance: slightly turbid, no scum + foam Odor: none Color: light gray-tan Other: no oil sheen + debris

Weather Conditions (required daily, or as conditions change): Direction/Speed: w 5mph variable Outlook: fair Precipitation: Y or N

Specific Comments (including purge/well volume calculations if required):

FIELD COMMENTS

Oil & Grease	Time	pH	Flow DEOL-W	DEOL-E	Bottle
Aliquot A	1721	8.73	0.75 inch = 0.15 ft³/s	0.8 inch = 0.16 ft³/s	1L/4sec
Aliquot B	1736	8.25	0.75 inch = 0.15 ft³/s	0.75 inch = 0.15 ft³/s	1L/4sec
Aliquot C	1751	8.10	0.5 inch = 0.1 ft³/s	0.7 inch = 0.14 ft³/s	1L/4.5sec
Aliquot D	1806	8.00	0.5 inch = 0.1 ft³/s	0.5 inch = 0.1 ft³/s	1L/5sec

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
12/19/13	Margie Thach	[signature]	AECOM
12/19/13	Michelle Wong	[signature]	AECOM

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

TAL-8029WM (0108)

Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-50592-1

Login Number: 50592

List Source: TestAmerica Denver

List Number: 1

Creator: Dedio, Michael T

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	N/A	Yes: Preservation labels on samples match COC
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-50592-1

Login Number: 50592
List Number: 1
Creator: Goliszek, Gregory T

List Source: TestAmerica Buffalo
List Creation: 12/26/13 06:59 PM

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.0 #2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-50592-1

Login Number: 50592
List Number: 1
Creator: Sung, Hubert

List Source: TestAmerica Irvine
List Creation: 12/24/13 12:53 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Attachment C
Discharge Monitoring Report Form

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM *(NPDES)*

DISCHARGE MONITORING REPORT *(DMR)*

Form Approved.
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME City and County of Honolulu
Department of Environmental Services, Refuse Division
100 Uluohia Street, Suite 212
Kapolei, Hawaii 96707

ADDRESS 92-460 Farrington Highway
Kapolei, HI 96707

FACILITY Waimanalo Gulch Sanitary Landfill

LOCATION Detention Basin Outfalls
Sampled on 04/24, 10/14, 12/01, 12/15, and 12/19/2013

HI R50A533	WGSL-DB01
PERMIT NUMBER	DISCHARGE NUMBER

	MONITORING PERIOD						
	YEAR	MO	DAY		YEAR	MO	DAY
FROM	13	01	01	TO	13	12	31

☐ **Check here if No Discharge**

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Flow	SAMPLE MEASUREMENT	2.062	4.8	cfs				cfs	0	5/365	Calculated/ Estimated
	PERMIT REQUIREMENT									1/365	Calculated/ Estimated
Biochemical Oxygen Demand	SAMPLE MEASUREMENT				2.44	15.82	67.1	mg/L	0	5/365	Composite
	PERMIT REQUIREMENT				Report	Report	Report			1/365	Composite
Chemical Oxygen Demand	SAMPLE MEASUREMENT				28	42.4	86	mg/L	0	5/365	Composite
	PERMIT REQUIREMENT				Report	Report	Report			1/365	Composite
Total Suspended Solids	SAMPLE MEASUREMENT				15	2,469.8	11,000	mg/L	3	5/365	Composite
	PERMIT REQUIREMENT				100	100	100			1/365	Composite
Total Phosphorus	SAMPLE MEASUREMENT				0.29	0.424	0.71	mg/L	0	5/365	Composite
	PERMIT REQUIREMENT				Report	Report	Report			1/365	Composite
Total Nitrogen	SAMPLE MEASUREMENT				3.7	5.1	9.5	mg/L	0	5/365	Composite
	PERMIT REQUIREMENT				Report	Report	Report			1/365	Composite
Nitrate + Nitrite Nitrogen	SAMPLE MEASUREMENT				2.8	3.34	4	mg/L	0	5/365	Composite
	PERMIT REQUIREMENT				Report	Report	Report			1/365	Composite
Oil and Grease	SAMPLE MEASUREMENT				< 5	20.25	36	mg/L	1	5/365	Grab
	PERMIT REQUIREMENT				15	15	15			1/365	Grab

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE		DATE		
Joseph Whelan, General Manager/Vice President Waste Management of Hawaii, Inc.	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	Joseph R. Whelan	808	668-2985	2014	2	28
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM *(NPDES)*
DISCHARGE MONITORING REPORT *(DMR)*

Form Approved.
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME City and County of Honolulu
Department of Environmental Services, Refuse Division
100 Uluohia Street, Suite 212
Kapolei, Hawaii 96707

ADDRESS 92-460 Farrington Highway
Kapolei, HI 96707

FACILITY Waimanalo Gulch Sanitary Landfill

LOCATION Detention Basin Outfalls
Sampled on 04/24, 10/14, 12/01, 12/15, and 12/19/2013

HI R50A533	WGSL-DB01
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	13	01	01	TO	13	12	31

☐ **Check here if No Discharge**

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
pH	SAMPLE MEASUREMENT				8.22	8.59	8.73	Standard Units	5	5/365	Grab
	PERMIT REQUIREMENT				5.5-8.0	5.5-8.0	5.5-8.0			1/365	Grab
Ammonia	SAMPLE MEASUREMENT				0.038	0.1524	0.24	mg/L	0	5/365	Composite
	PERMIT REQUIREMENT				10 (daily) 4.9 (monthly avg)	10 (daily) 4.9 (monthly avg)	10 (daily) 4.9 (monthly avg)			1/365	Composite
Alpha Terpineol	SAMPLE MEASUREMENT				< 0.01	< 0.01	< 0.01	mg/L	0	5/365	Composite
	PERMIT REQUIREMENT				0.033 (daily) 0.016 (monthly avg)	0.033 (daily) 0.016 (monthly avg)	0.033 (daily) 0.016 (monthly avg)			1/365	Composite
Benzoic Acid	SAMPLE MEASUREMENT				< 0.05	< 0.05	< 0.05	mg/L	0	5/365	Composite
	PERMIT REQUIREMENT				0.12 (daily) 0.071 (monthly avg)	0.12 (daily) 0.071 (monthly avg)	0.12 (daily) 0.071 (monthly avg)			1/365	Composite
p-Cresol	SAMPLE MEASUREMENT				< 0.01	< 0.01	< 0.01	mg/L	0	5/365	Composite
	PERMIT REQUIREMENT				0.025 (daily) 0.014 (monthly avg)	0.025 (daily) 0.014 (monthly avg)	0.025 (daily) 0.014 (monthly avg)			1/365	Composite
Pentachlorophenol	SAMPLE MEASUREMENT				< 0.019	< 0.019	< 0.019	mg/L	0	5/365	Composite
	PERMIT REQUIREMENT				0.02	0.02	0.02			1/365	Composite
Phenol	SAMPLE MEASUREMENT				< 0.01	< 0.01	< 0.01		0	5/365	Composite
	PERMIT REQUIREMENT				0.026 (daily) 0.015 (monthly avg)	0.026 (daily) 0.015 (monthly avg)	0.026 (daily) 0.015 (monthly avg)			1/365	Composite

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE		DATE		
Joseph Whelan, General Manager/Vice President Waste Management of Hawaii, Inc.	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate tha information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and completa. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	Joseph R. Whelan	808	668-2985	2014	2	28
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM *(NPDES)*
DISCHARGE MONITORING REPORT *(DMR)*

Form Approved.
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME City and County of Honolulu
Department of Environmental Services, Refuse Division
100 Uluohia Street, Suite 212
Kapolei, Hawaii 96707

ADDRESS 92-460 Farrington Highway
Kapolei, HI 96707

FACILITY Waimanalo Gulch Sanitary Landfill

LOCATION Detention Basin Outfalls
Sampled on 04/24, 10/14, 12/01, 12/15, and 12/19/2013

HI R50A533	WGSL-DB01
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	13	01	01	TO	13	12	31

☐ **Check here if No Discharge**

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Total Recoverable Arsenic	SAMPLE MEASUREMENT				< 0.015	< 0.015	< 0.015	mg/L	0	5/365	Composite
	PERMIT REQUIREMENT				0.36	0.36	0.36			1/365	Composite
Total Recoverable Cadmium	SAMPLE MEASUREMENT				< 0.00045	0.00093	0.0014	mg/L	0	5/365	Composite
	PERMIT REQUIREMENT				0.003	0.003	0.003			1/365	Composite
Total Recoverable Chromium IV	SAMPLE MEASUREMENT				< 0.001	0.00195	0.0026	mg/L	0	5/365	Composite
	PERMIT REQUIREMENT				0.016	0.016	0.016			1/365	Composite
Total Recoverable Iron	SAMPLE MEASUREMENT				1.8	31.78	94	mg/L	5	5/365	Composite
	PERMIT REQUIREMENT				1.0	1.0	1.0			1/365	Composite
Total Recoverable Lead	SAMPLE MEASUREMENT				< 0.009	0.0148	0.029	mg/L	0	5/365	Composite
	PERMIT REQUIREMENT				0.029	0.029	0.029			1/365	Composite
Total Recoverable Mercury	SAMPLE MEASUREMENT				< 0.0002	0.00014	0.00016	mg/L	0	5/365	Composite
	PERMIT REQUIREMENT				0.0024	0.0024	0.0024			1/365	Composite
Total Recoverable Selenium	SAMPLE MEASUREMENT				< 0.015	< 0.015	< 0.015	mg/L	0	5/365	Composite
	PERMIT REQUIREMENT				0.02	0.02	0.02			1/365	Composite
Total Recoverable Silver	SAMPLE MEASUREMENT				< 0.00093	0.00093	0.00093	mg/L	0	5/365	Composite
	PERMIT REQUIREMENT				0.001	0.001	0.001			1/365	Composite

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE		DATE		
Joseph Whelan, General Manager/Vice President Waste Management of Hawaii, Inc.	I certify under penalty of law that this document end all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	Joseph R. Whelan	808	668-2985	2014	2	28
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM *(NPDES)*
DISCHARGE MONITORING REPORT *(DMR)*

Form Approved.
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME City and County of Honolulu
Department of Environmental Services, Refuse Division
100 Uluohia Street, Suite 212
Kapolei, Hawaii 96707

ADDRESS 92-460 Farrington Highway
Kapolei, HI 96707

FACILITY Waimanalo Gulch Sanitary Landfill

LOCATION Detention Basin Outfalls
Sampled on 04/24, 10/14, 12/01, 12/15, and 12/19/2013

HI R50A533	WGSL-DB01
PERMIT NUMBER	DISCHARGE NUMBER

	MONITORING PERIOD						
	YEAR	MO	DAY		YEAR	MO	DAY
FROM	13	01	01	TO	13	12	31

☐ **Check here if No Discharge**

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Total Recoverable Zinc	SAMPLE MEASUREMENT				< 0.015	0.0874	0.24	mg/L	4	5/365	Composite
	PERMIT REQUIREMENT				0.022	0.022	0.022			1/365	Composite

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	Joseph R. Whelan	TELEPHONE		DATE		
Joseph Whelan, General Manager/Vice President Waste Management of Hawaii, Inc.			808	668-2985	2014	2	28
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

Attachment D
Written Notices of Exceedance

January 14, 2013, notice of pH exceedance hard copy not available.

WASTE MANAGEMENT

WASTE MANAGEMENT
92-460 Farrington Hwy
Kapolei, HI 96707
(808) 668-2985
(808) 668-1366 Fax

February 6, 2013

Ms. Kris Poentis, Engineering Section
State Department of Health
Environmental Management Division
Clean Water Branch
919 Ala Moana Blvd. Room 301
Honolulu, HI 96814

Subject: Waimanalo Gulch Sanitary Landfill, Kapolei, Oahu, Hawaii
File No. HI R50A533

Dear Ms. Poentis:

On the morning and early afternoon of Monday, January 14, 2013, rainfall caused a discharge of stormwater into the detention basin at the Waimanalo Gulch Sanitary Landfill. Field measurements of pH and an analytical grab sample were collected from ponded water at the Detention Basin East Outfall (DB01-E), which had negligible or no flow at the time. No stormwater flowed off site due to the storm event.

The analytical laboratory report indicated that Iron, Lead, Zinc, and Total Suspended Solids (TSS) in the sample were present in excess of State Water Quality Standards. Attached is the Laboratory Data Report. The exceedances are listed in Table 1 below, along with the corresponding discharge limitation per the latest Waimanalo Gulch Sanitary Landfill (WGSL) Notice of General Permit Coverage (NGPC), dated August 30, 2010:

Table 1: WGSL Storm Water Sampling Exceedances at the Compliance Point

Parameter	Result (mg/L)	Effluent Limitation (mg/L)
Iron	25	1
Lead	0.05	0.029
Zinc	0.26	0.022
TSS	340	100

mg/L milligram per liter

A representative of Waste Management of Hawaii (WMH) made a verbal notification of the potential exceedance to the Hawaii State Department of Health, Clean Water Branch (CWB) on February 5, 2013.

A pH exceedance (field measurement of 8.97 units, versus a limit of 5.5 to 8.0) was also noted during the January 14th sampling event. The notice of that exceedance was made on January 16, 2013.

No direct cause for the iron, zinc, and TSS exceedances could be identified. Exceedances of iron, zinc, and TSS have been reported in the past.

Furthermore, no direct cause for the lead exceedance could be identified. Lead was detected at only low concentrations in the past. Though the samples were filtered in the field, the laboratory noted presence of sediment, and it is suspected that naturally occurring background levels in surrounding soils are the primary source of the lead exceedance.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you should have any questions or require additional information, please contact me at (808) 668-2985.

Very truly yours,

Joseph R. Whelan

Joseph Whelan
General Manager/Vice President
Waste Management of Hawaii

Enclosures: Attachment A – Analytical Report

cc: Wayne Hamada - City and County of Honolulu
Justin Lottig - WMH
Jesse Frey – WMH
Mark Hofferbert – AECOM Technical Services

NANAKULI STATION
WAIANAE, Hawaii
967923798
1424030281 -0099
02/06/2013 (808)696-0161 01:47:23 PM

Sales Receipt

Product Description	Sale Qty	Unit Price	Final Price
HONOLULU HI 96814			$5.60
Zone-1 Priority Mail			
13.90 oz.			
Expected Delivery: Thu 02/07/13			
Return Rcpt (Green Card)			$2.55
Certified			$3.10
Label #:	70111570000329828398		
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Total	$11.25	

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City, State, ZIP+4

Hawaii Department of Health
Kris Poentis, Engineering Section
Clean Water Branch
919 Ala Moana Blvd #301
Honolulu, HI. 96814

PS Form 3800, August 2006 See Reverse for Instructions

WASTE MANAGEMENT

WASTE MANAGEMENT
92-460 Farrington Hwy.
Kapolei, HI 96707
(808) 668-2985
(808) 668-1366 Fax

April 17, 2013

Ms. Kris Poentis, Engineering Section
State Department of Health
Environmental Management Division
Clean Water Branch
P.O. Box 3378
Honolulu, HI 96801-3378

Subject: Waimanalo Gulch Sanitary Landfill, Kapolei, Oahu, Hawaii
March 10, 2013 Storm and Clarification on Previous Submittal
File No. HI R50A533

Dear Ms. Poentis:

This letter serves as a memo to the State Department of Health, Clean Water Branch, of a recent storm water sampling event at the Waimanalo Gulch Sanitary Landfill. This memo is sent to you for informational purposes only and is not considered a stormwater sample, as defined by our stormwater discharge permit. In a letter dated March 11, 2013, we incorrectly reported a Notice of Exceedance for field pH. After further review, we do not believe that this was a valid sample because the discharge was described as "weeping" and "too low to measure." Below is a short summary of the laboratory findings related to that sampling event. It is also important to note that no stormwater was observed leaving the property boundary.

No stormwater was observed discharging from the property as a result of a light rain event beginning in the late evening of March 9, 2013. At the time of the sampling on the afternoon of March 10, 2013, the discharge rate at the compliance point was too low to measure. Grab samples were, however, collected from seeping and ponded water at the point of compliance (sample point DB01E). The samples were submitted to TestAmerica Laboratories, Inc. in Honolulu and Denver for analysis strictly for informational purposes and not as an official sample from the compliance point.

Table 1 lists the analyte concentrations which were in excess of the site discharge limits, had this been a valid sample.

Table 1. WGSL Storm Water Sampling Exceedances

Parameter	Result (mg/L)	Limitation (mg/L)
Iron	16	1
Zinc	0.1	0.022
TSS	160	100

No direct causes of the elevated concentrations could be identified, but it is noted that similar results for iron, zinc, and TSS are typically present in effluent from adjacent offsite properties as measured in the Western Diversion System. It is suspected that naturally occurring background metal and ion levels in surrounding soils are the primary sources of the elevated values.

If you should have any questions or require additional information, please contact me at (808) 523-8874.

Very truly yours,

Joseph R. Whelan

Joseph R. Whelan
General Manager/Vice President
Waste Management of Hawaii

cc: Wayne Hamada – City and County of Honolulu
Justin Lottig – WMH
Jesse Frey – WMH
Mark Hofferbert – AECOM Technical Services

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Steven Chang P.E., Chief
Solid and Hazardous Waste Branch
State of Hawaii DOH
919 Ala Moana Blvd. suite 212
Honolulu, HI. 96801-3378

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Hawaii Department of Health
Kris Poentis, Engineering Section
Clean Water Branch
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$8.00 04/23/2013

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Total: $26.68

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92-460 Farrington Hwy.
Kapolei, HI 96707
(808) 668-2985
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April 25, 2013

Ms. Kris Poentis, Engineering Section
State Department of Health
Environmental Management Division
Clean Water Branch
P.O. Box 3378
Honolulu, HI 96801-3378

Subject: Waimanalo Gulch Sanitary Landfill, Kapolei, Oahu, Hawaii
File No. HI R50A533

Dear Ms. Poentis:

On the morning of Wednesday, April 24, 2013, a stormwater discharge was sampled at the Waimanalo Gulch Sanitary Landfill. Field measurements of pH, and analytical grab and composite samples, were collected at the Detention Basin East Outfall (DB01-E), which had a low flow of approximately 0.15 ft^3 per second at the time. Total discharge flow, including the West Outfall (DB01-W) was approximately 0.20 ft^3 per second.

As listed in the table below, the pH was in exceedance of the corresponding discharge limitation per the NGPC:

Table 1: WGSL Storm Water Sampling Exceedance

Sampling Point	Parameter	Result	Effluent Limitation
DB01-E	pH	8.70	5.5-8.0

The analytical samples were delivered to TestAmerica Laboratories for analysis. The Field Form and Stormwater Sampling forms are attached for your information.

A representative of Waste Management of Hawaii (WMH) made a verbal notification of the potential pH exceedance to the Hawaii State Department of Health, Clean Water Branch (CWB) on April 25, 2013.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you should have any questions or require additional information, please contact me at (808) 668-2985.

Very truly yours,

Joseph R. Whelan

Joseph Whelan
General Manager/Vice President
Waste Management of Hawaii

Enclosures: Attachment A – Field Information Form, Stormwater Sampling Form

cc: Wayne Hamada - City and County of Honolulu
Justin Lottig - WMH
Jesse Frey – WMH
Mark Hofferbert – AECOM Technical Services

Storm Water Sampling Form

Waimanalo Gulch Sanitary Landfill

Storm Water Monitoring Plan

Sampling Location: Outfall DB01 E	Date: 4-24-2013
	Project Number: 60287037.02
Sampling Personnel: MB, LM	
Weather Conditions: PT. Cloudy, calm	
Observations/Comments: Sample collected from outflow pipe	

Instrument	Manufacturer	Model	Serial No.	Calibration Date and Time
pH Meter	YSI	pH 10A	JC00784	4-24-13 / 0935

Calibration results: pH 4 = 4.02 pH 7 = 7.00 pH 10 = 10.03

Comments: none

Time at Start of Rain: ~0630	Time of First Run-off: ~0645

Sample Collection Method: Oil + Grease - Grab All other - Composite

Flow-Measurement Method: Flow at Time of sampling was approx. .25 of Pipe diameter

Describe:

Sample Appearance: Cloudy Brown	Odor: none	Color: Lt. Brown-Brown
Floating Debris: none	Scum or Foam: none	Oil Sheen: none

SAMPLE NUMBER	TIME SAMPLED	pH	FLOW MEASUREMENT
DB01 E	1140 / oil Grease	8.70	See above
"	1205 / composite		

Comments:

Sample	Time	pH	Temp	Flow depth	Flow ft³/sec
A	1045	8.7	24.2	3.0 cm	0.25
B	1100	8.4	24.8	2.0 cm	0.15
C	1115	8.4	24.9	2.0 cm	0.15
D	1130	8.2	25.8	1.5 cm	0.05

Average = 0.15 ft³/sec

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: [illegible] WMS

Site No.: 995 Sample Point: DB01E (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory)

Laboratory Use Only/Lab ID:

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hr:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or N

Filter Device: Y or N 0.45 µ or ____ µ (circle or fill in)

Purging Device ____ A- Submersible Pump B-Peristaltic Pump C-QED Bladder Pump D-Bailer E-Piston Pump F-Dipper/Bailer

Sampling Device ____

X-Other: ____

Filter Type: ____ A-In-line Disposable B-Pressure C-Vacuum X-Other ____

Sample Tube Type: ____ A-Teflon B-Stainless Steel C-PVC D-Polypropylene X-Other: ____

WELL DATA

Well Elevation (at TOC) ____ (ft/msl)

Depth to Water (DTW) (from TOC) ____ (ft)

Groundwater Elevation (site datum, from TOC) ____ (ft/msl)

Total Well Depth (from TOC) ____ (ft)

Stick Up (from ground elevation) ____ (ft)

Casing ID ____ (in)

Casing Material ____

Note: Total Well Depth, Stick Up, Casing Id, etc are optional and can be from historical data, unless required by State/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
		1st	1st					
		2nd	2nd					
		3rd	3rd					
		4th	4th					
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: ____ Units ____
04 24 13	8.70						

Final Field Readings are required (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.

Sample Appearance: Cloudy Odor: None Color: Slight brown Other: ____

Weather Conditions (required daily, or as conditions change): Direction/Speed: Calm Outlook: Clear Precipitation: Y or N

Specific Comments (including purge/well volume calculations if required):

FIELD COMMENTS

All meters YSI 100A, pH, Conductivity calibrated with 4-7-10 buffer solutions at 0715.

Collect sample @ 1140 Gulf Grove Club

1205 Call [illegible] company [illegible]

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
4/24/13	Mark Bigelow	[signature]	AECOM

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Clean Water Branch
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Honolulu, HI. 96814

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City, State, ZIP+4

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(808) 668-1366 Fax

May 15, 2013

Ms. Kris Poentis, Engineering Section
State Department of Health
Environmental Management Division
Clean Water Branch
P.O. Box 3378
Honolulu, HI 96801-3378

Subject: Waimanalo Gulch Sanitary Landfill, Kapolei, Oahu, Hawaii
File No. HI R50A533

Dear Ms. Poentis:

On the morning of Wednesday, April 24, 2013, a stormwater discharge was sampled at the Waimanalo Gulch Sanitary Landfill. Field measurements of pH, and analytical grab and composite samples, were collected at the Detention Basin East Outfall (DB01-E), which had a low flow of approximately 0.15 ft^3 per second at the time. Total discharge flow, including the West Outfall (DB01-W) was approximately 0.20 ft^3 per second.

As listed in the table below, the Iron, Zinc, and Total Suspended Solids (TSS) were in exceedance of the corresponding discharge limitation per the NGPC:

Table 1: WGSL Storm Water Sampling Exceedance

Sampling Point	Parameter	Result (mg/L)	Effluent Limitation (mg/L)
DB01-E	Iron	46	1.0
	Zinc	0.12	0.022
	TSS	1,100	100

The analytical samples were delivered to TestAmerica Laboratories for analysis. The Field Form and Stormwater Sampling forms are attached for your information.

No direct causes of the elevated concentrations could be identified, but it is noted that similar results for iron, zinc, and TSS are present in effluent from adjacent offsite properties as measured in the Western Diversion System. It is suspected that naturally occurring background metal and ion levels in surrounding soils is the primary source of the elevated values.

A representative of Waste Management of Hawaii (WMH) made a verbal notification of the Iron, Zinc, and TSS exceedance to the Hawaii State Department of Health, Clean Water Branch (CWB) followed by an email on May 15, 2013. Verbal notification occurred on April 25, 2013 for a previous pH exceedance for the same sampling event.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you should have any questions or require additional information, please contact me at (808) 668-2985.

Very truly yours,

Joseph R. Whelan

Joseph Whelan
General Manager/Vice President
Waste Management of Hawaii

Enclosures: Attachment A – Field Information Form, Stormwater Sampling Form

cc: Wayne Hamada - City and County of Honolulu
Justin Lottig - WMH
Jesse Frey – WMH
Mark Hofferbert – AECOM Technical Services

Storm Water Sampling Form

Waimanaio Gulch Sanitary Landfill

Storm Water Monitoring Plan

Sampling Location: Outfall DB01 E	Date: 4-24-2013 Project Number: 60287037.02
Sampling Personnel: MB, LM	
Weather Conditions: PT. Cloudy, calm	
Observations/Comments: Sample collected from outflow pipe	

Instrument	Manufacturer	Model	Serial No.	Calibration Date and Time
pH Meter	YSI	PH 10A	JC00784	4-24-13 / 0935

Calibration results: pH 4 = 4.02 pH 7 = 7.00 pH 10 = 10.03

Comments: none

Time at Start of Rain: ~0630	Time of First Run-off: ~0645

Sample Collection Method: Oil + Grease - Grab All other - Composite

Flow-Measurement Method: Flow at Time of sampling was approx. .25 of Pipe diameter

Describe:

Sample Appearance: Cloudy Brown	Odor: none	Color: Lt. Brown-Brown
Floating Debris: none	Scum or Foam: none	Oil Sheen: none

SAMPLE NUMBER	TIME SAMPLED	pH	FLOW MEASUREMENTS
DB01 E	1140 / oil Grease	8.70	See above
"	1205 / composite		

Comments:

Sample	Time	pH	Temp	Flow depth	Flow ft³/sec
A	1045	8.7	24.2	3.0 cm	0.25
B	1100	8.4	24.8	2.0 cm	0.15
C	1115	8.4	24.9	2.0 cm	0.15
D	1130	8.2	25.8	1.5 cm	0.05

Average = 0.15 ft³/sec

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: DBOIE - WMSL

Site No.: 715 Sample Point: DBOIE (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory)

Laboratory Use Only/Lab ID:

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or N

Filter Device: Y or N 0.45 µ or ____ µ (circle or fill in)

Purging Device ____ A- Submersible Pump B-Peristaltic Pump C-QED Bladder Pump D-Bailer E-Piston Pump F-Dipper/Bottle

Sampling Device ____

X-Other: ____

Filter Type: ____ A-In-line Disposable B-Pressure C-Vacuum X-Other ____

Sample Tube Type: ____ A-Teflon B-Stainless Steel C-PVC D-Polypropylene X-Other: ____

WELL DATA

Well Elevation (at TOC) ____ (ft/msl)

Depth to Water (DTW) (from TOC) ____ (ft)

Groundwater Elevation (site datum, from TOC) ____ (ft/msl)

Total Well Depth (from TOC) ____ (ft)

Stick Up (from ground elevation) ____ (ft)

Casing ID ____ (in)

Casing Material ____

Note: Total Well Depth, Stick Up, Casing Id, etc. are optimal and can be from historical data, unless required by State/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
	1st	1st	1st					
	2nd	2nd	2nd					
	3rd	3rd	3rd					
	4th	4th	4th					
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: ____ Units ____
04 24 13	8.70						

Final Field Readings are required (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.

FIELD COMMENTS

Sample Appearance: Cloudy Odor: none Color: slight brown Other: ____

Weather Conditions (required daily, or as conditions change): Direction/Speed: calm Outlook: clear Precipitation: Y or N

Specific Comments (including purge/well volume calculations if required):

pH meter. YSI 10A, SN. 12 2704 calibrated w/ 4-7-10 buffer solutions at 0715.

Collect sample @ 1140 (all + cross lab)

1205 (all + MS/MSD composite)

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
4/24/13	Mark Bigelow	[signature]	AECOM

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

TAL-8029WM (0108)

Certified (4) PCS.

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Product Description	Sale Qty	Unit Price	Final Price
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First-Class Letter			
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Customer Postage			-$0.46
Subtotal:			$0.00
Issue PVI:			$0.00
HONOLULU HI 96801			$1.12
Zone-1 First-Class			
Large Env			
1.50 oz.			
Expected Delivery: Thu 05/16/13			
Return Rcpt (Green Card)			$2.55
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Label #:	70111570000329828268		
Issue PVI:			$6.77
HONOLULU HI 96814			$1.12
Zone-1 First-Class			
Large Env			
1.40 oz.			
Expected Delivery: Thu 05/16/13			
Return Rcpt (Green Card)			$2.55
@@ Certified			$3.10
Label #:	70111570000329828626		
Issue PVI:			$6.77
HONOLULU HI 96814			$1.12
Zone-1 First-Class			
Large Env			
1.50 oz.			
Expected Delivery: Thu 05/16/13			
Return Rcpt (Green Card)			$2.55
@@ Certified			$3.10
Label #:	70111570000329827711		
Issue PVI:			$6.77
SAN FRANCISCO CA 94105			$1.12
Zone-8 First-Class			
Large Env			
1.40 oz.			
Expected Delivery: Mon 05/20/13			
Return Rcpt (Green Card)			$2.55
@@ Certified			$3.10
Label #:	70111570000329827704		
Issue PVI:			$6.77

Total: $27.08

Paid by:
Cash $30.00
Change Due: -$2.92

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Ms. Kris Poentis, Engineering Section
State Department of Health
Environmental Management Division
Clean Water Branch
PO Box 3378
Honolulu, HI 96801-3378

PS Form 3800, Au

Lottig, Justin

From: Tsuji, Michael <Michael.Tsuji@doh.hawaii.gov>
Sent: Wednesday, May 15, 2013 11:08 AM
To: Lottig, Justin
Cc: Kurano, Matthew
Subject: RE: Waimanalo Gulch Stormwater Results

Justin,
Acknowledging receipt of the following email to the Waimanalo Gulch Stormwater Results.
M. Tsuji

From: Lottig, Justin [mailto:JLottig@wm.com]
Sent: Wednesday, May 15, 2013 10:53 AM
To: Tsuji, Michael
Cc: Kurano, Matthew
Subject: Waimanalo Gulch Stormwater Results

Mike, as requested in my call to you, I am sending the results electronically from the April 24 sampling event.

Sampling Point	Parameter	Result (mg/L)	Effluent Limitation (mg/L)
DB01-E	Iron	46	1.0
	Zinc	0.12	0.022
	TSS	1,100	100

Justin H. Lottig
Environmental Protection Manager
jlottig@wm.com

Waste Management of Hawaii
92-460 Farrington Hwy.
Kapolei, HI 96817
Tel 808 668 2985
Cell 808 479 0749

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A WASTE MANAGEMENT COMPANY
P.O. Box 1259
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Kekaha, HI 96752
(808) 337-1416
(808) 337-9614 Fax

October 15, 2013

Ms. Kris Poentis, Engineering Section
State Department of Health
Environmental Management Division
Clean Water Branch
P.O. Box 3378
Honolulu, HI 96801-3378

Subject: Waimanalo Gulch Sanitary Landfill, Kapolei, Oahu, Hawaii
File No. HI R50A533

Dear Ms. Poentis:

During a recent file review, we were unable to confirm that a hardcopy of this letter had been sent to you. We are sending this letter to you in case you did not receive the original.

Per Hawaii Administrative Rules (HAR) Chapter 11-55, Appendix B, this letter serves as written notification to the State Department of Health (DOH) Clean Water Branch (CWB) of a recent potential exceedance of storm water discharge limitations as stated in the Waimanalo Gulch Sanitary Landfill (WGSL) Notice of General Permit Coverage (NGPC), dated August 30, 2010.

The potential exceedance is listed in the table below, along with the corresponding discharge limitation per the NGPC:

Table 1: WGSL Storm Water Sampling Exceedances

Parameter	Result	Effluent Limitation
pH	8.69 to 8.30	5.5 - 8.0

Discharge from the site was the result of a heavy rainfall event beginning noon of October 14, 2013. The sampling event occurred in the early afternoon of the same day. Analytical grab and composite samples were collected from the water actively discharging over the concrete weir at the point of compliance. At the time of the event, a continuous discharge of approximately 4.8 ft^3/sec was measured. The pH field measurements dropped from 8.68 to 8.30 during collection of the sample aliquots. The Field Information Form is attached for your information.

A representative of Waste Management of Hawaii (WMH) made a verbal notification of the potential exceedance to the CWB on October 15, 2013.

No direct cause for the pH exceedance could be identified, but it was noted that similar pH exceedances have been historically detected in the water discharged from the Western Diversion

Flip Bucket. It is suspected that naturally occurring background ion levels in surrounding soils is the primary source of the elevated pH values.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you should have any questions or require additional information, please contact me at (808) 668-2985.

Very truly yours,

Joseph R. Whelan

Joseph Whelan
General Manager/Vice President
Waste Management of Hawaii

Enclosures: Attachment A – Field Information Form

cc: Wayne Hamada – City and County of Honolulu
Justin Lottig – WMH
Jesse Frey – WMH
Mark Hofferbert – AECOM Technical Services

WASTE MANAGEMENT OF HAWAII, INC.
dba SANIFILL OF HAWAII
A WASTE MANAGEMENT COMPANY
P.O. Box 1259
6900D Kaumualii Hwy.
Kekaha, HI 96752
(808) 337-1416
(808) 337-9614 Fax

November 6, 2013

Ms. Kris Poentis, Engineering Section
State Department of Health
Environmental Management Division
Clean Water Branch
P.O. Box 3378
Honolulu, HI 96801-3378

Subject: Waimanalo Gulch Sanitary Landfill, Kapolei, Oahu, Hawaii
File No. HI R50A533

Dear Ms. Poentis:

Per Hawaii Administrative Rules (HAR) Chapter 11-55, Appendix B, this letter serves as written notification to the State Department of Health (DOH) Clean Water Branch (CWB) of recent potential exceedances of storm water discharge limitations as stated in the Waimanalo Gulch Sanitary Landfill (WGSL) Notice of General Permit Coverage (NGPC), dated August 30, 2010.

The potential exceedances are listed in the table below, along with the corresponding discharge limitation per the NGPC:

Table 1: WGSL Storm Water Sampling Exceedances

Parameter	Result	Effluent Limitation
Iron	94	1
Zinc	0.24	0.022
TSS	11,000	100

Discharge from the site was the result of a heavy rainfall event beginning noon of October 14, 2013. The sampling event occurred in the early afternoon of the same day. Analytical grab and composite samples were collected from the water actively discharging over the concrete weir at the point of compliance. At the time of the event, a continuous discharge of approximately 4.8 ft^3/sec was measured. The Field Information Form is attached for your information.

A representative of Waste Management of Hawaii (WMH) made a verbal notification of the potential exceedance to the CWB on November 6, 2013.

A pH exceedance (field measurement of 8.86 units, versus a limit of 5.5 to 8.0) was also noted during the sampling event. The notice of that exceedance was previously delivered to the CWB on October 15, 2013.

No direct cause for the iron, zinc, and TSS exceedances could be identified. Exceedances of iron, zinc, and TSS from the compliance point have been reported in the past, but it was noted that similar exceedances have been historically detected in the water discharged from the Western Diversion Flip Bucket. It is suspected that naturally occurring background ion levels in surrounding soils is the primary source of the elevated values.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you should have any questions or require additional information, please contact me at (808) 668-2985.

Very truly yours,

Joseph R. W Whelan

Joseph Whelan
General Manager/Vice President
Waste Management of Hawaii

Enclosures: Attachment A – Field Information Form

cc: Wayne Hamada – City and County of Honolulu
Justin Lottig – WMH
Jesse Frey – WMH
Mark Hofferbert – AECOM Technical Services

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: WGSL

Site No.:

Sample Point: DB01-E (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or N

Filter Device: Y or N 0.45 µ or ____ µ (circle or fill in)

Purging Device: A-Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device:

X-Other:

Filter Type: A-In-line Disposable, B-Pressure, C-Vacuum, X-Other

Sample Tube Type: A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other:

WELL DATA

Well Elevation (at TOC) (ft/msl)

Depth to Water (DTW) (from TOC) (ft)

Groundwater Elevation (site datum, from TOC) (ft/msl)

Total Well Depth (from TOC) (ft)

Stick Up (from ground elevation) (ft)

Casing ID (in)

Casing Material

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm@25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
	1st	1st						
	2nd	2nd						
	3rd	3rd						
	4th	4th						
Suggested range for 3 consec. readings or note Permit/State requirements:		+/- 0.2	+/- 3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fileds above are needed, use separate sheet or form.*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: Units
101413	869						

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

Sample Appearance: very turbid Odor: none Color: brown Other: foam + scum

Weather Conditions (required daily, or as conditions change): Direction/Speed: NA Outlook: cloudy Precipitation: Y or N

Specific Comments (including purge/well volume calculations if required):

FIELD COMMENTS

	sample time	flow	pH	
Oil + grease	1429	1L/sec	8.69	DB01-E depth - 5 inches = 1.8 ft³/sec
Aliquot A	1432	1L/sec		DB01-W depth - 7 inches = 3.0 ft³/sec
Aliquot B	1448	1L/sec	8.48	Total = 4.8 ft³/sec
Aliquot C	1503	1L/sec	8.41	
Aliquot D	1518	1L/sec	8.30	

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
10/14/13	Margie Thack	Margie Thack	AECOM
10/14/13	Michelle Wong	Michelle Wong	AECOM

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December 3, 2013

Ms. Kris Poentis, Engineering Section
State Department of Health
Environmental Management Division
Clean Water Branch
P.O. Box 3378
Honolulu, HI 96801-3378

Subject: Waimanalo Gulch Sanitary Landfill, Kapolei, Oahu, Hawaii
File No. HI R50A533

Dear Ms. Poentis:

Per Hawaii Administrative Rules (HAR) Chapter 11-55, Appendix B, this letter serves as written notification to the State Department of Health (DOH) Clean Water Branch (CWB) of a recent potential exceedance of storm water discharge limitations as stated in the Waimanalo Gulch Sanitary Landfill (WGSL) Notice of General Permit Coverage (NGPC), dated August 30, 2010.

The potential exceedance is listed in the table below, along with the corresponding discharge limitation per the NGPC:

Table 1: WGSL Storm Water Sampling Exceedances

Sampling Point	Parameter	Result	Effluent Limitation
DB01-W	pH	8.22 to 7.93	5.5 – 8.0

Discharge from the site was the result of a heavy rainfall event beginning morning of December 1, 2013. The sampling event occurred just before noon of the same day. Analytical grab and composite samples were collected from the water actively discharging over the concrete weir at the point of compliance. At the time of the event, the continuous discharge measured approximately 1.3 ft^3/sec at the detention basin west outfall and 0.8 ft^3/sec at the east outfall for a total discharge flow of 2.1 ft^3/sec. The pH field measurements dropped from 8.22 to 7.93 during collection of the sample aliquots. The Field Information Form is attached for your information.

A representative of Waste Management of Hawaii (WMH) made a notification via email (at the request of DOH in lieu of verbal notification) of the exceedance to the CWB on December 2, 2013.

No direct cause for the pH exceedance could be identified, but it was noted that similar pH values (8.55 to 7.75) were detected during the same sampling event in the water discharged from the Western Diversion Flip Bucket. It is suspected that naturally occurring background ion levels in surrounding soils is the primary source of the elevated pH values.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you should have any questions or require additional information, please contact me at (808) 668-2985.

Very truly yours,

Joseph R. Whelan

Joseph Whelan
General Manager/Vice President
Waste Management of Hawaii

Enclosures: Attachment A – Field Information Form

cc: Wayne Hamada – City and County of Honolulu
Justin Lottig – WMH
Jesse Frey – WMH
Mark Hofferbert – AECOM Technical Services

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Street, Apt. No.; or PO Box No.: Environmental Management Division
Clean Water Branch
City, State, ZIP+4: P.O. Box 3378
Honolulu, HI 96801-3378

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(808) 668-2985
(808) 668-1366 Fax

January 2, 2014

Ms. Kris Poentis, Engineering Section
State Department of Health
Environmental Management Division
Clean Water Branch
P.O. Box 3378
Honolulu, HI 96801-3378

Subject: Waimanalo Gulch Sanitary Landfill, Kapolei, Oahu, Hawaii
File No. HI R50A533

Dear Ms. Poentis:

Per Hawaii Administrative Rules (HAR) Chapter 11-55, Appendix B, this letter serves as written notification to the State Department of Health (DOH) Clean Water Branch (CWB) of recent potential exceedances of storm water discharge limitations as stated in the Waimanalo Gulch Sanitary Landfill (WGSL) Notice of General Permit Coverage (NGPC), dated August 30, 2010.

The potential exceedances are listed in the table below, along with the corresponding discharge limitation per the NGPC:

Table 1: WGSL Storm Water Sampling Exceedances

Parameter	Result	Effluent Limitation
Iron	12	1
Zinc	0.039	0.022
TSS	1,600	100

Discharge from the site was the result of a heavy rainfall event beginning early morning of December 1, 2013. The sampling event occurred just before noon of the same day. Analytical grab and composite samples were collected from the water actively discharging over the concrete weir at the point of compliance. At the time of the event, the continuous discharge measured approximately 1.3 ft^3/sec at the detention basin west outfall and 0.8 ft^3/sec at the east outfall for a total discharge flow of 2.1 ft^3/sec. The Field Information Form is attached for your information.

The final analytical laboratory data report was received on December 31, 2013 from TestAmerica Laboratories, Inc. - Denver. A representative of Waste Management of Hawaii (WMH) made a verbal notification of the potential exceedance to the CWB on December 29, 2013 after an initial report was recieved.

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Ms.Kris Poentis, Engineering Section
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State Department of Health
919 Ala Moana Blvd., Room 203
Honolulu, HI 96814

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PS Form 3800, August 2006 See Reverse for Instructions

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WASTE MANAGEMENT

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92-460 Farrington Hwy.
Kapolei, HI 96707
(808) 668-2985
(808) 668-1366 Fax

December 18, 2013

Ms. Kris Poentis, Engineering Section
State Department of Health
Environmental Management Division
Clean Water Branch
P.O. Box 3378
Honolulu, HI 96801-3378

Subject: **Waimanalo Gulch Sanitary Landfill, Kapolei, Oahu, Hawaii**
File No. HI R50A533

Dear Ms. Poentis:

Per Hawaii Administrative Rules (HAR) Chapter 11-55, Appendix B, this letter serves as written notification to the State Department of Health (DOH) Clean Water Branch (CWB) of a recent potential exceedance of storm water discharge limitations as stated in the Waimanalo Gulch Sanitary Landfill (WGSL) Notice of General Permit Coverage (NGPC), dated August 30, 2010.

The potential exceedance is listed in the table below, along with the corresponding discharge limitation per the NGPC:

Table 1: WGSL Storm Water Sampling Exceedances

Sampling Point	Parameter	Result	Effluent Limitation
DB01-E	pH	8.60 to 8.07	5.5 – 8.0

Discharge from the site was the result of a heavy rainfall event beginning morning of December 15, 2013. The sampling event occurred at noon of the same day. Analytical grab and composite samples were collected from the water actively discharging over the concrete weir at the point of compliance. At the time of the event, the continuous discharge measured approximately 1.6 ft^3/sec at the detention basin west outfall and 1.3 ft^3/sec at the east outfall for a total discharge flow of 2.9 ft^3/sec. The pH field measurements ranged from 8.60 to 8.07 during collection of the sample aliquots. The Field Information Form is attached for your information.

A representative of Waste Management of Hawaii (WMH) made a notification via email (at the request of the DOH in lieu of a phone call) of the potential exceedance to the CWB on December 16, 2013.

No direct cause for the pH exceedance could be identified.

I certify under penalty of law that this document and all attachments were prepared under direction or supervision in accordance with a system designed to ensure that qualified perso[redacted] properly gathered and evaluated the information submitted. Based on my inquiry of the pe[redacted] or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accu[redacted] and complete. I am aware that there are significant penalties for submitting false informat[redacted] including the possibility of fine and imprisonment for knowing violations.

If you should have any questions or require additional information, please contact me at (808) 668-2985.

Very truly yours,

Joseph R. Whelan

Joseph Whelan
General Manager/Vice President
Waste Management of Hawaii

Enclosures: Attachment A – Field Information Form

cc: Wayne Hamada – City and County of Honolulu
Justin Lottig – WMH
Jesse Frey – WMH
Mark Hofferbert – AECOM Technical Services

WASTE MANAGEMENT

WASTE MANAGEMENT
92-460 Farrington Hwy.
Kapolei, HI 96707
(808) 668-2985
(808) 668-1366 Fax

December 18, 2013

Ms. Kris Poentis, Engineering Section
State Department of Health
Environmental Management Division
Clean Water Branch
P.O. Box 3378
Honolulu, HI 96801-3378

Subject: **Waimanalo Gulch Sanitary Landfill, Kapolei, Oahu, Hawaii**
File No. HI R50A533

Dear Ms. Poentis:

Per Hawaii Administrative Rules (HAR) Chapter 11-55, Appendix B, this letter serves as written notification to the State Department of Health (DOH) Clean Water Branch (CWB) of a recent potential exceedance of storm water discharge limitations as stated in the Waimanalo Gulch Sanitary Landfill (WGSL) Notice of General Permit Coverage (NGPC), dated August 30, 2010.

The potential exceedance is listed in the table below, along with the corresponding discharge limitation per the NGPC:

Table 1: WGSL Storm Water Sampling Exceedances

Sampling Point	Parameter	Result	Effluent Limitation
DB01-E	pH	8.60 to 8.07	5.5 – 8.0

Discharge from the site was the result of a heavy rainfall event beginning morning of December 15, 2013. The sampling event occurred at noon of the same day. Analytical grab and composite samples were collected from the water actively discharging over the concrete weir at the point of compliance. At the time of the event, the continuous discharge measured approximately 1.6 ft^3/sec at the detention basin west outfall and 1.3 ft^3/sec at the east outfall for a total discharge flow of 2.9 ft^3/sec. The pH field measurements ranged from 8.60 to 8.07 during collection of the sample aliquots. The Field Information Form is attached for your information.

A representative of Waste Management of Hawaii (WMH) made a notification via email (at the request of the DOH in lieu of a phone call) of the potential exceedance to the CWB on December 16, 2013.

No direct cause for the pH exceedance could be identified.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you should have any questions or require additional information, please contact me at (808) 668-2985.

Very truly yours,

Joseph R. Whelan

Joseph Whelan
General Manager/Vice President
Waste Management of Hawaii

Enclosures: Attachment A – Field Information Form

cc: Wayne Hamada – City and County of Honolulu
Justin Lottig – WMH
Jesse Frey – WMH
Mark Hofferbert – AECOM Technical Services

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City, State, ZIP+4 notification

PS Form 3800, August 2006 See Reverse for Instructions

WASTE MANAGEMENT

WASTE MANAGEMENT
92-460 Farrington Hwy.
Kapolei, HI 96707
(808) 668-2985
(808) 668-1366 Fax

January 10, 2014

Ms. Kris Poentis, Engineering Section
State Department of Health
Environmental Management Division
Clean Water Branch
919 Ala Moana Boulevard, # 300
Honolulu, HI 96801-3378

Subject: Waimanalo Gulch Sanitary Landfill, Kapolei, Oahu, Hawaii
File No. HI R50A533

Dear Ms. Poentis:

Per Hawaii Administrative Rules (HAR) Chapter 11-55, Appendix B, this letter serves as written notification to the State Department of Health (DOH) Clean Water Branch (CWB) of recent potential exceedances of storm water discharge limitations as stated in the Waimanalo Gulch Sanitary Landfill (WGSL) Notice of General Permit Coverage (NGPC), dated August 30, 2010 and renewed on December 9, 2013.

The potential exceedances are listed in the table below, along with the corresponding discharge limitation per the NGPC:

Table 1: WGSL Storm Water Sampling Exceedances

Parameter	Result (mg/L)	Effluent Limitation (mg/L)
Iron	5.1	1
Zinc	0.023	0.022

Discharge from the site was the result of a heavy rainfall event beginning morning of December 15, 2013. The sampling event occurred at noon of the same day. Analytical grab and composite samples were collected from the water actively discharging over the concrete weir at the point of compliance. At the time of the event, the continuous discharge measured approximately 1.6 ft^3/sec at the detention basin west outfall and 1.3 ft^3/sec at the east outfall for a total discharge flow of 2.9 ft^3/sec. The Field Information Form is attached for your information.

Analytical laboratory data were received on January 9, 2014 from TestAmerica Laboratories, Inc. - Denver. A representative of Waste Management of Hawaii (WMH) made a verbal notification of the potential exceedance to the CWB on January 9, 2014.

A pH exceedance (field measurement of 8.60 units, versus a limit of 5.5 to 8.0) was also noted during the sampling event. The notice of that exceedance was previously delivered to the CWB on January 2, 2014.

No direct cause for the iron and zinc exceedances could be identified. Exceedances of iron and zinc from the compliance point have been reported in the past, and it was noted that iron and zinc concentrations in the water discharged from the Western Diversion Flip Bucket collected during the same sampling event had concentrations at least five times higher than the compliance point concentrations. It is suspected that naturally occurring background ion levels in surrounding soils is the primary source of the elevated values.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you should have any questions or require additional information, please contact me at (808) 668-2985.

Very truly yours,

Joseph R. Whelan

Joseph Whelan
General Manager
Waste Management of Hawaii

Enclosures: Attachment A – Field Information Form

cc: File
Via email only:
Wayne Hamada – City and County of Honolulu
Justin Lottig – WMH
Jesse Frey – WMH
Mark Hofferbert – AECOM Technical Services

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name:

Site No.:

Sample Point: Sample ID

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory)

Laboratory Use Only/Lab ID:

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or N

Filter Device: Y or N 0.45 µ or ____ µ (circle or fill in)

Purging Device: A-Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle

Sampling Device:

X-Other:

Filter Type: A-In-line Disposable, B-Pressure, C-Vacuum, X-Other

Sample Tube Type: A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other:

WELL DATA

Well Elevation (at TOC) (ft msl)

Depth to Water (DTW) (from TOC) (ft)

Groundwater Elevation (site datum, from TOC) (ft msl)

Total Well Depth (from TOC) (ft)

Stick Up (from ground elevation) (ft)

Casing ID (in)

Casing Material

Note: Total Well Depth, Stick Up, Casing Id, etc are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm@25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
:		1st	1st					
:		2nd	2nd					
:		3rd	3rd					
:		4th	4th					
:								
:								
:								
:								
:								
:								
Suggested range for 3 consec. readings or note Permit/State requirements:		+-0.2	<+-3%	--	--	+/- 10%	+/- 25 mV	Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State) These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: Units
12/5/13	8.60						

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

Sample Appearance: Turbid

Odor: None

Color: tan

Other: Water, Air Lines

Weather Conditions (required daily, or as conditions change):

Direction/Speed: NE 5 mph

Outlook: Cloudy

Precipitation: Y or N

Specific Comments (including purge/well volume calculations if required):

FIELD COMMENTS

	Flow Rate Gal/Min	pH	Time	Flow Rate Gal/Min	Bottom
A	4 in = 1.3 ft³/sec	8.60	1214	4 in = 1.3 ft³/sec	
B	4 in = 1.3 ft³/sec	8.07	1231	4.5 in = 1.5 ft³/sec	
C	4 in = 1.3 ft³/sec	8.37	1245	4.5 in = 1.5 ft³/sec	
D	4 in = 1.3 ft³/sec	8.11	1300	5 in = 1.8 ft³/sec	

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
12/5/13	Margie Thach	[signature]	AECOM
12/5/13	Michelle Wong	Michelle Wong	AECOM

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

TAL-8029WM (0108)

STORMWATER DISCHARGE
12/15/13

7012 2920 0000 5863 3642

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CERTIFIED MAIL™ RECEIPT
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HONOLULU HI 96814

OFFICIAL USE

Postage	$ $1.12	0281
Certified Fee	$3.10	06
Return Receipt Fee (Endorsement Required)	$2.55	Postmark Here
Restricted Delivery Fee (Endorsement Required)	$0.00	
Total Postage & F	$6.77	01/10/2014

Sent To
Street, Apt. No.; or PO Box No.
City, State, ZIP+4

Ms.Kris Poentis, Engineering Section
Clean Water Branch
Environmental Management Division
State Department of Health
919 Ala Moana Blvd., Room 203
Honolulu, HI 96814 (STORMWATER DISCHARGE)

PS Form 3800, August 2006 See Reverse for Instructions

NANAKULI STATION
WAIANAE, Hawaii
967923798
1424030281 -0099
01/10/2014 (808)696-0161 02:21:25 PM

Sales Receipt

Product Description	Sale Qty	Unit Price	Final Price
HONOLULU HI 96814 Zone-1			$1.12
First-Class Mail Large Env			
1.20 oz.			
Scheduled Delivery Day: Sat 01/11/14			
Return Rcpt (Green Card)			$2.55
@@ Certified			$3.10
Label #:	70122920000058633642		
Issue PVI:			$6.77
Total:			$6.77

Paid by:
Cash $20.00
Change Due: -$13.23

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YOUR OPINION COUNTS

****
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Customer Copy

December 19, 2013, notices of pH, Fe, Zn, and TSS exceedance hard copies not available.

Attachment E
Inspection Reports

BI-ANNUAL INSPECTION LOG
WAIMANALO GULCH SANITARY LANDFILL
STORM WATER POLLUTION CONTROL PLAN

GENERAL INFORMATION

Date: 08/23/2013

Personnel: Justin Lottig (WMH), Mark Hofferbert (AECOM)

Weather: 50% overcast, dry

Raining Yes ☐ No ☒

No rain fell in the last 72 hours

Runoff:

Flow observed? Yes ☐ No ☒

Type of Flow Sheet ☐ Rill ☐ Concentrated ☐

VISUAL OBSERVATIONS

Inspection List	*Yes/No/NA*	*Required Follow-up Action (if any)*
Active Face / Landfill Cover		
Active face minimized and controlled?	Yes	Active face is covered with 6" of soil every day.
Bare or sparsely vegetated areas?	Yes	Alternate Cover area is sparsely vegetated but is actively being landscaped. MSW cells 9 and 10 are bare but currently being landscaped. MSW cells 5, 6, and 7 have stockpiled soil, bare but bermed. Ash cells 1 through 8 need final cover, are currently bare but bermed.
Settlement or depressions?	No	None observed.
Slope instability?	No	None observed.
Gullies caused by erosion?	No	Small rivulettes are evident, but no gullies were observed.
Illicitly-dumped material?	No	None observed.
Stressed or dead vegetation?	No	See above regarding sparse vegetation.
Other indicators of leachate seepage or other non-storm water discharge?	No	None observed.
Drainage swales		
Evidence of erosion?	Yes	"Smart Ditch" is eroded and in disrepair.
Sediment deposition?	No	None observed.
Diversion structures clear/unobstructed?	Yes	No obstructions observed.
Drainage swales functional?	Yes	Except Smart Ditch which is in disrepair as noted above.
Highway culvert entrances free of debris?	Yes	No obstructions observed.

Inspection List	*Yes/No/NA*	*Required Follow-up Action (if any)*
Detention Basins		
Structure blocked or has obstructions?	No	None observed.
Outfall areas eroded?	Yes	Minor erosion at OWS outfall into South Detention Basin. Erosion of armor stone at Western Bypass Flip Bucket outfall. Some liner exposed. Repair recommended.
Sediment accumulation?	No	Sediment currently stockpiled and being removed from North Detention Basin.
Standing water?	No	None observed.
Security Measures		
Landfill access road or gate damaged?	No	No significant damage observed.
Access Roads		
Roads inaccessible?	No	No obstructions to access roads.
Roads damaged by erosion or settlement?	No	No substantial erosion observed.
Leachate Sumps		
Sump logs show that leachate levels within compliance limits?	Yes	Due to new construction and modifications, the compliance elevations shown on log forms E1, 4B, and E6 appear incorrect. The forms should be updated to show the actual compliance level.
Maintenance Area & Fuel Storage		
Are all solvents, oils, etc. properly stored?	Yes	Roofs and secondary containment appeared intact.
Is the facility and surrounding area in proper order (good housekeeping)?	Yes	Some minor oil stain on surface gravel in parking area.
Are the diesel fuel storage tanks (mobile) in good working order?	Yes	No leaks observed.

NON-STORM WATER DISCHARGE ASSESSMENT AND CERTIFICATION Waimanalo Gulch Sanitary Landfill Storm Water Pollution Control Plan	Completed by:	Joseph Whelan
	Title:	General Manager
	Date:	August 23, 2013

Date of Test or Evaluation	Outfall Directly Observed During the Test (identify as indicated on the site map)	Method Used to Test or Evaluate Discharge	Describe Results from Test for the Presence of Non-Storm Water Discharge	Identify Potential Significant Sources	Name of Person Who Conducted the Test or Evaluation
08/23/2013	Culvert Inlet (at Farrington Highway)	Visual	Dry. No flow or visible evidence of moisture or recent discharge.	N/A	Justin Lottig (WMH) Mark Hofferbert (AECOM)
08/23/2013	DB01E (point of compliance)	Visual	Dry. No flow or visible evidence of moisture or recent discharge.	N/A	Justin Lottig (WMH) Mark Hofferbert (AECOM)
08/23/2013	DB01W (point of compliance)	Visual	Dry. No flow or visible evidence of moisture or recent discharge.	N/A	Justin Lottig (WMH) Mark Hofferbert (AECOM)
08/23/2013	Western Bypass System Outfall (at "Flip Bucket")	Visual	Dry. No flow or visible evidence of moisture or recent discharge.	N/A	Justin Lottig (WMH) Mark Hofferbert (AECOM)

CERTIFICATION

I, Joseph Whelan (responsible corporate official), certify under penalty of law that this document and all attachments were prepared under by direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name & Official Title (type or print)	B. Area Code and Telephone Number
Joseph Whelan, General Manager	808-668-2985
C. Signature Joseph R. Whelan	D. Date Signed 9-18-13

(Rev. 04/11)

BI-ANNUAL INSPECTION LOG
WAIMANALO GULCH SANITARY LANDFILL
STORM WATER POLLUTION CONTROL PLAN

GENERAL INFORMATION

Date: 02/17/2014 (2013 Wet Season Inspection)

Personnel: Justin Lottig (WMH), Mark Hofferbert (AECOM)

Weather: Overcast, light intermittent rain

Raining Yes ☒ No ☐

Light intermittent rain totaling 0.30 inches over the last 72 hours

Runoff:

Flow observed? Yes ☐ No ☒

Type of Flow Sheet ☐ Rill ☐ Concentrated ☐

VISUAL OBSERVATIONS

Inspection List	*Yes/No/NA*	*Required Follow-up Action (if any)*
Active Face / Landfill Cover		
Active face minimized and controlled?	Yes	Active face is covered with 6" of soil every day. Needs additional litter fencing.
Bare or sparsely vegetated areas?	Yes	Alternate Cover area is sparsely vegetated but is being landscaped. Ash Cells 1 through 8 are currently bare but bermed and is undergoing final cover placement. Stockpile area near Western Berm needs grass, irrigation system is currently being installed.
Settlement or depressions?	No	None observed.
Slope instability?	No	None observed, except in Cell E9 active construction/blasting zone.
Gullies caused by erosion?	No	No gullies were observed.
Illicitly-dumped material?	No	None observed.
Stressed or dead vegetation?	No	See above regarding sparse vegetation.
Other indicators of leachate seepage or other non-storm water discharge?	No	None observed.
Drainage swales		
Evidence of erosion?	Yes	"Smart Ditch" is eroded and in disrepair. Redesign is underway.
Sediment deposition?	No	None observed except minor sediment accumulation in Western Diversion Structure. (Northern drainage inlet not observed today due to slippery roads.)
Diversion structures clear/unobstructed?	Yes	No obstructions observed.
Drainage swales functional?	Yes	Except "Smart Ditch" which is in disrepair as noted above.
Highway culvert entrances free of debris?	Yes	No obstructions observed.

Inspection List	*Yes/No/NA*	*Required Follow-up Action (if any)*
Detention Basins		
Structure blocked or has obstructions?	No	None observed.
Outfall areas eroded?	Yes	OWS outfall has been diverted via HDPE pipe to North Basin, needs stone at new outfall. To be completed after pond is free of water. Erosion of armor stone at Western Bypass Flip Bucket outfall. Some geotextile exposed. Repairs made but more recommended.
Sediment accumulation?	Yes	Some sediment has accumulated at head of North Detention Basin. South Detention Basin should be mowed to remove tall grass and shrubs.
Standing water?	Yes	North Detention Basin is ~ 75% full.
Security Measures		
Landfill access road or gate damaged?	No	No significant damage observed.
Access Roads		
Roads inaccessible?	No	No obstructions to access roads (except steep road to North Drainage System Inlet is too slippery due to recent rain).
Roads damaged by erosion or settlement?	No	No substantial erosion observed.
Leachate Sumps		
Sump logs show that leachate levels within compliance limits?	Yes	Some sporadic high readings were recorded due to transducer failure or bubbler fouling; repairs were made. The sump log forms should be updated and standardized as part of the update to the site Operations Manual.
Maintenance Area & Fuel Storage		
Are all solvents, oils, etc. properly stored?	Yes	Some (mostly) empty buckets of construction contractor's hydraulic fluid need to be disposed or placed in secondary containment. Roofs and all other secondary containment appeared intact.
Is the facility and surrounding area in proper order (good housekeeping)?	Yes	No oil staining observed.
Are the diesel fuel storage tanks (mobile) in good working order?	Yes	No leaks observed.

NON-STORM WATER DISCHARGE ASSESSMENT AND CERTIFICATION Waimanalo Gulch Sanitary Landfill Storm Water Pollution Control Plan	Completed by:	Joseph Whelan
	Title:	General Manager
	Date:	February 17, 2014

Date of Test or Evaluation	Outfall Directly Observed During the Test (identify as indicated on the site map)	Method Used to Test or Evaluate Discharge	Describe Results from Test for the Presence of Non-Storm Water Discharge	Identify Potential Significant Sources	Name of Person Who Conducted the Test or Evaluation
02/17/2014	Culvert Inlet (at Farrington Highway)	Visual	No flow. No visible evidence of non-storm water discharge.	N/A	Justin Lottig (WMH) Mark Hofferbert (AECOM)
02/17/2014	DB01E (point of compliance)	Visual	No flow. No visible evidence of non-storm water discharge.	N/A	Justin Lottig (WMH) Mark Hofferbert (AECOM)
02/17/2014	DB01W (point of compliance)	Visual	No flow. No visible evidence of non-storm water discharge.	N/A	Justin Lottig (WMH) Mark Hofferbert (AECOM)
02/17/2014	Western Bypass System Outfall (at "Flip Bucket")	Visual	No flow. No visible evidence of non-storm water discharge.	N/A	Justin Lottig (WMH) Mark Hofferbert (AECOM)

CERTIFICATION

I, Joseph Whelan (responsible corporate official), certify under penalty of law that this document and all attachments were prepared under by direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name & Official Title (type or print)	B. Area Code and Telephone Number
Joseph Whelan, General Manager	808-668-2985
C. Signature Joseph R. Whelan	D. Date Signed 2-18-14

(Rev. 04/11)

Attachment F
Depth-Flow Tables

Waimanalo Gulch Storm Water Sampling Weirs

Depth of Water in Weir H (inches)	Depth of Water in Weir H (feet)	K	g	sqrt 2g	H^3/2	Estimated Flow (cubic feet per second)
0	0.00	0.40	32.2	8.02	0.00	**0.0**
1	0.08	0.40	32.2	8.02	0.02	**0.2**
2	0.17	0.41	32.2	8.02	0.07	**0.4**
3	0.25	0.41	32.2	8.02	0.13	**0.8**
4	0.33	0.41	32.2	8.02	0.19	**1.3**
5	0.42	0.42	32.2	8.02	0.27	**1.8**
6	0.50	0.42	32.2	8.02	0.35	**2.4**
7	0.58	0.43	32.2	8.02	0.45	**3.0**
8	0.67	0.43	32.2	8.02	0.54	**3.7**
9	0.75	0.43	32.2	8.02	0.65	**4.5**
10	0.83	0.44	32.2	8.02	0.76	**5.3**
11	0.92	0.44	32.2	8.02	0.88	**6.2**
12	1.00	0.44	32.2	8.02	1.00	**7.1**
	(feet)					
P =	1.15					
L =	2.00					