SM HI R50A533

Waimanalo Gulch Sanitary Landfill

WASTE MANAGEMENT OF HAWAII INC.
92-460 Farrington Highway
Kapolei, HI 96707
(808) 668-2985
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February 9, 2015

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

2015 FEB 12 11:02AM

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, 2014 through December 31, 2014.

Rainfall at the site during 2014 resulted in sampling events on January 14, February 4, March 8, June 3, and October 19 & 20, 2014. During the five 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 January 14th event resulted from overnight and early morning rain. Total rainfall at the site during the event was 1.85 inches. The samples were collected with grab and composite methods from actively flowing water from the site compliance point at the detention basin west outfall (DB01-W). The flow rate from DB01-W was approximately 0.025 cubic feet per second (ft^3/s) and the flow rate from the east outfall (DB01-E, another compliance point) was also approximately 0.025 ft^3/s, for a total discharge rate of 0.05 ft^3/s.

The February 4th event resulted from overnight and early morning rain. Total rainfall was 1.13 inches. The samples were collected with grab and composite methods from actively flowing water from DB01-E. The flow rate from DB01-E was approximately 0.30 ft^3/s, and the flow rate from DB01-W was 0.34 ft^3/s, for a total discharge rate of 0.64 ft^3/s.

The March 8th event resulted from rain starting from the previous afternoon and continuing overnight. Total rainfall was 0.80 inches. The samples were collected with grab and composite methods from actively flowing water at DB01-E. The flow rate from DB01-E was approximately 0.05 ft^3/s. There was no flow at the west outfall (DB01-W).

The June 3rd event resulted from overnight rain. Total rainfall was 0.85 inches. The samples were collected with grab and composite methods from actively flowing water at DB01-W. The flow rate from DB01-W was 0.025 ft^3/s. There was no flow at the west outfall (DB01-E).

The October 19th event resulted from rain from the previous day and lasting through October 20th. Total rainfall for the event was 5.77 inches. The samples were collected with grab and composite methods from actively flowing water at DB01-E. The flow rate from DB01-E was 1.4 ft^3/s and the flow rate from DB01-W was 2.5 ft^3/s for a total discharge rate of 3.9 ft^3/s.

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, specifically pH, total suspended solids (TSS), iron and zinc. 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). Copies of the Notices of Exceedance are provided in Attachment D.

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

Sampling Event Date	Notice of Exceedance	Submittal Date
01/14/2014	Iron	02/05/2014
02/04/2014	pH	02/06/2014
	Iron, Zinc	02/21/2014
03/08/2014	Zinc	04/04/2014
06/03/2014	Iron, Zinc	06/03/2014
10/19/2014	pH	10/20/2014
	Iron, Zinc, TSS	11/12/2014

The 2014 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 in Attachment B. The bi-annual site inspection logs and the non-storm water discharge certifications are included as Attachment E. The flow rates were determined using the depth-flow table in Attachment F, which was developed for the identical weirs at both the west and east detention basin outfall pipes.

No direct cause for the pH, iron, zinc, and TSS exceedances could be identified. Exceedances of pH, iron, zinc, and TSS from the compliance point have been reported in the past. It is suspected that naturally occurring background ion levels in surrounding soils, as verified by up-canyon sample results, is the primary source of the elevated pH, iron, and zinc values.

Note that improvements to the site storm water conveyance systems have recently been completed and additional improvements are planned. The final cover and drainage structures were completed over ash cells 1-8 and vegetation was established. Additionally, over the next

four months, WMH and the City and County of Honolulu will modify the storm water detention basin to increase detention time, decrease velocities, and improve the level of treatment.

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 Forms
Attachment B – Analytical Laboratory Reports
Attachment C – Discharge Monitoring Report Form
Attachment D – Written Notices of Exceedance
Attachment E – Inspection Reports
Attachment F – Flow Calculation Table

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 Stormwater

Site No.: ~~DB011~~ new Sample Point: DB011W

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
~~DB011W~~ new					

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 _____
01 14 14	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: slightly turbid Odor: none Color: light tan Other: bugs swimming

Weather Conditions (required daily, or as conditions change): Direction/Speed: <5mpH sw Outlook: partly cloudy Precipitation: Y or (N)

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

FIELD COMMENTS

				East	West
A	9:45	7.81	20 sec/L		
B	10:00	7.85	22 sec/L	1/8 in = 0.025 ft³/sec	1/8 in = 0.025 ft³/sec
C	10:15	7.91	22 sec/L	1/8 in = 0.025 ft³/sec	1/8 in = 0.025 ft³/sec
D	10:30	7.92	22 sec/L	0 in = 0 ft³/sec - flow stopped	1/8 in = 0.025 ft³/sec
	(time)	(pH)	(flow)	0 in = 0 ft³/sec - no flow	1/8 in = 0.025 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
01 14 14	Marge Trach		AECOM
1 14 14	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-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 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
101914	804						

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: Brown/turbid Odor: none Color: brown Other: No oil/sheen/scum/foam

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

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

FIELD COMMENTS

	pH	DB01 B Flow	DB01W Flow
Oil & Grease + Aliquot A	8.04	4" = 1.3 cfs	6" = 2.4 cfs
Aliquot B	8.34	4" = 1.3 cfs	6" = 2.4 cfs
Aliquot C	8.36	4" = 1.3 cfs	6" = 2.4 cfs
Aliquot D	8.60	4.5" = 1.6 cfs	6.5" = 2.7 cfs

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, 19, 14	Adam Miyamoto		AECOM
10, 19, 14	Dustin Goto		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: 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

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 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 ____
060314	7.89						

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 murky

Odor: None

Color: light tan

Other:

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

Wind Direction/Speed: SE < 5mph

Outlook: Partly cloudy

Precipitation: Y or (N)

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

FIELD COMMENTS

	time	pH	flow (West only)	
A	0945	7.89	0.125in = 0.025 ft³/s	East not flowing during time of sampling
B	1000	7.84	0.125in = 0.025 ft³/s	
C	1015	7.83	0.125in = 0.025 ft³/s	
D	1030	7.95	0.125in = 0.025 ft³/s	

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
6/3/14	Michelle Wong	Michelle Wong	AECOM
6/3/14	Didier Dumas	[illegible]	AECOM

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

TAL-8029WM (0108)

FIELD INFORMATION FORM

WM 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					
	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
030814	781						

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: clear no sediment Odor: none Color: clear Other: no scum

Weather Conditions (required daily, or as conditions change): Direction/Speed: S, 5 mpH Outlook: overcast Precipitation: Y or N

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

FIELD COMMENTS

	pH	DB01E	DB01-W	Total Flow Calculation
08G Aliquot A	7.81	0.25 inch over weir	no flow	0.05 cfs
Aliquot B	7.63	0.25 inch over weir	no flow	0.05 cfs
Aliquot C	7.51	<0.25 inch over weir	no flow	0.05 cfs

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
03/08/14	Margie Thack	[signature]	AECOM
[illegible]	[illegible]	[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: D B d I 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

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

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

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 ____
02 04 14	8.28						

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: Clear slightly turbid **Odor:** no **Color:** light tan **Other:** flow increased with time

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

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

FIELD COMMENTS

	time	PH	flow	flow Measurements	West
A	10:55	8.28	1 sec/L	East 1.25 in: 0.25 ft³/sec	0.75 in = 0.15 ft³/sec
B	11:10	8.42	1 sec/L	1.50 in = 0.3 ft³/sec	1.50 in = 0.3 ft³/sec
C	11:25	8.05	1 sec/L	2.00 in = 0.4 ft³/sec	1.75 in = 0.35 ft³/sec
D	11:40	8.18	1 sec/L	2.00 in = 0.4 ft³/sec	2 in = 0.4 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
2/4/14	Dustin Goto	[signature]	AECOM
2/4/14	Michelle Wang	Michelle Wang	AECOM

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

TAL-8029WM (0108)

Attachment B
Analytical Laboratory Reports

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 280-51248-2

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.
Janice S Collins
Project Management Assistant I
1/30/2014 11:04 AM

Designee for
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01/30/2014

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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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 280-61614-1

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
Stephanie D Sanders
Project Manager I
11/7/2014 4:23 PM

Designee for
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11/07/2014

cc: Mr. Mark Hofferbert
Ms. Margie Thach

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The Lab Certification ID# is 4025.

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: 280-61614-1

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 10/23/2014; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.1° C and 2.2° C.

The sample collection times on the containers for sample DB01-E (10/19/2014 10:45) do not match the time listed on the chain of custody. The times on the containers are listed as 11:30 and as 10:45 on the chain of custody. There was no time listed on one unpreserved 250 ml container for sample DB01-E (10:45). The sample was logged per the chain of custody.

One of two unpreserved 1 L plastic containers for each sample arrived less than 1/2 full. Sufficient volume is available for the requested analysis.

The client was notified on 10/24/2014.

Holding Times

All holding times were met.

Method Blanks

Total Iron Method 6010B, HEM Method 1664A and Chemical Oxygen Demand 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.

All other Method Blanks were within established control limits.

Laboratory Control Samples (LCS)

The Method 625 laboratory control sample and the laboratory control sample duplicate (LCS/LCSD) for prep batch 249646 recovered outside control limits for the following analyte(s): Hexachlorocyclopentadiene. Hexachlorocyclopentadiene has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

All other Laboratory Control Samples were within established control limits.

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

The percent recoveries and/or relative percent difference of the MS/MSD performed on a sample from another client were outside control limits for Total Iron Method 6010B because the sample concentration was greater than four times the spike amount. Because the corresponding Laboratory Control Sample and the Method Blank sample were within control limits, 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 Iron Method 6010B, Ammonia Method 350.1, Total Kjeldahl Nitrogen Method 351.2 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 DBO1-E 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 COD below the lower control limit indicating the possible presence of a matrix interference.

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.

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

Organics

Sample DBO1-E was observed to be cloudy during the Method 625 extraction procedure.

HPLC

The following samples were analyzed for hexavalent chromium, batch 214352. The reference method requires sample to be preserved to a pH of 9.3-->9.7. The following samples were received with insufficient preservation at a pH of <9.3. The samples were preserved to the appropriate pH in the laboratory. DBO1-E (280-61614-1)

General Comments

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

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 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: 280-61614-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
280-61614-1	**DBO1-E**					
Benzoic acid		0.042	J	0.050	mg/L	625
p-Cresol		0.0024	J	0.010	mg/L	625
Nitrogen, Kjeldahl		0.43	J	0.50	mg/L	351.2
Phosphorus, Total		1.1		0.050	mg/L	365.1
Chemical Oxygen Demand		85	B	20	mg/L	410.4
Total Suspended Solids		73		4.0	mg/L	SM 2540D
Nitrogen, Total		0.43		0.10	mg/L	Total Nitrogen
Dissolved						
Chromium, hexavalent		0.43	J	1.0	ug/L	218.6
Total Recoverable						
Arsenic		0.0050	J	0.015	mg/L	200.7 Rev 4.4
Iron		6.8	B	0.10	mg/L	200.7 Rev 4.4
Lead		0.0052	J	0.0090	mg/L	200.7 Rev 4.4
Zinc		0.033		0.020	mg/L	200.7 Rev 4.4

METHOD SUMMARY

Client: Waste Management

Job Number: 280-61614-1

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	
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: 280-61614-1

Method	Analyst	Analyst ID
40CFR136A 625	Kiekel, Daniel C	DCK
EPA 200.7 Rev 4.4	Broander, Laura L	LLB
EPA 245.1	Whyte, Whitney A	WAW
1664A 1664A	Lawrence, Caitlyn M	CML
MCAWW 350.1	Hoefler, Alexandra F	AFH
MCAWW 351.2	Woolley, Mark -	MW1
MCAWW 353.2	Janssen, Elizabeth L	ELJ
EPA 365.1	Schwemin, Andrew J	AJS
MCAWW 410.4	Shaheen, Scott W	SWS
SM SM 2540D	Woolley, Mark -	MW1
EPA Total Nitrogen	Sullivan, Roxanne K	RKS
EPA 218.6	Pham, Quynh D	QPD

SAMPLE SUMMARY

Client: Waste Management

Job Number: 280-61614-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-61614-1	DBO1-E	Water	10/19/2014 1045	10/23/2014 0930

SAMPLE RESULTS

Client: Waste Management

Job Number: 280-61614-1

Client Sample ID: **DBO1-E**

Lab Sample ID: 280-61614-1

Client Matrix: Water

Date Sampled: 10/19/2014 1045

Date Received: 10/23/2014 0930

625 Semivolatile Organic Compounds (GC/MS)

Analysis Method:	625	Analysis Batch:	280-250496	Instrument ID:	SMS_B2
Prep Method:	625	Prep Batch:	280-249646	Lab File ID:	B2-8054.D
Dilution:	1.0			Initial Weight/Volume:	1048.2 mL
Analysis Date:	10/30/2014 2131			Final Weight/Volume:	1 mL
Prep Date:	10/25/2014 0958			Injection Volume:	0.5 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Alpha-Terpineol	ND		0.0019	0.010
Benzoic acid	0.042	J	0.0095	0.050
p-Cresol	0.0024	J	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	73		36 - 120
2-Fluorophenol	69		30 - 120
Nitrobenzene-d5	76		45 - 120
Phenol-d5	74		36 - 120
Terphenyl-d14	55		41 - 120

Client: Waste Management

Job Number: 280-61614-1

Client Sample ID: **DBO1-E**

Lab Sample ID: 280-61614-1
Client Matrix: Water

Date Sampled: 10/19/2014 1045
Date Received: 10/23/2014 0930

218.6 Chromium, Hexavalent (Ion Chromatography)-Dissolved

Analysis Method:	218.6	Analysis Batch:	440-214352	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:	10/27/2014 1851			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chromium, hexavalent	0.43	J	0.25	1.0

Client: Waste Management

Job Number: 280-61614-1

Client Sample ID: **DBO1-E**

Lab Sample ID: 280-61614-1

Client Matrix: Water

Date Sampled: 10/19/2014 1045

Date Received: 10/23/2014 0930

200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	280-250454	Instrument ID:	MT_026
Prep Method:	200.7	Prep Batch:	280-249488	Lab File ID:	26e102914.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	10/29/2014 2236			Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 0700				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Arsenic	0.0050	J	0.0044	0.015
Cadmium	ND		0.00045	0.0050
Lead	0.0052	J	0.0026	0.0090
Selenium	ND		0.0049	0.015
Zinc	0.033		0.0045	0.020
Silver	ND		0.00093	0.010

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	280-250702	Instrument ID:	MT_026
Prep Method:	200.7	Prep Batch:	280-249488	Lab File ID:	26A103014A.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	10/30/2014 1650			Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 0700				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Iron	6.8	B	0.022	0.10

245.1 Mercury (CVAA)

Analysis Method:	245.1	Analysis Batch:	280-251094	Instrument ID:	MT_034
Prep Method:	245.1	Prep Batch:	280-250046	Lab File ID:	141031taa.txt
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	10/31/2014 1733			Final Weight/Volume:	30 mL
Prep Date:	10/31/2014 1400				

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

General Chemistry

Client Sample ID: **DBO1-E**

Lab Sample ID: 280-61614-1

Client Matrix: Water

Date Sampled: 10/19/2014 1045

Date Received: 10/23/2014 0930

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
HEM	ND		mg/L	1.6	5.0	1.0	1664A
Analysis Batch: 280-250054	Analysis Date: 10/28/2014 1243						
Prep Batch: 280-249994	Prep Date: 10/28/2014 0910						
Ammonia	ND		mg/L	0.022	0.10	1.0	350.1
Analysis Batch: 280-250207	Analysis Date: 10/28/2014 1455						
Nitrogen, Kjeldahl	0.43	J	mg/L	0.18	0.50	1.0	351.2
Analysis Batch: 280-250673	Analysis Date: 10/30/2014 2252						
Prep Batch: 280-250411	Prep Date: 10/29/2014 2134						
Nitrate Nitrite as N	ND		mg/L	0.019	0.10	1.0	353.2
Analysis Batch: 280-250205	Analysis Date: 10/28/2014 1455						
Phosphorus, Total	1.1		mg/L	0.010	0.050	2.0	365.1
Analysis Batch: 280-250627	Analysis Date: 10/30/2014 1923						
Prep Batch: 280-250337	Prep Date: 10/29/2014 1507						
Chemical Oxygen Demand	85	B	mg/L	4.1	20	1.0	410.4
Analysis Batch: 280-249797	Analysis Date: 10/27/2014 1108						
Total Suspended Solids	73		mg/L	2.8	4.0	1.0	SM 2540D
Analysis Batch: 280-249328	Analysis Date: 10/23/2014 1511						
Nitrogen, Total	0.43		mg/L	0.042	0.10	1.0	Total Nitrogen
Analysis Batch: 280-251061	Analysis Date: 11/03/2014 1258						

DATA REPORTING QUALIFIERS

Client: Waste Management

Job Number: 280-61614-1

Lab Section	Qualifier	Description
GC/MS Semi VOA		
	*	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.
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.
	F1	MS and/or MSD Recovery 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.
	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: 280-61614-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 280-249646					
LCS 280-249646/2-A	Lab Control Sample	T	Water	625	
LCSD 280-249646/3-A	Lab Control Sample Duplicate	T	Water	625	
MB 280-249646/1-A	Method Blank	T	Water	625	
280-61614-1	DBO1-E	T	Water	625	
Analysis Batch:280-250496					
LCS 280-249646/2-A	Lab Control Sample	T	Water	625	280-249646
LCSD 280-249646/3-A	Lab Control Sample Duplicate	T	Water	625	280-249646
MB 280-249646/1-A	Method Blank	T	Water	625	280-249646
280-61614-1	DBO1-E	T	Water	625	280-249646

Report Basis

T = Total

Client: Waste Management

Job Number: 280-61614-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-249488					
LCS 280-249488/2-A	Lab Control Sample	R	Water	200.7	
MB 280-249488/1-A	Method Blank	R	Water	200.7	
280-61610-O-1-B MS	Matrix Spike	R	Water	200.7	
280-61610-O-1-C MSD	Matrix Spike Duplicate	R	Water	200.7	
280-61614-1	DBO1-E	R	Water	200.7	
Prep Batch: 280-250046					
LCS 280-250046/2-A	Lab Control Sample	T	Water	245.1	
MB 280-250046/1-A	Method Blank	T	Water	245.1	
280-61614-1	DBO1-E	T	Water	245.1	
280-61614-I-2-C MS	Matrix Spike	T	Water	245.1	
280-61614-I-2-D MSD	Matrix Spike Duplicate	T	Water	245.1	
Analysis Batch:280-250454					
LCS 280-249488/2-A	Lab Control Sample	R	Water	200.7 Rev 4.4	280-249488
MB 280-249488/1-A	Method Blank	R	Water	200.7 Rev 4.4	280-249488
280-61610-O-1-B MS	Matrix Spike	R	Water	200.7 Rev 4.4	280-249488
280-61610-O-1-C MSD	Matrix Spike Duplicate	R	Water	200.7 Rev 4.4	280-249488
280-61614-1	DBO1-E	R	Water	200.7 Rev 4.4	280-249488
Analysis Batch:280-250702					
280-61614-1	DBO1-E	R	Water	200.7 Rev 4.4	280-249488
Analysis Batch:280-251094					
LCS 280-250046/2-A	Lab Control Sample	T	Water	245.1	280-250046
MB 280-250046/1-A	Method Blank	T	Water	245.1	280-250046
280-61614-1	DBO1-E	T	Water	245.1	280-250046
280-61614-I-2-C MS	Matrix Spike	T	Water	245.1	280-250046
280-61614-I-2-D MSD	Matrix Spike Duplicate	T	Water	245.1	280-250046

Report Basis

R = Total Recoverable

T = Total

Client: Waste Management

Job Number: 280-61614-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-249328					
LCS 280-249328/1	Lab Control Sample	T	Water	SM 2540D	
LCSD 280-249328/2	Lab Control Sample Duplicate	T	Water	SM 2540D	
MB 280-249328/3	Method Blank	T	Water	SM 2540D	
280-61614-1	DBO1-E	T	Water	SM 2540D	
280-61625-B-1 DU	Duplicate	T	Water	SM 2540D	
Analysis Batch:280-249797					
LCS 280-249797/3	Lab Control Sample	T	Water	410.4	
LCSD 280-249797/4	Lab Control Sample Duplicate	T	Water	410.4	
MB 280-249797/5	Method Blank	T	Water	410.4	
280-61614-1	DBO1-E	T	Water	410.4	
280-61614-1MS	Matrix Spike	T	Water	410.4	
280-61614-1MSD	Matrix Spike Duplicate	T	Water	410.4	
Prep Batch: 280-249994					
LCS 280-249994/2-A	Lab Control Sample	T	Water	1664A	
LCSD 280-249994/3-A	Lab Control Sample Duplicate	T	Water	1664A	
MB 280-249994/1-A	Method Blank	T	Water	1664A	
280-61614-1	DBO1-E	T	Water	1664A	
Analysis Batch:280-250054					
LCS 280-249994/2-A	Lab Control Sample	T	Water	1664A	280-249994
LCSD 280-249994/3-A	Lab Control Sample Duplicate	T	Water	1664A	280-249994
MB 280-249994/1-A	Method Blank	T	Water	1664A	280-249994
280-61614-1	DBO1-E	T	Water	1664A	280-249994
Analysis Batch:280-250205					
LCS 280-250205/21	Lab Control Sample	T	Water	353.2	
LCSD 280-250205/22	Lab Control Sample Duplicate	T	Water	353.2	
MB 280-250205/23	Method Blank	T	Water	353.2	
280-61612-E-1 MS	Matrix Spike	T	Water	353.2	
280-61612-E-1 MSD	Matrix Spike Duplicate	T	Water	353.2	
280-61614-1	DBO1-E	T	Water	353.2	
Analysis Batch:280-250207					
LCS 280-250207/106	Lab Control Sample	T	Water	350.1	
LCSD 280-250207/107	Lab Control Sample Duplicate	T	Water	350.1	
MB 280-250207/108	Method Blank	T	Water	350.1	
280-61613-D-1 MS	Matrix Spike	T	Water	350.1	
280-61613-D-1 MSD	Matrix Spike Duplicate	T	Water	350.1	
280-61614-1	DBO1-E	T	Water	350.1	

Client: Waste Management

Job Number: 280-61614-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Prep Batch: 280-250337					
LCS 280-250337/3-A	Lab Control Sample	T	Water	365.2/365.3/365	
LCSD 280-250337/4-A	Lab Control Sample Duplicate	T	Water	365.2/365.3/365	
MB 280-250337/5-A	Method Blank	T	Water	365.2/365.3/365	
280-61614-1	DBO1-E	T	Water	365.2/365.3/365	
280-61822-A-5-B MS	Matrix Spike	T	Water	365.2/365.3/365	
280-61822-A-5-C MSD	Matrix Spike Duplicate	T	Water	365.2/365.3/365	
Prep Batch: 280-250411					
LCS 280-250411/1-A	Lab Control Sample	T	Water	351.2	
LCSD 280-250411/2-A	Lab Control Sample Duplicate	T	Water	351.2	
MB 280-250411/3-A	Method Blank	T	Water	351.2	
280-61477-A-6-B MS	Matrix Spike	T	Water	351.2	
280-61477-A-6-C MSD	Matrix Spike Duplicate	T	Water	351.2	
280-61614-1	DBO1-E	T	Water	351.2	
Analysis Batch:280-250627					
LCS 280-250337/3-A	Lab Control Sample	T	Water	365.1	280-250337
LCSD 280-250337/4-A	Lab Control Sample Duplicate	T	Water	365.1	280-250337
MB 280-250337/5-A	Method Blank	T	Water	365.1	280-250337
280-61614-1	DBO1-E	T	Water	365.1	280-250337
280-61822-A-5-B MS	Matrix Spike	T	Water	365.1	280-250337
280-61822-A-5-C MSD	Matrix Spike Duplicate	T	Water	365.1	280-250337
Analysis Batch:280-250673					
LCS 280-250411/1-A	Lab Control Sample	T	Water	351.2	280-250411
LCSD 280-250411/2-A	Lab Control Sample Duplicate	T	Water	351.2	280-250411
MB 280-250411/3-A	Method Blank	T	Water	351.2	280-250411
280-61477-A-6-B MS	Matrix Spike	T	Water	351.2	280-250411
280-61477-A-6-C MSD	Matrix Spike Duplicate	T	Water	351.2	280-250411
280-61614-1	DBO1-E	T	Water	351.2	280-250411
Analysis Batch:280-251061					
MB 280-251061/1	Method Blank	T	Water	Total Nitrogen	
280-61614-1	DBO1-E	T	Water	Total Nitrogen	

Report Basis

T = Total

Client: Waste Management

Job Number: 280-61614-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
HPLC/IC					
Analysis Batch:440-214352					
LCS 440-214352/2	Lab Control Sample	T	Water	218.6	
MB 440-214352/3	Method Blank	T	Water	218.6	
280-61614-1	DBO1-E	D	Water	218.6	
280-61614-J-2 MS	Matrix Spike	D	Water	218.6	
280-61614-J-2 MSD	Matrix Spike Duplicate	D	Water	218.6	

Report Basis

D = Dissolved

T = Total

Client: Waste Management

Job Number: 280-61614-1

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
280-61614-1	DBO1-E	87	73	69	76	74	55
MB 280-249646/1-A		64	62	66	66	68	92
LCS 280-249646/2-A		87	72	70	72	72	88
LCSD 280-249646/3-A		92	78	73	78	77	93

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: 280-61614-1

Method Blank - Batch: 280-249646

Method: 625
Preparation: 625

Lab Sample ID:	MB 280-249646/1-A	Analysis Batch:	280-250496	Instrument ID:	SMS_B2
Client Matrix:	Water	Prep Batch:	280-249646	Lab File ID:	B2-8033.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	10/30/2014 1056	Units:	mg/L	Final Weight/Volume:	1 mL
Prep Date:	10/25/2014 0958			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	64	50 - 120
2-Fluorobiphenyl	62	36 - 120
2-Fluorophenol	66	30 - 120
Nitrobenzene-d5	66	45 - 120
Phenol-d5	68	36 - 120
Terphenyl-d14	92	41 - 120

Client: Waste Management

Job Number: 280-61614-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-249646

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-249646/2-A	Analysis Batch:	280-250496	Instrument ID:	SMS_B2
Client Matrix:	Water	Prep Batch:	280-249646	Lab File ID:	B2-8034.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	10/30/2014 1126	Units:	mg/L	Final Weight/Volume:	1 mL
Prep Date:	10/25/2014 0958			Injection Volume:	0.5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-249646/3-A	Analysis Batch:	280-250496	Instrument ID:	SMS_B2
Client Matrix:	Water	Prep Batch:	280-249646	Lab File ID:	B2-8035.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	10/30/2014 1157	Units:	mg/L	Final Weight/Volume:	1 mL
Prep Date:	10/25/2014 0958			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
1,2,4-Trichlorobenzene	56	65	44 - 120	16	35		
1,2-Dichlorobenzene	50	64	32 - 120	23	42		
1,3-Dichlorobenzene	47	60	23 - 120	24	47		
1,4-Dichlorobenzene	49	62	24 - 120	24	49		
2,2'-Oxybis(1-chloropropane)	69	75	37 - 120	9	30		
2,4,6-Trichlorophenol	77	88	51 - 120	12	30		
2,4-Dichlorophenol	72	79	46 - 120	9	30		
2,4-Dimethylphenol	47	56	44 - 119	17	35		
2,4-Dinitrophenol	80	88	20 - 121	9	61		
2,4-Dinitrotoluene	87	94	57 - 120	8	35		
2,6-Dinitrotoluene	83	94	56 - 120	12	30		
2-Chloronaphthalene	69	78	60 - 118	13	30		
2-Chlorophenol	69	75	34 - 120	9	30		
2-Methylphenol	69	74	38 - 120	8	35		
2-Nitrophenol	71	78	47 - 120	9	30		
3,3'-Dichlorobenzidine	50	42	18 - 120	18	50	J	J
4,6-Dinitro-2-methylphenol	84	91	40 - 120	9	55		
4-Bromophenyl phenyl ether	82	88	53 - 120	7	34		
4-Chloro-3-methylphenol	79	88	57 - 120	10	30		
4-Chlorophenyl phenyl ether	77	88	51 - 120	14	30		
4-Nitrophenol	87	92	53 - 120	6	42		
Acenaphthene	74	84	47 - 120	13	30		
Acenaphthylene	72	82	33 - 120	13	30		
Anthracene	81	86	52 - 120	7	30		
Benzidine	25	25	10 - 218	2	50		
Benzo[a]anthracene	83	91	54 - 120	9	30		
Benzo[a]pyrene	82	87	39 - 120	7	73		
Benzo[b]fluoranthene	84	90	51 - 120	7	90		
Benzo[g,h,i]perylene	84	89	48 - 120	6	64		
Benzo[k]fluoranthene	87	94	49 - 120	8	50		
Bis(2-chloroethoxy)methane	70	78	50 - 120	10	30		
Bis(2-chloroethyl)ether	68	74	35 - 120	9	30		
Bis(2-ethylhexyl) phthalate	85	94	56 - 120	9	30		
Butyl benzyl phthalate	86	94	53 - 120	9	30		
Chrysene	82	91	51 - 120	10	30		
Dibenz(a,h)anthracene	84	92	45 - 120	8	78		

Client: Waste Management

Job Number: 280-61614-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-249646

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-249646/2-A	Analysis Batch:	280-250496	Instrument ID:	SMS_B2
Client Matrix:	Water	Prep Batch:	280-249646	Lab File ID:	B2-8034.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	10/30/2014 1126	Units:	mg/L	Final Weight/Volume:	1 mL
Prep Date:	10/25/2014 0958			Injection Volume:	0.5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-249646/3-A	Analysis Batch:	280-250496	Instrument ID:	SMS_B2
Client Matrix:	Water	Prep Batch:	280-249646	Lab File ID:	B2-8035.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	10/30/2014 1157	Units:	mg/L	Final Weight/Volume:	1 mL
Prep Date:	10/25/2014 0958			Injection Volume:	0.5 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Diethyl phthalate	85	93	59 - 114	9	30		
Dimethyl phthalate	83	91	58 - 112	9	30		
Di-n-butyl phthalate	86	93	57 - 118	8	30		
Di-n-octyl phthalate	87	97	56 - 120	10	30		
Fluoranthene	84	90	58 - 120	7	30		
Fluorene	80	88	59 - 120	10	30		
Hexachlorobenzene	79	88	53 - 120	11	30		
Hexachlorobutadiene	49	60	27 - 116	20	41		
Hexachlorocyclopentadiene	6	8	10 - 120	36	82	J *	J *
Hexachloroethane	43	58	40 - 113	30	52		
Indeno[1,2,3-cd]pyrene	82	89	50 - 120	8	73		
Isophorone	72	80	50 - 120	11	30		
Naphthalene	64	72	37 - 120	13	30		
n-Decane	36	52	28 - 120	37	61		
Nitrobenzene	70	78	46 - 120	11	30		
N-Nitrosodimethylamine	66	71	37 - 120	8	30		
N-Nitrosodi-n-propylamine	71	80	50 - 120	11	30		
N-Nitrosodiphenylamine	79	85	46 - 203	8	50		
p-Cresol	69	77	42 - 120	12	39		
Pentachlorophenol	80	88	46 - 120	10	30		
Phenanthrene	82	88	54 - 120	7	30		
Phenol	70	75	37 - 112	7	30		
Pyrene	84	92	55 - 115	9	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
2,4,6-Tribromophenol	87	92	50 - 120
2-Fluorobiphenyl	72	78	36 - 120
2-Fluorophenol	70	73	30 - 120
Nitrobenzene-d5	72	78	45 - 120
Phenol-d5	72	77	36 - 120
Terphenyl-d14	88	93	41 - 120

Client: Waste Management

Job Number: 280-61614-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-249646

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-249646/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-249646/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/30/2014 1126			Analysis Date:	10/30/2014 1157
Prep Date:	10/25/2014 0958			Prep Date:	10/25/2014 0958
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	0.0446		0.0524	
1,2-Dichlorobenzene	0.0800	0.0800	0.0403		0.0509	
1,3-Dichlorobenzene	0.0800	0.0800	0.0375		0.0476	
1,4-Dichlorobenzene	0.0800	0.0800	0.0388		0.0493	
2,2'-Oxybis(1-chloropropane)	0.0800	0.0800	0.0552		0.0604	
2,4,6-Trichlorophenol	0.0800	0.0800	0.0620		0.0700	
2,4-Dichlorophenol	0.0800	0.0800	0.0577		0.0631	
2,4-Dimethylphenol	0.0800	0.0800	0.0376		0.0444	
2,4-Dinitrophenol	0.160	0.160	0.128		0.140	
2,4-Dinitrotoluene	0.0800	0.0800	0.0694		0.0754	
2,6-Dinitrotoluene	0.0800	0.0800	0.0666		0.0753	
2-Chloronaphthalene	0.0800	0.0800	0.0552		0.0627	
2-Chlorophenol	0.0800	0.0800	0.0549		0.0603	
2-Methylphenol	0.0800	0.0800	0.0548		0.0596	
2-Nitrophenol	0.0800	0.0800	0.0568		0.0624	
3,3'-Dichlorobenzidine	0.0800	0.0800	0.0401	J	0.0337	J
4,6-Dinitro-2-methylphenol	0.160	0.160	0.134		0.146	
4-Bromophenyl phenyl ether	0.0800	0.0800	0.0653		0.0701	
4-Chloro-3-methylphenol	0.0800	0.0800	0.0635		0.0700	
4-Chlorophenyl phenyl ether	0.0800	0.0800	0.0615		0.0705	
4-Nitrophenol	0.160	0.160	0.138		0.147	
Acenaphthene	0.0800	0.0800	0.0592		0.0673	
Acenaphthylene	0.0800	0.0800	0.0579		0.0660	
Anthracene	0.0800	0.0800	0.0644		0.0688	
Benzidine	0.0800	0.0800	ND		ND	
Benzo[a]anthracene	0.0800	0.0800	0.0662		0.0724	
Benzo[a]pyrene	0.0800	0.0800	0.0654		0.0699	
Benzo[b]fluoranthene	0.0800	0.0800	0.0669		0.0718	
Benzo[g,h,i]perylene	0.0800	0.0800	0.0675		0.0714	
Benzo[k]fluoranthene	0.0800	0.0800	0.0694		0.0749	
Bis(2-chloroethoxy)methane	0.0800	0.0800	0.0562		0.0622	
Bis(2-chloroethyl)ether	0.0800	0.0800	0.0543		0.0594	
Bis(2-ethylhexyl) phthalate	0.0800	0.0800	0.0684		0.0749	
Butyl benzyl phthalate	0.0800	0.0800	0.0685		0.0749	
Chrysene	0.0800	0.0800	0.0658		0.0725	
Dibenz(a,h)anthracene	0.0800	0.0800	0.0676		0.0733	
Diethyl phthalate	0.0800	0.0800	0.0679		0.0745	
Dimethyl phthalate	0.0800	0.0800	0.0668		0.0731	
Di-n-butyl phthalate	0.0800	0.0800	0.0689		0.0744	

Client: Waste Management

Job Number: 280-61614-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-249646

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-249646/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-249646/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/30/2014 1126			Analysis Date:	10/30/2014 1157
Prep Date:	10/25/2014 0958			Prep Date:	10/25/2014 0958
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	0.0699	0.0775
Fluoranthene	0.0800	0.0800	0.0671	0.0723
Fluorene	0.0800	0.0800	0.0640	0.0704
Hexachlorobenzene	0.0800	0.0800	0.0635	0.0707
Hexachlorobutadiene	0.0800	0.0800	0.0393	0.0479
Hexachlorocyclopentadiene	0.0800	0.0800	0.00456 J *	0.00658 J *
Hexachloroethane	0.0800	0.0800	0.0341	0.0461
Indeno[1,2,3-cd]pyrene	0.0800	0.0800	0.0654	0.0712
Isophorone	0.0800	0.0800	0.0573	0.0638
Naphthalene	0.0800	0.0800	0.0510	0.0579
n-Decane	0.0800	0.0800	0.0286	0.0415
Nitrobenzene	0.0800	0.0800	0.0561	0.0624
N-Nitrosodimethylamine	0.0800	0.0800	0.0525	0.0567
N-Nitrosodi-n-propylamine	0.0800	0.0800	0.0569	0.0638
N-Nitrosodiphenylamine	0.0800	0.0800	0.0630	0.0682
p-Cresol	0.0800	0.0800	0.0550	0.0619
Pentachlorophenol	0.160	0.160	0.128	0.141
Phenanthrene	0.0800	0.0800	0.0658	0.0704
Phenol	0.0800	0.0800	0.0563	0.0603
Pyrene	0.0800	0.0800	0.0670	0.0737

Client: Waste Management

Job Number: 280-61614-1

Method Blank - Batch: 440-214352

Method: 218.6
Preparation: N/A

Lab Sample ID:	MB 440-214352/3	Analysis Batch:	440-214352	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:	10/27/2014 0735	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: 440-214352

Method: 218.6
Preparation: N/A

Lab Sample ID:	LCS 440-214352/2	Analysis Batch:	440-214352	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:	10/27/2014 0722	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	49.9	100	90 - 110	

Method Reporting Limit Check - Batch: 440-214352

Method: 218.6
Preparation: N/A

Lab Sample ID:	MRL 440-214352/4	Analysis Batch:	440-214352	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:	10/27/2014 0749	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	1.00	1.02	102	50 - 150	

Client: Waste Management

Job Number: 280-61614-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 440-214352

Method: 218.6
Preparation: N/A

MS Lab Sample ID:	280-61614-J-2 MS	Analysis Batch:	440-214352	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:	10/27/2014 1918			Final Weight/Volume:	1.0 mL
Prep Date:	N/A			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	280-61614-J-2 MSD	Analysis Batch:	440-214352	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:	10/27/2014 1932			Final Weight/Volume:	1.0 mL
Prep Date:	N/A			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Chromium, hexavalent	101	102	90 - 110	0	10		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 440-214352

Method: 218.6
Preparation: N/A

MS Lab Sample ID:	280-61614-J-2 MS	Units:	ug/L	MSD Lab Sample ID:	280-61614-J-2 MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/27/2014 1918			Analysis Date:	10/27/2014 1932
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	1.1	50.0	50.0	51.8	52.0

Client: Waste Management

Job Number: 280-61614-1

Method Blank - Batch: 280-249488

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	MB 280-249488/1-A	Analysis Batch:	280-250454	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-249488	Lab File ID:	26e102914.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	10/29/2014 2158	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 0700				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Arsenic	ND		0.0044	0.015
Cadmium	ND		0.00045	0.0050
Iron	0.0312	J	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: 280-249488

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	LCS 280-249488/2-A	Analysis Batch:	280-250454	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-249488	Lab File ID:	26e102914.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	10/29/2014 2201	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 0700				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	1.00	0.993	99	88 - 110	
Cadmium	0.100	0.0970	97	88 - 111	
Iron	1.00	1.05	105	89 - 115	
Lead	0.500	0.519	104	89 - 110	
Selenium	2.00	2.11	106	85 - 112	
Zinc	0.500	0.493	99	85 - 111	
Silver	0.0500	0.0557	111	85 - 115	

Client: Waste Management

Job Number: 280-61614-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-249488

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-61610-O-1-B MS	Analysis Batch:	280-250454	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-249488	Lab File ID:	26e102914.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	10/29/2014 2212			Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 0700				
Leach Date:	N/A				

MSD Lab Sample ID:	280-61610-O-1-C MSD	Analysis Batch:	280-250454	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-249488	Lab File ID:	26e102914.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	10/29/2014 2214			Final Weight/Volume:	50 mL
Prep Date:	10/25/2014 0700				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Arsenic	102	106	88 - 110	3	20		
Cadmium	98	102	88 - 111	4	20		
Iron	99	157	89 - 115	2	20	4	4
Lead	98	101	89 - 110	3	20		
Selenium	107	111	85 - 112	4	20		
Zinc	94	98	85 - 111	3	20		
Silver	113	119	85 - 115	5	20		F1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-249488

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-61610-O-1-B MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	10/29/2014 2212		
Prep Date:	10/25/2014 0700		
Leach Date:	N/A		

MSD Lab Sample ID:	280-61610-O-1-C MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	10/29/2014 2214
Prep Date:	10/25/2014 0700
Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Arsenic	0.049		1.00	1.00	1.07		1.11	
Cadmium	ND		0.100	0.100	0.0981		0.102	
Iron	25		1.00	1.00	25.9	4	26.5	4
Lead	ND		0.500	0.500	0.490		0.506	
Selenium	0.0088	J	2.00	2.00	2.15		2.24	
Zinc	0.033		0.500	0.500	0.504		0.521	
Silver	ND		0.0500	0.0500	0.0566		0.0595	F1

Client: Waste Management

Job Number: 280-61614-1

Method Blank - Batch: 280-250046

Method: 245.1
Preparation: 245.1

Lab Sample ID:	MB 280-250046/1-A	Analysis Batch:	280-251094	Instrument ID:	MT_034
Client Matrix:	Water	Prep Batch:	280-250046	Lab File ID:	141031taa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/31/2014 1726	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	10/31/2014 1400				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000027	0.00020

Lab Control Sample - Batch: 280-250046

Method: 245.1
Preparation: 245.1

Lab Sample ID:	LCS 280-250046/2-A	Analysis Batch:	280-251094	Instrument ID:	MT_034
Client Matrix:	Water	Prep Batch:	280-250046	Lab File ID:	141031taa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/31/2014 1728	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	10/31/2014 1400				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00491	98	90 - 110	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-250046

Method: 245.1
Preparation: 245.1

MS Lab Sample ID:	280-61614-I-2-C MS	Analysis Batch:	280-251094	Instrument ID:	MT_034
Client Matrix:	Water	Prep Batch:	280-250046	Lab File ID:	141031taa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/31/2014 1737			Final Weight/Volume:	30 mL
Prep Date:	10/31/2014 1400				
Leach Date:	N/A				

MSD Lab Sample ID:	280-61614-I-2-D MSD	Analysis Batch:	280-251094	Instrument ID:	MT_034
Client Matrix:	Water	Prep Batch:	280-250046	Lab File ID:	141031taa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	10/31/2014 1740			Final Weight/Volume:	30 mL
Prep Date:	10/31/2014 1400				
Leach Date:	N/A				

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

Client: Waste Management

Job Number: 280-61614-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-250046

Method: 245.1
Preparation: 245.1

MS Lab Sample ID:	280-61614-I-2-C MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	10/31/2014 1737		
Prep Date:	10/31/2014 1400		
Leach Date:	N/A		

MSD Lab Sample ID:	280-61614-I-2-D MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	10/31/2014 1740
Prep Date:	10/31/2014 1400
Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Mercury	0.000092	J	0.00500	0.00500	0.00493	0.00475

Client: Waste Management

Job Number: 280-61614-1

Method Blank - Batch: 280-249994

Method: 1664A
Preparation: 1664A

Lab Sample ID:	MB 280-249994/1-A	Analysis Batch:	280-250054	Instrument ID:	WC_Cond_Orion
Client Matrix:	Water	Prep Batch:	280-249994	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	10/28/2014 1243	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	10/28/2014 0910				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
HEM	1.70	J	1.6	5.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-249994

Method: 1664A
Preparation: 1664A

LCS Lab Sample ID:	LCS 280-249994/2-A	Analysis Batch:	280-250054	Instrument ID:	WC_Cond_Orion
Client Matrix:	Water	Prep Batch:	280-249994	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	10/28/2014 1243	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	10/28/2014 0910				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-249994/3-A	Analysis Batch:	280-250054	Instrument ID:	WC_Cond_Orion
Client Matrix:	Water	Prep Batch:	280-249994	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	10/28/2014 1243	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	10/28/2014 0910				
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
HEM	84	93	78 - 114	11	18		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-249994

Method: 1664A
Preparation: 1664A

LCS Lab Sample ID:	LCS 280-249994/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-249994/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/28/2014 1243			Analysis Date:	10/28/2014 1243
Prep Date:	10/28/2014 0910			Prep Date:	10/28/2014 0910
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	33.5	37.4

Client: Waste Management

Job Number: 280-61614-1

Method Blank - Batch: 280-250207

Method: 350.1
Preparation: N/A

Lab Sample ID:	MB 280-250207/108	Analysis Batch:	280-250207	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\102814.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	10/28/2014 1449	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: 280-250207

Method: 350.1
Preparation: N/A

LCS Lab Sample ID:	LCS 280-250207/106	Analysis Batch:	280-250207	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\102814.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2014 1445	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-250207/107	Analysis Batch:	280-250207	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\102814.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2014 1447	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	97	98	90 - 110	0	10		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-250207

Method: 350.1
Preparation: N/A

LCS Lab Sample ID:	LCS 280-250207/106	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-250207/107
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/28/2014 1445			Analysis Date:	10/28/2014 1447
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	2.43	2.44

Client: Waste Management

Job Number: 280-61614-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-250207

Method: 350.1
Preparation: N/A

MS Lab Sample ID:	280-61613-D-1 MS	Analysis Batch:	280-250207	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\102814.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	10/28/2014 1451			Final Weight/Volume:	10 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-61613-D-1 MSD	Analysis Batch:	280-250207	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\102814.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	10/28/2014 1453			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	84	85	90 - 110	0	10	F1	F1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-250207

Method: 350.1
Preparation: N/A

MS Lab Sample ID:	280-61613-D-1 MS	Units:	mg/L	MSD Lab Sample ID:	280-61613-D-1 MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/28/2014 1451			Analysis Date:	10/28/2014 1453
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	0.26	1.00	1.00	1.10	F1	1.11	F1

Client: Waste Management

Job Number: 280-61614-1

Method Blank - Batch: 280-250411

Method: 351.2
Preparation: 351.2

Lab Sample ID:	MB 280-250411/3-A	Analysis Batch:	280-250673	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-250411	Lab File ID:	103014TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	10/30/2014 2207	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	10/29/2014 2134				
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: 280-250411

Method: 351.2
Preparation: 351.2

LCS Lab Sample ID:	LCS 280-250411/1-A	Analysis Batch:	280-250673	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-250411	Lab File ID:	103014TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	10/30/2014 2204	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	10/29/2014 2134				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-250411/2-A	Analysis Batch:	280-250673	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-250411	Lab File ID:	103014TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	10/30/2014 2206	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	10/29/2014 2134				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Nitrogen, Kjeldahl	92	93	90 - 110	2	25		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-250411

Method: 351.2
Preparation: 351.2

LCS Lab Sample ID:	LCS 280-250411/1-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-250411/2-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/30/2014 2204			Analysis Date:	10/30/2014 2206
Prep Date:	10/29/2014 2134			Prep Date:	10/29/2014 2134
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	5.50	5.61

Client: Waste Management

Job Number: 280-61614-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-250411

Method: 351.2
Preparation: 351.2

MS Lab Sample ID:	280-61477-A-6-B MS	Analysis Batch:	280-250673	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-250411	Lab File ID:	103014TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	10/30/2014 2312			Final Weight/Volume:	25 mL
Prep Date:	10/29/2014 2134				
Leach Date:	N/A				

MSD Lab Sample ID:	280-61477-A-6-C MSD	Analysis Batch:	280-250673	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-250411	Lab File ID:	103014TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	10/30/2014 2313			Final Weight/Volume:	25 mL
Prep Date:	10/29/2014 2134				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Nitrogen, Kjeldahl	182	164	90 - 110	6	25	F1	F1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-250411

Method: 351.2
Preparation: 351.2

MS Lab Sample ID:	280-61477-A-6-B MS	Units:	mg/L	MSD Lab Sample ID:	280-61477-A-6-C MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/30/2014 2312			Analysis Date:	10/30/2014 2313
Prep Date:	10/29/2014 2134			Prep Date:	10/29/2014 2134
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Nitrogen, Kjeldahl	3.8	3.00	3.00	9.23	F1	8.68	F1

Client: Waste Management

Job Number: 280-61614-1

Method Blank - Batch: 280-250205

Method: 353.2
Preparation: N/A

Lab Sample ID:	MB 280-250205/23	Analysis Batch:	280-250205	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\102814.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	10/28/2014 1425	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: 280-250205

Method: 353.2
Preparation: N/A

Lab Sample ID:	MRL 280-250205/18	Analysis Batch:	280-250205	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\102814.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2014 1406	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	0.0953	95	50 - 150	J

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-250205

Method: 353.2
Preparation: N/A

LCS Lab Sample ID:	LCS 280-250205/21	Analysis Batch:	280-250205	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\102814.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2014 1421	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-250205/22	Analysis Batch:	280-250205	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\102814.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	10/28/2014 1423	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	102	90 - 110	1	10		

Client: Waste Management

Job Number: 280-61614-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-250205

Method: 353.2
Preparation: N/A

LCS Lab Sample ID:	LCS 280-250205/21	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-250205/22
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/28/2014 1421			Analysis Date:	10/28/2014 1423
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	5.14	5.11

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-250205

Method: 353.2
Preparation: N/A

MS Lab Sample ID:	280-61612-E-1 MS	Analysis Batch:	280-250205	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\102814.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/28/2014 1429			Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-61612-E-1 MSD	Analysis Batch:	280-250205	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\102814.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	10/28/2014 1431			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	103	103	90 - 110	1	10		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-250205

Method: 353.2
Preparation: N/A

MS Lab Sample ID:	280-61612-E-1 MS	Units:	mg/L	MSD Lab Sample ID:	280-61612-E-1 MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/28/2014 1429			Analysis Date:	10/28/2014 1431
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	0.026	J	4.00	4.00	4.15	4.13

Client: Waste Management

Job Number: 280-61614-1

Method Blank - Batch: 280-250337

Method: 365.1
Preparation: 365.2/365.3/365

Lab Sample ID:	MB 280-250337/5-A	Analysis Batch:	280-250627	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	280-250337	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	10/30/2014 1852	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	10/29/2014 1507				
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: 280-250337

Method: 365.1
Preparation: 365.2/365.3/365

LCS Lab Sample ID:	LCS 280-250337/3-A	Analysis Batch:	280-250627	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	280-250337	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	10/30/2014 1852	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	10/29/2014 1507				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-250337/4-A	Analysis Batch:	280-250627	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	280-250337	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	10/30/2014 1852	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	10/29/2014 1507				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Phosphorus, Total	103	100	90 - 110	3	10		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-250337

Method: 365.1
Preparation: 365.2/365.3/365

LCS Lab Sample ID:	LCS 280-250337/3-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-250337/4-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/30/2014 1852			Analysis Date:	10/30/2014 1852
Prep Date:	10/29/2014 1507			Prep Date:	10/29/2014 1507
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	0.515	0.501

Client: Waste Management

Job Number: 280-61614-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-250337

Method: 365.1
Preparation: 365.2/365.3/365

MS Lab Sample ID:	280-61822-A-5-B MS	Analysis Batch:	280-250627	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	280-250337	Lab File ID:	N/A
Dilution:	2.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	10/30/2014 1923			Final Weight/Volume:	50 mL
Prep Date:	10/29/2014 1507				
Leach Date:	N/A				

MSD Lab Sample ID:	280-61822-A-5-C MSD	Analysis Batch:	280-250627	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	280-250337	Lab File ID:	N/A
Dilution:	2.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	10/30/2014 1923			Final Weight/Volume:	50 mL
Prep Date:	10/29/2014 1507				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Phosphorus, Total	118	112	90 - 110	2	10	F1	F1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-250337

Method: 365.1
Preparation: 365.2/365.3/365

MS Lab Sample ID:	280-61822-A-5-B MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	2.0		
Analysis Date:	10/30/2014 1923		
Prep Date:	10/29/2014 1507		
Leach Date:	N/A		

MSD Lab Sample ID:	280-61822-A-5-C MSD
Client Matrix:	Water
Dilution:	2.0
Analysis Date:	10/30/2014 1923
Prep Date:	10/29/2014 1507
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Phosphorus, Total	1.4	0.500	0.500	2.03	F1	1.99	F1

Client: Waste Management

Job Number: 280-61614-1

Method Blank - Batch: 280-249797

Method: 410.4
Preparation: N/A

Lab Sample ID:	MB 280-249797/5	Analysis Batch:	280-249797	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:	10/27/2014 1108	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Chemical Oxygen Demand	5.73	J	4.1	20

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-249797

Method: 410.4
Preparation: N/A

LCS Lab Sample ID:	LCS 280-249797/3	Analysis Batch:	280-249797	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:	10/27/2014 1108	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-249797/4	Analysis Batch:	280-249797	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:	10/27/2014 1108	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	108	106	90 - 110	2	11		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-249797

Method: 410.4
Preparation: N/A

LCS Lab Sample ID:	LCS 280-249797/3	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-249797/4
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/27/2014 1108			Analysis Date:	10/27/2014 1108
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	108	106

Client: Waste Management

Job Number: 280-61614-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-249797

Method: 410.4
Preparation: N/A

MS Lab Sample ID:	280-61614-1	Analysis Batch:	280-249797	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:	10/27/2014 1108			Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-61614-1	Analysis Batch:	280-249797	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:	10/27/2014 1108			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	85	90 - 110	3	11		F1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-249797

Method: 410.4
Preparation: N/A

MS Lab Sample ID:	280-61614-1	Units:	mg/L	MSD Lab Sample ID:	280-61614-1
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/27/2014 1108			Analysis Date:	10/27/2014 1108
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	
Chemical Oxygen Demand	85	50.0	50.0	131	127	F1

Client: Waste Management

Job Number: 280-61614-1

Method Blank - Batch: 280-249328

Method: SM 2540D
Preparation: N/A

Lab Sample ID:	MB 280-249328/3	Analysis Batch:	280-249328	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:	10/23/2014 1511	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: 280-249328

Method: SM 2540D
Preparation: N/A

LCS Lab Sample ID:	LCS 280-249328/1	Analysis Batch:	280-249328	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:	10/23/2014 1511	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-249328/2	Analysis Batch:	280-249328	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:	10/23/2014 1511	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	92	89	86 - 114	3	20		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-249328

Method: SM 2540D
Preparation: N/A

LCS Lab Sample ID:	LCS 280-249328/1	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-249328/2
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	10/23/2014 1511			Analysis Date:	10/23/2014 1511
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	92.0	89.0

Client: Waste Management

Job Number: 280-61614-1

Duplicate - Batch: 280-249328

Method: SM 2540D
Preparation: N/A

Lab Sample ID:	280-61625-B-1 DU	Analysis Batch:	280-249328	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:	10/23/2014 1511	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	6.0	5.60	7	10	

Client: Waste Management

Job Number: 280-61614-1

Method Blank - Batch: 280-251061

Method: Total Nitrogen
Preparation: N/A

Lab Sample ID:	MB 280-251061/1	Analysis Batch:	280-251061	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:	11/03/2014 1258	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: 280-61614-1

Laboratory Chronicle

Lab ID: **280-61614-1** **Client ID:** **DBO1-E**

Sample Date/Time: 10/19/2014 10:45 Received Date/Time: 10/23/2014 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	280-61614-A-1-A		280-250496	280-249646	10/25/2014 09:58	1	TAL DEN	JRK
A:625	280-61614-A-1-A		280-250496	280-249646	10/30/2014 21:31	1	TAL DEN	DCK
A:218.6	280-61614-J-1		440-214352		10/27/2014 18:51	1	TAL IRV	QPD
P:200.7	280-61614-I-1-A		280-250454	280-249488	10/25/2014 07:00	1	TAL DEN	CGG
A:200.7 Rev 4.4	280-61614-I-1-A		280-250454	280-249488	10/29/2014 22:36	1	TAL DEN	LLB
P:200.7	280-61614-I-1-A		280-250702	280-249488	10/25/2014 07:00	1	TAL DEN	CGG
A:200.7 Rev 4.4	280-61614-I-1-A		280-250702	280-249488	10/30/2014 16:50	1	TAL DEN	LLB
P:245.1	280-61614-I-1-B		280-251094	280-250046	10/31/2014 14:00	1	TAL DEN	WAW
A:245.1	280-61614-I-1-B		280-251094	280-250046	10/31/2014 17:33	1	TAL DEN	WAW
P:1664A	280-61614-C-1-A		280-250054	280-249994	10/28/2014 09:10	1	TAL DEN	CML
A:1664A	280-61614-C-1-A		280-250054	280-249994	10/28/2014 12:43	1	TAL DEN	CML
A:350.1	280-61614-G-1		280-250207		10/28/2014 14:55	1	TAL DEN	AFH
P:351.2	280-61614-G-1-B		280-250673	280-250411	10/29/2014 21:34	1	TAL DEN	MW1
A:351.2	280-61614-G-1-B		280-250673	280-250411	10/30/2014 22:52	1	TAL DEN	MW1
A:353.2	280-61614-H-1		280-250205		10/28/2014 14:55	1	TAL DEN	ELJ
P:365.2/365.3/365	280-61614-G-1-A		280-250627	280-250337	10/29/2014 15:07	2	TAL DEN	AJS
A:365.1	280-61614-G-1-A		280-250627	280-250337	10/30/2014 19:23	2	TAL DEN	AJS
A:410.4	280-61614-G-1		280-249797		10/27/2014 11:08	1	TAL DEN	SWS
A:SM 2540D	280-61614-E-1		280-249328		10/23/2014 15:11	1	TAL DEN	MW1
A:Total Nitrogen	280-61614-A-1		280-251061		11/03/2014 12:58	1	TAL DEN	RKS

Lab ID: **280-61614-1 MS** **Client ID:** **DBO1-E**

Sample Date/Time: 10/19/2014 10:45 Received Date/Time: 10/23/2014 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:410.4	280-61614-G-1 MS		280-249797		10/27/2014 11:08	1	TAL DEN	SWS

Lab ID: **280-61614-1 MSD** **Client ID:** **DBO1-E**

Sample Date/Time: 10/19/2014 10:45 Received Date/Time: 10/23/2014 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:410.4	280-61614-G-1 MSD		280-249797		10/27/2014 11:08	1	TAL DEN	SWS

Client: Waste Management

Job Number: 280-61614-1

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 280-249646/1-A		280-250496	280-249646	10/25/2014 09:58	1	TAL DEN	JRK
A:625	MB 280-249646/1-A		280-250496	280-249646	10/30/2014 10:56	1	TAL DEN	DCK
A:218.6	MB 440-214352/3		440-214352		10/27/2014 07:35	1	TAL IRV	QPD
P:200.7	MB 280-249488/1-A		280-250454	280-249488	10/25/2014 07:00	1	TAL DEN	CGG
A:200.7 Rev 4.4	MB 280-249488/1-A		280-250454	280-249488	10/29/2014 21:58	1	TAL DEN	LLB
P:245.1	MB 280-250046/1-A		280-251094	280-250046	10/31/2014 14:00	1	TAL DEN	WAW
A:245.1	MB 280-250046/1-A		280-251094	280-250046	10/31/2014 17:26	1	TAL DEN	WAW
P:1664A	MB 280-249994/1-A		280-250054	280-249994	10/28/2014 09:10	1	TAL DEN	CML
A:1664A	MB 280-249994/1-A		280-250054	280-249994	10/28/2014 12:43	1	TAL DEN	CML
A:350.1	MB 280-250207/108		280-250207		10/28/2014 14:49	1	TAL DEN	AFH
P:351.2	MB 280-250411/3-A		280-250673	280-250411	10/29/2014 21:34	1	TAL DEN	MW1
A:351.2	MB 280-250411/3-A		280-250673	280-250411	10/30/2014 22:07	1	TAL DEN	MW1
A:353.2	MB 280-250205/23		280-250205		10/28/2014 14:25	1	TAL DEN	ELJ
P:365.2/365.3/365	MB 280-250337/5-A		280-250627	280-250337	10/29/2014 15:07	1	TAL DEN	AJS
A:365.1	MB 280-250337/5-A		280-250627	280-250337	10/30/2014 18:52	1	TAL DEN	AJS
A:410.4	MB 280-249797/5		280-249797		10/27/2014 11:08	1	TAL DEN	SWS
A:SM 2540D	MB 280-249328/3		280-249328		10/23/2014 15:11	1	TAL DEN	MW1
A:Total Nitrogen	MB 280-251061/1		280-251061		11/03/2014 12:58	1	TAL DEN	RKS

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 280-249646/2-A		280-250496	280-249646	10/25/2014 09:58	1	TAL DEN	JRK
A:625	LCS 280-249646/2-A		280-250496	280-249646	10/30/2014 11:26	1	TAL DEN	DCK
A:218.6	LCS 440-214352/2		440-214352		10/27/2014 07:22	1	TAL IRV	QPD
P:200.7	LCS 280-249488/2-A		280-250454	280-249488	10/25/2014 07:00	1	TAL DEN	CGG
A:200.7 Rev 4.4	LCS 280-249488/2-A		280-250454	280-249488	10/29/2014 22:01	1	TAL DEN	LLB
P:245.1	LCS 280-250046/2-A		280-251094	280-250046	10/31/2014 14:00	1	TAL DEN	WAW
A:245.1	LCS 280-250046/2-A		280-251094	280-250046	10/31/2014 17:28	1	TAL DEN	WAW
P:1664A	LCS 280-249994/2-A		280-250054	280-249994	10/28/2014 09:10	1	TAL DEN	CML
A:1664A	LCS 280-249994/2-A		280-250054	280-249994	10/28/2014 12:43	1	TAL DEN	CML
A:350.1	LCS 280-250207/106		280-250207		10/28/2014 14:45	1	TAL DEN	AFH
P:351.2	LCS 280-250411/1-A		280-250673	280-250411	10/29/2014 21:34	1	TAL DEN	MW1
A:351.2	LCS 280-250411/1-A		280-250673	280-250411	10/30/2014 22:04	1	TAL DEN	MW1
A:353.2	LCS 280-250205/21		280-250205		10/28/2014 14:21	1	TAL DEN	ELJ
P:365.2/365.3/365	LCS 280-250337/3-A		280-250627	280-250337	10/29/2014 15:07	1	TAL DEN	AJS
A:365.1	LCS 280-250337/3-A		280-250627	280-250337	10/30/2014 18:52	1	TAL DEN	AJS
A:410.4	LCS 280-249797/3		280-249797		10/27/2014 11:08	1	TAL DEN	SWS
A:SM 2540D	LCS 280-249328/1		280-249328		10/23/2014 15:11	1	TAL DEN	MW1

Client: Waste Management

Job Number: 280-61614-1

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 280-249646/3-A		280-250496	280-249646	10/25/2014 09:58	1	TAL DEN	JRK
A:625	LCSD 280-249646/3-A		280-250496	280-249646	10/30/2014 11:57	1	TAL DEN	DCK
P:1664A	LCSD 280-249994/3-A		280-250054	280-249994	10/28/2014 09:10	1	TAL DEN	CML
A:1664A	LCSD 280-249994/3-A		280-250054	280-249994	10/28/2014 12:43	1	TAL DEN	CML
A:350.1	LCSD 280-250207/107		280-250207		10/28/2014 14:47	1	TAL DEN	AFH
P:351.2	LCSD 280-250411/2-A		280-250673	280-250411	10/29/2014 21:34	1	TAL DEN	MW1
A:351.2	LCSD 280-250411/2-A		280-250673	280-250411	10/30/2014 22:06	1	TAL DEN	MW1
A:353.2	LCSD 280-250205/22		280-250205		10/28/2014 14:23	1	TAL DEN	ELJ
P:365.2/365.3/365	LCSD 280-250337/4-A		280-250627	280-250337	10/29/2014 15:07	1	TAL DEN	AJS
A:365.1	LCSD 280-250337/4-A		280-250627	280-250337	10/30/2014 18:52	1	TAL DEN	AJS
A:410.4	LCSD 280-249797/4		280-249797		10/27/2014 11:08	1	TAL DEN	SWS
A:SM 2540D	LCSD 280-249328/2		280-249328		10/23/2014 15:11	1	TAL DEN	MW1

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 440-214352/4		440-214352		10/27/2014 07:49	1	TAL IRV	QPD
A:353.2	MRL 280-250205/18		280-250205		10/28/2014 14:06	1	TAL DEN	ELJ

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

Sample Date/Time: 10/20/2014 12:53 Received Date/Time: 10/23/2014 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:218.6	280-61614-J-2 MS		440-214352		10/27/2014 19:18	1	TAL IRV	QPD
P:200.7	280-61610-O-1-B MS		280-250454	280-249488	10/25/2014 07:00	1	TAL DEN	CGG
A:200.7 Rev 4.4	280-61610-O-1-B MS		280-250454	280-249488	10/29/2014 22:12	1	TAL DEN	LLB
P:245.1	280-61614-I-2-C MS		280-251094	280-250046	10/31/2014 14:00	1	TAL DEN	WAW
A:245.1	280-61614-I-2-C MS		280-251094	280-250046	10/31/2014 17:37	1	TAL DEN	WAW
A:350.1	280-61613-D-1 MS		280-250207		10/28/2014 14:51	1	TAL DEN	AFH
P:351.2	280-61477-A-6-B MS		280-250673	280-250411	10/29/2014 21:34	1	TAL DEN	MW1
A:351.2	280-61477-A-6-B MS		280-250673	280-250411	10/30/2014 23:12	1	TAL DEN	MW1
A:353.2	280-61612-E-1 MS		280-250205		10/28/2014 14:29	1	TAL DEN	ELJ
P:365.2/365.3/365	280-61822-A-5-B MS		280-250627	280-250337	10/29/2014 15:07	2	TAL DEN	AJS
A:365.1	280-61822-A-5-B MS		280-250627	280-250337	10/30/2014 19:23	2	TAL DEN	AJS

Client: Waste Management

Job Number: 280-61614-1

Laboratory Chronicle

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

Sample Date/Time: 10/20/2014 12:53 Received Date/Time: 10/23/2014 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:218.6	280-61614-J-2 MSD		440-214352		10/27/2014 19:32	1	TAL IRV	QPD
P:200.7	280-61610-O-1-C MSD		280-250454	280-249488	10/25/2014 07:00	1	TAL DEN	CGG
A:200.7 Rev 4.4	280-61610-O-1-C MSD		280-250454	280-249488	10/29/2014 22:14	1	TAL DEN	LLB
P:245.1	280-61614-I-2-D MSD		280-251094	280-250046	10/31/2014 14:00	1	TAL DEN	WAW
A:245.1	280-61614-I-2-D MSD		280-251094	280-250046	10/31/2014 17:40	1	TAL DEN	WAW
A:350.1	280-61613-D-1 MSD		280-250207		10/28/2014 14:53	1	TAL DEN	AFH
P:351.2	280-61477-A-6-C MSD		280-250673	280-250411	10/29/2014 21:34	1	TAL DEN	MW1
A:351.2	280-61477-A-6-C MSD		280-250673	280-250411	10/30/2014 23:13	1	TAL DEN	MW1
A:353.2	280-61612-E-1 MSD		280-250205		10/28/2014 14:31	1	TAL DEN	ELJ
P:365.2/365.3/365	280-61822-A-5-C MSD		280-250627	280-250337	10/29/2014 15:07	2	TAL DEN	AJS
A:365.1	280-61822-A-5-C MSD		280-250627	280-250337	10/30/2014 19:23	2	TAL DEN	AJS

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

Sample Date/Time: 10/21/2014 13:35 Received Date/Time: 10/23/2014 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:SM 2540D	280-61625-B-1 DU		280-249328		10/23/2014 15:11	1	TAL DEN	MW1

Lab References:

TAL DEN = TestAmerica Denver

TAL IRV = TestAmerica Irvine

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Honolulu
4429 Malaai St. #104
Honolulu, HI 96818
Tel: 808-486-5227

TestAmerica Job ID: HXJ0063
Client Project/Site: 60147675.02
Client Project Description: AECOM, WGSL STORMWATER

For:
TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002

Attn: Betsy Sara

Authorized for release by:
10/28/2014 5:57:21 PM

Craig O. Pilialoha, Project Manager
808-486-5227
Craig.Pilialoha@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: 60147675.02

TestAmerica Job ID: HXJ0063

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
CFL	Contains Free Liquid
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: 60147675.02

TestAmerica Job ID: HXJ0063

Job ID: HXJ0063

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 5.4 degrees C.

TestAmerica has determined 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.

Sample Summary

Client: TestAmerica Denver
Project/Site: 60147675.02

TestAmerica Job ID: HXJ0063

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
HXJ0063-01	DB01-E	Water - NonPotable	10/19/14 10:45	10/20/14 09:20

Detection Summary

Client: TestAmerica Denver
Project/Site: 60147675.02

TestAmerica Job ID: HXJ0063

Client Sample ID: DB01-E

Lab Sample ID: HXJ0063-01

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
BOD - 5 Day	12.4		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: 60147675.02

TestAmerica Job ID: HXJ0063

Client Sample ID: DB01-E
Date Collected: 10/19/14 10:45
Date Received: 10/20/14 09:20

Lab Sample ID: HXJ0063-01
Matrix: Water - NonPotable

Method: SM5210B - General Chemistry Parameters

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
BOD - 5 Day	12.4		2.00		mg/L		10/20/14 17:07	10/25/14 18:17	1.00

QC Sample Results

Client: TestAmerica Denver
Project/Site: 60147675.02

TestAmerica Job ID: HXJ0063

Method: SM5210B - General Chemistry Parameters

Lab Sample ID: 14J0040-BLK1
Matrix: Water - NonPotable
Analysis Batch: 14J0040

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 14J0040_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
BOD - 5 Day	ND		2.00		mg/L		10/20/14 16:53	10/25/14 17:58	1.00

Lab Sample ID: 14J0040-BS1
Matrix: Water - NonPotable
Analysis Batch: 14J0040

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 14J0040_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
BOD - 5 Day	198	177		mg/L		89	85 - 115

Lab Sample ID: 14J0040-DUP1
Matrix: Water - NonPotable
Analysis Batch: 14J0040

Client Sample ID: Duplicate
Prep Type: Total
Prep Batch: 14J0040_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
BOD - 5 Day	4.00		3.95		mg/L		1	20

QC Association Summary

Client: TestAmerica Denver
Project/Site: 60147675.02

TestAmerica Job ID: HXJ0063

WetChem

Analysis Batch: 14J0040

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
14J0040-BLK1	Method Blank	Total	Water - NonPotable	SM5210B	14J0040_P
14J0040-BS1	Lab Control Sample	Total	Water - NonPotable	SM5210B	14J0040_P
14J0040-DUP1	Duplicate	Total	Water - NonPotable	SM5210B	14J0040_P
HXJ0063-01	DB01-E	Total	Water - NonPotable	SM5210B	14J0040_P

Prep Batch: 14J0040_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
14J0040-BLK1	Method Blank	Total	Water - NonPotable	Default Prep GenChem	
14J0040-BS1	Lab Control Sample	Total	Water - NonPotable	Default Prep GenChem	
14J0040-DUP1	Duplicate	Total	Water - NonPotable	Default Prep GenChem	
HXJ0063-01	DB01-E	Total	Water - NonPotable	Default Prep GenChem	

Lab Chronicle

Client: TestAmerica Denver
Project/Site: 60147675.02

TestAmerica Job ID: HXJ0063

Client Sample ID: DB01-E

Date Collected: 10/19/14 10:45
Date Received: 10/20/14 09:20

Lab Sample ID: HXJ0063-01

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	14J0040_P	10/20/14 17:07	ENM	TAL HON
Total	Analysis	GenChem SM5210B		1.00	14J0040	10/25/14 18:17	ENM	TAL HON

Laboratory References:

TAL HON = TestAmerica Honolulu, 4429 Malaai St. #104, Honolulu, HI 96818, TEL 808-486-5227

Certification Summary

Client: TestAmerica Denver
Project/Site: 60147675.02

TestAmerica Job ID: HXJ0063

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
USDA	Federal		HON-S-206	01-31-15

Method Summary

Client: TestAmerica Denver
Project/Site: 60147675.02

TestAmerica Job ID: HXJ0063

Method	Method Description	Protocol	Laboratory
SM5210B	General Chemistry Parameters		TAL HON

Protocol References:

Laboratory References:

TAL HON = TestAmerica Honolulu, 4429 Malaai St. #104, Honolulu, HI 96818, TEL 808-486-5227

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

HXJ0063

TAL-4124-280 (0508)

Client: Waste Management / AECOM	Project Manager: Mark Hofferbert	Date	Chain of Custody Number: 134142
Address: 1001 Bishop St. Suite 1600	Telephone Number (Area Code)/Fax Number: 808-523-8874 / 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.			

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 A/B Oil & Grease	SM5210B BOD	218.6 Hex Chrom	SM2540D TSS	625 SVOCs	410.4 COD	365.4 T. Phos	350.1 Ammonia	351.2 TKN	353.2 NO2+NO3	SM4500N T. Nitrogen	200.7/8 Metals	245.1/7 Mercury	Special Instructions/ Conditions of Receipt
D801-E	10/9/14	1045		X			4	4	1				X	X	X	X	X	X	X	X	X	X	X	X	X	HXJ0063-01

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: Didier Dumas	10/20/14	9:20	1. Received By: David Buchli intact no ice 5.4°C	10/20/14	9:20
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments: BOD - Hach Chem preservation at TA-Honolulu; SVOCs: a-terpineol, benzoic acid, p-cresol, pentachlorophenol, phenol; Metals: As, Cd, ~~Fe~~ Fe, Pb, Hg, Se, Ag, Tl

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica

Destination Laboratory Denver

Destination Laboratory PM (if known) _____

Drop Shipment Receipt Checklist

Client Name: AECOM **Date/ Time Received:** 10/20/14 9:20

Received By: David Buchli

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 ice
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 °C

Samples drop shipped on ice? Yes ☑ No ☐ Type: wet ice

Date of drop shipment: 10/21/14

Comments/ Sampling Handling Notes:

HEXAVALENT CHROMIUM pH CHECK
(EPA 7199/218.6)

Date: 10/20/14
Analyst: ENM

NH4 Buffer: 20 Drops
0.02N H2SO4: N/A
Conc. H2SO4: N/A

Meter ID: ORNI
pH 4 Buffer:
pH 7 Buffer: 7.05 (ICV)
pH 10 Buffer:

pH Criteria : 9.0 - 9.5

CALIBRATION CURVE SLOPE = 101.1%

WORK ORDER	MATRIX	Initial pH	Adjusted pH	Filtered Field/Lab	COMMENTS
AECOM	WATER	8.114	9.1467	LAB	WGSL STORM WATER
					10/19/14 1045

[redacted]

Chain of Custody Record

TAL-4124-280 (0508)

Sampler ID _____

Temperature on Receipt 1.1, 2.2+0

R-6 Transfer by [illegible] 10/23/[redacted]

Drinking Water? Yes ☐ No ☐

Te

THE L

280-61614 Chain of Custody

Client: Waste Management / AECOM	Project Manager: Mark Hofferbert		Chain of Custody Number: 134142
Address: 1001 Bishop St. Suite 1600	Telephone Number (Area Code)/Fax Number: 808-523-8874 / 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.			

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 A/B Oil & Grease	SM5210B BOD	218.6 HexChrom	SM2540D TSS	625 SVOCs	410.4 COD	365.4 T. Phos	350.1 Ammonia	351.1/2 TKN	353.2 NO_2-NO_3	SM4500N T. Nitrogen	200.7/8 Metals	245.1/2 Mercury	Special Instructions/ Conditions of Receipt
DB01-E	10/19/14	1045		X			4	4	1				X	X	X	X	X	X	X	X	X	X	X	X	X	

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: Didier Dumas [signature]	10/20/14	9:20	1. Received By: David Buchli intact no ice 5.4°C	10/20/14	9:20
2. Relinquished By			2. Received By: [signature]	10/23/14 ~~10/22~~ 10	930
3. Relinquished By			3. Received By		

Comments: BOD: HexChrom preservation at TA-Honolulu; SVOCs: a-terpineol, benzoic acid, p-cresol, pentachlorophenol, phenol; Metals: As, Cd, ~~Fed~~ Fe, Pb, Hg, Se, Ag, Zn

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

11/07/2014

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: 168572
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 Loftig	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 SVOCs*	410.4 COD	365.1 T. Phos	350.1 Ammonia	353.2 NO_3-NO_2	SM4500N T. Nitrogen	200.7, 245.1 Metals	SM5210 B BOD	218.6 Cr VI	TKN	Special Instructions/ Conditions of Receipt
DB01-E	10/20/14	1253		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: Timothy Ashton [signature]	10/20/14	1455	1. Received By: [signature] Justin Loftig Wet S2 TAKon	10/20/14	1450
2. Relinquished By:			2. Received By: [signature]	10/23/14	930
3. Relinquished By:			3. Received By:		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

11/07/2014

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: WGSL - DB01E (Stormwater)

Site No.: 995 Sample Point: DB-01E (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 ____
10 20 14	8.46						

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/SLIGHTLY TURBID Odor: EARTHY Color: LIGHT BROWN Other: ____

Weather Conditions (required daily, or as conditions change): Direction/Speed: NNE @ 5 MPH Outlook: OVERCAST Precipitation: Y or N

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

FIELD COMMENTS

	Time	pH	Flow East	Flow West
A	1253	8.46	4.75 in	4.50 in
B	1308	8.30	4.75 in	4.50 in
C	1323	8.08	4.50 in	4.25 in
D	1338	8.05	4.25 in	4.25 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
10/20/14	TIMOTHY ASHTON	[signature]	AECOM

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

Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-61614-1

Login Number: 61614
List Number: 1
Creator: Orfield, Taylor C

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
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.	False	Refer to job narrative for details
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	False	Refer to job narrative for details
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.	False	REFER TO CUR
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: 280-61614-1

Login Number: 61614
List Number: 2
Creator: Salas, Margarita

List Source: TestAmerica Irvine
List Creation: 10/25/14 11:11 AM

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").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 280-56309-1

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
7/3/2014 4:12 PM

Betsy A Sara, Project Manager II
4955 Yarrow Street, Arvada, CO, 80002
(303)736-0189
betsy.sara@testamericainc.com
07/03/2014
Revision: 1

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: 280-56309-1

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 06/06/2014; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 5.6 C.

Holding Times

Method 218.6 requires samples to be preserved to a pH in the range of 9.3-9.7. The sample DB01-W was incorrectly preserved by TA Honolulu to a pH of 9.19 due to misinformation from TA Irvine. The pH was off by 0.2 units. The sample was further preserved to the appropriate pH in the laboratory and data was flagged with H qualifier.

All other holding times were met.

Method Blanks

Total Iron Method 200.7, Total Mercury Method 245.1, 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 625 laboratory control sample and the laboratory control sample duplicate (LCS/LCSD) recovered below the lower control limit for Hexachlorocyclopentadiene. Because Hexachlorocyclopentadiene has been identified as a poor performer, re-extraction and reanalysis were not performed.

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 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 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. Because the corresponding Laboratory Control Sample and the Method Blank sample were within control limits, no corrective action was taken.

The Matrix Spikes and Matrix Spike Duplicates performed on samples from other clients exhibited MS and/or MSD recoveries outside control limits for Ammonia Method 350.1 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.

General Comments

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

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 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

This submission was revised to further explain the Hexavalent Chromium pH issue per the client's request.

EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-56309-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
280-56309-1	**DB01-W**					
Mercury		0.000059	J B	0.00020	mg/L	245.1
Field pH		7.89			SU	Field Sampling
Ammonia		0.092	J	0.10	mg/L	350.1
Nitrogen, Kjeldahl		0.45	J	0.50	mg/L	351.2
Nitrate Nitrite as N		8.4		0.10	mg/L	353.2
Phosphorus, Total		0.29	B	0.050	mg/L	365.1
Chemical Oxygen Demand		22	B	20	mg/L	410.4
Total Suspended Solids		22		4.0	mg/L	SM 2540D
Nitrogen, Total		8.9		0.10	mg/L	Total Nitrogen
Dissolved						
Chromium, hexavalent		3.5	H	1.0	ug/L	218.6
Total Recoverable						
Iron		1.9	B	0.10	mg/L	200.7 Rev 4.4
Zinc		0.069		0.020	mg/L	200.7 Rev 4.4

METHOD SUMMARY

Client: Waste Management | Job Number: 280-56309-1

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: 280-56309-1

Method	Analyst	Analyst ID
40CFR136A 625	Kiekel, Daniel C	DCK
EPA 200.7 Rev 4.4	Scott, Samantha J	SJS
EPA 245.1	Broander, Laura L	LLB
EPA Field Sampling	Saraubon, Phakchaya	PS
1664A 1664A	Benson, Alex F	AFB
MCAWW 350.1	Lawrence, Caitlyn M	CML
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	Woolley, Mark -	MW1
EPA Total Nitrogen	Sullivan, Roxanne K	RKS
EPA 218.6	Welch, Raquel	RW

SAMPLE SUMMARY

Client: Waste Management

Job Number: 280-56309-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-56309-1	DB01-W	Water	06/03/2014 0945	06/06/2014 0900

SAMPLE RESULTS

Client: Waste Management

Job Number: 280-56309-1

Client Sample ID: **DB01-W**

Lab Sample ID: 280-56309-1

Client Matrix: Water

Date Sampled: 06/03/2014 0945

Date Received: 06/06/2014 0900

625 Semivolatile Organic Compounds (GC/MS)

Analysis Method:	625	Analysis Batch:	280-229973	Instrument ID:	SMS_B2
Prep Method:	625	Prep Batch:	280-229290	Lab File ID:	B2-6130.D
Dilution:	1.0			Initial Weight/Volume:	1048.3 mL
Analysis Date:	06/13/2014 0556			Final Weight/Volume:	1 mL
Prep Date:	06/09/2014 1535			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	89		50 - 120
2-Fluorobiphenyl	82		36 - 120
2-Fluorophenol	82		30 - 120
Nitrobenzene-d5	82		45 - 120
Phenol-d5	83		36 - 120
Terphenyl-d14	74		41 - 120

Client: Waste Management

Job Number: 280-56309-1

Client Sample ID: **DB01-W**

Lab Sample ID: 280-56309-1

Client Matrix: Water

Date Sampled: 06/03/2014 0945

Date Received: 06/06/2014 0900

218.6 Chromium, Hexavalent (Ion Chromatography)-Dissolved

Analysis Method:	218.6	Analysis Batch:	440-187414	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:	06/09/2014 1838			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1000 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chromium, hexavalent	3.5	H	0.25	1.0

Client: Waste Management

Job Number: 280-56309-1

Client Sample ID: **DB01-W**

Lab Sample ID: 280-56309-1
Client Matrix: Water

Date Sampled: 06/03/2014 0945
Date Received: 06/06/2014 0900

200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	280-229629	Instrument ID:	MT_026
Prep Method:	200.7	Prep Batch:	280-229230	Lab File ID:	26A061114G.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/11/2014 0354			Final Weight/Volume:	50 mL
Prep Date:	06/10/2014 1300				

Analyte	Result (mg/L)	Qualifier	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	0.069		0.0045	0.020
Silver	ND		0.00093	0.010

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	280-230134	Instrument ID:	MT_026
Prep Method:	200.7	Prep Batch:	280-229230	Lab File ID:	26a061214c.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/12/2014 2022			Final Weight/Volume:	50 mL
Prep Date:	06/10/2014 1300				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Iron	1.9	B	0.022	0.10

245.1 Mercury (CVAA)

Analysis Method:	245.1	Analysis Batch:	280-229417	Instrument ID:	MT_034
Prep Method:	245.1	Prep Batch:	280-229174	Lab File ID:	140609taa.txt
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	06/09/2014 1755			Final Weight/Volume:	30 mL
Prep Date:	06/09/2014 1310				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Mercury	0.000059	J B	0.000027	0.00020

General Chemistry

Client Sample ID: **DB01-W**

Lab Sample ID: 280-56309-1

Client Matrix: Water

Date Sampled: 06/03/2014 0945

Date Received: 06/06/2014 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
HEM	ND		mg/L	1.6	5.0	1.0	1664A
Analysis Batch: 280-230195	Analysis Date: 06/13/2014 1418						
Prep Batch: 280-230112	Prep Date: 06/13/2014 0836						
Ammonia	0.092	J	mg/L	0.022	0.10	1.0	350.1
Analysis Batch: 280-229833	Analysis Date: 06/11/2014 2049						
Nitrogen, Kjeldahl	0.45	J	mg/L	0.18	0.50	1.0	351.2
Analysis Batch: 280-230084	Analysis Date: 06/13/2014 0036						
Prep Batch: 280-230046	Prep Date: 06/12/2014 1836						
Nitrate Nitrite as N	8.4		mg/L	0.019	0.10	1.0	353.2
Analysis Batch: 280-230330	Analysis Date: 06/14/2014 1233						
Phosphorus, Total	0.29	B	mg/L	0.0050	0.050	1.0	365.1
Analysis Batch: 280-230204	Analysis Date: 06/13/2014 1405						
Prep Batch: 280-229630	Prep Date: 06/11/2014 0927						
Chemical Oxygen Demand	22	B	mg/L	4.1	20	1.0	410.4
Analysis Batch: 280-229175	Analysis Date: 06/09/2014 0824						
Total Suspended Solids	22		mg/L	1.1	4.0	1.0	SM 2540D
Analysis Batch: 280-229501	Analysis Date: 06/10/2014 1526						
Nitrogen, Total	8.9		mg/L	0.042	0.10	1.0	Total Nitrogen
Analysis Batch: 280-231242	Analysis Date: 06/20/2014 0953						

Field Service / Mobile Lab

Client Sample ID: **DB01-W**

Lab Sample ID: 280-56309-1

Client Matrix: Water

Date Sampled: 06/03/2014 0945

Date Received: 06/06/2014 0900

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed Date Prepared
Field pH	7.89		SU	1.0	Field Sampling	280-229380	06/03/2014 1345

DATA REPORTING QUALIFIERS

Client: Waste Management

Job Number: 280-56309-1

Lab Section	Qualifier	Description
GC/MS Semi VOA		
	*	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.
HPLC/IC		
	H	Sample was prepped or analyzed beyond the specified holding time
Metals		
	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.
	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: 280-56309-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 280-229290					
LCS 280-229290/2-A	Lab Control Sample	T	Water	625	
LCSD 280-229290/3-A	Lab Control Sample Duplicate	T	Water	625	
MB 280-229290/1-A	Method Blank	T	Water	625	
280-56309-1	DB01-W	T	Water	625	
Analysis Batch:280-229973					
LCS 280-229290/2-A	Lab Control Sample	T	Water	625	280-229290
LCSD 280-229290/3-A	Lab Control Sample Duplicate	T	Water	625	280-229290
MB 280-229290/1-A	Method Blank	T	Water	625	280-229290
280-56309-1	DB01-W	T	Water	625	280-229290

Report Basis
T = Total

Client: Waste Management

Job Number: 280-56309-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-229174					
LCS 280-229174/2-A	Lab Control Sample	T	Water	245.1	
MB 280-229174/1-A	Method Blank	T	Water	245.1	
280-56188-C-1-D MS	Matrix Spike	T	Water	245.1	
280-56188-C-1-E MSD	Matrix Spike Duplicate	T	Water	245.1	
280-56309-1	DB01-W	T	Water	245.1	
Prep Batch: 280-229230					
LCS 280-229230/2-A	Lab Control Sample	R	Water	200.7	
MB 280-229230/1-A	Method Blank	R	Water	200.7	
280-56309-1	DB01-W	R	Water	200.7	
280-56347-A-1-B MS	Matrix Spike	R	Water	200.7	
280-56347-A-1-C MSD	Matrix Spike Duplicate	R	Water	200.7	
Analysis Batch:280-229417					
LCS 280-229174/2-A	Lab Control Sample	T	Water	245.1	280-229174
MB 280-229174/1-A	Method Blank	T	Water	245.1	280-229174
280-56188-C-1-D MS	Matrix Spike	T	Water	245.1	280-229174
280-56188-C-1-E MSD	Matrix Spike Duplicate	T	Water	245.1	280-229174
280-56309-1	DB01-W	T	Water	245.1	280-229174
Analysis Batch:280-229629					
LCS 280-229230/2-A	Lab Control Sample	R	Water	200.7 Rev 4.4	280-229230
MB 280-229230/1-A	Method Blank	R	Water	200.7 Rev 4.4	280-229230
280-56309-1	DB01-W	R	Water	200.7 Rev 4.4	280-229230
280-56347-A-1-B MS	Matrix Spike	R	Water	200.7 Rev 4.4	280-229230
280-56347-A-1-C MSD	Matrix Spike Duplicate	R	Water	200.7 Rev 4.4	280-229230
Analysis Batch:280-229897					
LCS 280-229230/2-A	Lab Control Sample	R	Water	200.7 Rev 4.4	280-229230
MB 280-229230/1-A	Method Blank	R	Water	200.7 Rev 4.4	280-229230
280-56309-1	DB01-W	R	Water	200.7 Rev 4.4	280-229230
280-56347-A-1-B MS	Matrix Spike	R	Water	200.7 Rev 4.4	280-229230
280-56347-A-1-C MSD	Matrix Spike Duplicate	R	Water	200.7 Rev 4.4	280-229230
Analysis Batch:280-230134					
LCS 280-229230/2-A	Lab Control Sample	R	Water	200.7 Rev 4.4	280-229230
MB 280-229230/1-A	Method Blank	R	Water	200.7 Rev 4.4	280-229230
280-56309-1	DB01-W	R	Water	200.7 Rev 4.4	280-229230
280-56347-A-1-B MS	Matrix Spike	R	Water	200.7 Rev 4.4	280-229230
280-56347-A-1-C MSD	Matrix Spike Duplicate	R	Water	200.7 Rev 4.4	280-229230

Report Basis

R = Total Recoverable

T = Total

Client: Waste Management

Job Number: 280-56309-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Field Service / Mobile Lab					
Analysis Batch:280-229380					
280-56309-1	DB01-W	T	Water	Field Sampling	

Report Basis
T = Total

Client: Waste Management

Job Number: 280-56309-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-229175					
LCS 280-229175/3	Lab Control Sample	T	Water	410.4	
LCSD 280-229175/4	Lab Control Sample Duplicate	T	Water	410.4	
MB 280-229175/5	Method Blank	T	Water	410.4	
280-56309-1	DB01-W	T	Water	410.4	
280-56309-1MS	Matrix Spike	T	Water	410.4	
280-56309-1MSD	Matrix Spike Duplicate	T	Water	410.4	
Analysis Batch:280-229501					
LCS 280-229501/1	Lab Control Sample	T	Water	SM 2540D	
LCSD 280-229501/2	Lab Control Sample Duplicate	T	Water	SM 2540D	
MB 280-229501/3	Method Blank	T	Water	SM 2540D	
280-56309-1	DB01-W	T	Water	SM 2540D	
280-56309-1DU	Duplicate	T	Water	SM 2540D	
Prep Batch: 280-229630					
LCS 280-229630/3-A	Lab Control Sample	T	Water	365.2/365.3/365	
LCSD 280-229630/4-A	Lab Control Sample Duplicate	T	Water	365.2/365.3/365	
MB 280-229630/5-A	Method Blank	T	Water	365.2/365.3/365	
280-56309-1	DB01-W	T	Water	365.2/365.3/365	
280-56309-1MS	Matrix Spike	T	Water	365.2/365.3/365	
280-56309-1MSD	Matrix Spike Duplicate	T	Water	365.2/365.3/365	
Analysis Batch:280-229833					
LCS 280-229833/70	Lab Control Sample	T	Water	350.1	
LCSD 280-229833/71	Lab Control Sample Duplicate	T	Water	350.1	
MB 280-229833/72	Method Blank	T	Water	350.1	
280-56309-1	DB01-W	T	Water	350.1	
280-56365-A-9 MS	Matrix Spike	T	Water	350.1	
280-56365-A-9 MSD	Matrix Spike Duplicate	T	Water	350.1	
Prep Batch: 280-230046					
LCS 280-230046/1-A	Lab Control Sample	T	Water	351.2	
LCSD 280-230046/2-A	Lab Control Sample Duplicate	T	Water	351.2	
MB 280-230046/3-A	Method Blank	T	Water	351.2	
280-56144-F-10-C MS	Matrix Spike	T	Water	351.2	
280-56144-F-10-D MSD	Matrix Spike Duplicate	T	Water	351.2	
280-56309-1	DB01-W	T	Water	351.2	
Analysis Batch:280-230084					
LCS 280-230046/1-A	Lab Control Sample	T	Water	351.2	280-230046
LCSD 280-230046/2-A	Lab Control Sample Duplicate	T	Water	351.2	280-230046
MB 280-230046/3-A	Method Blank	T	Water	351.2	280-230046
280-56144-F-10-C MS	Matrix Spike	T	Water	351.2	280-230046
280-56144-F-10-D MSD	Matrix Spike Duplicate	T	Water	351.2	280-230046
280-56309-1	DB01-W	T	Water	351.2	280-230046

Client: Waste Management

Job Number: 280-56309-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Prep Batch: 280-230112					
LCS 280-230112/2-A	Lab Control Sample	T	Water	1664A	
LCSD 280-230112/3-A	Lab Control Sample Duplicate	T	Water	1664A	
MB 280-230112/1-A	Method Blank	T	Water	1664A	
280-56309-1	DB01-W	T	Water	1664A	
Analysis Batch:280-230195					
LCS 280-230112/2-A	Lab Control Sample	T	Water	1664A	280-230112
LCSD 280-230112/3-A	Lab Control Sample Duplicate	T	Water	1664A	280-230112
MB 280-230112/1-A	Method Blank	T	Water	1664A	280-230112
280-56309-1	DB01-W	T	Water	1664A	280-230112
Analysis Batch:280-230204					
LCS 280-229630/3-A	Lab Control Sample	T	Water	365.1	280-229630
LCSD 280-229630/4-A	Lab Control Sample Duplicate	T	Water	365.1	280-229630
MB 280-229630/5-A	Method Blank	T	Water	365.1	280-229630
280-56309-1	DB01-W	T	Water	365.1	280-229630
280-56309-1MS	Matrix Spike	T	Water	365.1	280-229630
280-56309-1MSD	Matrix Spike Duplicate	T	Water	365.1	280-229630
Analysis Batch:280-230330					
LCS 280-230330/20	Lab Control Sample	T	Water	353.2	
LCSD 280-230330/21	Lab Control Sample Duplicate	T	Water	353.2	
MB 280-230330/22	Method Blank	T	Water	353.2	
280-56283-L-1 MS	Matrix Spike	T	Water	353.2	
280-56283-L-1 MSD	Matrix Spike Duplicate	T	Water	353.2	
280-56309-1	DB01-W	T	Water	353.2	
Analysis Batch:280-231242					
MB 280-231242/1	Method Blank	T	Water	Total Nitrogen	
280-56309-1	DB01-W	T	Water	Total Nitrogen	

Report Basis

T = Total

Client: Waste Management

Job Number: 280-56309-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
HPLC/IC					
Analysis Batch:440-187414					
LCS 440-187414/2	Lab Control Sample	T	Water	218.6	
MB 440-187414/3	Method Blank	T	Water	218.6	
280-56309-1	DB01-W	D	Water	218.6	
280-56309-1MS	Matrix Spike	D	Water	218.6	
280-56309-1MSD	Matrix Spike Duplicate	D	Water	218.6	

Report Basis

D = Dissolved

T = Total

Client: Waste Management

Job Number: 280-56309-1

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
280-56309-1	DB01-W	89	82	82	82	83	74
MB 280-229290/1-A		86	83	82	83	83	96
LCS 280-229290/2-A		96	82	85	82	84	92
LCSD 280-229290/3-A		94	81	85	84	84	89

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: 280-56309-1

Method Blank - Batch: 280-229290

Method: 625
Preparation: 625

Lab Sample ID:	MB 280-229290/1-A	Analysis Batch:	280-229973	Instrument ID:	SMS_B2
Client Matrix:	Water	Prep Batch:	280-229290	Lab File ID:	B2-6108.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/12/2014 1857	Units:	mg/L	Final Weight/Volume:	1 mL
Prep Date:	06/09/2014 1535			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	86	50 - 120
2-Fluorobiphenyl	83	36 - 120
2-Fluorophenol	82	30 - 120
Nitrobenzene-d5	83	45 - 120
Phenol-d5	83	36 - 120
Terphenyl-d14	96	41 - 120

Client: Waste Management

Job Number: 280-56309-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-229290

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-229290/2-A	Analysis Batch:	280-229973	Instrument ID:	SMS_B2
Client Matrix:	Water	Prep Batch:	280-229290	Lab File ID:	B2-6109.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/12/2014 1927	Units:	mg/L	Final Weight/Volume:	1 mL
Prep Date:	06/09/2014 1535			Injection Volume:	0.5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-229290/3-A	Analysis Batch:	280-229973	Instrument ID:	SMS_B2
Client Matrix:	Water	Prep Batch:	280-229290	Lab File ID:	B2-6110.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/12/2014 1957	Units:	mg/L	Final Weight/Volume:	1 mL
Prep Date:	06/09/2014 1535			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
1,2,4-Trichlorobenzene	80	77	44 - 120	3	35		
1,2-Dichlorobenzene	79	76	32 - 120	4	42		
1,3-Dichlorobenzene	77	75	23 - 120	3	47		
1,4-Dichlorobenzene	77	75	24 - 120	2	49		
2,2'-Oxybis(1-chloropropane)	81	81	37 - 120	0	30		
2,4,6-Trichlorophenol	92	92	51 - 120	1	30		
2,4-Dichlorophenol	90	89	46 - 120	1	30		
2,4-Dimethylphenol	63	62	44 - 119	1	35		
2,4-Dinitrophenol	89	89	20 - 121	0	61		
2,4-Dinitrotoluene	99	96	57 - 120	3	35		
2,6-Dinitrotoluene	94	94	56 - 120	0	30		
2-Chloronaphthalene	78	76	60 - 118	3	30		
2-Chlorophenol	91	89	34 - 120	2	30		
2-Methylphenol	83	83	38 - 120	0	35		
2-Nitrophenol	98	98	47 - 120	0	30		
3,3'-Dichlorobenzidine	55	52	18 - 120	5	50	J	J
4,6-Dinitro-2-methylphenol	100	96	40 - 120	5	55		
4-Bromophenyl phenyl ether	88	84	53 - 120	4	34		
4-Chloro-3-methylphenol	86	85	57 - 120	1	30		
4-Chlorophenyl phenyl ether	83	82	51 - 120	1	30		
4-Nitrophenol	88	87	53 - 120	1	42		
Acenaphthene	80	80	47 - 120	0	30		
Acenaphthylene	78	77	33 - 120	2	30		
Anthracene	87	84	52 - 120	4	30		
Benzidine	33	31	10 - 218	7	50		
Benzo[a]anthracene	92	88	54 - 120	5	30		
Benzo[a]pyrene	87	83	39 - 120	5	73		
Benzo[b]fluoranthene	93	88	51 - 120	6	90		
Benzo[g,h,i]perylene	92	87	48 - 120	5	64		
Benzo[k]fluoranthene	94	89	49 - 120	5	50		
Bis(2-chloroethoxy)methane	87	88	50 - 120	1	30		
Bis(2-chloroethyl)ether	90	87	35 - 120	3	30		
Bis(2-ethylhexyl) phthalate	94	91	56 - 120	4	30		
Butyl benzyl phthalate	93	90	53 - 120	3	30		
Chrysene	93	89	51 - 120	4	30		
Dibenz(a,h)anthracene	95	86	45 - 120	10	78		

Client: Waste Management

Job Number: 280-56309-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-229290

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-229290/2-A	Analysis Batch:	280-229973	Instrument ID:	SMS_B2
Client Matrix:	Water	Prep Batch:	280-229290	Lab File ID:	B2-6109.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/12/2014 1927	Units:	mg/L	Final Weight/Volume:	1 mL
Prep Date:	06/09/2014 1535			Injection Volume:	0.5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-229290/3-A	Analysis Batch:	280-229973	Instrument ID:	SMS_B2
Client Matrix:	Water	Prep Batch:	280-229290	Lab File ID:	B2-6110.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/12/2014 1957	Units:	mg/L	Final Weight/Volume:	1 mL
Prep Date:	06/09/2014 1535			Injection Volume:	0.5 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Diethyl phthalate	92	90	59 - 114	2	30		
Dimethyl phthalate	91	89	58 - 112	2	30		
Di-n-butyl phthalate	94	91	57 - 118	4	30		
Di-n-octyl phthalate	97	94	56 - 120	3	30		
Fluoranthene	92	90	58 - 120	3	30		
Fluorene	83	83	59 - 120	0	30		
Hexachlorobenzene	92	89	53 - 120	4	30		
Hexachlorobutadiene	74	71	27 - 116	4	41		
Hexachlorocyclopentadiene	3	4	10 - 120	18	82	J *	J *
Hexachloroethane	76	72	40 - 113	5	52		
Indeno[1,2,3-cd]pyrene	93	89	50 - 120	5	73		
Isophorone	80	79	50 - 120	1	30		
Naphthalene	82	80	37 - 120	2	30		
n-Decane	66	63	28 - 120	5	61		
Nitrobenzene	88	88	46 - 120	0	30		
N-Nitrosodimethylamine	83	82	37 - 120	1	30		
N-Nitrosodi-n-propylamine	85	84	50 - 120	0	30		
N-Nitrosodiphenylamine	83	80	46 - 203	3	50		
p-Cresol	84	85	42 - 120	0	39		
Pentachlorophenol	90	88	46 - 120	2	30		
Phenanthrene	89	86	54 - 120	2	30		
Phenol	88	87	37 - 112	1	30		
Pyrene	92	88	55 - 115	5	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
2,4,6-Tribromophenol	96	94	50 - 120
2-Fluorobiphenyl	82	81	36 - 120
2-Fluorophenol	85	85	30 - 120
Nitrobenzene-d5	82	84	45 - 120
Phenol-d5	84	84	36 - 120
Terphenyl-d14	92	89	41 - 120

Client: Waste Management

Job Number: 280-56309-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-229290

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-229290/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-229290/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	06/12/2014 1927			Analysis Date:	06/12/2014 1957
Prep Date:	06/09/2014 1535			Prep Date:	06/09/2014 1535
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	0.0639		0.0619	
1,2-Dichlorobenzene	0.0800	0.0800	0.0634		0.0611	
1,3-Dichlorobenzene	0.0800	0.0800	0.0619		0.0600	
1,4-Dichlorobenzene	0.0800	0.0800	0.0616		0.0602	
2,2'-Oxybis(1-chloropropane)	0.0800	0.0800	0.0647		0.0648	
2,4,6-Trichlorophenol	0.0800	0.0800	0.0739		0.0734	
2,4-Dichlorophenol	0.0800	0.0800	0.0721		0.0712	
2,4-Dimethylphenol	0.0800	0.0800	0.0501		0.0495	
2,4-Dinitrophenol	0.160	0.160	0.142		0.143	
2,4-Dinitrotoluene	0.0800	0.0800	0.0795		0.0769	
2,6-Dinitrotoluene	0.0800	0.0800	0.0752		0.0753	
2-Chloronaphthalene	0.0800	0.0800	0.0628		0.0610	
2-Chlorophenol	0.0800	0.0800	0.0731		0.0715	
2-Methylphenol	0.0800	0.0800	0.0661		0.0661	
2-Nitrophenol	0.0800	0.0800	0.0787		0.0785	
3,3'-Dichlorobenzidine	0.0800	0.0800	0.0441	J	0.0420	J
4,6-Dinitro-2-methylphenol	0.160	0.160	0.161		0.153	
4-Bromophenyl phenyl ether	0.0800	0.0800	0.0702		0.0673	
4-Chloro-3-methylphenol	0.0800	0.0800	0.0688		0.0683	
4-Chlorophenyl phenyl ether	0.0800	0.0800	0.0664		0.0656	
4-Nitrophenol	0.160	0.160	0.141		0.139	
Acenaphthene	0.0800	0.0800	0.0641		0.0639	
Acenaphthylene	0.0800	0.0800	0.0628		0.0615	
Anthracene	0.0800	0.0800	0.0696		0.0669	
Benzidine	0.0800	0.0800	ND		ND	
Benzo[a]anthracene	0.0800	0.0800	0.0737		0.0704	
Benzo[a]pyrene	0.0800	0.0800	0.0697		0.0660	
Benzo[b]fluoranthene	0.0800	0.0800	0.0745		0.0702	
Benzo[g,h,i]perylene	0.0800	0.0800	0.0738		0.0700	
Benzo[k]fluoranthene	0.0800	0.0800	0.0751		0.0713	
Bis(2-chloroethoxy)methane	0.0800	0.0800	0.0699		0.0703	
Bis(2-chloroethyl)ether	0.0800	0.0800	0.0717		0.0699	
Bis(2-ethylhexyl) phthalate	0.0800	0.0800	0.0756		0.0729	
Butyl benzyl phthalate	0.0800	0.0800	0.0746		0.0722	
Chrysene	0.0800	0.0800	0.0743		0.0712	
Dibenz(a,h)anthracene	0.0800	0.0800	0.0758		0.0688	
Diethyl phthalate	0.0800	0.0800	0.0738		0.0724	
Dimethyl phthalate	0.0800	0.0800	0.0729		0.0714	
Di-n-butyl phthalate	0.0800	0.0800	0.0751		0.0724	

Client: Waste Management

Job Number: 280-56309-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-229290

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-229290/2-A	Units: mg/L		LCSD Lab Sample ID:	LCSD 280-229290/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	06/12/2014 1927			Analysis Date:	06/12/2014 1957
Prep Date:	06/09/2014 1535			Prep Date:	06/09/2014 1535
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	0.0777	0.0752
Fluoranthene	0.0800	0.0800	0.0737	0.0718
Fluorene	0.0800	0.0800	0.0666	0.0664
Hexachlorobenzene	0.0800	0.0800	0.0738	0.0709
Hexachlorobutadiene	0.0800	0.0800	0.0591	0.0566
Hexachlorocyclopentadiene	0.0800	0.0800	0.00255 J *	0.00306 J *
Hexachloroethane	0.0800	0.0800	0.0605	0.0575
Indeno[1,2,3-cd]pyrene	0.0800	0.0800	0.0742	0.0708
Isophorone	0.0800	0.0800	0.0638	0.0632
Naphthalene	0.0800	0.0800	0.0653	0.0640
n-Decane	0.0800	0.0800	0.0531	0.0507
Nitrobenzene	0.0800	0.0800	0.0701	0.0703
N-Nitrosodimethylamine	0.0800	0.0800	0.0665	0.0659
N-Nitrosodi-n-propylamine	0.0800	0.0800	0.0677	0.0675
N-Nitrosodiphenylamine	0.0800	0.0800	0.0660	0.0640
p-Cresol	0.0800	0.0800	0.0675	0.0676
Pentachlorophenol	0.160	0.160	0.145	0.141
Phenanthrene	0.0800	0.0800	0.0709	0.0691
Phenol	0.0800	0.0800	0.0703	0.0697
Pyrene	0.0800	0.0800	0.0740	0.0706

Client: Waste Management

Job Number: 280-56309-1

Method Blank - Batch: 440-187414

Method: 218.6
Preparation: N/A

Lab Sample ID:	MB 440-187414/3	Analysis Batch:	440-187414	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:	06/09/2014 0733	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: 440-187414

Method: 218.6
Preparation: N/A

Lab Sample ID:	LCS 440-187414/2	Analysis Batch:	440-187414	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:	06/09/2014 0719	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	52.0	104	90 - 110	

Method Reporting Limit Check - Batch: 440-187414

Method: 218.6
Preparation: N/A

Lab Sample ID:	MRL 440-187414/4	Analysis Batch:	440-187414	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:	06/09/2014 0746	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	1.03	103	50 - 150	

Client: Waste Management

Job Number: 280-56309-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 440-187414

Method: 218.6
Preparation: N/A

MS Lab Sample ID:	280-56309-1	Analysis Batch:	440-187414	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:	06/09/2014 1852			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1000 uL
Leach Date:	N/A				

MSD Lab Sample ID:	280-56309-1	Analysis Batch:	440-187414	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:	06/09/2014 1905			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	99	103	90 - 110	4	10		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 440-187414

Method: 218.6
Preparation: N/A

MS Lab Sample ID:	280-56309-1	Units:	ug/L	MSD Lab Sample ID:	280-56309-1
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	06/09/2014 1852			Analysis Date:	06/09/2014 1905
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	3.5	50.0	50.0	53.0	55.0

Client: Waste Management

Job Number: 280-56309-1

Method Blank - Batch: 280-229230

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	MB 280-229230/1-A	Analysis Batch:	280-229629	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-229230	Lab File ID:	26A061114G.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/11/2014 0334	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/10/2014 1300				
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: 280-229230

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	MB 280-229230/1-A	Analysis Batch:	280-230134	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-229230	Lab File ID:	26a061214c.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/12/2014 2005	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/10/2014 1300				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Iron	0.0345	J	0.022	0.10

Client: Waste Management

Job Number: 280-56309-1

Lab Control Sample - Batch: 280-229230

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	LCS 280-229230/2-A	Analysis Batch:	280-229629	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-229230	Lab File ID:	26A061114G.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/11/2014 0337	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/10/2014 1300				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	1.00	1.01	101	88 - 110	
Cadmium	0.100	0.105	105	88 - 111	
Lead	0.500	0.509	102	89 - 110	
Selenium	2.00	2.08	104	85 - 112	
Zinc	0.500	0.492	98	85 - 111	
Silver	0.0500	0.0492	98	85 - 115	

Lab Control Sample - Batch: 280-229230

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	LCS 280-229230/2-A	Analysis Batch:	280-230134	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-229230	Lab File ID:	26a061214c.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/12/2014 2007	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/10/2014 1300				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Iron	1.00	0.987	99	89 - 115	

Client: Waste Management

Job Number: 280-56309-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-229230

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-56347-A-1-B MS	Analysis Batch:	280-229629	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-229230	Lab File ID:	26A061114G.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/11/2014 0344			Final Weight/Volume:	50 mL
Prep Date:	06/10/2014 1300				
Leach Date:	N/A				

MSD Lab Sample ID:	280-56347-A-1-C MSD	Analysis Batch:	280-229629	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-229230	Lab File ID:	26A061114G.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/11/2014 0347			Final Weight/Volume:	50 mL
Prep Date:	06/10/2014 1300				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Arsenic	99	98	88 - 110	1	20		
Cadmium	104	102	88 - 111	2	20		
Lead	98	97	89 - 110	1	20		
Selenium	102	100	85 - 112	2	20		
Zinc	97	97	85 - 111	0	20		
Silver	101	97	85 - 115	4	20		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-229230

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-56347-A-1-B MS	Analysis Batch:	280-230134	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-229230	Lab File ID:	26a061214c.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/12/2014 2015			Final Weight/Volume:	50 mL
Prep Date:	06/10/2014 1300				
Leach Date:	N/A				

MSD Lab Sample ID:	280-56347-A-1-C MSD	Analysis Batch:	280-230134	Instrument ID:	MT_026
Client Matrix:	Water	Prep Batch:	280-229230	Lab File ID:	26a061214c.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/12/2014 2017			Final Weight/Volume:	50 mL
Prep Date:	06/10/2014 1300				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Iron	97	258	89 - 115	4	20	4	4

Client: Waste Management

Job Number: 280-56309-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-229230

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-56347-A-1-B MS	Units:	mg/L	MSD Lab Sample ID:	280-56347-A-1-C MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	06/11/2014 0344			Analysis Date:	06/11/2014 0347
Prep Date:	06/10/2014 1300			Prep Date:	06/10/2014 1300
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	0.016		1.00	1.00	1.01	0.996
Cadmium	0.0016	J	0.100	0.100	0.106	0.103
Lead	0.056		0.500	0.500	0.549	0.543
Selenium	0.015		2.00	2.00	2.06	2.02
Zinc	0.24		0.500	0.500	0.722	0.723
Silver	ND		0.0500	0.0500	0.0506	0.0487

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-229230

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-56347-A-1-B MS	Units:	mg/L	MSD Lab Sample ID:	280-56347-A-1-C MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	06/12/2014 2015			Analysis Date:	06/12/2014 2017
Prep Date:	06/10/2014 1300			Prep Date:	06/10/2014 1300
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	35		1.00	1.00	36.2	4	37.8	4

Client: Waste Management

Job Number: 280-56309-1

Method Blank - Batch: 280-229174

Method: 245.1
Preparation: 245.1

Lab Sample ID:	MB 280-229174/1-A	Analysis Batch:	280-229417	Instrument ID:	MT_034
Client Matrix:	Water	Prep Batch:	280-229174	Lab File ID:	140609taa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	06/09/2014 1658	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	06/09/2014 1310				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.0000390	J	0.000027	0.00020

Lab Control Sample - Batch: 280-229174

Method: 245.1
Preparation: 245.1

Lab Sample ID:	LCS 280-229174/2-A	Analysis Batch:	280-229417	Instrument ID:	MT_034
Client Matrix:	Water	Prep Batch:	280-229174	Lab File ID:	140609taa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	06/09/2014 1701	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	06/09/2014 1310				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00500	100	90 - 110	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-229174

Method: 245.1
Preparation: 245.1

MS Lab Sample ID:	280-56188-C-1-D MS	Analysis Batch:	280-229417	Instrument ID:	MT_034
Client Matrix:	Water	Prep Batch:	280-229174	Lab File ID:	140609taa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	06/09/2014 1742			Final Weight/Volume:	30 mL
Prep Date:	06/09/2014 1310				
Leach Date:	N/A				

MSD Lab Sample ID:	280-56188-C-1-E MSD	Analysis Batch:	280-229417	Instrument ID:	MT_034
Client Matrix:	Water	Prep Batch:	280-229174	Lab File ID:	140609taa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	06/09/2014 1744			Final Weight/Volume:	30 mL
Prep Date:	06/09/2014 1310				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	96	103	80 - 120	7	10		

Client: Waste Management

Job Number: 280-56309-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-229174

Method: 245.1
Preparation: 245.1

MS Lab Sample ID:	280-56188-C-1-D MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	06/09/2014 1742		
Prep Date:	06/09/2014 1310		
Leach Date:	N/A		

MSD Lab Sample ID:	280-56188-C-1-E MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	06/09/2014 1744
Prep Date:	06/09/2014 1310
Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Mercury	0.000032	J	0.00500	0.00500	0.00486	0.00519

Client: Waste Management

Job Number: 280-56309-1

Method Blank - Batch: 280-230112

Method: 1664A
Preparation: 1664A

Lab Sample ID:	MB 280-230112/1-A	Analysis Batch:	280-230195	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	280-230112	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/13/2014 1418	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	06/13/2014 0836				
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: 280-230112

Method: 1664A
Preparation: 1664A

LCS Lab Sample ID:	LCS 280-230112/2-A	Analysis Batch:	280-230195	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	280-230112	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/13/2014 1418	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	06/13/2014 0836				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-230112/3-A	Analysis Batch:	280-230195	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	280-230112	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	06/13/2014 1418	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	06/13/2014 0836				
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
HEM	88	89	78 - 114	1	18		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-230112

Method: 1664A
Preparation: 1664A

LCS Lab Sample ID:	LCS 280-230112/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-230112/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	06/13/2014 1418			Analysis Date:	06/13/2014 1418
Prep Date:	06/13/2014 0836			Prep Date:	06/13/2014 0836
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	35.1	35.4

Client: Waste Management

Job Number: 280-56309-1

Method Blank - Batch: 280-229833

Method: 350.1
Preparation: N/A

Lab Sample ID:	MB 280-229833/72	Analysis Batch:	280-229833	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\061114A.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	06/11/2014 1916	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: 280-229833

Method: 350.1
Preparation: N/A

LCS Lab Sample ID:	LCS 280-229833/70	Analysis Batch:	280-229833	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\061114A.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	06/11/2014 1912	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-229833/71	Analysis Batch:	280-229833	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\061114A.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	06/11/2014 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
Ammonia	96	100	90 - 110	5	10		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-229833

Method: 350.1
Preparation: N/A

LCS Lab Sample ID:	LCS 280-229833/70	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-229833/71
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	06/11/2014 1912			Analysis Date:	06/11/2014 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
Ammonia	2.50	2.50	2.39	2.50

Client: Waste Management

Job Number: 280-56309-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-229833

Method: 350.1
Preparation: N/A

MS Lab Sample ID:	280-56365-A-9 MS	Analysis Batch:	280-229833	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\061114A.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	06/11/2014 2022			Final Weight/Volume:	10 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-56365-A-9 MSD	Analysis Batch:	280-229833	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\061114A.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	06/11/2014 2024			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	111	111	90 - 110	0	10	F1	F1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-229833

Method: 350.1
Preparation: N/A

MS Lab Sample ID:	280-56365-A-9 MS	Units:	mg/L	MSD Lab Sample ID:	280-56365-A-9 MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	06/11/2014 2022			Analysis Date:	06/11/2014 2024
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	0.26	1.00	1.00	1.37	F1	1.37	F1

Client: Waste Management

Job Number: 280-56309-1

Method Blank - Batch: 280-230046

Method: 351.2
Preparation: 351.2

Lab Sample ID:	MB 280-230046/3-A	Analysis Batch:	280-230084	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-230046	Lab File ID:	061214TKNA.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	06/13/2014 0010	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	06/12/2014 1836				
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: 280-230046

Method: 351.2
Preparation: 351.2

LCS Lab Sample ID:	LCS 280-230046/1-A	Analysis Batch:	280-230084	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-230046	Lab File ID:	061214TKNA.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	06/13/2014 0007	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	06/12/2014 1836				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-230046/2-A	Analysis Batch:	280-230084	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-230046	Lab File ID:	061214TKNA.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	06/13/2014 0008	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	06/12/2014 1836				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Nitrogen, Kjeldahl	97	98	90 - 110	1	25		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-230046

Method: 351.2
Preparation: 351.2

LCS Lab Sample ID:	LCS 280-230046/1-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-230046/2-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	06/13/2014 0007			Analysis Date:	06/13/2014 0008
Prep Date:	06/12/2014 1836			Prep Date:	06/12/2014 1836
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	5.82	5.89

Client: Waste Management

Job Number: 280-56309-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-230046

Method: 351.2
Preparation: 351.2

MS Lab Sample ID:	280-56144-F-10-C MS	Analysis Batch:	280-230084	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-230046	Lab File ID:	061214TKNA.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	06/13/2014 0031			Final Weight/Volume:	25 mL
Prep Date:	06/12/2014 1836				
Leach Date:	N/A				

MSD Lab Sample ID:	280-56144-F-10-D MSD	Analysis Batch:	280-230084	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-230046	Lab File ID:	061214TKNA.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	06/13/2014 0032			Final Weight/Volume:	25 mL
Prep Date:	06/12/2014 1836				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Nitrogen, Kjeldahl	71	72	90 - 110	1	25	F1	F1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-230046

Method: 351.2
Preparation: 351.2

MS Lab Sample ID:	280-56144-F-10-C MS	Units:	mg/L	MSD Lab Sample ID:	280-56144-F-10-D MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	06/13/2014 0031			Analysis Date:	06/13/2014 0032
Prep Date:	06/12/2014 1836			Prep Date:	06/12/2014 1836
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Nitrogen, Kjeldahl	ND	3.00	3.00	2.14	F1	2.17	F1

Client: Waste Management

Job Number: 280-56309-1

Method Blank - Batch: 280-230330

Method: 353.2
Preparation: N/A

Lab Sample ID:	MB 280-230330/22	Analysis Batch:	280-230330	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0614NXNM.R:
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	06/14/2014 1211	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: 280-230330

Method: 353.2
Preparation: N/A

Lab Sample ID:	MRL 280-230330/18	Analysis Batch:	280-230330	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0614NXNM.R:
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	06/14/2014 1205	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	0.0930	93	50 - 150	J

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-230330

Method: 353.2
Preparation: N/A

LCS Lab Sample ID:	LCS 280-230330/20	Analysis Batch:	280-230330	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0614NXNM.R
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	06/14/2014 1208	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-230330/21	Analysis Batch:	280-230330	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0614NXNM.R
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	06/14/2014 1210	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	99	99	90 - 110	0	10		

Client: Waste Management

Job Number: 280-56309-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-230330

Method: 353.2
Preparation: N/A

LCS Lab Sample ID:	LCS 280-230330/20	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-230330/21
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	06/14/2014 1208			Analysis Date:	06/14/2014 1210
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	4.97	4.97

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-230330

Method: 353.2
Preparation: N/A

MS Lab Sample ID:	280-56283-L-1 MS	Analysis Batch:	280-230330	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0614NXNM.R:
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/14/2014 1225			Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-56283-L-1 MSD	Analysis Batch:	280-230330	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0614NXNM.R:
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/14/2014 1226			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	98	96	90 - 110	2	10		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-230330

Method: 353.2
Preparation: N/A

MS Lab Sample ID:	280-56283-L-1 MS	Units:	mg/L	MSD Lab Sample ID:	280-56283-L-1 MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	06/14/2014 1225			Analysis Date:	06/14/2014 1226
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	0.031	J	4.00	4.00	3.95	3.86

Client: Waste Management

Job Number: 280-56309-1

Method Blank - Batch: 280-229630

Method: 365.1
Preparation: 365.2/365.3/365

Lab Sample ID:	MB 280-229630/5-A	Analysis Batch:	280-230204	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-229630	Lab File ID:	061314TPHOS.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/13/2014 1405	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/11/2014 0927				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Phosphorus, Total	0.00596	J	0.0050	0.050

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-229630

Method: 365.1
Preparation: 365.2/365.3/365

LCS Lab Sample ID:	LCS 280-229630/3-A	Analysis Batch:	280-230204	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-229630	Lab File ID:	061314TPHOS.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/13/2014 1405	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/11/2014 0927				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-229630/4-A	Analysis Batch:	280-230204	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-229630	Lab File ID:	061314TPHOS.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/13/2014 1405	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	06/11/2014 0927				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Phosphorus, Total	105	101	90 - 110	4	10		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-229630

Method: 365.1
Preparation: 365.2/365.3/365

LCS Lab Sample ID:	LCS 280-229630/3-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-229630/4-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	06/13/2014 1405			Analysis Date:	06/13/2014 1405
Prep Date:	06/11/2014 0927			Prep Date:	06/11/2014 0927
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	0.524	0.503

Client: Waste Management

Job Number: 280-56309-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-229630

Method: 365.1
Preparation: 365.2/365.3/365

MS Lab Sample ID:	280-56309-1	Analysis Batch:	280-230204	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-229630	Lab File ID:	061314TPHOS.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/13/2014 1405			Final Weight/Volume:	50 mL
Prep Date:	06/11/2014 0927				
Leach Date:	N/A				

MSD Lab Sample ID:	280-56309-1	Analysis Batch:	280-230204	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-229630	Lab File ID:	061314TPHOS.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/13/2014 1405			Final Weight/Volume:	50 mL
Prep Date:	06/11/2014 0927				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Phosphorus, Total	90	90	90 - 110	0	10		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-229630

Method: 365.1
Preparation: 365.2/365.3/365

MS Lab Sample ID:	280-56309-1	Units:	mg/L	MSD Lab Sample ID:	280-56309-1
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	06/13/2014 1405			Analysis Date:	06/13/2014 1405
Prep Date:	06/11/2014 0927			Prep Date:	06/11/2014 0927
Leach Date:	N/A			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	0.742	0.745

Client: Waste Management

Job Number: 280-56309-1

Method Blank - Batch: 280-229175

Method: 410.4
Preparation: N/A

Lab Sample ID:	MB 280-229175/5	Analysis Batch:	280-229175	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:	06/09/2014 0824	Units:	mg/L	Final Weight/Volume:	2 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Chemical Oxygen Demand	5.39	J	4.1	20

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-229175

Method: 410.4
Preparation: N/A

LCS Lab Sample ID:	LCS 280-229175/3	Analysis Batch:	280-229175	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:	06/09/2014 0824	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-229175/4	Analysis Batch:	280-229175	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:	06/09/2014 0824	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	109	109	90 - 110	1	11		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-229175

Method: 410.4
Preparation: N/A

LCS Lab Sample ID:	LCS 280-229175/3	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-229175/4
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	06/09/2014 0824			Analysis Date:	06/09/2014 0824
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	109	109

Client: Waste Management

Job Number: 280-56309-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-229175

Method: 410.4
Preparation: N/A

MS Lab Sample ID:	280-56309-1	Analysis Batch:	280-229175	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:	06/09/2014 0824			Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-56309-1	Analysis Batch:	280-229175	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:	06/09/2014 0824			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	101	95	90 - 110	4	11		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-229175

Method: 410.4
Preparation: N/A

MS Lab Sample ID:	280-56309-1	Units:	mg/L	MSD Lab Sample ID:	280-56309-1
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	06/09/2014 0824			Analysis Date:	06/09/2014 0824
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
Chemical Oxygen Demand	22	50.0	50.0	72.3	69.6

Client: Waste Management

Job Number: 280-56309-1

Method Blank - Batch: 280-229501

Method: SM 2540D
Preparation: N/A

Lab Sample ID:	MB 280-229501/3	Analysis Batch:	280-229501	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:	06/10/2014 1526	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: 280-229501

Method: SM 2540D
Preparation: N/A

LCS Lab Sample ID:	LCS 280-229501/1	Analysis Batch:	280-229501	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:	06/10/2014 1526	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-229501/2	Analysis Batch:	280-229501	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:	06/10/2014 1526	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	89	93	86 - 114	4	20		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-229501

Method: SM 2540D
Preparation: N/A

LCS Lab Sample ID:	LCS 280-229501/1	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-229501/2
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	06/10/2014 1526			Analysis Date:	06/10/2014 1526
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	89.0	93.0

Client: Waste Management

Job Number: 280-56309-1

Duplicate - Batch: 280-229501

Method: SM 2540D
Preparation: N/A

Lab Sample ID:	280-56309-1	Analysis Batch:	280-229501	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:	06/10/2014 1526	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	22	21.2	4	10	

Client: Waste Management

Job Number: 280-56309-1

Method Blank - Batch: 280-231242

Method: Total Nitrogen
Preparation: N/A

Lab Sample ID:	MB 280-231242/1	Analysis Batch:	280-231242	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:	06/20/2014 0953	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: 280-56309-1

Laboratory Chronicle

Lab ID: 280-56309-1 **Client ID:** DB01-W

Sample Date/Time: 06/03/2014 09:45 Received Date/Time: 06/06/2014 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	280-56309-C-1-A		280-229973	280-229290	06/09/2014 15:35	1	TAL DEN	ACF
A:625	280-56309-C-1-A		280-229973	280-229290	06/13/2014 05:56	1	TAL DEN	DCK
A:218.6	280-56309-I-1		440-187414		06/09/2014 18:38	1	TAL IRV	RW
P:200.7	280-56309-H-1-B		280-229629	280-229230	06/10/2014 13:00	1	TAL DEN	WAW
A:200.7 Rev 4.4	280-56309-H-1-B		280-229629	280-229230	06/11/2014 03:54	1	TAL DEN	SJS
P:200.7	280-56309-H-1-B		280-230134	280-229230	06/10/2014 13:00	1	TAL DEN	WAW
A:200.7 Rev 4.4	280-56309-H-1-B		280-230134	280-229230	06/12/2014 20:22	1	TAL DEN	SJS
P:245.1	280-56309-H-1-A		280-229417	280-229174	06/09/2014 13:10	1	TAL DEN	LLB
A:245.1	280-56309-H-1-A		280-229417	280-229174	06/09/2014 17:55	1	TAL DEN	LLB
P:1664A	280-56309-A-1-A		280-230195	280-230112	06/13/2014 08:36	1	TAL DEN	AFB
A:1664A	280-56309-A-1-A		280-230195	280-230112	06/13/2014 14:18	1	TAL DEN	AFB
A:350.1	280-56309-F-1		280-229833		06/11/2014 20:49	1	TAL DEN	CML
P:351.2	280-56309-F-1-D		280-230084	280-230046	06/12/2014 18:36	1	TAL DEN	MW1
A:351.2	280-56309-F-1-D		280-230084	280-230046	06/13/2014 00:36	1	TAL DEN	MW1
A:353.2	280-56309-F-1		280-230330		06/14/2014 12:33	1	TAL DEN	DVA
P:365.2/365.3/365	280-56309-F-1-A		280-230204	280-229630	06/11/2014 09:27	1	TAL DEN	AJS
A:365.1	280-56309-F-1-A		280-230204	280-229630	06/13/2014 14:05	1	TAL DEN	AJS
A:410.4	280-56309-E-1		280-229175		06/09/2014 08:24	1	TAL DEN	AFB
A:SM 2540D	280-56309-G-1		280-229501		06/10/2014 15:26	1	TAL DEN	MW1
A:Total Nitrogen	280-56309-A-1		280-231242		06/20/2014 09:53	1	TAL DEN	RKS
A:Field Sampling	280-56309-A-1		280-229380		06/03/2014 13:45	1	TAL DEN	PS

Lab ID: 280-56309-1 MS **Client ID:** DB01-W

Sample Date/Time: 06/03/2014 09:45 Received Date/Time: 06/06/2014 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:218.6	280-56309-I-1 MS		440-187414		06/09/2014 18:52	1	TAL IRV	RW
P:365.2/365.3/365	280-56309-F-1-B MS		280-230204	280-229630	06/11/2014 09:27	1	TAL DEN	AJS
A:365.1	280-56309-F-1-B MS		280-230204	280-229630	06/13/2014 14:05	1	TAL DEN	AJS
A:410.4	280-56309-E-1 MS		280-229175		06/09/2014 08:24	1	TAL DEN	AFB

Lab ID: 280-56309-1 MSD **Client ID:** DB01-W

Sample Date/Time: 06/03/2014 09:45 Received Date/Time: 06/06/2014 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:218.6	280-56309-I-1 MSD		440-187414		06/09/2014 19:05	1	TAL IRV	RW
P:365.2/365.3/365	280-56309-F-1-C MSD		280-230204	280-229630	06/11/2014 09:27	1	TAL DEN	AJS
A:365.1	280-56309-F-1-C MSD		280-230204	280-229630	06/13/2014 14:05	1	TAL DEN	AJS
A:410.4	280-56309-E-1 MSD		280-229175		06/09/2014 08:24	1	TAL DEN	AFB

Client: Waste Management

Job Number: 280-56309-1

Laboratory Chronicle

Lab ID: **280-56309-1 DU** **Client ID:** **DB01-W**

Sample Date/Time: 06/03/2014 09:45 Received Date/Time: 06/06/2014 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:SM 2540D	280-56309-G-1 DU		280-229501		06/10/2014 15:26	1	TAL DEN	MW1

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 280-229290/1-A		280-229973	280-229290	06/09/2014 15:35	1	TAL DEN	ACF
A:625	MB 280-229290/1-A		280-229973	280-229290	06/12/2014 18:57	1	TAL DEN	DCK
A:218.6	MB 440-187414/3		440-187414		06/09/2014 07:33	1	TAL IRV	RW
P:200.7	MB 280-229230/1-A		280-229629	280-229230	06/10/2014 13:00	1	TAL DEN	WAW
A:200.7 Rev 4.4	MB 280-229230/1-A		280-229629	280-229230	06/11/2014 03:34	1	TAL DEN	SJS
P:200.7	MB 280-229230/1-A		280-230134	280-229230	06/10/2014 13:00	1	TAL DEN	WAW
A:200.7 Rev 4.4	MB 280-229230/1-A		280-230134	280-229230	06/12/2014 20:05	1	TAL DEN	SJS
P:245.1	MB 280-229174/1-A		280-229417	280-229174	06/09/2014 13:10	1	TAL DEN	LLB
A:245.1	MB 280-229174/1-A		280-229417	280-229174	06/09/2014 16:58	1	TAL DEN	LLB
P:1664A	MB 280-230112/1-A		280-230195	280-230112	06/13/2014 08:36	1	TAL DEN	AFB
A:1664A	MB 280-230112/1-A		280-230195	280-230112	06/13/2014 14:18	1	TAL DEN	AFB
A:350.1	MB 280-229833/72		280-229833		06/11/2014 19:16	1	TAL DEN	CML
P:351.2	MB 280-230046/3-A		280-230084	280-230046	06/12/2014 18:36	1	TAL DEN	MW1
A:351.2	MB 280-230046/3-A		280-230084	280-230046	06/13/2014 00:10	1	TAL DEN	MW1
A:353.2	MB 280-230330/22		280-230330		06/14/2014 12:11	1	TAL DEN	DVA
P:365.2/365.3/365	MB 280-229630/5-A		280-230204	280-229630	06/11/2014 09:27	1	TAL DEN	AJS
A:365.1	MB 280-229630/5-A		280-230204	280-229630	06/13/2014 14:05	1	TAL DEN	AJS
A:410.4	MB 280-229175/5		280-229175		06/09/2014 08:24	1	TAL DEN	AFB
A:SM 2540D	MB 280-229501/3		280-229501		06/10/2014 15:26	1	TAL DEN	MW1
A:Total Nitrogen	MB 280-231242/1		280-231242		06/20/2014 09:53	1	TAL DEN	RKS

Client: Waste Management

Job Number: 280-56309-1

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 280-229290/2-A		280-229973	280-229290	06/09/2014 15:35	1	TAL DEN	ACF
A:625	LCS 280-229290/2-A		280-229973	280-229290	06/12/2014 19:27	1	TAL DEN	DCK
A:218.6	LCS 440-187414/2		440-187414		06/09/2014 07:19	1	TAL IRV	RW
P:200.7	LCS 280-229230/2-A		280-229629	280-229230	06/10/2014 13:00	1	TAL DEN	WAW
A:200.7 Rev 4.4	LCS 280-229230/2-A		280-229629	280-229230	06/11/2014 03:37	1	TAL DEN	SJS
P:200.7	LCS 280-229230/2-A		280-230134	280-229230	06/10/2014 13:00	1	TAL DEN	WAW
A:200.7 Rev 4.4	LCS 280-229230/2-A		280-230134	280-229230	06/12/2014 20:07	1	TAL DEN	SJS
P:245.1	LCS 280-229174/2-A		280-229417	280-229174	06/09/2014 13:10	1	TAL DEN	LLB
A:245.1	LCS 280-229174/2-A		280-229417	280-229174	06/09/2014 17:01	1	TAL DEN	LLB
P:1664A	LCS 280-230112/2-A		280-230195	280-230112	06/13/2014 08:36	1	TAL DEN	AFB
A:1664A	LCS 280-230112/2-A		280-230195	280-230112	06/13/2014 14:18	1	TAL DEN	AFB
A:350.1	LCS 280-229833/70		280-229833		06/11/2014 19:12	1	TAL DEN	CML
P:351.2	LCS 280-230046/1-A		280-230084	280-230046	06/12/2014 18:36	1	TAL DEN	MW1
A:351.2	LCS 280-230046/1-A		280-230084	280-230046	06/13/2014 00:07	1	TAL DEN	MW1
A:353.2	LCS 280-230330/20		280-230330		06/14/2014 12:08	1	TAL DEN	DVA
P:365.2/365.3/365	LCS 280-229630/3-A		280-230204	280-229630	06/11/2014 09:27	1	TAL DEN	AJS
A:365.1	LCS 280-229630/3-A		280-230204	280-229630	06/13/2014 14:05	1	TAL DEN	AJS
A:410.4	LCS 280-229175/3		280-229175		06/09/2014 08:24	1	TAL DEN	AFB
A:SM 2540D	LCS 280-229501/1		280-229501		06/10/2014 15:26	1	TAL DEN	MW1

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 280-229290/3-A		280-229973	280-229290	06/09/2014 15:35	1	TAL DEN	ACF
A:625	LCSD 280-229290/3-A		280-229973	280-229290	06/12/2014 19:57	1	TAL DEN	DCK
P:1664A	LCSD 280-230112/3-A		280-230195	280-230112	06/13/2014 08:36	1	TAL DEN	AFB
A:1664A	LCSD 280-230112/3-A		280-230195	280-230112	06/13/2014 14:18	1	TAL DEN	AFB
A:350.1	LCSD 280-229833/71		280-229833		06/11/2014 19:14	1	TAL DEN	CML
P:351.2	LCSD 280-230046/2-A		280-230084	280-230046	06/12/2014 18:36	1	TAL DEN	MW1
A:351.2	LCSD 280-230046/2-A		280-230084	280-230046	06/13/2014 00:08	1	TAL DEN	MW1
A:353.2	LCSD 280-230330/21		280-230330		06/14/2014 12:10	1	TAL DEN	DVA
P:365.2/365.3/365	LCSD 280-229630/4-A		280-230204	280-229630	06/11/2014 09:27	1	TAL DEN	AJS
A:365.1	LCSD 280-229630/4-A		280-230204	280-229630	06/13/2014 14:05	1	TAL DEN	AJS
A:410.4	LCSD 280-229175/4		280-229175		06/09/2014 08:24	1	TAL DEN	AFB
A:SM 2540D	LCSD 280-229501/2		280-229501		06/10/2014 15:26	1	TAL DEN	MW1

Client: Waste Management

Job Number: 280-56309-1

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 440-187414/4		440-187414		06/09/2014 07:46	1	TAL IRV	RW
A:353.2	MRL 280-230330/18		280-230330		06/14/2014 12:05	1	TAL DEN	DVA

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

Sample Date/Time: 06/03/2014 13:20 Received Date/Time: 06/05/2014 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:200.7	280-56347-A-1-B MS		280-229629	280-229230	06/10/2014 13:00	1	TAL DEN	WAW
A:200.7 Rev 4.4	280-56347-A-1-B MS		280-229629	280-229230	06/11/2014 03:44	1	TAL DEN	SJS
P:200.7	280-56347-A-1-B MS		280-230134	280-229230	06/10/2014 13:00	1	TAL DEN	WAW
A:200.7 Rev 4.4	280-56347-A-1-B MS		280-230134	280-229230	06/12/2014 20:15	1	TAL DEN	SJS
P:245.1	280-56188-C-1-D MS		280-229417	280-229174	06/09/2014 13:10	1	TAL DEN	LLB
A:245.1	280-56188-C-1-D MS		280-229417	280-229174	06/09/2014 17:42	1	TAL DEN	LLB
A:350.1	280-56365-A-9 MS		280-229833		06/11/2014 20:22	1	TAL DEN	CML
P:351.2	280-56144-F-10-C MS		280-230084	280-230046	06/12/2014 18:36	1	TAL DEN	MW1
A:351.2	280-56144-F-10-C MS		280-230084	280-230046	06/13/2014 00:31	1	TAL DEN	MW1
A:353.2	280-56283-L-1 MS		280-230330		06/14/2014 12:25	1	TAL DEN	DVA

Client: Waste Management

Job Number: 280-56309-1

Laboratory Chronicle

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

Sample Date/Time: 06/03/2014 13:20 Received Date/Time: 06/05/2014 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:200.7	280-56347-A-1-C MSD		280-229629	280-229230	06/10/2014 13:00	1	TAL DEN	WAW
A:200.7 Rev 4.4	280-56347-A-1-C MSD		280-229629	280-229230	06/11/2014 03:47	1	TAL DEN	SJS
P:200.7	280-56347-A-1-C MSD		280-230134	280-229230	06/10/2014 13:00	1	TAL DEN	WAW
A:200.7 Rev 4.4	280-56347-A-1-C MSD		280-230134	280-229230	06/12/2014 20:17	1	TAL DEN	SJS
P:245.1	280-56188-C-1-E MSD		280-229417	280-229174	06/09/2014 13:10	1	TAL DEN	LLB
A:245.1	280-56188-C-1-E MSD		280-229417	280-229174	06/09/2014 17:44	1	TAL DEN	LLB
A:350.1	280-56365-A-9 MSD		280-229833		06/11/2014 20:24	1	TAL DEN	CML
P:351.2	280-56144-F-10-D MSD		280-230084	280-230046	06/12/2014 18:36	1	TAL DEN	MW1
A:351.2	280-56144-F-10-D MSD		280-230084	280-230046	06/13/2014 00:32	1	TAL DEN	MW1
A:353.2	280-56283-L-1 MSD		280-230330		06/14/2014 12:26	1	TAL DEN	DVA

Lab References:
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: HXF0004
Client Project/Site: [none]
Client Project Description: AECOM, WGSL STORMWATER

For:
TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002

Attn: Betsy Sara

Authorized for release by:
6/17/2014 8:46:53 PM

Jimson E. Carr, Service Center Manager
808-486-5227
Jimson.Carr@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: [none]

TestAmerica Job ID: HXF0004

Qualifiers

WetChem

Qualifier	Qualifier Description
L2	Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was below acceptance limits.
K	The sample dilutions set-up for the BOD analysis did not meet the oxygen depletion criteria of at least 2 mg/l. Therefore the reported result is an estimated value only.

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
CFL	Contains Free Liquid
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: [none]

TestAmerica Job ID: HXF0004

Job ID: HXF0004

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 27 degrees C.

TestAmerica has determined 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.

BOD:
Laboratory Control Spike and BOD Setup Oxygen Depletion failed to meet acceptance criteria. As such BOD value reported should be considered an estimate.

Sample Summary

Client: TestAmerica Denver
Project/Site: [none]

TestAmerica Job ID: HXF0004

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
HXF0004-01	DB01 - W	Water - NonPotable	06/03/14 09:45	06/03/14 11:40

Detection Summary

Client: TestAmerica Denver
Project/Site: [none]

TestAmerica Job ID: HXF0004

Client Sample ID: DB01 - W

Lab Sample ID: HXF0004-01

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
BOD - 5 Day	2.19	K	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: [none]

TestAmerica Job ID: HXF0004

Client Sample ID: DB01 - W

Date Collected: 06/03/14 09:45
Date Received: 06/03/14 11:40

Lab Sample ID: HXF0004-01

Matrix: Water - NonPotable

Method: SM5210B - General Chemistry Parameters

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
BOD - 5 Day	2.19	K	2.00		mg/L		06/03/14 15:24	06/08/14 20:27	1.00

QC Sample Results

Client: TestAmerica Denver
Project/Site: [none]

TestAmerica Job ID: HXF0004

Method: SM5210B - General Chemistry Parameters

Lab Sample ID: 14F0003-BLK1
Matrix: Water - NonPotable
Analysis Batch: 14F0003

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 14F0003_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
BOD - 5 Day	ND		2.00		mg/L		06/03/14 15:19	06/08/14 20:18	1.00

Lab Sample ID: 14F0003-BS1
Matrix: Water - NonPotable
Analysis Batch: 14F0003

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 14F0003_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
BOD - 5 Day	198	164	L2	mg/L		83	85 - 115

Lab Sample ID: 14F0003-DUP1
Matrix: Water - NonPotable
Analysis Batch: 14F0003

Client Sample ID: DB01 - W
Prep Type: Total
Prep Batch: 14F0003_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
BOD - 5 Day	2.19	K	2.08	K	mg/L		5	20

QC Association Summary

Client: TestAmerica Denver
Project/Site: [none]

TestAmerica Job ID: HXF0004

WetChem

Analysis Batch: 14F0003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
14F0003-BLK1	Method Blank	Total	Water - NonPotable	SM5210B	14F0003_P
14F0003-BS1	Lab Control Sample	Total	Water - NonPotable	SM5210B	14F0003_P
14F0003-DUP1	DB01 - W	Total	Water - NonPotable	SM5210B	14F0003_P
HXF0004-01	DB01 - W	Total	Water - NonPotable	SM5210B	14F0003_P

Prep Batch: 14F0003_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
14F0003-BLK1	Method Blank	Total	Water - NonPotable	Default Prep GenChem	
14F0003-BS1	Lab Control Sample	Total	Water - NonPotable	Default Prep GenChem	
14F0003-DUP1	DB01 - W	Total	Water - NonPotable	Default Prep GenChem	
HXF0004-01	DB01 - W	Total	Water - NonPotable	Default Prep GenChem	

Lab Chronicle

Client: TestAmerica Denver
Project/Site: [none]

TestAmerica Job ID: HXF0004

Client Sample ID: DB01 - W

Date Collected: 06/03/14 09:45
Date Received: 06/03/14 11:40

Lab Sample ID: HXF0004-01

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	14F0003_P	06/03/14 15:24	ENM	TAL HON
Total	Analysis	GenChem SM5210B		1.00	14F0003	06/08/14 20:27	ENM	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: [none]

TestAmerica Job ID: HXF0004

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
Hawaii	State Program	9	N/A	06-28-14
USDA	Federal		HON-S-206	01-31-15

Method Summary

Client: TestAmerica Denver
Project/Site: [none]

TestAmerica Job ID: HXF0004

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

[redacted]

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Temperature on Receipt _____

Drinking Water? Yes☐ No☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

Client: Waste Management / AECOM	Project Manager: Mark Hofferbert	Date: 6/3/14	Chain of Custody Number: 163604
Address: 1001 Bishop St. Suite 1600	Telephone Number (Area Code)/Fax Number: 808-523-8874 / 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.:			

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 A/B Oil & Grease	SM5210B BOD	218.6 Hex Chrom	SM2540D TSS	625 SVOCs	410.4 COD	365.4 T. Phos	350.1 Ammonia	351.1/2 TKN	353.2 NO2+NO3	SM4500N T. Nitrogen	200.7/8 Metals	245.1/2 Mercury	Special Instructions/ Conditions of Receipt
DB01-W	6/3/14	0945		X			4	4	1				X	X	X	X	X	X	X	X	X	X	X	X	X	

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: Michelle Wong	6/3/14	~~12:00~~ 11:30	1. Received By: Matthew N. Beeks	6/03/2014	1140 INTACT NO. 27.4
2. Relinquished By: Matthew N. Beeks	6/3/14	1220	2. Received By:		
3. Relinquished By:			3. Received By:		

Comments: BOD → Hex Chrom preservation at TA. Honolulu, SVOCs; a-terpineol, benzoic acid, p-cresol, pentachlorophenol, phenol; Metals: As, Cd, Fe, Pb, Hg, Ag, Se, Zn

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica

Destination Laboratory DENVER

Destination Laboratory PM (if known) _____

Drop Shipment Receipt Checklist

Client Name: WASTE MGMT. / AFCOM **Date/ Time Received:** 6/3/2014 1217

Received By: MATTHEW BEEKS

Matrices: **Carrier:** **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:
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: 27.0 °C

Samples drop shipped on ice? Yes ✓ No Type: WET

Date of drop shipment: 6/03/2014

Comments/ Sampling Handling Notes:

[redacted]

Chain of Custody Record

Temperature on Receipt 5.1 JR 4+6.5 SK 6-5-14

Drinking Water? Yes ☐ No ☐

TestAm

THE LEADER IN ENVIR

280-56309 Chain of Custody

TAL-4124 (1007)

Client: Waste Management / AFCOM	Project Manager: Mark Hofferbert	Date: 6/3/14	Chain of Custody Number: 163604
Address: 1001 Bishop St. Suite 1600	Telephone Number (Area Code)/Fax Number: 808-523-8874 / 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.:			

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 A/B Oil & Grease	SM5210B BOD	218.6 Hex Chrom	SM2540D TSS	625 SVOCs	410.4 COD	365.4 T. Phos	350.1 Ammonia	351.1/2 TKN	353.2 NO_2-NO_3	SM4500N T. Nitrogen	200.7/8 Metals	245.1/2 Mercury	Special Instructions/ Conditions of Receipt
DB01-W	6/3/14	0945		X			4	4	1				X	X	X	X	X	X	X	X	X	X	X	X	X	

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: Michelle Wong	6/3/14	~~12:00~~ 11:30	1. Received By: Matthew N. Beeks	6/03/2014	1140 INTACT NO KE 27.0°C
2. Relinquished By: Matthew N. Beeks	6/3/14	1220	2. Received By: [signature]	6-5-14	900
3. Relinquished By:			3. Received By:		

Comments: BOD - Hex Chrom preservation at TA-Honolulu, SVOCs; a-terpineol, benzoic acid, p-cresol, pentachlorophenol, phenol; Metals: As, Cd, Fe, Pb, Hg, Ag, Se, Zn

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

FIELD INFORMATION FORM

WM WASTE MANAGEMENT

Site Name: WGSL

Site No.:

Sample Point: 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 ____
060314	789						

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 murky Odor: None Color: light tan Other: ____

Weather Conditions (required daily, or as conditions change): wind Direction/Speed: SE <5mph Outlook: Partly cloudy Precipitation: Y or N

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

	time	PH	flow (west only)
A	0945	7.89	0.125in = 0.025 ft³/s
B	1000	7.84	0.125in = 0.025 ft³/s
C	1015	7.83	0.125in = 0.025 ft³/s
D	1030	7.95	0.125in = 0.025 ft³/s

East not flowing during time of 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
6/3/14	Michelle Wong	Michelle Wong	AECOM
6/3/14	Didier Dumas	[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: 280-56309-1

Login Number: 56309
List Number: 1
Creator: Knauf, James R

List Source: TestAmerica Denver

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.	False	
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: 280-56309-1

Login Number: 56309
List Number: 2
Creator: Soderbiom, Tim

List Source: TestAmerica Irvine
List Creation: 06/07/14 01:41 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?	True	
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.	N/A	
Sample Preservation Verified.	True	
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	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 280-52954-1

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
4/3/2014 9:42 AM

Betsy A Sara, Project Manager II
4955 Yarrow Street, Arvada, CO, 80002
(303)736-0189
betsy.sara@testamericainc.com
04/03/2014

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: 280-52954-1

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 03/12/2014; the sample arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 2.3 C.

Holding Times

All holding times were met.

Method Blanks

Total Zinc Method 200.7 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)

The Method 625 laboratory control sample and the laboratory control sample duplicate (LCS/LCSD) recovered below the lower control limit for 2-Chloronaphthalene at 53% and 59% (control limits 60%-118%). Because 2-Chloronaphthalene was not a target compound, re-extraction and reanalysis were not performed.

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 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 MS and/or MSD recoveries outside control limits for Ammonia Method 350.1 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.

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 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: 280-52954-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
280-52954-1	**WGSL-DB01E**					
Mercury		0.000054	J	0.00020	mg/L	245.1
Field pH		7.81			SU	Field Sampling
Ammonia		0.070	J	0.10	mg/L	350.1
Nitrogen, Kjeldahl		0.59		0.50	mg/L	351.2
Nitrate Nitrite as N		8.3		0.10	mg/L	353.2
Phosphorus, Total		0.12		0.050	mg/L	365.1
Chemical Oxygen Demand		26		20	mg/L	410.4
Total Suspended Solids		3.2	J	4.0	mg/L	SM 2540D
Nitrogen, Total		8.9		0.10	mg/L	Total Nitrogen
Dissolved						
Chromium, hexavalent		2.8		1.0	ug/L	218.6
Total Recoverable						
Cadmium		0.00090	J	0.0050	mg/L	200.7 Rev 4.4
Iron		0.077	J	0.10	mg/L	200.7 Rev 4.4
Zinc		0.024	B	0.020	mg/L	200.7 Rev 4.4

METHOD SUMMARY

Client: Waste Management

Job Number: 280-52954-1

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: 280-52954-1

Method	Analyst	Analyst ID
40CFR136A 625	Hoffman, Michael G	MGH
EPA 200.7 Rev 4.4	Harre, John K	JKH
EPA 245.1	Broander, Laura L	LLB
EPA Field Sampling	Promduang, Thaweesin	TP
1664A 1664A	Benson, Alex F	AFB
MCAWW 350.1	Hoefler, Alexandra F	AFH
MCAWW 351.2	Woolley, Mark -	MW1
MCAWW 353.2	Ayala, Delaina V	DVA
EPA 365.1	Schwemin, Andrew J	AJS
MCAWW 410.4	Jewell, Connie C	CCJ
SM SM 2540D	Woolley, Mark -	MW1
EPA Total Nitrogen	Sullivan, Roxanne K	RKS
EPA 218.6	Nikbakht-Sangari, Maryam	MN

SAMPLE SUMMARY

Client: Waste Management

Job Number: 280-52954-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-52954-1	WGSL-DB01E	Water	03/08/2014 1017	03/12/2014 0950

SAMPLE RESULTS

Client: Waste Management

Job Number: 280-52954-1

Client Sample ID: **WGSL-DB01E**

Lab Sample ID: 280-52954-1

Client Matrix: Water

Date Sampled: 03/08/2014 1017

Date Received: 03/12/2014 0950

625 Semivolatile Organic Compounds (GC/MS)

Analysis Method:	625	Analysis Batch:	280-217279	Instrument ID:	SMS_Y
Prep Method:	625	Prep Batch:	280-216713	Lab File ID:	Y9431.D
Dilution:	1.0			Initial Weight/Volume:	1051.1 mL
Analysis Date:	03/18/2014 2132			Final Weight/Volume:	1 mL
Prep Date:	03/13/2014 1317			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	87		50 - 120
2-Fluorobiphenyl	80		36 - 120
2-Fluorophenol	86		30 - 120
Nitrobenzene-d5	86		45 - 120
Phenol-d5	90		36 - 120
Terphenyl-d14	41		41 - 120

Client: Waste Management

Job Number: 280-52954-1

Client Sample ID: **WGSL-DB01E**

Lab Sample ID: 280-52954-1

Client Matrix: Water

Date Sampled: 03/08/2014 1017

Date Received: 03/12/2014 0950

218.6 Chromium, Hexavalent (Ion Chromatography)-Dissolved

Analysis Method:	218.6	Analysis Batch:	440-169778	Instrument ID:	IC-22
	N/A	Prep Batch:	N/A	Lab File ID:	440-0037824-011.d
Dilution:	1.0			Initial Weight/Volume:	10 mL
Analysis Date:	03/17/2014 2150			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1000 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chromium, hexavalent	2.8		0.25	1.0

Client: Waste Management

Job Number: 280-52954-1

Client Sample ID: **WGSL-DB01E**

Lab Sample ID: 280-52954-1

Client Matrix: Water

Date Sampled: 03/08/2014 1017

Date Received: 03/12/2014 0950

200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	280-217080	Instrument ID:	MT_025
Prep Method:	200.7	Prep Batch:	280-216611	Lab File ID:	25A4031414.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/15/2014 0506			Final Weight/Volume:	50 mL
Prep Date:	03/13/2014 0700				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Arsenic	ND		0.0044	0.015
Cadmium	0.00090	J	0.00045	0.0050
Iron	0.077	J	0.022	0.10
Lead	ND		0.0026	0.0090
Selenium	ND		0.0049	0.015
Silver	ND		0.00093	0.010

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	280-217243	Instrument ID:	MT_025
Prep Method:	200.7	Prep Batch:	280-216611	Lab File ID:	25B1031714.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/17/2014 2046			Final Weight/Volume:	50 mL
Prep Date:	03/13/2014 0700				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Zinc	0.024	B	0.0045	0.020

245.1 Mercury (CVAA)

Analysis Method:	245.1	Analysis Batch:	280-216899	Instrument ID:	MT_034
Prep Method:	245.1	Prep Batch:	280-216661	Lab File ID:	140313taa.txt
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	03/13/2014 1703			Final Weight/Volume:	30 mL
Prep Date:	03/13/2014 1140				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Mercury	0.000054	J	0.000027	0.00020

General Chemistry

Client Sample ID: **WGSL-DB01E**

Lab Sample ID: 280-52954-1

Client Matrix: Water

Date Sampled: 03/08/2014 1017

Date Received: 03/12/2014 0950

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
HEM	ND		mg/L	1.6	5.0	1.0	1664A
Analysis Batch: 280-217298	Analysis Date: 03/18/2014 1358						
Prep Batch: 280-217255	Prep Date: 03/18/2014 0952						
Ammonia	0.070	J	mg/L	0.022	0.10	1.0	350.1
Analysis Batch: 280-216875	Analysis Date: 03/13/2014 1953						
Nitrogen, Kjeldahl	0.59		mg/L	0.18	0.50	1.0	351.2
Analysis Batch: 280-217739	Analysis Date: 03/20/2014 2117						
Prep Batch: 280-217708	Prep Date: 03/19/2014 2230						
Nitrate Nitrite as N	8.3		mg/L	0.019	0.10	1.0	353.2
Analysis Batch: 280-217025	Analysis Date: 03/15/2014 1445						
Phosphorus, Total	0.12		mg/L	0.0050	0.050	1.0	365.1
Analysis Batch: 280-217889	Analysis Date: 03/21/2014 1300						
Prep Batch: 280-217650	Prep Date: 03/20/2014 1255						
Chemical Oxygen Demand	26		mg/L	4.1	20	1.0	410.4
Analysis Batch: 280-217267	Analysis Date: 03/18/2014 1037						
Total Suspended Solids	3.2	J	mg/L	1.1	4.0	1.0	SM 2540D
Analysis Batch: 280-216948	Analysis Date: 03/14/2014 1536						
Nitrogen, Total	8.9		mg/L	0.042	0.10	1.0	Total Nitrogen
Analysis Batch: 280-218552	Analysis Date: 03/27/2014 0710						

Field Service / Mobile Lab

Client Sample ID: **WGSL-DB01E**

Lab Sample ID: 280-52954-1

Client Matrix: Water

Date Sampled: 03/08/2014 1017

Date Received: 03/12/2014 0950

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed Date Prepared
Field pH	7.81		SU	1.0	Field Sampling	280-216630	03/08/2014 1317

DATA REPORTING QUALIFIERS

Client: Waste Management

Job Number: 280-52954-1

Lab Section	Qualifier	Description
GC/MS Semi VOA		
	*	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.
Metals		
	B	Compound was found in the blank and sample.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
General Chemistry		
	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: 280-52954-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 280-216713					
LCS 280-216713/2-A	Lab Control Sample	T	Water	625	
LCSD 280-216713/3-A	Lab Control Sample Duplicate	T	Water	625	
MB 280-216713/1-A	Method Blank	T	Water	625	
280-52954-1	WGSL-DB01E	T	Water	625	
Analysis Batch:280-217279					
LCS 280-216713/2-A	Lab Control Sample	T	Water	625	280-216713
LCSD 280-216713/3-A	Lab Control Sample Duplicate	T	Water	625	280-216713
MB 280-216713/1-A	Method Blank	T	Water	625	280-216713
280-52954-1	WGSL-DB01E	T	Water	625	280-216713

Report Basis

T = Total

Client: Waste Management

Job Number: 280-52954-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-216611					
LCS 280-216611/2-A	Lab Control Sample	R	Water	200.7	
MB 280-216611/1-A	Method Blank	R	Water	200.7	
280-52954-1	WGSL-DB01E	R	Water	200.7	
280-52970-B-1-E MS	Matrix Spike	R	Water	200.7	
280-52970-B-1-F MSD	Matrix Spike Duplicate	R	Water	200.7	
Prep Batch: 280-216661					
LCS 280-216661/2-A	Lab Control Sample	T	Water	245.1	
MB 280-216661/1-A	Method Blank	T	Water	245.1	
280-52954-1	WGSL-DB01E	T	Water	245.1	
280-52970-B-1-K MS	Matrix Spike	T	Water	245.1	
280-52970-B-1-L MSD	Matrix Spike Duplicate	T	Water	245.1	
Analysis Batch:280-216899					
LCS 280-216661/2-A	Lab Control Sample	T	Water	245.1	280-216661
MB 280-216661/1-A	Method Blank	T	Water	245.1	280-216661
280-52954-1	WGSL-DB01E	T	Water	245.1	280-216661
280-52970-B-1-K MS	Matrix Spike	T	Water	245.1	280-216661
280-52970-B-1-L MSD	Matrix Spike Duplicate	T	Water	245.1	280-216661
Analysis Batch:280-217080					
LCS 280-216611/2-A	Lab Control Sample	R	Water	200.7 Rev 4.4	280-216611
MB 280-216611/1-A	Method Blank	R	Water	200.7 Rev 4.4	280-216611
280-52954-1	WGSL-DB01E	R	Water	200.7 Rev 4.4	280-216611
280-52970-B-1-E MS	Matrix Spike	R	Water	200.7 Rev 4.4	280-216611
280-52970-B-1-F MSD	Matrix Spike Duplicate	R	Water	200.7 Rev 4.4	280-216611
Analysis Batch:280-217243					
LCS 280-216611/2-A	Lab Control Sample	R	Water	200.7 Rev 4.4	280-216611
MB 280-216611/1-A	Method Blank	R	Water	200.7 Rev 4.4	280-216611
280-52954-1	WGSL-DB01E	R	Water	200.7 Rev 4.4	280-216611
280-52970-B-1-E MS	Matrix Spike	R	Water	200.7 Rev 4.4	280-216611
280-52970-B-1-F MSD	Matrix Spike Duplicate	R	Water	200.7 Rev 4.4	280-216611

Report Basis

R = Total Recoverable

T = Total

Client: Waste Management

Job Number: 280-52954-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Field Service / Mobile Lab					
Analysis Batch:280-216630					
280-52954-1	WGSL-DB01E	T	Water	Field Sampling	

Report Basis
T = Total

Client: Waste Management

Job Number: 280-52954-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-216875					
LCS 280-216875/19	Lab Control Sample	T	Water	350.1	
LCSD 280-216875/20	Lab Control Sample Duplicate	T	Water	350.1	
MB 280-216875/21	Method Blank	T	Water	350.1	
280-52918-C-8 MS	Matrix Spike	T	Water	350.1	
280-52918-C-8 MSD	Matrix Spike Duplicate	T	Water	350.1	
280-52954-1	WGSL-DB01E	T	Water	350.1	
Analysis Batch:280-216948					
LCS 280-216948/1	Lab Control Sample	T	Water	SM 2540D	
LCSD 280-216948/2	Lab Control Sample Duplicate	T	Water	SM 2540D	
MB 280-216948/3	Method Blank	T	Water	SM 2540D	
280-52954-1	WGSL-DB01E	T	Water	SM 2540D	
280-52954-1DU	Duplicate	T	Water	SM 2540D	
Analysis Batch:280-217025					
280-52954-1	WGSL-DB01E	T	Water	353.2	
Prep Batch: 280-217255					
LCS 280-217255/2-A	Lab Control Sample	T	Water	1664A	
LCSD 280-217255/3-A	Lab Control Sample Duplicate	T	Water	1664A	
MB 280-217255/1-A	Method Blank	T	Water	1664A	
280-52954-1	WGSL-DB01E	T	Water	1664A	
Analysis Batch:280-217267					
LCS 280-217267/3	Lab Control Sample	T	Water	410.4	
LCSD 280-217267/4	Lab Control Sample Duplicate	T	Water	410.4	
MB 280-217267/5	Method Blank	T	Water	410.4	
280-52954-1	WGSL-DB01E	T	Water	410.4	
280-52954-1MS	Matrix Spike	T	Water	410.4	
280-52954-1MSD	Matrix Spike Duplicate	T	Water	410.4	
Analysis Batch:280-217298					
LCS 280-217255/2-A	Lab Control Sample	T	Water	1664A	280-217255
LCSD 280-217255/3-A	Lab Control Sample Duplicate	T	Water	1664A	280-217255
MB 280-217255/1-A	Method Blank	T	Water	1664A	280-217255
280-52954-1	WGSL-DB01E	T	Water	1664A	280-217255
Prep Batch: 280-217650					
LCS 280-217650/3-A	Lab Control Sample	T	Water	365.2/365.3/365	
LCSD 280-217650/4-A	Lab Control Sample Duplicate	T	Water	365.2/365.3/365	
MB 280-217650/5-A	Method Blank	T	Water	365.2/365.3/365	
280-52954-1	WGSL-DB01E	T	Water	365.2/365.3/365	
280-52954-1MS	Matrix Spike	T	Water	365.2/365.3/365	
280-52954-1MSD	Matrix Spike Duplicate	T	Water	365.2/365.3/365	

Client: Waste Management

Job Number: 280-52954-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Prep Batch: 280-217708					
LCS 280-217708/1-A	Lab Control Sample	T	Water	351.2	
LCSD 280-217708/2-A	Lab Control Sample Duplicate	T	Water	351.2	
MB 280-217708/3-A	Method Blank	T	Water	351.2	
280-52954-1	WGSL-DB01E	T	Water	351.2	
280-53142-C-4-B MS	Matrix Spike	T	Water	351.2	
280-53142-C-4-C MSD	Matrix Spike Duplicate	T	Water	351.2	
Analysis Batch:280-217739					
LCS 280-217708/1-A	Lab Control Sample	T	Water	351.2	280-217708
LCSD 280-217708/2-A	Lab Control Sample Duplicate	T	Water	351.2	280-217708
MB 280-217708/3-A	Method Blank	T	Water	351.2	280-217708
280-52954-1	WGSL-DB01E	T	Water	351.2	280-217708
280-53142-C-4-B MS	Matrix Spike	T	Water	351.2	280-217708
280-53142-C-4-C MSD	Matrix Spike Duplicate	T	Water	351.2	280-217708
Analysis Batch:280-217889					
LCS 280-217650/3-A	Lab Control Sample	T	Water	365.1	280-217650
LCSD 280-217650/4-A	Lab Control Sample Duplicate	T	Water	365.1	280-217650
MB 280-217650/5-A	Method Blank	T	Water	365.1	280-217650
280-52954-1	WGSL-DB01E	T	Water	365.1	280-217650
280-52954-1MS	Matrix Spike	T	Water	365.1	280-217650
280-52954-1MSD	Matrix Spike Duplicate	T	Water	365.1	280-217650
Analysis Batch:280-218552					
MB 280-218552/1	Method Blank	T	Water	Total Nitrogen	
280-52954-1	WGSL-DB01E	T	Water	Total Nitrogen	

Report Basis
T = Total

HPLC/IC

Analysis Batch:440-169778					
LCS 440-169778/1002	Lab Control Sample	T	Water	218.6	
MB 440-169778/1003	Method Blank	T	Water	218.6	
280-52954-1	WGSL-DB01E	D	Water	218.6	
440-73407-D-11 MS	Matrix Spike	T	Water	218.6	
440-73407-D-11 MSD	Matrix Spike Duplicate	T	Water	218.6	

Report Basis
D = Dissolved
T = Total

Client: Waste Management

Job Number: 280-52954-1

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
280-52954-1	WGSL-DB01E	87	80	86	86	90	41
MB 280-216713/1-A		76	76	81	80	84	89
LCS 280-216713/2-A		86	77	87	85	89	90
LCSD 280-216713/3-A		84	76	84	83	87	90

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: 280-52954-1

Method Blank - Batch: 280-216713

Method: 625
Preparation: 625

Lab Sample ID:	MB 280-216713/1-A	Analysis Batch:	280-217279	Instrument ID:	SMS_Y
Client Matrix:	Water	Prep Batch:	280-216713	Lab File ID:	Y9405.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/18/2014 0932	Units:	mg/L	Final Weight/Volume:	1 mL
Prep Date:	03/13/2014 1317			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	76	50 - 120
2-Fluorobiphenyl	76	36 - 120
2-Fluorophenol	81	30 - 120
Nitrobenzene-d5	80	45 - 120
Phenol-d5	84	36 - 120
Terphenyl-d14	89	41 - 120

Client: Waste Management

Job Number: 280-52954-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-216713

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-216713/2-A	Analysis Batch:	280-217279	Instrument ID:	SMS_Y
Client Matrix:	Water	Prep Batch:	280-216713	Lab File ID:	Y9406.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/18/2014 1000	Units:	mg/L	Final Weight/Volume:	1 mL
Prep Date:	03/13/2014 1317			Injection Volume:	0.5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-216713/3-A	Analysis Batch:	280-217279	Instrument ID:	SMS_Y
Client Matrix:	Water	Prep Batch:	280-216713	Lab File ID:	Y9407.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/18/2014 1028	Units:	mg/L	Final Weight/Volume:	1 mL
Prep Date:	03/13/2014 1317			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	47	53	44 - 120	13	35		
1,2-Dichlorobenzene	50	56	32 - 120	11	42		
1,3-Dichlorobenzene	49	54	23 - 120	10	47		
1,4-Dichlorobenzene	49	56	24 - 120	13	49		
2,2'-Oxybis(1-chloropropane)	71	72	37 - 120	2	30		
2,4,6-Trichlorophenol	81	83	51 - 120	3	30		
2,4-Dichlorophenol	83	83	46 - 120	1	30		
2,4-Dimethylphenol	70	69	44 - 119	2	35		
2,4-Dinitrophenol	82	86	20 - 121	6	61		
2,4-Dinitrotoluene	87	89	57 - 120	3	35		
2,6-Dinitrotoluene	84	86	56 - 120	3	30		
2-Chloronaphthalene	53	59	60 - 118	10	30	*	*
2-Chlorophenol	85	84	34 - 120	2	30		
2-Methylphenol	86	84	38 - 120	3	35		
2-Nitrophenol	79	79	47 - 120	1	30		
3,3'-Dichlorobenzidine	40	47	18 - 120	18	50	J	J
4,6-Dinitro-2-methylphenol	90	94	40 - 120	5	55		
4-Bromophenyl phenyl ether	79	79	53 - 120	0	34		
4-Chloro-3-methylphenol	85	84	57 - 120	1	30		
4-Chlorophenyl phenyl ether	73	74	51 - 120	0	30		
4-Nitrophenol	87	89	53 - 120	3	42		
Acenaphthene	65	66	47 - 120	2	30		
Acenaphthylene	62	64	33 - 120	3	30		
Anthracene	83	84	52 - 120	2	30		
Benzidine	27	35	10 - 218	23	50		
Benzo[a]anthracene	87	88	54 - 120	2	30		
Benzo[a]pyrene	83	86	39 - 120	4	73		
Benzo[b]fluoranthene	85	89	51 - 120	5	90		
Benzo[g,h,i]perylene	88	90	48 - 120	2	64		
Benzo[k]fluoranthene	87	92	49 - 120	5	50		
Bis(2-chloroethoxy)methane	84	84	50 - 120	0	30		
Bis(2-chloroethyl)ether	83	81	35 - 120	3	30		
Bis(2-ethylhexyl) phthalate	84	87	56 - 120	2	30		
Butyl benzyl phthalate	85	88	53 - 120	3	30		
Chrysene	86	87	51 - 120	1	30		
Dibenz(a,h)anthracene	87	89	45 - 120	2	78		

Client: Waste Management

Job Number: 280-52954-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-216713

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-216713/2-A	Analysis Batch:	280-217279	Instrument ID:	SMS_Y
Client Matrix:	Water	Prep Batch:	280-216713	Lab File ID:	Y9406.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/18/2014 1000	Units:	mg/L	Final Weight/Volume:	1 mL
Prep Date:	03/13/2014 1317			Injection Volume:	0.5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-216713/3-A	Analysis Batch:	280-217279	Instrument ID:	SMS_Y
Client Matrix:	Water	Prep Batch:	280-216713	Lab File ID:	Y9407.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/18/2014 1028	Units:	mg/L	Final Weight/Volume:	1 mL
Prep Date:	03/13/2014 1317			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Diethyl phthalate	87	89	59 - 114	3	30		
Dimethyl phthalate	85	86	58 - 112	1	30		
Di-n-butyl phthalate	85	88	57 - 118	3	30		
Di-n-octyl phthalate	84	85	56 - 120	1	30		
Fluoranthene	85	88	58 - 120	4	30		
Fluorene	74	76	59 - 120	3	30		
Hexachlorobenzene	81	81	53 - 120	0	30		
Hexachlorobutadiene	45	51	27 - 116	13	41		
Hexachlorocyclopentadiene	22	24	10 - 120	7	82	J	J
Hexachloroethane	45	53	40 - 113	15	52		
Indeno[1,2,3-cd]pyrene	90	86	50 - 120	4	73		
Isophorone	79	80	50 - 120	1	30		
Naphthalene	50	57	37 - 120	13	30		
n-Decane	44	51	28 - 120	16	61		
Nitrobenzene	78	79	46 - 120	1	30		
N-Nitrosodimethylamine	86	85	37 - 120	1	30		
N-Nitrosodi-n-propylamine	83	83	50 - 120	1	30		
N-Nitrosodiphenylamine	83	84	46 - 203	1	50		
p-Cresol	87	85	42 - 120	2	39		
Pentachlorophenol	93	94	46 - 120	1	30		
Phenanthrene	83	86	54 - 120	3	30		
Phenol	91	88	37 - 112	3	30		
Pyrene	86	89	55 - 115	3	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
2,4,6-Tribromophenol	86	84	50 - 120
2-Fluorobiphenyl	77	76	36 - 120
2-Fluorophenol	87	84	30 - 120
Nitrobenzene-d5	85	83	45 - 120
Phenol-d5	89	87	36 - 120
Terphenyl-d14	90	90	41 - 120

Client: Waste Management

Job Number: 280-52954-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-216713

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-216713/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-216713/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	03/18/2014 1000			Analysis Date:	03/18/2014 1028
Prep Date:	03/13/2014 1317			Prep Date:	03/13/2014 1317
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	0.0373		0.0424	
1,2-Dichlorobenzene	0.0800	0.0800	0.0399		0.0444	
1,3-Dichlorobenzene	0.0800	0.0800	0.0392		0.0433	
1,4-Dichlorobenzene	0.0800	0.0800	0.0389		0.0445	
2,2'-Oxybis(1-chloropropane)	0.0800	0.0800	0.0565		0.0578	
2,4,6-Trichlorophenol	0.0800	0.0800	0.0647		0.0668	
2,4-Dichlorophenol	0.0800	0.0800	0.0660		0.0665	
2,4-Dimethylphenol	0.0800	0.0800	0.0561		0.0551	
2,4-Dinitrophenol	0.160	0.160	0.131		0.138	
2,4-Dinitrotoluene	0.0800	0.0800	0.0693		0.0712	
2,6-Dinitrotoluene	0.0800	0.0800	0.0673		0.0690	
2-Chloronaphthalene	0.0800	0.0800	0.0422	*	0.0468	*
2-Chlorophenol	0.0800	0.0800	0.0684		0.0670	
2-Methylphenol	0.0800	0.0800	0.0689		0.0672	
2-Nitrophenol	0.0800	0.0800	0.0628		0.0636	
3,3'-Dichlorobenzidine	0.0800	0.0800	0.0317	J	0.0377	J
4,6-Dinitro-2-methylphenol	0.160	0.160	0.144		0.151	
4-Bromophenyl phenyl ether	0.0800	0.0800	0.0633		0.0634	
4-Chloro-3-methylphenol	0.0800	0.0800	0.0680		0.0675	
4-Chlorophenyl phenyl ether	0.0800	0.0800	0.0588		0.0588	
4-Nitrophenol	0.160	0.160	0.139		0.143	
Acenaphthene	0.0800	0.0800	0.0517		0.0527	
Acenaphthylene	0.0800	0.0800	0.0500		0.0513	
Anthracene	0.0800	0.0800	0.0661		0.0672	
Benzidine	0.0800	0.0800	ND		ND	
Benzo[a]anthracene	0.0800	0.0800	0.0695		0.0706	
Benzo[a]pyrene	0.0800	0.0800	0.0663		0.0688	
Benzo[b]fluoranthene	0.0800	0.0800	0.0679		0.0711	
Benzo[g,h,i]perylene	0.0800	0.0800	0.0702		0.0718	
Benzo[k]fluoranthene	0.0800	0.0800	0.0699		0.0736	
Bis(2-chloroethoxy)methane	0.0800	0.0800	0.0673		0.0674	
Bis(2-chloroethyl)ether	0.0800	0.0800	0.0665		0.0647	
Bis(2-ethylhexyl) phthalate	0.0800	0.0800	0.0675		0.0692	
Butyl benzyl phthalate	0.0800	0.0800	0.0679		0.0703	
Chrysene	0.0800	0.0800	0.0688		0.0697	
Dibenz(a,h)anthracene	0.0800	0.0800	0.0694		0.0709	
Diethyl phthalate	0.0800	0.0800	0.0693		0.0711	
Dimethyl phthalate	0.0800	0.0800	0.0683		0.0689	
Di-n-butyl phthalate	0.0800	0.0800	0.0680		0.0701	

Client: Waste Management

Job Number: 280-52954-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-216713

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-216713/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-216713/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	03/18/2014 1000			Analysis Date:	03/18/2014 1028
Prep Date:	03/13/2014 1317			Prep Date:	03/13/2014 1317
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	0.0674		0.0682	
Fluoranthene	0.0800	0.0800	0.0681		0.0708	
Fluorene	0.0800	0.0800	0.0592		0.0608	
Hexachlorobenzene	0.0800	0.0800	0.0645		0.0646	
Hexachlorobutadiene	0.0800	0.0800	0.0357		0.0406	
Hexachlorocyclopentadiene	0.0800	0.0800	0.0177	J	0.0189	J
Hexachloroethane	0.0800	0.0800	0.0362		0.0423	
Indeno[1,2,3-cd]pyrene	0.0800	0.0800	0.0723		0.0692	
Isophorone	0.0800	0.0800	0.0635		0.0641	
Naphthalene	0.0800	0.0800	0.0403		0.0459	
n-Decane	0.0800	0.0800	0.0348		0.0409	
Nitrobenzene	0.0800	0.0800	0.0627		0.0632	
N-Nitrosodimethylamine	0.0800	0.0800	0.0685		0.0679	
N-Nitrosodi-n-propylamine	0.0800	0.0800	0.0667		0.0661	
N-Nitrosodiphenylamine	0.0800	0.0800	0.0662		0.0671	
p-Cresol	0.0800	0.0800	0.0697		0.0681	
Pentachlorophenol	0.160	0.160	0.149		0.150	
Phenanthrene	0.0800	0.0800	0.0667		0.0690	
Phenol	0.0800	0.0800	0.0725		0.0707	
Pyrene	0.0800	0.0800	0.0690		0.0713	

Client: Waste Management

Job Number: 280-52954-1

Method Blank - Batch: 440-169778

Method: 218.6
Preparation: N/A

Lab Sample ID:	MB 440-169778/1003	Analysis Batch:	440-169778	Instrument ID:	IC-22
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	440-0037824-003-MB.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	03/17/2014 1941	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: 440-169778

Method: 218.6
Preparation: N/A

Lab Sample ID:	LCS 440-169778/1002	Analysis Batch:	440-169778	Instrument ID:	IC-22
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	440-0037824-002-LCS.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	03/17/2014 1928	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	51.1	102	90 - 110	

Method Reporting Limit Check - Batch: 440-169778

Method: 218.6
Preparation: N/A

Lab Sample ID:	MRL 440-169778/4	Analysis Batch:	440-169778	Instrument ID:	IC-22
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	440-0037824-004.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	03/17/2014 1954	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	1.06	106	50 - 150	

Client: Waste Management

Job Number: 280-52954-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 440-169778

Method: 218.6
Preparation: N/A

MS Lab Sample ID:	440-73407-D-11 MS	Analysis Batch:	440-169778	Instrument ID:	IC-22
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	440-0037824-007.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	03/17/2014 2058			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1000 uL
Leach Date:	N/A				

MSD Lab Sample ID:	440-73407-D-11 MSD	Analysis Batch:	440-169778	Instrument ID:	IC-22
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	440-0037824-008.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	03/17/2014 2111			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	101	102	90 - 110	1	10		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 440-169778

Method: 218.6
Preparation: N/A

MS Lab Sample ID:	440-73407-D-11 MS	Units:	ug/L	MSD Lab Sample ID:	440-73407-D-11 MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	03/17/2014 2058			Analysis Date:	03/17/2014 2111
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	7.5	50.0	50.0	58.0	58.7

Client: Waste Management

Job Number: 280-52954-1

Method Blank - Batch: 280-216611

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	MB 280-216611/1-A	Analysis Batch:	280-217080	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-216611	Lab File ID:	25A4031414.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/15/2014 0459	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	03/13/2014 0700				
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
Silver	ND		0.00093	0.010

Method Blank - Batch: 280-216611

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	MB 280-216611/1-A	Analysis Batch:	280-217243	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-216611	Lab File ID:	25B1031714.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/17/2014 2039	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	03/13/2014 0700				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Zinc	0.00701	J	0.0045	0.020

Client: Waste Management

Job Number: 280-52954-1

Lab Control Sample - Batch: 280-216611

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	LCS 280-216611/2-A	Analysis Batch:	280-217080	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-216611	Lab File ID:	25A4031414.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/15/2014 0501	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	03/13/2014 0700				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	1.00	1.03	103	88 - 110	
Cadmium	0.100	0.108	108	88 - 111	
Iron	1.00	0.984	98	89 - 115	
Lead	0.500	0.513	103	89 - 110	
Selenium	2.00	2.08	104	85 - 112	
Silver	0.0500	0.0532	106	85 - 115	

Lab Control Sample - Batch: 280-216611

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	LCS 280-216611/2-A	Analysis Batch:	280-217243	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-216611	Lab File ID:	25B1031714.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/17/2014 2041	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	03/13/2014 0700				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Zinc	0.500	0.516	103	85 - 111	

Client: Waste Management

Job Number: 280-52954-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-216611

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-52970-B-1-E MS	Analysis Batch:	280-217080	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-216611	Lab File ID:	25A4031414.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/15/2014 0513			Final Weight/Volume:	50 mL
Prep Date:	03/13/2014 0700				
Leach Date:	N/A				

MSD Lab Sample ID:	280-52970-B-1-F MSD	Analysis Batch:	280-217080	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-216611	Lab File ID:	25A4031414.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/15/2014 0515			Final Weight/Volume:	50 mL
Prep Date:	03/13/2014 0700				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Arsenic	106	106	88 - 110	1	20		
Cadmium	108	108	88 - 111	1	20		
Iron	101	103	89 - 115	1	20		
Lead	101	100	89 - 110	1	20		
Selenium	104	103	85 - 112	1	20		
Silver	108	107	85 - 115	1	20		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-216611

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-52970-B-1-E MS	Analysis Batch:	280-217243	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-216611	Lab File ID:	25B1031714.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/17/2014 2053			Final Weight/Volume:	50 mL
Prep Date:	03/13/2014 0700				
Leach Date:	N/A				

MSD Lab Sample ID:	280-52970-B-1-F MSD	Analysis Batch:	280-217243	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-216611	Lab File ID:	25B1031714.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/17/2014 2055			Final Weight/Volume:	50 mL
Prep Date:	03/13/2014 0700				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Zinc	103	103	85 - 111	0	20		

Client: Waste Management

Job Number: 280-52954-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-216611

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-52970-B-1-E MS	Units:	mg/L	MSD Lab Sample ID:	280-52970-B-1-F MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	03/15/2014 0513			Analysis Date:	03/15/2014 0515
Prep Date:	03/13/2014 0700			Prep Date:	03/13/2014 0700
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	ND		1.00	1.00	1.06	1.06
Cadmium	0.00067	J	0.100	0.100	0.109	0.108
Iron	0.31		1.00	1.00	1.32	1.33
Lead	ND		0.500	0.500	0.503	0.501
Selenium	ND		2.00	2.00	2.07	2.06
Silver	ND		0.0500	0.0500	0.0540	0.0537

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-216611

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-52970-B-1-E MS	Units:	mg/L	MSD Lab Sample ID:	280-52970-B-1-F MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	03/17/2014 2053			Analysis Date:	03/17/2014 2055
Prep Date:	03/13/2014 0700			Prep Date:	03/13/2014 0700
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Zinc	0.013	J	0.500	0.500	0.530	0.529

Client: Waste Management

Job Number: 280-52954-1

Method Blank - Batch: 280-216661

Method: 245.1
Preparation: 245.1

Lab Sample ID:	MB 280-216661/1-A	Analysis Batch:	280-216899	Instrument ID:	MT_034
Client Matrix:	Water	Prep Batch:	280-216661	Lab File ID:	140313taa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	03/13/2014 1656	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	03/13/2014 1140				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000027	0.00020

Lab Control Sample - Batch: 280-216661

Method: 245.1
Preparation: 245.1

Lab Sample ID:	LCS 280-216661/2-A	Analysis Batch:	280-216899	Instrument ID:	MT_034
Client Matrix:	Water	Prep Batch:	280-216661	Lab File ID:	140313taa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	03/13/2014 1658	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	03/13/2014 1140				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00488	98	90 - 110	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-216661

Method: 245.1
Preparation: 245.1

MS Lab Sample ID:	280-52970-B-1-K MS	Analysis Batch:	280-216899	Instrument ID:	MT_034
Client Matrix:	Water	Prep Batch:	280-216661	Lab File ID:	140313taa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	03/13/2014 1712			Final Weight/Volume:	30 mL
Prep Date:	03/13/2014 1140				
Leach Date:	N/A				

MSD Lab Sample ID:	280-52970-B-1-L MSD	Analysis Batch:	280-216899	Instrument ID:	MT_034
Client Matrix:	Water	Prep Batch:	280-216661	Lab File ID:	140313taa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	03/13/2014 1714			Final Weight/Volume:	30 mL
Prep Date:	03/13/2014 1140				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	95	91	80 - 120	4	10		

Client: Waste Management

Job Number: 280-52954-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-216661

Method: 245.1
Preparation: 245.1

MS Lab Sample ID:	280-52970-B-1-K MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	03/13/2014 1712		
Prep Date:	03/13/2014 1140		
Leach Date:	N/A		

MSD Lab Sample ID:	280-52970-B-1-L MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	03/13/2014 1714
Prep Date:	03/13/2014 1140
Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Mercury	0.000042	J	0.00500	0.00500	0.00477	0.00459

Client: Waste Management

Job Number: 280-52954-1

Method Blank - Batch: 280-217255

Method: 1664A
Preparation: 1664A

Lab Sample ID:	MB 280-217255/1-A	Analysis Batch:	280-217298	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	280-217255	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/18/2014 1358	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	03/18/2014 0952				
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: 280-217255

Method: 1664A
Preparation: 1664A

LCS Lab Sample ID:	LCS 280-217255/2-A	Analysis Batch:	280-217298	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	280-217255	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/18/2014 1358	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	03/18/2014 0952				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-217255/3-A	Analysis Batch:	280-217298	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	280-217255	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	03/18/2014 1358	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	03/18/2014 0952				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
HEM	86	88	78 - 114	2	18		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-217255

Method: 1664A
Preparation: 1664A

LCS Lab Sample ID:	LCS 280-217255/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-217255/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	03/18/2014 1358			Analysis Date:	03/18/2014 1358
Prep Date:	03/18/2014 0952			Prep Date:	03/18/2014 0952
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	34.5	35.1

Client: Waste Management

Job Number: 280-52954-1

Method Blank - Batch: 280-216875

Method: 350.1
Preparation: N/A

Lab Sample ID:	MB 280-216875/21	Analysis Batch:	280-216875	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\031314_.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	03/13/2014 1826	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: 280-216875

Method: 350.1
Preparation: N/A

LCS Lab Sample ID:	LCS 280-216875/19	Analysis Batch:	280-216875	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\031314_.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	03/13/2014 1819	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-216875/20	Analysis Batch:	280-216875	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\031314_.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	03/13/2014 1823	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	104	104	90 - 110	0	10		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-216875

Method: 350.1
Preparation: N/A

LCS Lab Sample ID:	LCS 280-216875/19	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-216875/20
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	03/13/2014 1819			Analysis Date:	03/13/2014 1823
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	2.60	2.61

Client: Waste Management

Job Number: 280-52954-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-216875

Method: 350.1
Preparation: N/A

MS Lab Sample ID:	280-52918-C-8 MS	Analysis Batch:	280-216875	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\031314_.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	03/13/2014 1926			Final Weight/Volume:	10 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-52918-C-8 MSD	Analysis Batch:	280-216875	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\031314_.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	03/13/2014 1929			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	110	111	90 - 110	1	10		F1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-216875

Method: 350.1
Preparation: N/A

MS Lab Sample ID:	280-52918-C-8 MS	Units:	mg/L	MSD Lab Sample ID:	280-52918-C-8 MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	03/13/2014 1926			Analysis Date:	03/13/2014 1929
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	0.031	J	1.00	1.00	1.14	1.15	F1

Client: Waste Management

Job Number: 280-52954-1

Method Blank - Batch: 280-217708

Method: 351.2
Preparation: 351.2

Lab Sample ID:	MB 280-217708/3-A	Analysis Batch:	280-217739	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-217708	Lab File ID:	032014TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	03/20/2014 2109	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	03/19/2014 2230				
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: 280-217708

Method: 351.2
Preparation: 351.2

LCS Lab Sample ID:	LCS 280-217708/1-A	Analysis Batch:	280-217739	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-217708	Lab File ID:	032014TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	03/20/2014 2107	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	03/19/2014 2230				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-217708/2-A	Analysis Batch:	280-217739	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-217708	Lab File ID:	032014TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	03/20/2014 2108	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	03/19/2014 2230				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Nitrogen, Kjeldahl	99	97	90 - 110	3	25		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-217708

Method: 351.2
Preparation: 351.2

LCS Lab Sample ID:	LCS 280-217708/1-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-217708/2-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	03/20/2014 2107			Analysis Date:	03/20/2014 2108
Prep Date:	03/19/2014 2230			Prep Date:	03/19/2014 2230
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	5.97	5.79

Client: Waste Management

Job Number: 280-52954-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-217708

Method: 351.2
Preparation: 351.2

MS Lab Sample ID:	280-53142-C-4-B MS	Analysis Batch:	280-217739	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-217708	Lab File ID:	032014TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	03/20/2014 2112			Final Weight/Volume:	25 mL
Prep Date:	03/19/2014 2230				
Leach Date:	N/A				

MSD Lab Sample ID:	280-53142-C-4-C MSD	Analysis Batch:	280-217739	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-217708	Lab File ID:	032014TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	03/20/2014 2113			Final Weight/Volume:	25 mL
Prep Date:	03/19/2014 2230				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Nitrogen, Kjeldahl	82	83	90 - 110	0	25	F1	F1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-217708

Method: 351.2
Preparation: 351.2

MS Lab Sample ID:	280-53142-C-4-B MS	Units:	mg/L	MSD Lab Sample ID:	280-53142-C-4-C MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	03/20/2014 2112			Analysis Date:	03/20/2014 2113
Prep Date:	03/19/2014 2230			Prep Date:	03/19/2014 2230
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Nitrogen, Kjeldahl	0.98	3.00	3.00	3.45	F1	3.45	F1

Client: Waste Management

Job Number: 280-52954-1

Method Reporting Limit Check - Batch: 280-217025

Method: 353.2
Preparation: N/A

Lab Sample ID:	MRL 280-217025/18	Analysis Batch:	280-217025	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0315NXNQ.R:
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	03/15/2014 1131	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	0.0957	96	50 - 150	J

Client: Waste Management

Job Number: 280-52954-1

Method Blank - Batch: 280-217650

Method: 365.1
Preparation: 365.2/365.3/365

Lab Sample ID:	MB 280-217650/5-A	Analysis Batch:	280-217889	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-217650	Lab File ID:	032114TPHOS.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/21/2014 1300	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	03/20/2014 1255				
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: 280-217650

Method: 365.1
Preparation: 365.2/365.3/365

LCS Lab Sample ID:	LCS 280-217650/3-A	Analysis Batch:	280-217889	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-217650	Lab File ID:	032114TPHOS.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/21/2014 1300	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	03/20/2014 1255				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-217650/4-A	Analysis Batch:	280-217889	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-217650	Lab File ID:	032114TPHOS.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/21/2014 1300	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	03/20/2014 1255				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Phosphorus, Total	108	104	90 - 110	3	10		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-217650

Method: 365.1
Preparation: 365.2/365.3/365

LCS Lab Sample ID:	LCS 280-217650/3-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-217650/4-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	03/21/2014 1300			Analysis Date:	03/21/2014 1300
Prep Date:	03/20/2014 1255			Prep Date:	03/20/2014 1255
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	0.540	0.522

Client: Waste Management

Job Number: 280-52954-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-217650

Method: 365.1
Preparation: 365.2/365.3/365

MS Lab Sample ID:	280-52954-1	Analysis Batch:	280-217889	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-217650	Lab File ID:	032114TPHOS.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/21/2014 1300			Final Weight/Volume:	50 mL
Prep Date:	03/20/2014 1255				
Leach Date:	N/A				

MSD Lab Sample ID:	280-52954-1	Analysis Batch:	280-217889	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-217650	Lab File ID:	032114TPHOS.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	03/21/2014 1300			Final Weight/Volume:	50 mL
Prep Date:	03/20/2014 1255				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Phosphorus, Total	102	107	90 - 110	4	10		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-217650

Method: 365.1
Preparation: 365.2/365.3/365

MS Lab Sample ID:	280-52954-1	Units: mg/L	
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	03/21/2014 1300		
Prep Date:	03/20/2014 1255		
Leach Date:	N/A		

MSD Lab Sample ID:	280-52954-1	
Client Matrix:	Water	
Dilution:	1.0	
Analysis Date:	03/21/2014 1300	
Prep Date:	03/20/2014 1255	
Leach Date:	N/A	

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Phosphorus, Total	0.12	0.500	0.500	0.628	0.652

Client: Waste Management

Job Number: 280-52954-1

Method Blank - Batch: 280-217267

Method: 410.4
Preparation: N/A

Lab Sample ID:	MB 280-217267/5	Analysis Batch:	280-217267	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:	03/18/2014 1037	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: 280-217267

Method: 410.4
Preparation: N/A

LCS Lab Sample ID:	LCS 280-217267/3	Analysis Batch:	280-217267	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:	03/18/2014 1037	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-217267/4	Analysis Batch:	280-217267	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:	03/18/2014 1037	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	105	90 - 110	1	11		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-217267

Method: 410.4
Preparation: N/A

LCS Lab Sample ID:	LCS 280-217267/3	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-217267/4
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	03/18/2014 1037			Analysis Date:	03/18/2014 1037
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	105

Client: Waste Management

Job Number: 280-52954-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-217267

Method: 410.4
Preparation: N/A

MS Lab Sample ID:	280-52954-1	Analysis Batch:	280-217267	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:	03/18/2014 1037			Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-52954-1	Analysis Batch:	280-217267	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:	03/18/2014 1037			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	91	90	90 - 110	1	11		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-217267

Method: 410.4
Preparation: N/A

MS Lab Sample ID:	280-52954-1	Units:	mg/L	MSD Lab Sample ID:	280-52954-1
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	03/18/2014 1037			Analysis Date:	03/18/2014 1037
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
Chemical Oxygen Demand	26	50.0	50.0	71.3	70.6

Client: Waste Management

Job Number: 280-52954-1

Method Blank - Batch: 280-216948

Method: SM 2540D
Preparation: N/A

Lab Sample ID:	MB 280-216948/3	Analysis Batch:	280-216948	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:	03/14/2014 1536	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: 280-216948

Method: SM 2540D
Preparation: N/A

LCS Lab Sample ID:	LCS 280-216948/1	Analysis Batch:	280-216948	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:	03/14/2014 1536	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-216948/2	Analysis Batch:	280-216948	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:	03/14/2014 1536	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	89	93	86 - 114	4	20		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-216948

Method: SM 2540D
Preparation: N/A

LCS Lab Sample ID:	LCS 280-216948/1	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-216948/2
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	03/14/2014 1536			Analysis Date:	03/14/2014 1536
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	89.0	93.0

Client: Waste Management

Job Number: 280-52954-1

Duplicate - Batch: 280-216948

Method: SM 2540D
Preparation: N/A

Lab Sample ID:	280-52954-1	Analysis Batch:	280-216948	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:	03/14/2014 1536	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	3.2	J	3.20	0	10	J

Client: Waste Management

Job Number: 280-52954-1

Method Blank - Batch: 280-218552

Method: Total Nitrogen
Preparation: N/A

Lab Sample ID:	MB 280-218552/1	Analysis Batch:	280-218552	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:	03/27/2014 0710	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: 280-52954-1

Laboratory Chronicle

Lab ID: 280-52954-1 **Client ID:** WGSL-DB01E

Sample Date/Time: 03/08/2014 10:17 Received Date/Time: 03/12/2014 09:50

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	280-52954-C-1-A		280-217279	280-216713	03/13/2014 13:17	1	TAL DEN	JJW
A:625	280-52954-C-1-A		280-217279	280-216713	03/18/2014 21:32	1	TAL DEN	MGH
A:218.6	280-52954-I-1		440-169778		03/17/2014 21:50	1	TAL IRV	MN
P:200.7	280-52954-F-1-A		280-217080	280-216611	03/13/2014 07:00	1	TAL DEN	SEJ
A:200.7 Rev 4.4	280-52954-F-1-A		280-217080	280-216611	03/15/2014 05:06	1	TAL DEN	JKH
P:200.7	280-52954-F-1-A		280-217243	280-216611	03/13/2014 07:00	1	TAL DEN	SEJ
A:200.7 Rev 4.4	280-52954-F-1-A		280-217243	280-216611	03/17/2014 20:46	1	TAL DEN	JKH
P:245.1	280-52954-F-1-B		280-216899	280-216661	03/13/2014 11:40	1	TAL DEN	LLB
A:245.1	280-52954-F-1-B		280-216899	280-216661	03/13/2014 17:03	1	TAL DEN	LLB
P:1664A	280-52954-A-1-A		280-217298	280-217255	03/18/2014 09:52	1	TAL DEN	AFB
A:1664A	280-52954-A-1-A		280-217298	280-217255	03/18/2014 13:58	1	TAL DEN	AFB
A:350.1	280-52954-H-1		280-216875		03/13/2014 19:53	1	TAL DEN	AFH
P:351.2	280-52954-H-1-D		280-217739	280-217708	03/19/2014 22:30	1	TAL DEN	MW1
A:351.2	280-52954-H-1-D		280-217739	280-217708	03/20/2014 21:17	1	TAL DEN	MW1
A:353.2	280-52954-H-1		280-217025		03/15/2014 14:45	1	TAL DEN	DVA
P:365.2/365.3/365	280-52954-H-1-A		280-217889	280-217650	03/20/2014 12:55	1	TAL DEN	AJS
A:365.1	280-52954-H-1-A		280-217889	280-217650	03/21/2014 13:00	1	TAL DEN	AJS
A:410.4	280-52954-H-1		280-217267		03/18/2014 10:37	1	TAL DEN	CCJ
A:SM 2540D	280-52954-E-1		280-216948		03/14/2014 15:36	1	TAL DEN	MW1
A:Total Nitrogen	280-52954-A-1		280-218552		03/27/2014 07:10	1	TAL DEN	RKS
A:Field Sampling	280-52954-A-1		280-216630		03/08/2014 13:17	1	TAL DEN	TP

Lab ID: 280-52954-1 MS **Client ID:** WGSL-DB01E

Sample Date/Time: 03/08/2014 10:17 Received Date/Time: 03/12/2014 09:50

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:365.2/365.3/365	280-52954-H-1-B MS		280-217889	280-217650	03/20/2014 12:55	1	TAL DEN	AJS
A:365.1	280-52954-H-1-B MS		280-217889	280-217650	03/21/2014 13:00	1	TAL DEN	AJS
A:410.4	280-52954-H-1 MS		280-217267		03/18/2014 10:37	1	TAL DEN	CCJ

Lab ID: 280-52954-1 MSD **Client ID:** WGSL-DB01E

Sample Date/Time: 03/08/2014 10:17 Received Date/Time: 03/12/2014 09:50

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:365.2/365.3/365	280-52954-H-1-C MSD		280-217889	280-217650	03/20/2014 12:55	1	TAL DEN	AJS
A:365.1	280-52954-H-1-C MSD		280-217889	280-217650	03/21/2014 13:00	1	TAL DEN	AJS
A:410.4	280-52954-H-1 MSD		280-217267		03/18/2014 10:37	1	TAL DEN	CCJ

Client: Waste Management

Job Number: 280-52954-1

Laboratory Chronicle

Lab ID: **280-52954-1 DU** **Client ID:** **WGSL-DB01E**

Sample Date/Time: 03/08/2014 10:17 Received Date/Time: 03/12/2014 09:50

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:SM 2540D	280-52954-E-1 DU		280-216948		03/14/2014 15:36	1	TAL DEN	MW1

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 280-216713/1-A		280-217279	280-216713	03/13/2014 13:17	1	TAL DEN	JJW
A:625	MB 280-216713/1-A		280-217279	280-216713	03/18/2014 09:32	1	TAL DEN	MGH
A:218.6	MB 440-169778/1003		440-169778		03/17/2014 19:41	1	TAL IRV	MN
P:200.7	MB 280-216611/1-A		280-217080	280-216611	03/13/2014 07:00	1	TAL DEN	SEJ
A:200.7 Rev 4.4	MB 280-216611/1-A		280-217080	280-216611	03/15/2014 04:59	1	TAL DEN	JKH
P:200.7	MB 280-216611/1-A		280-217243	280-216611	03/13/2014 07:00	1	TAL DEN	SEJ
A:200.7 Rev 4.4	MB 280-216611/1-A		280-217243	280-216611	03/17/2014 20:39	1	TAL DEN	JKH
P:245.1	MB 280-216661/1-A		280-216899	280-216661	03/13/2014 11:40	1	TAL DEN	LLB
A:245.1	MB 280-216661/1-A		280-216899	280-216661	03/13/2014 16:56	1	TAL DEN	LLB
P:1664A	MB 280-217255/1-A		280-217298	280-217255	03/18/2014 09:52	1	TAL DEN	AFB
A:1664A	MB 280-217255/1-A		280-217298	280-217255	03/18/2014 13:58	1	TAL DEN	AFB
A:350.1	MB 280-216875/21		280-216875		03/13/2014 18:26	1	TAL DEN	AFH
P:351.2	MB 280-217708/3-A		280-217739	280-217708	03/19/2014 22:30	1	TAL DEN	MW1
A:351.2	MB 280-217708/3-A		280-217739	280-217708	03/20/2014 21:09	1	TAL DEN	MW1
P:365.2/365.3/365	MB 280-217650/5-A		280-217889	280-217650	03/20/2014 12:55	1	TAL DEN	AJS
A:365.1	MB 280-217650/5-A		280-217889	280-217650	03/21/2014 13:00	1	TAL DEN	AJS
A:410.4	MB 280-217267/5		280-217267		03/18/2014 10:37	1	TAL DEN	CCJ
A:SM 2540D	MB 280-216948/3		280-216948		03/14/2014 15:36	1	TAL DEN	MW1
A:Total Nitrogen	MB 280-218552/1		280-218552		03/27/2014 07:10	1	TAL DEN	RKS

Client: Waste Management

Job Number: 280-52954-1

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 280-216713/2-A		280-217279	280-216713	03/13/2014 13:17	1	TAL DEN	JJW
A:625	LCS 280-216713/2-A		280-217279	280-216713	03/18/2014 10:00	1	TAL DEN	MGH
A:218.6	LCS 440-169778/1002		440-169778		03/17/2014 19:28	1	TAL IRV	MN
P:200.7	LCS 280-216611/2-A		280-217080	280-216611	03/13/2014 07:00	1	TAL DEN	SEJ
A:200.7 Rev 4.4	LCS 280-216611/2-A		280-217080	280-216611	03/15/2014 05:01	1	TAL DEN	JKH
P:200.7	LCS 280-216611/2-A		280-217243	280-216611	03/13/2014 07:00	1	TAL DEN	SEJ
A:200.7 Rev 4.4	LCS 280-216611/2-A		280-217243	280-216611	03/17/2014 20:41	1	TAL DEN	JKH
P:245.1	LCS 280-216661/2-A		280-216899	280-216661	03/13/2014 11:40	1	TAL DEN	LLB
A:245.1	LCS 280-216661/2-A		280-216899	280-216661	03/13/2014 16:58	1	TAL DEN	LLB
P:1664A	LCS 280-217255/2-A		280-217298	280-217255	03/18/2014 09:52	1	TAL DEN	AFB
A:1664A	LCS 280-217255/2-A		280-217298	280-217255	03/18/2014 13:58	1	TAL DEN	AFB
A:350.1	LCS 280-216875/19		280-216875		03/13/2014 18:19	1	TAL DEN	AFH
P:351.2	LCS 280-217708/1-A		280-217739	280-217708	03/19/2014 22:30	1	TAL DEN	MW1
A:351.2	LCS 280-217708/1-A		280-217739	280-217708	03/20/2014 21:07	1	TAL DEN	MW1
P:365.2/365.3/365	LCS 280-217650/3-A		280-217889	280-217650	03/20/2014 12:55	1	TAL DEN	AJS
A:365.1	LCS 280-217650/3-A		280-217889	280-217650	03/21/2014 13:00	1	TAL DEN	AJS
A:410.4	LCS 280-217267/3		280-217267		03/18/2014 10:37	1	TAL DEN	CCJ
A:SM 2540D	LCS 280-216948/1		280-216948		03/14/2014 15:36	1	TAL DEN	MW1

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 280-216713/3-A		280-217279	280-216713	03/13/2014 13:17	1	TAL DEN	JJW
A:625	LCSD 280-216713/3-A		280-217279	280-216713	03/18/2014 10:28	1	TAL DEN	MGH
P:1664A	LCSD 280-217255/3-A		280-217298	280-217255	03/18/2014 09:52	1	TAL DEN	AFB
A:1664A	LCSD 280-217255/3-A		280-217298	280-217255	03/18/2014 13:58	1	TAL DEN	AFB
A:350.1	LCSD 280-216875/20		280-216875		03/13/2014 18:23	1	TAL DEN	AFH
P:351.2	LCSD 280-217708/2-A		280-217739	280-217708	03/19/2014 22:30	1	TAL DEN	MW1
A:351.2	LCSD 280-217708/2-A		280-217739	280-217708	03/20/2014 21:08	1	TAL DEN	MW1
P:365.2/365.3/365	LCSD 280-217650/4-A		280-217889	280-217650	03/20/2014 12:55	1	TAL DEN	AJS
A:365.1	LCSD 280-217650/4-A		280-217889	280-217650	03/21/2014 13:00	1	TAL DEN	AJS
A:410.4	LCSD 280-217267/4		280-217267		03/18/2014 10:37	1	TAL DEN	CCJ
A:SM 2540D	LCSD 280-216948/2		280-216948		03/14/2014 15:36	1	TAL DEN	MW1

Client: Waste Management

Job Number: 280-52954-1

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 440-169778/4		440-169778		03/17/2014 19:54	1	TAL IRV	MN
A:353.2	MRL 280-217025/18		280-217025		03/15/2014 11:31	1	TAL DEN	DVA

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

Sample Date/Time: 03/17/2014 12:45 Received Date/Time: 03/17/2014 17:32

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:218.6	440-73407-D-11 MS		440-169778		03/17/2014 20:58	1	TAL IRV	MN
P:200.7	280-52970-B-1-E MS		280-217080	280-216611	03/13/2014 07:00	1	TAL DEN	SEJ
A:200.7 Rev 4.4	280-52970-B-1-E MS		280-217080	280-216611	03/15/2014 05:13	1	TAL DEN	JKH
P:200.7	280-52970-B-1-E MS		280-217243	280-216611	03/13/2014 07:00	1	TAL DEN	SEJ
A:200.7 Rev 4.4	280-52970-B-1-E MS		280-217243	280-216611	03/17/2014 20:53	1	TAL DEN	JKH
P:245.1	280-52970-B-1-K MS		280-216899	280-216661	03/13/2014 11:40	1	TAL DEN	LLB
A:245.1	280-52970-B-1-K MS		280-216899	280-216661	03/13/2014 17:12	1	TAL DEN	LLB
A:350.1	280-52918-C-8 MS		280-216875		03/13/2014 19:26	1	TAL DEN	AFH
P:351.2	280-53142-C-4-B MS		280-217739	280-217708	03/19/2014 22:30	1	TAL DEN	MW1
A:351.2	280-53142-C-4-B MS		280-217739	280-217708	03/20/2014 21:12	1	TAL DEN	MW1

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

Sample Date/Time: 03/17/2014 12:45 Received Date/Time: 03/17/2014 17:32

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:218.6	440-73407-D-11 MSD		440-169778		03/17/2014 21:11	1	TAL IRV	MN
P:200.7	280-52970-B-1-F MSD		280-217080	280-216611	03/13/2014 07:00	1	TAL DEN	SEJ
A:200.7 Rev 4.4	280-52970-B-1-F MSD		280-217080	280-216611	03/15/2014 05:15	1	TAL DEN	JKH
P:200.7	280-52970-B-1-F MSD		280-217243	280-216611	03/13/2014 07:00	1	TAL DEN	SEJ
A:200.7 Rev 4.4	280-52970-B-1-F MSD		280-217243	280-216611	03/17/2014 20:55	1	TAL DEN	JKH
P:245.1	280-52970-B-1-L MSD		280-216899	280-216661	03/13/2014 11:40	1	TAL DEN	LLB
A:245.1	280-52970-B-1-L MSD		280-216899	280-216661	03/13/2014 17:14	1	TAL DEN	LLB
A:350.1	280-52918-C-8 MSD		280-216875		03/13/2014 19:29	1	TAL DEN	AFH
P:351.2	280-53142-C-4-C MSD		280-217739	280-217708	03/19/2014 22:30	1	TAL DEN	MW1
A:351.2	280-53142-C-4-C MSD		280-217739	280-217708	03/20/2014 21:13	1	TAL DEN	MW1

Lab References:

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: HXC0036
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:
4/2/2014 9:17:12 AM
Jimson E. Carr, Service Center Manager
Jimson.Carr@testamericainc.com

Designee for

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: HXC0036

Qualifiers

WetChem

Qualifier	Qualifier Description
H3	Sample was received and analyzed past holding time.

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: HXC0036

Job ID: HXC0036

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 4.8 degrees C.

TestAmerica has determined 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.

Sample Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HXC0036

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
HXC0036-01	280-52954-1 / DB01 E	Water - NonPotable	03/08/14 10:17	03/10/14 08:30

Detection Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HXC0036

Client Sample ID: 280-52954-1 / DB01 E **Lab Sample ID: HXC0036-01**

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HXC0036

Client Sample ID: 280-52954-1 / DB01 E

Date Collected: 03/08/14 10:17
Date Received: 03/10/14 08:30

Lab Sample ID: HXC0036-01

Matrix: Water - NonPotable

Method: SM5210B - General Chemistry Parameters

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
BOD - 5 Day	ND	H3	2.00		mg/L		03/10/14 16:29	03/15/14 13:38	1.00

QC Sample Results

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HXC0036

Method: SM5210B - General Chemistry Parameters

Lab Sample ID: 14C0011-BLK1
Matrix: Water - NonPotable
Analysis Batch: 14C0011

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 14C0011_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
BOD - 5 Day	ND		2.00		mg/L		03/10/14 16:12	03/15/14 13:26	1.00

Lab Sample ID: 14C0011-BS1
Matrix: Water - NonPotable
Analysis Batch: 14C0011

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 14C0011_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
BOD - 5 Day	198	198		mg/L		100	85 - 115

Lab Sample ID: 14C0011-DUP1
Matrix: Water - NonPotable
Analysis Batch: 14C0011

Client Sample ID: Duplicate
Prep Type: Total
Prep Batch: 14C0011_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
BOD - 5 Day	3.13		2.55		mg/L		20	20

QC Association Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HXC0036

WetChem

Analysis Batch: 14C0011

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
14C0011-BLK1	Method Blank	Total	Water - NonPotable	SM5210B	14C0011_P
14C0011-BS1	Lab Control Sample	Total	Water - NonPotable	SM5210B	14C0011_P
14C0011-DUP1	Duplicate	Total	Water - NonPotable	SM5210B	14C0011_P
HXC0036-01	280-52954-1 / DB01 E	Total	Water - NonPotable	SM5210B	14C0011_P

Prep Batch: 14C0011_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
14C0011-BLK1	Method Blank	Total	Water - NonPotable	Default Prep GenChem	
14C0011-BS1	Lab Control Sample	Total	Water - NonPotable	Default Prep GenChem	
14C0011-DUP1	Duplicate	Total	Water - NonPotable	Default Prep GenChem	
HXC0036-01	280-52954-1 / DB01 E	Total	Water - NonPotable	Default Prep GenChem	

Lab Chronicle

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HXC0036

Client Sample ID: 280-52954-1 / DB01 E

Date Collected: 03/08/14 10:17
Date Received: 03/10/14 08:30

Lab Sample ID: HXC0036-01

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	14C0011_P	03/10/14 16:29	KR	TAL HON
Total	Analysis	GenChem SM5210B		1.00	14C0011	03/15/14 13:38	KR	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: HXC0036

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
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: HXC0036

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

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

HXC0036

TAL-4124-280 (0506)

Client: Waste Management / AECOM	Project Manager: Mark Hofferbert	Date:	Chain of Custody Number: 168571
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 Lothig	Lab Contact: Bixby Sara	
Project Name and Location (State): WGSA Stormwater	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.: W0287037.02			

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	Total Oil & Grease	Total TSS	1625 SVOC*	Alk & COD	3650.1 Phos	3500 Ammonia	3500 NO2+NO3	Emulsion Filtration	Total Metals**	Total Phenols	2540 C (TVS)	NH3	Special Instructions/ Conditions of Receipt
D001 E	03/08/14	1017		X			4	4	1				X	X	X	X	X	X	X	X	X	X	X	X	HXC0036-01

* acenaphthene, benzoic acid, p-cresol, pentachlorophenol, phenol

** As, Ca, Cr, Pb, Ni, Se, Ag, Tl

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): 4.8°C int wet ice

1. Relinquished By: Andrea Wong	Date: 3/10/14	Time: 0830	1. Received By: Kristie Reilly	Date: 3/10/14	Time: 8:30
2. Relinquished By: Kristie Reilly	Date: 3/10/14	Time: 9:40	2. Received By:	Date:	Time:
3. Relinquished By:	Date:	Time:	3. Received By:	Date:	Time:

Comments

WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

FIELD INFORMATION FORM

WM WASTE MANAGEMENT

WGSL

No.: | Sample Point: DBD1F (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: [illegible]

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
030814	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: clear, no sediment | Odor: none | Color: clear | Other: no sheen

Weather Conditions (required daily, or as conditions change): | Direction/Speed: S 5 mph | Outlook: overcast | Precipitation: Y or N

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

FIELD COMMENTS

	pH	DBD1E	DBD1W
OIG, Aliquot A	7.81	0.25 inch over weir	no flow
Aliquot B	7.63	0.25 inch over weir	no flow
Aliquot C	7.51	<0.25 inch over weir	no flow

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
03/08/14	Margie Thach	[signature]	AECOM
[illegible]	[illegible]	[signature]	AECOM

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

TAL-8029WM (0108)
4/2/2014

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Destination Laboratory Denver.

Destination Laboratory PM (if known) _____

Drop Shipment Receipt Checklist

Client Name: AECOM **Date/ Time Received:** 3/10/14 8:30

Received By: 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	☐	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 ☒~~ KR 3/10/14

Sample Container Temperature: 4.8 °C

Samples drop shipped on ice? Yes ☐ No ☐ Type:

Date of drop shipment:

Comments/ Sampling Handling Notes:

TA Honolulu retaining. 1L poly unpres. for BOD analysis.

Chain of Custody

280-52954 Chain of Custody

TAL-4124-280 (0508)

Sampler ID _____

Temperature on Receipt 21 IR#0.2 SL 3-12-14

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client: Waste Management / AECOM	Project Manager: Mark Hofferbert	Date:	Chain of Custody Number: 168571
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	SM2540D TSS	1625 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 CrVI	TKN	Special Instructions/ Conditions of Receipt
DB01-E	03/08/14	1017		X			4	4	1				X	X	X	X	X	X	X	X	X	X	X	X	* aterpineol, 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: Andrea Wong	3/10/14	0830	1. Received By: Kristie Reilly [signature]	3/10/14	8:30
2. Relinquished By: Kristie Reilly [signature]	3/10/14	9:40	2. Received By: Stephanie O'Tormey	3/12/14	0950
3. Relinquished By:			3. Received By:		

4.8°C Intact wet ice

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: D001E (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 ____
030814	781						

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: clear, no sediment Odor: none Color: clear Other: no scum

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

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

FIELD COMMENTS

	pH		
		D001E	D001W
O&G, Aliquot A	7.81	0.25 inch over weir	no flow
Aliquot B	7.63	0.25 inch over weir	no flow
Aliquot C	7.51	<0.25 inch over weir	no flow

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
03/08/14	Margie Thach	[signature]	AECOM
03/08/14	Didier Dubois	[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: 280-52954-1

Login Number: 52954
List Number: 1
Creator: O'Tormey, Stephanie R

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
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: 280-52954-1

Login Number: 52954
List Number: 1
Creator: King, Ronald

List Source: TestAmerica Irvine
List Creation: 03/13/14 06:12 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	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 280-51935-1

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
2/21/2014 9:34 AM

Betsy A Sara, Project Manager II
4955 Yarrow Street, Arvada, CO, 80002
(303)736-0189
betsy.sara@testamericainc.com
02/21/2014

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: 280-51935-1

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 02/07/2014; the sample arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 1.5 C.

Holding Times

All holding times were met.

Method Blanks

Total Zinc Method 200.7 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)

The Method 625 laboratory control sample and the laboratory control sample duplicate (LCS/LCSD) recovered below the lower control limit for Hexachlorocyclopentadiene at 7% (control limits 10%-120%). Hexachlorocyclopentadiene has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction and reanalysis were not performed.

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 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 MS and MSD recoveries outside control limits for Total Iron, Total Lead Method 200.7 and Chemical Oxygen Demand (COD) Method 410.4. In addition, the RPD result was outside the RPD limit for COD. 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 relative percent difference of the MS/MSD performed on a sample from another client were outside control limits for Total Kjeldahl Nitrogen (TKN) Method 351.2 because the sample concentration was greater than four times the spike amount. Because the corresponding Laboratory Control Sample and the Method Blank sample were within control limits, 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 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: 280-51935-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
280-51935-1	**DB01E**					
Field pH		8.28			SU	Field Sampling
Ammonia		0.18		0.10	mg/L	350.1
Nitrogen, Kjeldahl		0.89		0.50	mg/L	351.2
Nitrate Nitrite as N		6.0		0.10	mg/L	353.2
Phosphorus, Total		0.33		0.050	mg/L	365.1
Chemical Oxygen Demand		25		20	mg/L	410.4
Total Suspended Solids		82		4.0	mg/L	SM 2540D
Nitrogen, Total		6.9		0.10	mg/L	Total Nitrogen
Dissolved						
Chromium, hexavalent		1.5		1.0	ug/L	218.6
Total Recoverable						
Cadmium		0.00082	J	0.0050	mg/L	200.7 Rev 4.4
Iron		5.0		0.10	mg/L	200.7 Rev 4.4
Lead		0.010		0.0090	mg/L	200.7 Rev 4.4
Zinc		0.048	B	0.020	mg/L	200.7 Rev 4.4

METHOD SUMMARY

Client: Waste Management

Job Number: 280-51935-1

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: 280-51935-1

Method	Analyst	Analyst ID
40CFR136A 625	Kiekel, Daniel C	DCK
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	Graham, Shane M	SMG
MCAWW 351.2	Woolley, Mark -	MW1
MCAWW 353.2	Ayala, Delaina V	DVA
EPA 365.1	Schwemin, Andrew J	AJS
MCAWW 410.4	Jewell, Connie C	CCJ
SM SM 2540D	Woolley, Mark -	MW1
EPA Total Nitrogen	Sullivan, Roxanne K	RKS
EPA 218.6	Welch, Raquel	RW

SAMPLE SUMMARY

Client: Waste Management

Job Number: 280-51935-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-51935-1	DB01E	Water	02/04/2014 1055	02/07/2014 1020

SAMPLE RESULTS

Client: Waste Management

Job Number: 280-51935-1

Client Sample ID: **DB01E**

Lab Sample ID: 280-51935-1

Client Matrix: Water

Date Sampled: 02/04/2014 1055

Date Received: 02/07/2014 1020

625 Semivolatile Organic Compounds (GC/MS)

Analysis Method:	625	Analysis Batch:	280-213417	Instrument ID:	SMS_B2
Prep Method:	625	Prep Batch:	280-212319	Lab File ID:	B2-4348.D
Dilution:	1.0			Initial Weight/Volume:	1030.3 mL
Analysis Date:	02/19/2014 0013			Final Weight/Volume:	1000 uL
Prep Date:	02/10/2014 1715			Injection Volume:	0.5 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Alpha-Terpineol	ND		0.0019	0.010
Benzoic acid	ND		0.0097	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	98		50 - 120
2-Fluorobiphenyl	80		36 - 120
2-Fluorophenol	77		30 - 120
Nitrobenzene-d5	77		45 - 120
Phenol-d5	78		36 - 120
Terphenyl-d14	51		41 - 120

Client: Waste Management

Job Number: 280-51935-1

Client Sample ID: **DB01E**

Lab Sample ID: 280-51935-1

Client Matrix: Water

Date Sampled: 02/04/2014 1055

Date Received: 02/07/2014 1020

218.6 Chromium, Hexavalent (Ion Chromatography)-Dissolved

Analysis Method:	218.6	Analysis Batch:	440-162302	Instrument ID:	IC-22
	N/A	Prep Batch:	N/A	Lab File ID:	440-0036293-013.d
Dilution:	1.0			Initial Weight/Volume:	10 mL
Analysis Date:	02/14/2014 1950			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chromium, hexavalent	1.5		0.25	1.0

Client: Waste Management

Job Number: 280-51935-1

Client Sample ID: **DB01E**

Lab Sample ID: 280-51935-1

Client Matrix: Water

Date Sampled: 02/04/2014 1055

Date Received: 02/07/2014 1020

200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	280-212571	Instrument ID:	MT_025
Prep Method:	200.7	Prep Batch:	280-212104	Lab File ID:	25A8021114.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	02/12/2014 0428			Final Weight/Volume:	50 mL
Prep Date:	02/11/2014 0730				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Arsenic	ND		0.0044	0.015
Cadmium	0.00082	J	0.00045	0.0050
Iron	5.0		0.022	0.10
Lead	0.010		0.0026	0.0090
Selenium	ND		0.0049	0.015
Zinc	0.048	B	0.0045	0.020
Silver	ND		0.00093	0.010

245.1 Mercury (CVAA)

Analysis Method:	245.1	Analysis Batch:	280-212634	Instrument ID:	MT_034
Prep Method:	245.1	Prep Batch:	280-212435	Lab File ID:	140211taa.txt
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	02/11/2014 1707			Final Weight/Volume:	30 mL
Prep Date:	02/11/2014 1230				

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

General Chemistry

Client Sample ID: **DB01E**

Lab Sample ID: 280-51935-1

Client Matrix: Water

Date Sampled: 02/04/2014 1055

Date Received: 02/07/2014 1020

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
HEM	ND		mg/L	1.6	5.0	1.0	1664A
Analysis Batch: 280-213132	Analysis Date: 02/14/2014 1520						
Prep Batch: 280-213068	Prep Date: 02/14/2014 0943						
Ammonia	0.18		mg/L	0.022	0.10	1.0	350.1
Analysis Batch: 280-212560	Analysis Date: 02/11/2014 1312						
Nitrogen, Kjeldahl	0.89		mg/L	0.18	0.50	1.0	351.2
Analysis Batch: 280-212772	Analysis Date: 02/12/2014 2112						
Prep Batch: 280-212538	Prep Date: 02/11/2014 2132						
Nitrate Nitrite as N	6.0		mg/L	0.019	0.10	1.0	353.2
Analysis Batch: 280-212562	Analysis Date: 02/11/2014 2218						
Phosphorus, Total	0.33		mg/L	0.0050	0.050	1.0	365.1
Analysis Batch: 280-212561	Analysis Date: 02/11/2014 2314						
Prep Batch: 280-212492	Prep Date: 02/11/2014 1604						
Chemical Oxygen Demand	25		mg/L	4.1	20	1.0	410.4
Analysis Batch: 280-212585	Analysis Date: 02/12/2014 0822						
Total Suspended Solids	82		mg/L	2.8	4.0	1.0	SM 2540D
Analysis Batch: 280-212142	Analysis Date: 02/08/2014 1035						
Nitrogen, Total	6.9		mg/L	0.042	0.10	1.0	Total Nitrogen
Analysis Batch: 280-213248	Analysis Date: 02/17/2014 0820						

Field Service / Mobile Lab

Client Sample ID: **DB01E**

Lab Sample ID: 280-51935-1

Client Matrix: Water

Date Sampled: 02/04/2014 1055

Date Received: 02/07/2014 1020

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed Date Prepared
Field pH	8.28		SU	1.0	Field Sampling	280-212236	02/04/2014 1055

DATA REPORTING QUALIFIERS

Client: Waste Management

Job Number: 280-51935-1

Lab Section	Qualifier	Description
GC/MS Semi VOA		
	*	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.
Metals		
	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.
General Chemistry		
	F1	MS and/or MSD Recovery 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.
	F2	MS/MSD RPD exceeds control limits

QUALITY CONTROL RESULTS

Client: Waste Management

Job Number: 280-51935-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 280-212319					
LCS 280-212319/2-A	Lab Control Sample	T	Water	625	
LCSD 280-212319/3-A	Lab Control Sample Duplicate	T	Water	625	
MB 280-212319/1-A	Method Blank	T	Water	625	
280-51935-1	DB01E	T	Water	625	
Analysis Batch:280-213067					
LCS 280-212319/2-A	Lab Control Sample	T	Water	625	280-212319
LCSD 280-212319/3-A	Lab Control Sample Duplicate	T	Water	625	280-212319
Analysis Batch:280-213417					
MB 280-212319/1-A	Method Blank	T	Water	625	280-212319
280-51935-1	DB01E	T	Water	625	280-212319

Report Basis

T = Total

Client: Waste Management

Job Number: 280-51935-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-212104					
LCS 280-212104/2-A	Lab Control Sample	R	Water	200.7	
MB 280-212104/1-A	Method Blank	R	Water	200.7	
280-51934-A-1-B MS	Matrix Spike	R	Water	200.7	
280-51934-A-1-C MSD	Matrix Spike Duplicate	R	Water	200.7	
280-51935-1	DB01E	R	Water	200.7	
Prep Batch: 280-212435					
LCS 280-212435/2-A	Lab Control Sample	T	Water	245.1	
MB 280-212435/1-A	Method Blank	T	Water	245.1	
280-51935-1	DB01E	T	Water	245.1	
280-51935-1MS	Matrix Spike	T	Water	245.1	
280-51935-1MSD	Matrix Spike Duplicate	T	Water	245.1	
Analysis Batch:280-212571					
LCS 280-212104/2-A	Lab Control Sample	R	Water	200.7 Rev 4.4	280-212104
MB 280-212104/1-A	Method Blank	R	Water	200.7 Rev 4.4	280-212104
280-51934-A-1-B MS	Matrix Spike	R	Water	200.7 Rev 4.4	280-212104
280-51934-A-1-C MSD	Matrix Spike Duplicate	R	Water	200.7 Rev 4.4	280-212104
280-51935-1	DB01E	R	Water	200.7 Rev 4.4	280-212104
Analysis Batch:280-212634					
LCS 280-212435/2-A	Lab Control Sample	T	Water	245.1	280-212435
MB 280-212435/1-A	Method Blank	T	Water	245.1	280-212435
280-51935-1	DB01E	T	Water	245.1	280-212435
280-51935-1MS	Matrix Spike	T	Water	245.1	280-212435
280-51935-1MSD	Matrix Spike Duplicate	T	Water	245.1	280-212435

Report Basis
R = Total Recoverable
T = Total

Field Service / Mobile Lab

Analysis Batch:280-212236					
280-51935-1	DB01E	T	Water	Field Sampling	

Report Basis
T = Total

Client: Waste Management

Job Number: 280-51935-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-212142					
LCS 280-212142/1	Lab Control Sample	T	Water	SM 2540D	
LCSD 280-212142/2	Lab Control Sample Duplicate	T	Water	SM 2540D	
MB 280-212142/3	Method Blank	T	Water	SM 2540D	
280-51935-1	DB01E	T	Water	SM 2540D	
280-51935-1DU	Duplicate	T	Water	SM 2540D	
Prep Batch: 280-212492					
LCS 280-212492/3-A	Lab Control Sample	T	Water	365.2/365.3/365	
LCSD 280-212492/4-A	Lab Control Sample Duplicate	T	Water	365.2/365.3/365	
MB 280-212492/5-A	Method Blank	T	Water	365.2/365.3/365	
280-51928-F-3-B MS	Matrix Spike	T	Water	365.2/365.3/365	
280-51928-F-3-C MSD	Matrix Spike Duplicate	T	Water	365.2/365.3/365	
280-51935-1	DB01E	T	Water	365.2/365.3/365	
Prep Batch: 280-212538					
LCS 280-212538/1-A	Lab Control Sample	T	Water	351.2	
LCSD 280-212538/2-A	Lab Control Sample Duplicate	T	Water	351.2	
MB 280-212538/3-A	Method Blank	T	Water	351.2	
280-51869-C-3-B MS	Matrix Spike	T	Water	351.2	
280-51869-C-3-C MSD	Matrix Spike Duplicate	T	Water	351.2	
280-51935-1	DB01E	T	Water	351.2	
Analysis Batch:280-212560					
LCS 280-212560/19	Lab Control Sample	T	Water	350.1	
LCSD 280-212560/20	Lab Control Sample Duplicate	T	Water	350.1	
MB 280-212560/21	Method Blank	T	Water	350.1	
280-51935-1	DB01E	T	Water	350.1	
Analysis Batch:280-212561					
LCS 280-212492/3-A	Lab Control Sample	T	Water	365.1	280-212492
LCSD 280-212492/4-A	Lab Control Sample Duplicate	T	Water	365.1	280-212492
MB 280-212492/5-A	Method Blank	T	Water	365.1	280-212492
280-51928-F-3-B MS	Matrix Spike	T	Water	365.1	280-212492
280-51928-F-3-C MSD	Matrix Spike Duplicate	T	Water	365.1	280-212492
280-51935-1	DB01E	T	Water	365.1	280-212492
Analysis Batch:280-212562					
LCS 280-212562/29	Lab Control Sample	T	Water	353.2	
LCSD 280-212562/30	Lab Control Sample Duplicate	T	Water	353.2	
MB 280-212562/28	Method Blank	T	Water	353.2	
320-5869-B-2 MS	Matrix Spike	T	Water	353.2	
320-5869-B-2 MSD	Matrix Spike Duplicate	T	Water	353.2	
280-51935-1	DB01E	T	Water	353.2	

Client: Waste Management

Job Number: 280-51935-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-212585					
LCS 280-212585/9	Lab Control Sample	T	Water	410.4	
LCSD 280-212585/10	Lab Control Sample Duplicate	T	Water	410.4	
MB 280-212585/11	Method Blank	T	Water	410.4	
280-51738-B-2 MS	Matrix Spike	T	Water	410.4	
280-51738-B-2 MSD	Matrix Spike Duplicate	T	Water	410.4	
280-51935-1	DB01E	T	Water	410.4	
Analysis Batch:280-212772					
LCS 280-212538/1-A	Lab Control Sample	T	Water	351.2	280-212538
LCSD 280-212538/2-A	Lab Control Sample Duplicate	T	Water	351.2	280-212538
MB 280-212538/3-A	Method Blank	T	Water	351.2	280-212538
280-51869-C-3-B MS	Matrix Spike	T	Water	351.2	280-212538
280-51869-C-3-C MSD	Matrix Spike Duplicate	T	Water	351.2	280-212538
280-51935-1	DB01E	T	Water	351.2	280-212538
Prep Batch: 280-213068					
LCS 280-213068/2-A	Lab Control Sample	T	Water	1664A	
LCSD 280-213068/3-A	Lab Control Sample Duplicate	T	Water	1664A	
MB 280-213068/1-A	Method Blank	T	Water	1664A	
280-51935-1	DB01E	T	Water	1664A	
Analysis Batch:280-213132					
LCS 280-213068/2-A	Lab Control Sample	T	Water	1664A	280-213068
LCSD 280-213068/3-A	Lab Control Sample Duplicate	T	Water	1664A	280-213068
MB 280-213068/1-A	Method Blank	T	Water	1664A	280-213068
280-51935-1	DB01E	T	Water	1664A	280-213068
Analysis Batch:280-213248					
MB 280-213248/1	Method Blank	T	Water	Total Nitrogen	
280-51935-1	DB01E	T	Water	Total Nitrogen	

Report Basis
T = Total

Client: Waste Management

Job Number: 280-51935-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
HPLC/IC					
Analysis Batch:440-162302					
LCS 440-162302/6	Lab Control Sample	T	Water	218.6	
MB 440-162302/3	Method Blank	T	Water	218.6	
280-51935-1	DB01E	D	Water	218.6	
440-70361-A-1 MS	Matrix Spike	D	Water	218.6	
440-70361-A-1 MSD	Matrix Spike Duplicate	D	Water	218.6	

Report Basis

D = Dissolved

T = Total

Client: Waste Management

Job Number: 280-51935-1

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
280-51935-1	DB01E	98	80	77	77	78	51
MB 280-212319/1-A		82	69	74	77	60	86
LCS 280-212319/2-A		94	76	77	77	76	84
LCSD 280-212319/3-A		93	77	76	77	76	85

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: 280-51935-1

Method Blank - Batch: 280-212319

Method: 625
Preparation: 625

Lab Sample ID:	MB 280-212319/1-A	Analysis Batch:	280-213417	Instrument ID:	SMS_B2
Client Matrix:	Water	Prep Batch:	280-212319	Lab File ID:	B2-4343.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	02/18/2014 2141	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	02/10/2014 1715			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	69	36 - 120
2-Fluorophenol	74	30 - 120
Nitrobenzene-d5	77	45 - 120
Phenol-d5	60	36 - 120
Terphenyl-d14	86	41 - 120

Client: Waste Management

Job Number: 280-51935-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-212319

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-212319/2-A	Analysis Batch:	280-213067	Instrument ID:	SMS_B2
Client Matrix:	Water	Prep Batch:	280-212319	Lab File ID:	B2-4300.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	02/14/2014 1307	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	02/10/2014 1715			Injection Volume:	0.5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-212319/3-A	Analysis Batch:	280-213067	Instrument ID:	SMS_B2
Client Matrix:	Water	Prep Batch:	280-212319	Lab File ID:	B2-4301.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	02/14/2014 1337	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	02/10/2014 1715			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	60	61	44 - 120	1	35		
1,2-Dichlorobenzene	58	55	32 - 120	5	42		
1,3-Dichlorobenzene	55	51	23 - 120	8	47		
1,4-Dichlorobenzene	55	52	24 - 120	6	49		
2,2'-Oxybis(1-chloropropane)	70	69	37 - 120	1	30		
2,4,6-Trichlorophenol	84	84	51 - 120	1	30		
2,4-Dichlorophenol	80	81	46 - 120	1	30		
2,4-Dimethylphenol	51	51	44 - 119	1	35		
2,4-Dinitrophenol	78	80	20 - 121	2	61		
2,4-Dinitrotoluene	92	92	57 - 120	0	35		
2,6-Dinitrotoluene	89	91	56 - 120	2	30		
2-Chloronaphthalene	73	75	60 - 118	2	30		
2-Chlorophenol	79	78	34 - 120	0	30		
2-Methylphenol	75	76	38 - 120	0	35		
2-Nitrophenol	82	82	47 - 120	0	30		
3,3'-Dichlorobenzidine	42	45	18 - 120	6	50	J	J
4,6-Dinitro-2-methylphenol	83	85	40 - 120	2	55		
4-Bromophenyl phenyl ether	79	82	53 - 120	4	34		
4-Chloro-3-methylphenol	79	80	57 - 120	1	30		
4-Chlorophenyl phenyl ether	81	83	51 - 120	3	30		
4-Nitrophenol	88	87	53 - 120	2	42		
Acenaphthene	75	76	47 - 120	2	30		
Acenaphthylene	72	73	33 - 120	2	30		
Anthracene	77	79	52 - 120	2	30		
Benzidine	23	24	10 - 218	3	50		
Benzo[a]anthracene	80	81	54 - 120	2	30		
Benzo[a]pyrene	78	80	39 - 120	3	73		
Benzo[b]fluoranthene	83	85	51 - 120	3	90		
Benzo[g,h,i]perylene	81	84	48 - 120	3	64		
Benzo[k]fluoranthene	86	86	49 - 120	0	50		
Bis(2-chloroethoxy)methane	78	78	50 - 120	1	30		
Bis(2-chloroethyl)ether	79	78	35 - 120	1	30		
Bis(2-ethylhexyl) phthalate	77	80	56 - 120	3	30		
Butyl benzyl phthalate	76	79	53 - 120	3	30		
Chrysene	81	83	51 - 120	2	30		
Dibenz(a,h)anthracene	82	84	45 - 120	2	78		

Client: Waste Management

Job Number: 280-51935-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-212319

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-212319/2-A	Analysis Batch:	280-213067	Instrument ID:	SMS_B2
Client Matrix:	Water	Prep Batch:	280-212319	Lab File ID:	B2-4300.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	02/14/2014 1307	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	02/10/2014 1715			Injection Volume:	0.5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-212319/3-A	Analysis Batch:	280-213067	Instrument ID:	SMS_B2
Client Matrix:	Water	Prep Batch:	280-212319	Lab File ID:	B2-4301.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	02/14/2014 1337	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	02/10/2014 1715			Injection Volume:	0.5 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Diethyl phthalate	84	85	59 - 114	1	30		
Dimethyl phthalate	85	86	58 - 112	0	30		
Di-n-butyl phthalate	79	80	57 - 118	1	30		
Di-n-octyl phthalate	72	74	56 - 120	4	30		
Fluoranthene	81	82	58 - 120	1	30		
Fluorene	80	81	59 - 120	1	30		
Hexachlorobenzene	83	83	53 - 120	1	30		
Hexachlorobutadiene	55	53	27 - 116	2	41		
Hexachlorocyclopentadiene	7	7	10 - 120	3	82	J *	J *
Hexachloroethane	49	46	40 - 113	6	52		
Indeno[1,2,3-cd]pyrene	74	77	50 - 120	4	73		
Isophorone	75	75	50 - 120	0	30		
Naphthalene	67	68	37 - 120	1	30		
n-Decane	39	34	28 - 120	12	61		
Nitrobenzene	77	77	46 - 120	0	30		
N-Nitrosodimethylamine	76	75	37 - 120	1	30		
N-Nitrosodi-n-propylamine	76	76	50 - 120	0	30		
N-Nitrosodiphenylamine	73	75	46 - 203	2	50		
p-Cresol	76	76	42 - 120	1	39		
Pentachlorophenol	88	88	46 - 120	0	30		
Phenanthrene	79	80	54 - 120	1	30		
Phenol	78	79	37 - 112	1	30		
Pyrene	79	81	55 - 115	2	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
2,4,6-Tribromophenol	94	93	50 - 120
2-Fluorobiphenyl	76	77	36 - 120
2-Fluorophenol	77	76	30 - 120
Nitrobenzene-d5	77	77	45 - 120
Phenol-d5	76	76	36 - 120
Terphenyl-d14	84	85	41 - 120

Client: Waste Management

Job Number: 280-51935-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-212319

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-212319/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-212319/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	02/14/2014 1307			Analysis Date:	02/14/2014 1337
Prep Date:	02/10/2014 1715			Prep Date:	02/10/2014 1715
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	0.0480	0.0485
1,2-Dichlorobenzene	0.0800	0.0800	0.0462	0.0441
1,3-Dichlorobenzene	0.0800	0.0800	0.0438	0.0404
1,4-Dichlorobenzene	0.0800	0.0800	0.0444	0.0419
2,2'-Oxybis(1-chloropropane)	0.0800	0.0800	0.0556	0.0553
2,4,6-Trichlorophenol	0.0800	0.0800	0.0669	0.0673
2,4-Dichlorophenol	0.0800	0.0800	0.0640	0.0646
2,4-Dimethylphenol	0.0800	0.0800	0.0407	0.0411
2,4-Dinitrophenol	0.160	0.160	0.126	0.129
2,4-Dinitrotoluene	0.0800	0.0800	0.0733	0.0734
2,6-Dinitrotoluene	0.0800	0.0800	0.0710	0.0725
2-Chloronaphthalene	0.0800	0.0800	0.0584	0.0597
2-Chlorophenol	0.0800	0.0800	0.0628	0.0626
2-Methylphenol	0.0800	0.0800	0.0603	0.0604
2-Nitrophenol	0.0800	0.0800	0.0655	0.0654
3,3'-Dichlorobenzidine	0.0800	0.0800	0.0337 J	0.0358 J
4,6-Dinitro-2-methylphenol	0.160	0.160	0.133	0.136
4-Bromophenyl phenyl ether	0.0800	0.0800	0.0636	0.0659
4-Chloro-3-methylphenol	0.0800	0.0800	0.0630	0.0637
4-Chlorophenyl phenyl ether	0.0800	0.0800	0.0647	0.0665
4-Nitrophenol	0.160	0.160	0.141	0.139
Acenaphthene	0.0800	0.0800	0.0600	0.0611
Acenaphthylene	0.0800	0.0800	0.0574	0.0584
Anthracene	0.0800	0.0800	0.0616	0.0629
Benzidine	0.0800	0.0800	ND	ND
Benzo[a]anthracene	0.0800	0.0800	0.0636	0.0652
Benzo[a]pyrene	0.0800	0.0800	0.0624	0.0643
Benzo[b]fluoranthene	0.0800	0.0800	0.0662	0.0681
Benzo[g,h,i]perylene	0.0800	0.0800	0.0651	0.0668
Benzo[k]fluoranthene	0.0800	0.0800	0.0687	0.0690
Bis(2-chloroethoxy)methane	0.0800	0.0800	0.0627	0.0620
Bis(2-chloroethyl)ether	0.0800	0.0800	0.0629	0.0626
Bis(2-ethylhexyl) phthalate	0.0800	0.0800	0.0620	0.0637
Butyl benzyl phthalate	0.0800	0.0800	0.0608	0.0629
Chrysene	0.0800	0.0800	0.0648	0.0662
Dibenz(a,h)anthracene	0.0800	0.0800	0.0658	0.0671
Diethyl phthalate	0.0800	0.0800	0.0673	0.0676
Dimethyl phthalate	0.0800	0.0800	0.0683	0.0686
Di-n-butyl phthalate	0.0800	0.0800	0.0634	0.0643

Client: Waste Management

Job Number: 280-51935-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-212319

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-212319/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-212319/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	02/14/2014 1307			Analysis Date:	02/14/2014 1337
Prep Date:	02/10/2014 1715			Prep Date:	02/10/2014 1715
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	0.0574	0.0595
Fluoranthene	0.0800	0.0800	0.0651	0.0659
Fluorene	0.0800	0.0800	0.0641	0.0649
Hexachlorobenzene	0.0800	0.0800	0.0661	0.0665
Hexachlorobutadiene	0.0800	0.0800	0.0438	0.0428
Hexachlorocyclopentadiene	0.0800	0.0800	0.00566 J *	0.00584 J *
Hexachloroethane	0.0800	0.0800	0.0389	0.0365
Indeno[1,2,3-cd]pyrene	0.0800	0.0800	0.0595	0.0618
Isophorone	0.0800	0.0800	0.0598	0.0600
Naphthalene	0.0800	0.0800	0.0539	0.0542
n-Decane	0.0800	0.0800	0.0309	0.0274
Nitrobenzene	0.0800	0.0800	0.0614	0.0614
N-Nitrosodimethylamine	0.0800	0.0800	0.0612	0.0604
N-Nitrosodi-n-propylamine	0.0800	0.0800	0.0605	0.0604
N-Nitrosodiphenylamine	0.0800	0.0800	0.0587	0.0601
p-Cresol	0.0800	0.0800	0.0605	0.0609
Pentachlorophenol	0.160	0.160	0.141	0.140
Phenanthrene	0.0800	0.0800	0.0634	0.0644
Phenol	0.0800	0.0800	0.0626	0.0633
Pyrene	0.0800	0.0800	0.0636	0.0651

Client: Waste Management

Job Number: 280-51935-1

Method Blank - Batch: 440-162302

Method: 218.6
Preparation: N/A

Lab Sample ID:	MB 440-162302/3	Analysis Batch:	440-162302	Instrument ID:	IC-22
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	MB.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	02/14/2014 1126	Units:	ug/L	Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1 mL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Chromium, hexavalent	ND		0.25	1.0

Method Reporting Limit Check - Batch: 440-162302

Method: 218.6
Preparation: N/A

Lab Sample ID:	MRL 440-162302/4	Analysis Batch:	440-162302	Instrument ID:	IC-22
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	mrl.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	02/14/2014 1139	Units:	ug/L	Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1 mL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chromium, hexavalent	1.00	1.05	105	50 - 150	

Lab Control Sample - Batch: 440-162302

Method: 218.6
Preparation: N/A

Lab Sample ID:	LCS 440-162302/6	Analysis Batch:	440-162302	Instrument ID:	IC-22
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	440-0036293-006.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	02/14/2014 1222	Units:	ug/L	Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1 mL
Leach Date:	N/A				

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

Client: Waste Management

Job Number: 280-51935-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 440-162302

Method: 218.6
Preparation: N/A

MS Lab Sample ID:	440-70361-A-1 MS	Analysis Batch:	440-162302	Instrument ID:	IC-22
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	280-51935-i-1 MS.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	02/14/2014 1911			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1 mL
Leach Date:	N/A				

MSD Lab Sample ID:	440-70361-A-1 MSD	Analysis Batch:	440-162302	Instrument ID:	IC-22
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	280-51935-i-1 MSD.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	02/14/2014 1924			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1 mL
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Chromium, hexavalent	99	101	90 - 110	2	10		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 440-162302

Method: 218.6
Preparation: N/A

MS Lab Sample ID:	440-70361-A-1 MS	Units:	ug/L	MSD Lab Sample ID:	440-70361-A-1 MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	02/14/2014 1911			Analysis Date:	02/14/2014 1924
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	8.1	50.0	50.0	57.7	58.6

Client: Waste Management

Job Number: 280-51935-1

Method Blank - Batch: 280-212104

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	MB 280-212104/1-A	Analysis Batch:	280-212571	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-212104	Lab File ID:	25A8021114.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	02/12/2014 0346	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	02/11/2014 0730				
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	0.00578	J	0.0045	0.020
Silver	ND		0.00093	0.010

Lab Control Sample - Batch: 280-212104

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	LCS 280-212104/2-A	Analysis Batch:	280-212571	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-212104	Lab File ID:	25A8021114.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	02/12/2014 0348	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	02/11/2014 0730				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	1.00	0.931	93	88 - 110	
Cadmium	0.100	0.0986	99	88 - 111	
Iron	1.00	0.938	94	89 - 115	
Lead	0.500	0.463	93	89 - 110	
Selenium	2.00	1.88	94	85 - 112	
Zinc	0.500	0.483	97	85 - 111	
Silver	0.0500	0.0491	98	85 - 115	

Client: Waste Management

Job Number: 280-51935-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-212104

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-51934-A-1-B MS	Analysis Batch:	280-212571	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-212104	Lab File ID:	25A8021114.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	02/12/2014 0413			Final Weight/Volume:	50 mL
Prep Date:	02/11/2014 0730				
Leach Date:	N/A				

MSD Lab Sample ID:	280-51934-A-1-C MSD	Analysis Batch:	280-212571	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-212104	Lab File ID:	25A8021114.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	02/12/2014 0416			Final Weight/Volume:	50 mL
Prep Date:	02/11/2014 0730				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Arsenic	96	101	88 - 110	5	20		
Cadmium	100	106	88 - 111	5	20		
Iron	70	92	89 - 115	6	20	F1	
Lead	85	89	89 - 110	4	20	F1	
Selenium	95	100	85 - 112	6	20		
Zinc	91	96	85 - 111	4	20		
Silver	103	109	85 - 115	6	20		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-212104

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-51934-A-1-B MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	02/12/2014 0413		
Prep Date:	02/11/2014 0730		
Leach Date:	N/A		

MSD Lab Sample ID:	280-51934-A-1-C MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	02/12/2014 0416
Prep Date:	02/11/2014 0730
Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual
Arsenic	0.012	J	1.00	1.00	0.971		1.02
Cadmium	0.0013	J	0.100	0.100	0.102		0.107
Iron	2.5		1.00	1.00	3.20	F1	3.42
Lead	ND		0.500	0.500	0.425	F1	0.444
Selenium	ND		2.00	2.00	1.89		2.01
Zinc	0.13		0.500	0.500	0.587		0.613
Silver	ND		0.0500	0.0500	0.0513		0.0543

Client: Waste Management

Job Number: 280-51935-1

Method Blank - Batch: 280-212435

Method: 245.1
Preparation: 245.1

Lab Sample ID:	MB 280-212435/1-A	Analysis Batch:	280-212634	Instrument ID:	MT_034
Client Matrix:	Water	Prep Batch:	280-212435	Lab File ID:	140211taa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	02/11/2014 1701	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	02/11/2014 1230				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000027	0.00020

Lab Control Sample - Batch: 280-212435

Method: 245.1
Preparation: 245.1

Lab Sample ID:	LCS 280-212435/2-A	Analysis Batch:	280-212634	Instrument ID:	MT_034
Client Matrix:	Water	Prep Batch:	280-212435	Lab File ID:	140211taa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	02/11/2014 1703	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	02/11/2014 1230				
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: 280-212435

Method: 245.1
Preparation: 245.1

MS Lab Sample ID:	280-51935-1	Analysis Batch:	280-212634	Instrument ID:	MT_034
Client Matrix:	Water	Prep Batch:	280-212435	Lab File ID:	140211taa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	02/11/2014 1710			Final Weight/Volume:	30 mL
Prep Date:	02/11/2014 1230				
Leach Date:	N/A				

MSD Lab Sample ID:	280-51935-1	Analysis Batch:	280-212634	Instrument ID:	MT_034
Client Matrix:	Water	Prep Batch:	280-212435	Lab File ID:	140211taa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	02/11/2014 1712			Final Weight/Volume:	30 mL
Prep Date:	02/11/2014 1230				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	99	99	80 - 120	0	10		

Client: Waste Management

Job Number: 280-51935-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-212435

Method: 245.1
Preparation: 245.1

MS Lab Sample ID:	280-51935-1	Units: mg/L	
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	02/11/2014 1710		
Prep Date:	02/11/2014 1230		
Leach Date:	N/A		

MSD Lab Sample ID:	280-51935-1
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	02/11/2014 1712
Prep Date:	02/11/2014 1230
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	0.00495	0.00493

Client: Waste Management

Job Number: 280-51935-1

Method Blank - Batch: 280-213068

Method: 1664A
Preparation: 1664A

Lab Sample ID:	MB 280-213068/1-A	Analysis Batch:	280-213132	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	280-213068	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	02/14/2014 1520	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	02/14/2014 0943				
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: 280-213068

Method: 1664A
Preparation: 1664A

LCS Lab Sample ID:	LCS 280-213068/2-A	Analysis Batch:	280-213132	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	280-213068	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	02/14/2014 1520	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	02/14/2014 0943				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-213068/3-A	Analysis Batch:	280-213132	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	280-213068	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	02/14/2014 1520	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	02/14/2014 0943				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
HEM	91	93	81 - 107	3	22		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-213068

Method: 1664A
Preparation: 1664A

LCS Lab Sample ID:	LCS 280-213068/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-213068/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	02/14/2014 1520			Analysis Date:	02/14/2014 1520
Prep Date:	02/14/2014 0943			Prep Date:	02/14/2014 0943
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	36.4	37.4

Client: Waste Management

Job Number: 280-51935-1

Method Blank - Batch: 280-212560

Method: 350.1
Preparation: N/A

Lab Sample ID:	MB 280-212560/21	Analysis Batch:	280-212560	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\021114.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	02/11/2014 1213	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: 280-212560

Method: 350.1
Preparation: N/A

LCS Lab Sample ID:	LCS 280-212560/19	Analysis Batch:	280-212560	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\021114.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	02/11/2014 1209	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-212560/20	Analysis Batch:	280-212560	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\021114.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	02/11/2014 1211	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	99	99	90 - 110	0	10		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-212560

Method: 350.1
Preparation: N/A

LCS Lab Sample ID:	LCS 280-212560/19	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-212560/20
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	02/11/2014 1209			Analysis Date:	02/11/2014 1211
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	2.47	2.47

Client: Waste Management

Job Number: 280-51935-1

Method Blank - Batch: 280-212538

Method: 351.2
Preparation: 351.2

Lab Sample ID:	MB 280-212538/3-A	Analysis Batch:	280-212772	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-212538	Lab File ID:	021214TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	02/12/2014 2040	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	02/11/2014 2132				
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: 280-212538

Method: 351.2
Preparation: 351.2

LCS Lab Sample ID:	LCS 280-212538/1-A	Analysis Batch:	280-212772	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-212538	Lab File ID:	021214TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	02/12/2014 2038	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	02/11/2014 2132				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-212538/2-A	Analysis Batch:	280-212772	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-212538	Lab File ID:	021214TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	02/12/2014 2039	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	02/11/2014 2132				
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Nitrogen, Kjeldahl	101	101	90 - 110	0	25		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-212538

Method: 351.2
Preparation: 351.2

LCS Lab Sample ID:	LCS 280-212538/1-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-212538/2-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	02/12/2014 2038			Analysis Date:	02/12/2014 2039
Prep Date:	02/11/2014 2132			Prep Date:	02/11/2014 2132
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	6.05	6.04

Client: Waste Management

Job Number: 280-51935-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-212538

Method: 351.2
Preparation: 351.2

MS Lab Sample ID:	280-51869-C-3-B MS	Analysis Batch:	280-212772	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-212538	Lab File ID:	021214TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	02/12/2014 2056			Final Weight/Volume:	25 mL
Prep Date:	02/11/2014 2132				
Leach Date:	N/A				

MSD Lab Sample ID:	280-51869-C-3-C MSD	Analysis Batch:	280-212772	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-212538	Lab File ID:	021214TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	02/12/2014 2058			Final Weight/Volume:	25 mL
Prep Date:	02/11/2014 2132				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Nitrogen, Kjeldahl	123	122	90 - 110	0	25	4	4

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-212538

Method: 351.2
Preparation: 351.2

MS Lab Sample ID:	280-51869-C-3-B MS	Units: mg/L	
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	02/12/2014 2056		
Prep Date:	02/11/2014 2132		
Leach Date:	N/A		

MSD Lab Sample ID:	280-51869-C-3-C MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	02/12/2014 2058
Prep Date:	02/11/2014 2132
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Nitrogen, Kjeldahl	14	3.00	3.00	17.8	4	17.8	4

Client: Waste Management

Job Number: 280-51935-1

Method Blank - Batch: 280-212562

Method: 353.2
Preparation: N/A

Lab Sample ID:	MB 280-212562/28	Analysis Batch:	280-212562	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0211NXNS.R!
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	02/11/2014 2153	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: 280-212562

Method: 353.2
Preparation: N/A

Lab Sample ID:	MRL 280-212562/18	Analysis Batch:	280-212562	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0211NXNS.R!
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	02/11/2014 2138	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	0.113	113	50 - 150	

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-212562

Method: 353.2
Preparation: N/A

LCS Lab Sample ID:	LCS 280-212562/29	Analysis Batch:	280-212562	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0211NXNS.R!
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	02/11/2014 2154	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-212562/30	Analysis Batch:	280-212562	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0211NXNS.R!
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	02/11/2014 2156	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	104	100	90 - 110	3	10		

Client: Waste Management

Job Number: 280-51935-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-212562

Method: 353.2
Preparation: N/A

LCS Lab Sample ID:	LCS 280-212562/29	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-212562/30
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	02/11/2014 2154			Analysis Date:	02/11/2014 2156
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	5.18	5.02

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-212562

Method: 353.2
Preparation: N/A

MS Lab Sample ID:	320-5869-B-2 MS	Analysis Batch:	280-212562	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0211NXNS.R\
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	02/11/2014 2208			Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	320-5869-B-2 MSD	Analysis Batch:	280-212562	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0211NXNS.R\
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	02/11/2014 2209			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	102	90 - 110	3	10		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-212562

Method: 353.2
Preparation: N/A

MS Lab Sample ID:	320-5869-B-2 MS	Units:	mg/L	MSD Lab Sample ID:	320-5869-B-2 MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	02/11/2014 2208			Analysis Date:	02/11/2014 2209
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	0.081	J	4.00	4.00	4.04	4.16

Client: Waste Management

Job Number: 280-51935-1

Method Blank - Batch: 280-212492

Method: 365.1
Preparation: 365.2/365.3/365

Lab Sample ID:	MB 280-212492/5-A	Analysis Batch:	280-212561	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-212492	Lab File ID:	021114TPHOS.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	02/11/2014 2249	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	02/11/2014 1604				
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: 280-212492

Method: 365.1
Preparation: 365.2/365.3/365

LCS Lab Sample ID:	LCS 280-212492/3-A	Analysis Batch:	280-212561	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-212492	Lab File ID:	021114TPHOS.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	02/11/2014 2249	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	02/11/2014 1604				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-212492/4-A	Analysis Batch:	280-212561	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-212492	Lab File ID:	021114TPHOS.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	02/11/2014 2249	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	02/11/2014 1604				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Phosphorus, Total	96	96	90 - 110	0	10		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-212492

Method: 365.1
Preparation: 365.2/365.3/365

LCS Lab Sample ID:	LCS 280-212492/3-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-212492/4-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	02/11/2014 2249			Analysis Date:	02/11/2014 2249
Prep Date:	02/11/2014 1604			Prep Date:	02/11/2014 1604
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	0.478	0.478

Client: Waste Management

Job Number: 280-51935-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-212492

Method: 365.1
Preparation: 365.2/365.3/365

MS Lab Sample ID:	280-51928-F-3-B MS	Analysis Batch:	280-212561	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-212492	Lab File ID:	021114TPHOS.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	02/11/2014 2312			Final Weight/Volume:	50 mL
Prep Date:	02/11/2014 1604				
Leach Date:	N/A				

MSD Lab Sample ID:	280-51928-F-3-C MSD	Analysis Batch:	280-212561	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-212492	Lab File ID:	021114TPHOS.xls
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	02/11/2014 2312			Final Weight/Volume:	50 mL
Prep Date:	02/11/2014 1604				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Phosphorus, Total	93	94	90 - 110	0	10		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-212492

Method: 365.1
Preparation: 365.2/365.3/365

MS Lab Sample ID:	280-51928-F-3-B MS	Units: mg/L	
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	02/11/2014 2312		
Prep Date:	02/11/2014 1604		
Leach Date:	N/A		

MSD Lab Sample ID:	280-51928-F-3-C MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	02/11/2014 2312
Prep Date:	02/11/2014 1604
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Phosphorus, Total	0.59	0.500	0.500	1.05	1.05

Client: Waste Management

Job Number: 280-51935-1

Method Blank - Batch: 280-212585

Method: 410.4
Preparation: N/A

Lab Sample ID:	MB 280-212585/11	Analysis Batch:	280-212585	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:	02/12/2014 0822	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: 280-212585

Method: 410.4
Preparation: N/A

LCS Lab Sample ID:	LCS 280-212585/9	Analysis Batch:	280-212585	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:	02/12/2014 0822	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-212585/10	Analysis Batch:	280-212585	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:	02/12/2014 0822	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	106	90 - 110	2	11		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-212585

Method: 410.4
Preparation: N/A

LCS Lab Sample ID:	LCS 280-212585/9	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-212585/10
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	02/12/2014 0822			Analysis Date:	02/12/2014 0822
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	106

Client: Waste Management

Job Number: 280-51935-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-212585

Method: 410.4
Preparation: N/A

MS Lab Sample ID:	280-51738-B-2 MS	Analysis Batch:	280-212585	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	2.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	02/12/2014 0822			Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-51738-B-2 MSD	Analysis Batch:	280-212585	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	2.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	02/12/2014 0822			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	-2	41	90 - 110	15	11	F1	F1 F2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-212585

Method: 410.4
Preparation: N/A

MS Lab Sample ID:	280-51738-B-2 MS	Units:	mg/L	MSD Lab Sample ID:	280-51738-B-2 MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	2.0			Dilution:	2.0
Analysis Date:	02/12/2014 0822			Analysis Date:	02/12/2014 0822
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	
Chemical Oxygen Demand	270	100	100	269	F1	311	F1 F2

Client: Waste Management

Job Number: 280-51935-1

Method Blank - Batch: 280-212142

Method: SM 2540D
Preparation: N/A

Lab Sample ID:	MB 280-212142/3	Analysis Batch:	280-212142	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:	02/08/2014 1035	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: 280-212142

Method: SM 2540D
Preparation: N/A

LCS Lab Sample ID:	LCS 280-212142/1	Analysis Batch:	280-212142	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:	02/08/2014 1035	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-212142/2	Analysis Batch:	280-212142	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:	02/08/2014 1035	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	96	86 - 114	5	20		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-212142

Method: SM 2540D
Preparation: N/A

LCS Lab Sample ID:	LCS 280-212142/1	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-212142/2
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	02/08/2014 1035			Analysis Date:	02/08/2014 1035
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	96.0

Client: Waste Management

Job Number: 280-51935-1

Duplicate - Batch: 280-212142

Method: SM 2540D
Preparation: N/A

Lab Sample ID:	280-51935-1	Analysis Batch:	280-212142	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:	02/08/2014 1035	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	82	81.0	1	10	

Client: Waste Management

Job Number: 280-51935-1

Method Blank - Batch: 280-213248

Method: Total Nitrogen
Preparation: N/A

Lab Sample ID:	MB 280-213248/1	Analysis Batch:	280-213248	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:	02/17/2014 0820	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: 280-51935-1

Laboratory Chronicle

Lab ID: 280-51935-1 **Client ID:** DB01E

Sample Date/Time: 02/04/2014 10:55 Received Date/Time: 02/07/2014 10:20

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	280-51935-E-1-A		280-213417	280-212319	02/10/2014 17:15	1	TAL DEN	BWJ
A:625	280-51935-E-1-A		280-213417	280-212319	02/19/2014 00:13	1	TAL DEN	DCK
A:218.6	280-51935-I-1		440-162302		02/14/2014 19:50	1	TAL IRV	RW
P:200.7	280-51935-H-1-A		280-212571	280-212104	02/11/2014 07:30	1	TAL DEN	WAW
A:200.7 Rev 4.4	280-51935-H-1-A		280-212571	280-212104	02/12/2014 04:28	1	TAL DEN	JKH
P:245.1	280-51935-H-1-B		280-212634	280-212435	02/11/2014 12:30	1	TAL DEN	JM
A:245.1	280-51935-H-1-B		280-212634	280-212435	02/11/2014 17:07	1	TAL DEN	JM
P:1664A	280-51935-A-1-A		280-213132	280-213068	02/14/2014 09:43	1	TAL DEN	AFB
A:1664A	280-51935-A-1-A		280-213132	280-213068	02/14/2014 15:20	1	TAL DEN	AFB
A:350.1	280-51935-G-1		280-212560		02/11/2014 13:12	1	TAL DEN	SMG
P:351.2	280-51935-B-1-A		280-212772	280-212538	02/11/2014 21:32	1	TAL DEN	MW1
A:351.2	280-51935-B-1-A		280-212772	280-212538	02/12/2014 21:12	1	TAL DEN	MW1
A:353.2	280-51935-A-1		280-212562		02/11/2014 22:18	1	TAL DEN	DVA
P:365.2/365.3/365	280-51935-F-1-A		280-212561	280-212492	02/11/2014 16:04	1	TAL DEN	AJS
A:365.1	280-51935-F-1-A		280-212561	280-212492	02/11/2014 23:14	1	TAL DEN	AJS
A:410.4	280-51935-G-1		280-212585		02/12/2014 08:22	1	TAL DEN	CCJ
A:SM 2540D	280-51935-C-1		280-212142		02/08/2014 10:35	1	TAL DEN	MW1
A:Total Nitrogen	280-51935-A-1		280-213248		02/17/2014 08:20	1	TAL DEN	RKS
A:Field Sampling	280-51935-A-1		280-212236		02/04/2014 10:55	1	TAL DEN	FS

Lab ID: 280-51935-1 MS **Client ID:** DB01E

Sample Date/Time: 02/04/2014 10:55 Received Date/Time: 02/07/2014 10:20

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:245.1	280-51935-H-1-C MS		280-212634	280-212435	02/11/2014 12:30	1	TAL DEN	JM
A:245.1	280-51935-H-1-C MS		280-212634	280-212435	02/11/2014 17:10	1	TAL DEN	JM

Lab ID: 280-51935-1 MSD **Client ID:** DB01E

Sample Date/Time: 02/04/2014 10:55 Received Date/Time: 02/07/2014 10:20

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:245.1	280-51935-H-1-D MSD		280-212634	280-212435	02/11/2014 12:30	1	TAL DEN	JM
A:245.1	280-51935-H-1-D MSD		280-212634	280-212435	02/11/2014 17:12	1	TAL DEN	JM

Client: Waste Management

Job Number: 280-51935-1

Laboratory Chronicle

Lab ID: **280-51935-1 DU** **Client ID:** **DB01E**

Sample Date/Time: 02/04/2014 10:55 Received Date/Time: 02/07/2014 10:20

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:SM 2540D	280-51935-C-1 DU		280-212142		02/08/2014 10:35	1	TAL DEN	MW1

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 280-212319/1-A		280-213417	280-212319	02/10/2014 17:15	1	TAL DEN	BWJ
A:625	MB 280-212319/1-A		280-213417	280-212319	02/18/2014 21:41	1	TAL DEN	DCK
A:218.6	MB 440-162302/3		440-162302		02/14/2014 11:26	1	TAL IRV	RW
P:200.7	MB 280-212104/1-A		280-212571	280-212104	02/11/2014 07:30	1	TAL DEN	WAW
A:200.7 Rev 4.4	MB 280-212104/1-A		280-212571	280-212104	02/12/2014 03:46	1	TAL DEN	JKH
P:245.1	MB 280-212435/1-A		280-212634	280-212435	02/11/2014 12:30	1	TAL DEN	JM
A:245.1	MB 280-212435/1-A		280-212634	280-212435	02/11/2014 17:01	1	TAL DEN	JM
P:1664A	MB 280-213068/1-A		280-213132	280-213068	02/14/2014 09:43	1	TAL DEN	AFB
A:1664A	MB 280-213068/1-A		280-213132	280-213068	02/14/2014 15:20	1	TAL DEN	AFB
A:350.1	MB 280-212560/21		280-212560		02/11/2014 12:13	1	TAL DEN	SMG
P:351.2	MB 280-212538/3-A		280-212772	280-212538	02/11/2014 21:32	1	TAL DEN	MW1
A:351.2	MB 280-212538/3-A		280-212772	280-212538	02/12/2014 20:40	1	TAL DEN	MW1
A:353.2	MB 280-212562/28		280-212562		02/11/2014 21:53	1	TAL DEN	DVA
P:365.2/365.3/365	MB 280-212492/5-A		280-212561	280-212492	02/11/2014 16:04	1	TAL DEN	AJS
A:365.1	MB 280-212492/5-A		280-212561	280-212492	02/11/2014 22:49	1	TAL DEN	AJS
A:410.4	MB 280-212585/11		280-212585		02/12/2014 08:22	1	TAL DEN	CCJ
A:SM 2540D	MB 280-212142/3		280-212142		02/08/2014 10:35	1	TAL DEN	MW1
A:Total Nitrogen	MB 280-213248/1		280-213248		02/17/2014 08:20	1	TAL DEN	RKS

Client: Waste Management

Job Number: 280-51935-1

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 280-212319/2-A		280-213067	280-212319	02/10/2014 17:15	1	TAL DEN	BWJ
A:625	LCS 280-212319/2-A		280-213067	280-212319	02/14/2014 13:07	1	TAL DEN	DCK
A:218.6	LCS 440-162302/6		440-162302		02/14/2014 12:22	1	TAL IRV	RW
P:200.7	LCS 280-212104/2-A		280-212571	280-212104	02/11/2014 07:30	1	TAL DEN	WAW
A:200.7 Rev 4.4	LCS 280-212104/2-A		280-212571	280-212104	02/12/2014 03:48	1	TAL DEN	JKH
P:245.1	LCS 280-212435/2-A		280-212634	280-212435	02/11/2014 12:30	1	TAL DEN	JM
A:245.1	LCS 280-212435/2-A		280-212634	280-212435	02/11/2014 17:03	1	TAL DEN	JM
P:1664A	LCS 280-213068/2-A		280-213132	280-213068	02/14/2014 09:43	1	TAL DEN	AFB
A:1664A	LCS 280-213068/2-A		280-213132	280-213068	02/14/2014 15:20	1	TAL DEN	AFB
A:350.1	LCS 280-212560/19		280-212560		02/11/2014 12:09	1	TAL DEN	SMG
P:351.2	LCS 280-212538/1-A		280-212772	280-212538	02/11/2014 21:32	1	TAL DEN	MW1
A:351.2	LCS 280-212538/1-A		280-212772	280-212538	02/12/2014 20:38	1	TAL DEN	MW1
A:353.2	LCS 280-212562/29		280-212562		02/11/2014 21:54	1	TAL DEN	DVA
P:365.2/365.3/365	LCS 280-212492/3-A		280-212561	280-212492	02/11/2014 16:04	1	TAL DEN	AJS
A:365.1	LCS 280-212492/3-A		280-212561	280-212492	02/11/2014 22:49	1	TAL DEN	AJS
A:410.4	LCS 280-212585/9		280-212585		02/12/2014 08:22	1	TAL DEN	CCJ
A:SM 2540D	LCS 280-212142/1		280-212142		02/08/2014 10:35	1	TAL DEN	MW1

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 280-212319/3-A		280-213067	280-212319	02/10/2014 17:15	1	TAL DEN	BWJ
A:625	LCSD 280-212319/3-A		280-213067	280-212319	02/14/2014 13:37	1	TAL DEN	DCK
P:1664A	LCSD 280-213068/3-A		280-213132	280-213068	02/14/2014 09:43	1	TAL DEN	AFB
A:1664A	LCSD 280-213068/3-A		280-213132	280-213068	02/14/2014 15:20	1	TAL DEN	AFB
A:350.1	LCSD 280-212560/20		280-212560		02/11/2014 12:11	1	TAL DEN	SMG
P:351.2	LCSD 280-212538/2-A		280-212772	280-212538	02/11/2014 21:32	1	TAL DEN	MW1
A:351.2	LCSD 280-212538/2-A		280-212772	280-212538	02/12/2014 20:39	1	TAL DEN	MW1
A:353.2	LCSD 280-212562/30		280-212562		02/11/2014 21:56	1	TAL DEN	DVA
P:365.2/365.3/365	LCSD 280-212492/4-A		280-212561	280-212492	02/11/2014 16:04	1	TAL DEN	AJS
A:365.1	LCSD 280-212492/4-A		280-212561	280-212492	02/11/2014 22:49	1	TAL DEN	AJS
A:410.4	LCSD 280-212585/10		280-212585		02/12/2014 08:22	1	TAL DEN	CCJ
A:SM 2540D	LCSD 280-212142/2		280-212142		02/08/2014 10:35	1	TAL DEN	MW1

Client: Waste Management

Job Number: 280-51935-1

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 440-162302/4		440-162302		02/14/2014 11:39	1	TAL IRV	RW
A:353.2	MRL 280-212562/18		280-212562		02/11/2014 21:38	1	TAL DEN	DVA

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

Sample Date/Time: 02/12/2014 10:25 Received Date/Time: 02/13/2014 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:218.6	440-70361-A-1 MS		440-162302		02/14/2014 19:11	1	TAL IRV	RW
P:200.7	280-51934-A-1-B MS		280-212571	280-212104	02/11/2014 07:30	1	TAL DEN	WAW
A:200.7 Rev 4.4	280-51934-A-1-B MS		280-212571	280-212104	02/12/2014 04:13	1	TAL DEN	JKH
P:351.2	280-51869-C-3-B MS		280-212772	280-212538	02/11/2014 21:32	1	TAL DEN	MW1
A:351.2	280-51869-C-3-B MS		280-212772	280-212538	02/12/2014 20:56	1	TAL DEN	MW1
A:353.2	320-5869-B-2 MS		280-212562		02/11/2014 22:08	1	TAL DEN	DVA
P:365.2/365.3/365	280-51928-F-3-B MS		280-212561	280-212492	02/11/2014 16:04	1	TAL DEN	AJS
A:365.1	280-51928-F-3-B MS		280-212561	280-212492	02/11/2014 23:12	1	TAL DEN	AJS
A:410.4	280-51738-B-2 MS		280-212585		02/12/2014 08:22	2	TAL DEN	CCJ

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

Sample Date/Time: 02/12/2014 10:25 Received Date/Time: 02/13/2014 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:218.6	440-70361-A-1 MSD		440-162302		02/14/2014 19:24	1	TAL IRV	RW
P:200.7	280-51934-A-1-C MSD		280-212571	280-212104	02/11/2014 07:30	1	TAL DEN	WAW
A:200.7 Rev 4.4	280-51934-A-1-C MSD		280-212571	280-212104	02/12/2014 04:16	1	TAL DEN	JKH
P:351.2	280-51869-C-3-C MSD		280-212772	280-212538	02/11/2014 21:32	1	TAL DEN	MW1
A:351.2	280-51869-C-3-C MSD		280-212772	280-212538	02/12/2014 20:58	1	TAL DEN	MW1
A:353.2	320-5869-B-2 MSD		280-212562		02/11/2014 22:09	1	TAL DEN	DVA
P:365.2/365.3/365	280-51928-F-3-C MSD		280-212561	280-212492	02/11/2014 16:04	1	TAL DEN	AJS
A:365.1	280-51928-F-3-C MSD		280-212561	280-212492	02/11/2014 23:12	1	TAL DEN	AJS
A:410.4	280-51738-B-2 MSD		280-212585		02/12/2014 08:22	2	TAL DEN	CCJ

Lab References:

TAL DEN = TestAmerica Denver

TAL IRV = TestAmerica Irvine

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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TestAmerica Job ID: HXB0012
Client Project/Site: 60246625.02
Client Project Description: AECOM, WGSL STORMWATER

For:
TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002

Attn: Betsy Sara

Kristie Reilly

Authorized for release by:
2/17/2014 9:29:38 AM

Kristie Reilly, Project Manager
808-486-5227
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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Definitions/Glossary

Client: TestAmerica Denver
Project/Site: 60246625.02

TestAmerica Job ID: HXB0012

Qualifiers

WetChem

Qualifier	Qualifier Description
A5	Incubator/water bath temperature was outside method requirements.

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: 60246625.02

TestAmerica Job ID: HXB0012

Job ID: HXB0012

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 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.

The temperature for the incubator for BOD batch 14B0003 containing sample HXB0012-01 was out of acceptance range by 1°C. The temperature went up to 22°C and the accepted range is 19-21°C. Samples could not be reanalyzed due to holding time and method criteria. All other QA/QC was within acceptance range.

Sample Summary

Client: TestAmerica Denver
Project/Site: 60246625.02

TestAmerica Job ID: HXB0012

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
HXB0012-01	DB01E	Water - NonPotable	02/04/14 10:55	02/04/14 13:50

Detection Summary

Client: TestAmerica Denver
Project/Site: 60246625.02

TestAmerica Job ID: HXB0012

Client Sample ID: DB01E

Lab Sample ID: HXB0012-01

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
BOD - 5 Day	3.10	A5	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: 60246625.02

TestAmerica Job ID: HXB0012

Client Sample ID: DB01E

Date Collected: 02/04/14 10:55
Date Received: 02/04/14 13:50

Lab Sample ID: HXB0012-01

Matrix: Water - NonPotable

Method: SM5210B - General Chemistry Parameters

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
BOD - 5 Day	3.10	A5	2.00		mg/L		02/05/14 15:05	02/10/14 15:22	1.00

QC Sample Results

Client: TestAmerica Denver
Project/Site: 60246625.02

TestAmerica Job ID: HXB0012

Method: SM5210B - General Chemistry Parameters

Lab Sample ID: 14B0003-BLK1
Matrix: Water - NonPotable
Analysis Batch: 14B0003

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 14B0003_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
BOD - 5 Day	ND	A5	2.00		mg/L		02/05/14 14:29	02/10/14 14:35	1.00

Lab Sample ID: 14B0003-BS1
Matrix: Water - NonPotable
Analysis Batch: 14B0003

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 14B0003_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
BOD - 5 Day	198	186	A5	mg/L		94	85 - 115

Lab Sample ID: 14B0003-DUP1
Matrix: Water - NonPotable
Analysis Batch: 14B0003

Client Sample ID: Duplicate
Prep Type: Total
Prep Batch: 14B0003_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
BOD - 5 Day	126		145	A5	mg/L		14	20

QC Association Summary

Client: TestAmerica Denver
Project/Site: 60246625.02

TestAmerica Job ID: HXB0012

WetChem

Analysis Batch: 14B0003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
14B0003-BLK1	Method Blank	Total	Water - NonPotable	SM5210B	14B0003_P
14B0003-BS1	Lab Control Sample	Total	Water - NonPotable	SM5210B	14B0003_P
14B0003-DUP1	Duplicate	Total	Water - NonPotable	SM5210B	14B0003_P
HXB0012-01	DB01E	Total	Water - NonPotable	SM5210B	14B0003_P

Prep Batch: 14B0003_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
14B0003-BLK1	Method Blank	Total	Water - NonPotable	Default Prep GenChem	
14B0003-BS1	Lab Control Sample	Total	Water - NonPotable	Default Prep GenChem	
14B0003-DUP1	Duplicate	Total	Water - NonPotable	Default Prep GenChem	
HXB0012-01	DB01E	Total	Water - NonPotable	Default Prep GenChem	

Lab Chronicle

Client: TestAmerica Denver
Project/Site: 60246625.02

TestAmerica Job ID: HXB0012

Client Sample ID: DB01E

Date Collected: 02/04/14 10:55
Date Received: 02/04/14 13:50

Lab Sample ID: HXB0012-01

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	14B0003_P	02/05/14 15:05	KR	TAL HON
Total	Analysis	GenChem SM5210B		1.00	14B0003	02/10/14 15:22	KR	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: 60246625.02

TestAmerica Job ID: HXB0012

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: 60246625.02

TestAmerica Job ID: HXB0012

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

TestAmerica

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TESTAMERICA DENVER

Yes. 02/04/14 MT

LABORATORY USE ONLY	
LAB JOB NO.	HXB0012
LOCATION	
CONTAINERS	

Chain of Custody / Analysis Request Form

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

Project identification

Job name: WGSL Stormwater

Job number: 60246625.02

Contact email address: mark.hofferbert@aecom.com, margie.thach@aecom.com

Date results required: 2 weeks

Indicate analyses requested

Item no	Client sample ID	COMP	GRAB	Matrix: Water	Soil	Wastewater	Drinking water	Sludge	Liquid	Solid	Oil	Other	Preservative 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 TKN	200.7, 245.1 Metals**	BOD SM5210	Hex Chrom 218.6		Laboratory ID no.
1	DBOIE		X	X									HCl	2/4/14	10:55	2	X								
2	DBOIE	X		X									varies	2/4/14	10:55	7		X	X	X	X	X X			HXB0012-01
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
Michelle Nilsing Michelle Nilsing MN	2/4/14, 1395		[illegible]	TestAmerica	2/4/14 1350	Cust Wit 22

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

TA-HNL to analyze BOD and preserve CrVI; direct ship to TA-DNVR

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

MT 02/04/14

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

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Destination Laboratory Denver

Destination Laboratory PM (if known) Betsy Sera

Drop Shipment Receipt Checklist

Client Name: AECOM **Date/ Time Received:** 2/4/14 1350

Received By: [illegible]

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	☐	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: 2 °C

Samples drop shipped on ice?	Yes	☐	No	☐	Type:

Date of drop shipment:

Comments/ Sampling Handling Notes:

TestAl
THE LEADER IN EN

280-51935 Chain of Custody

TESTAMERICA DENVER

1.3 IR5+02
JK 2-7-14

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: MW, DG; # 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**					Laboratory ID no.
1	DBOIE		X	X									HCl	2/4/14	10:55	2	X									
2	DBOIE	X		X									varies	2/4/14	10:55	7		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
Michelle Wang Michelle	2/4/14 / 1345		[signature]	TestAmerica	2/4/14 / 1350	8-wt wet 22
[signature]	2/5/14 / 1030	Fedex			/	
	/				/	

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

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

Please check one:
☒ Dispose by lab
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COC PRI1A0000 Distribution: White - TestAmerica Yellow - TestAmerica Pink - Client

Page of

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: WGSL Stormwater

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

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
02 04 14	8.28						

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: Clear, slightly turbid Odor: no Color: light tan Other: flow increased with time

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

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

FIELD COMMENTS

	time	PH	flow	flow Measurements	
A	10:55	8.28	1 sec/L	~~East~~ 1.25 in = 0.25 ft³/sec	West 0.75 in = 0.15 ft³/sec
B	11:10	8.42	1 sec/L	1.50 in = 0.3 ft³/sec	1.50 in = 0.3 ft³/sec
C	11:25	8.05	1 sec/L	2.00 in = 0.4 ft³/sec	1.75 in = 0.35 ft³/sec
D	11:40	8.18	1 sec/L	2.00 in = 0.4 ft³/sec	2 in = 0.4 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
2/4/14	Dustin Goto	[signature]	AECOM
2/4/14	Michelle Wang	[signature]	AECOM

DISTRIBUTION: WHITE/ORIGINAL - Remain with Sample; YELLOW - Returned to Client; PINK - Field Copy

$\frac{1}{0.2} = \frac{1.25}{x}$

TAL-8029WM (0108)

Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-51935-1

Login Number: 51935
List Number: 1
Creator: Dedio, Michael T

List Source: TestAmerica Denver

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.	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.	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: 280-51935-1

Login Number: 51935
List Number: 1
Creator: Chy, Jonathan

List Source: TestAmerica Irvine
List Creation: 02/14/14 03:32 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?	True	
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	

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CASE NARRATIVE

Client: Waste Management

Project: 995|Waimanalo Gulch LF

Report Number: 280-51248-2

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 01/16/2014; the sample arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 2.4° C, 1.3° C and 2.4° C.

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)

Sample DB01W 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 above the upper control limit indicating the possible presence of a matrix interference.

The Matrix Spikes and Matrix Spike Duplicates performed on samples from other clients exhibited MS and MSD recoveries outside control limits for Total Silver Method 200.7 and Ammonia Method 350.1. 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.

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. Because the corresponding Laboratory Control Sample and the Method Blank sample were within control limits, no corrective action was taken.

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.

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

Metals

The Method 245.1 continuing calibration verification (CCV) for Total Mercury recovered above the upper control limit. The samples associated with this CCV were not detected above the reporting limit for Total Mercury; 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 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: 280-51248-2

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
280-51248-2	**DB01W**					
Mercury		0.000030	J ^	0.00020	mg/L	245.1
Field pH		7.81			SU	Field Sampling
Ammonia		0.036	J	0.10	mg/L	350.1
Nitrogen, Kjeldahl		0.75		0.50	mg/L	351.2
Nitrate Nitrite as N		3.2		0.10	mg/L	353.2
Phosphorus, Total		0.28		0.050	mg/L	365.1
Chemical Oxygen Demand		21		20	mg/L	410.4
Total Suspended Solids		36		4.0	mg/L	SM 2540D
Nitrogen, Total		4.0		0.10	mg/L	Total Nitrogen
Dissolved						
Chromium, hexavalent		1.3		1.0	ug/L	218.6
Total Recoverable						
Iron		2.7		0.10	mg/L	200.7 Rev 4.4
Zinc		0.021		0.020	mg/L	200.7 Rev 4.4

METHOD SUMMARY

Client: Waste Management

Job Number: 280-51248-2

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
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: 280-51248-2

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	Benson, Alex F	AFB
MCAWW 350.1	Graham, Shane M	SMG
MCAWW 351.2	Graham, Shane M	SMG
MCAWW 353.2	Ayala, Delaina V	DVA
EPA 365.1	Schwemin, Andrew J	AJS
MCAWW 410.4	Jewell, Connie C	CCJ
SM SM 2540D	Janssen, Elizabeth L	ELJ
EPA Total Nitrogen	Sullivan, Roxanne K	RKS
EPA 218.6	Pham, Quynh D	QPD

SAMPLE SUMMARY

Client: Waste Management

Job Number: 280-51248-2

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-51248-2	DB01W	Water	01/14/2014 0945	01/16/2014 0920

SAMPLE RESULTS

Client: Waste Management

Job Number: 280-51248-2

Client Sample ID: **DB01W**

Lab Sample ID: 280-51248-2

Client Matrix: Water

Date Sampled: 01/14/2014 0945

Date Received: 01/16/2014 0920

625 Semivolatile Organic Compounds (GC/MS)

Analysis Method:	625	Analysis Batch:	280-209708	Instrument ID:	SMS_Y
Prep Method:	625	Prep Batch:	280-209177	Lab File ID:	Y8790.D
Dilution:	1.0			Initial Weight/Volume:	1039.2 mL
Analysis Date:	01/23/2014 2127			Final Weight/Volume:	1000 uL
Prep Date:	01/20/2014 1043			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	71		50 - 120
2-Fluorobiphenyl	81		36 - 120
2-Fluorophenol	73		30 - 120
Nitrobenzene-d5	74		45 - 120
Phenol-d5	74		36 - 120
Terphenyl-d14	42		41 - 120

Client: Waste Management

Job Number: 280-51248-2

Client Sample ID: **DB01W**

Lab Sample ID: 280-51248-2

Client Matrix: Water

Date Sampled: 01/14/2014 0945

Date Received: 01/16/2014 0920

218.6 Chromium, Hexavalent (Ion Chromatography)-Dissolved

Analysis Method:	218.6	Analysis Batch:	440-157224	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:	01/21/2014 1854			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1000 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chromium, hexavalent	1.3		0.25	1.0

Client: Waste Management

Job Number: 280-51248-2

Client Sample ID: **DB01W**

Lab Sample ID: 280-51248-2

Client Matrix: Water

Date Sampled: 01/14/2014 0945

Date Received: 01/16/2014 0920

200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method:	200.7 Rev 4.4	Analysis Batch:	280-209348	Instrument ID:	MT_025
Prep Method:	200.7	Prep Batch:	280-209053	Lab File ID:	25A6012014.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	01/20/2014 2236			Final Weight/Volume:	50 mL
Prep Date:	01/20/2014 1230				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Arsenic	ND		0.0044	0.015
Cadmium	ND		0.00045	0.0050
Iron	2.7		0.022	0.10
Lead	ND		0.0026	0.0090
Selenium	ND		0.0049	0.015
Zinc	0.021		0.0045	0.020
Silver	ND		0.00093	0.010

245.1 Mercury (CVAA)

Analysis Method:	245.1	Analysis Batch:	280-209898	Instrument ID:	MT_034
Prep Method:	245.1	Prep Batch:	280-209679	Lab File ID:	140123tab2.txt
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	01/23/2014 1508			Final Weight/Volume:	30 mL
Prep Date:	01/23/2014 1000				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Mercury	0.000030	J ^	0.000027	0.00020

General Chemistry

Client Sample ID: **DB01W**

Lab Sample ID: 280-51248-2

Client Matrix: Water

Date Sampled: 01/14/2014 0945

Date Received: 01/16/2014 0920

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
HEM	ND		mg/L	1.6	5.0	1.0	1664A
Analysis Batch: 280-209096	Analysis Date: 01/18/2014 1332						
Prep Batch: 280-209083	Prep Date: 01/18/2014 0920						
Ammonia	0.036	J	mg/L	0.022	0.10	1.0	350.1
Analysis Batch: 280-209837	Analysis Date: 01/23/2014 1644						
Nitrogen, Kjeldahl	0.75		mg/L	0.18	0.50	1.0	351.2
Analysis Batch: 280-209798	Analysis Date: 01/23/2014 1316						
Prep Batch: 280-209604	Prep Date: 01/22/2014 1509						
Nitrate Nitrite as N	3.2		mg/L	0.019	0.10	1.0	353.2
Analysis Batch: 280-209801	Analysis Date: 01/22/2014 1931						
Phosphorus, Total	0.28		mg/L	0.0050	0.050	1.0	365.1
Analysis Batch: 280-210630	Analysis Date: 01/29/2014 2217						
Prep Batch: 280-210397	Prep Date: 01/28/2014 1700						
Chemical Oxygen Demand	21		mg/L	4.1	20	1.0	410.4
Analysis Batch: 280-209703	Analysis Date: 01/23/2014 0849						
Total Suspended Solids	36		mg/L	1.1	4.0	1.0	SM 2540D
Analysis Batch: 280-209264	Analysis Date: 01/20/2014 1747						
Nitrogen, Total	4.0		mg/L	0.042	0.10	1.0	Total Nitrogen
Analysis Batch: 280-210108	Analysis Date: 01/27/2014 0824						

Field Service / Mobile Lab

Client Sample ID: **DB01W**

Lab Sample ID: 280-51248-2

Client Matrix: Water

Date Sampled: 01/14/2014 0945

Date Received: 01/16/2014 0920

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed Date Prepared
Field pH	7.81		SU	1.0	Field Sampling	280-209216	01/14/2014 0945

DATA REPORTING QUALIFIERS

Client: Waste Management

Job Number: 280-51248-2

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		
	^	Instrument related QC exceeds the control limits
	F1	MS and/or MSD Recovery 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.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
General Chemistry		
	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: 280-51248-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 280-209177					
LCS 280-209177/2-A	Lab Control Sample	T	Water	625	
LCSD 280-209177/3-A	Lab Control Sample Duplicate	T	Water	625	
MB 280-209177/1-A	Method Blank	T	Water	625	
280-51248-2	DB01W	T	Water	625	
Analysis Batch:280-209708					
LCS 280-209177/2-A	Lab Control Sample	T	Water	625	280-209177
LCSD 280-209177/3-A	Lab Control Sample Duplicate	T	Water	625	280-209177
MB 280-209177/1-A	Method Blank	T	Water	625	280-209177
280-51248-2	DB01W	T	Water	625	280-209177

Report Basis

T = Total

Client: Waste Management

Job Number: 280-51248-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-209053					
LCS 280-209053/2-A	Lab Control Sample	R	Water	200.7	
MB 280-209053/1-A	Method Blank	R	Water	200.7	
280-51248-2	DB01W	R	Water	200.7	
280-51270-D-1-B MS	Matrix Spike	R	Water	200.7	
280-51270-D-1-C MSD	Matrix Spike Duplicate	R	Water	200.7	
Analysis Batch:280-209348					
LCS 280-209053/2-A	Lab Control Sample	R	Water	200.7 Rev 4.4	280-209053
MB 280-209053/1-A	Method Blank	R	Water	200.7 Rev 4.4	280-209053
280-51248-2	DB01W	R	Water	200.7 Rev 4.4	280-209053
280-51270-D-1-B MS	Matrix Spike	R	Water	200.7 Rev 4.4	280-209053
280-51270-D-1-C MSD	Matrix Spike Duplicate	R	Water	200.7 Rev 4.4	280-209053
Prep Batch: 280-209679					
LCS 280-209679/2-A	Lab Control Sample	T	Water	245.1	
MB 280-209679/1-A	Method Blank	T	Water	245.1	
280-51248-2	DB01W	T	Water	245.1	
280-51392-B-1-K MS	Matrix Spike	T	Water	245.1	
280-51392-B-1-L MSD	Matrix Spike Duplicate	T	Water	245.1	
Analysis Batch:280-209898					
LCS 280-209679/2-A	Lab Control Sample	T	Water	245.1	280-209679
MB 280-209679/1-A	Method Blank	T	Water	245.1	280-209679
280-51248-2	DB01W	T	Water	245.1	280-209679
280-51392-B-1-K MS	Matrix Spike	T	Water	245.1	280-209679
280-51392-B-1-L MSD	Matrix Spike Duplicate	T	Water	245.1	280-209679

Report Basis

R = Total Recoverable

T = Total

Field Service / Mobile Lab

Analysis Batch:280-209216					
280-51248-2	DB01W	T	Water	Field Sampling	

Report Basis

T = Total

Client: Waste Management

Job Number: 280-51248-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Prep Batch: 280-209083					
LCS 280-209083/2-A	Lab Control Sample	T	Water	1664A	
LCSD 280-209083/3-A	Lab Control Sample Duplicate	T	Water	1664A	
MB 280-209083/1-A	Method Blank	T	Water	1664A	
280-51248-2	DB01W	T	Water	1664A	
Analysis Batch:280-209096					
LCS 280-209083/2-A	Lab Control Sample	T	Water	1664A	280-209083
LCSD 280-209083/3-A	Lab Control Sample Duplicate	T	Water	1664A	280-209083
MB 280-209083/1-A	Method Blank	T	Water	1664A	280-209083
280-51248-2	DB01W	T	Water	1664A	280-209083
Analysis Batch:280-209264					
LCS 280-209264/2	Lab Control Sample	T	Water	SM 2540D	
LCSD 280-209264/3	Lab Control Sample Duplicate	T	Water	SM 2540D	
MB 280-209264/1	Method Blank	T	Water	SM 2540D	
280-51244-A-2 DU	Duplicate	T	Water	SM 2540D	
280-51248-2	DB01W	T	Water	SM 2540D	
Prep Batch: 280-209604					
LCS 280-209604/2-A	Lab Control Sample	T	Water	351.2	
LCSD 280-209604/3-A	Lab Control Sample Duplicate	T	Water	351.2	
MB 280-209604/1-A	Method Blank	T	Water	351.2	
280-51248-2	DB01W	T	Water	351.2	
280-51248-2MS	Matrix Spike	T	Water	351.2	
280-51248-2MSD	Matrix Spike Duplicate	T	Water	351.2	
Analysis Batch:280-209703					
LCS 280-209703/3	Lab Control Sample	T	Water	410.4	
LCSD 280-209703/4	Lab Control Sample Duplicate	T	Water	410.4	
MB 280-209703/5	Method Blank	T	Water	410.4	
280-51205-A-1 MS	Matrix Spike	T	Water	410.4	
280-51205-A-1 MSD	Matrix Spike Duplicate	T	Water	410.4	
280-51248-2	DB01W	T	Water	410.4	
Analysis Batch:280-209798					
LCS 280-209604/2-A	Lab Control Sample	T	Water	351.2	280-209604
LCSD 280-209604/3-A	Lab Control Sample Duplicate	T	Water	351.2	280-209604
MB 280-209604/1-A	Method Blank	T	Water	351.2	280-209604
280-51248-2	DB01W	T	Water	351.2	280-209604
280-51248-2MS	Matrix Spike	T	Water	351.2	280-209604
280-51248-2MSD	Matrix Spike Duplicate	T	Water	351.2	280-209604

Client: Waste Management

Job Number: 280-51248-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-209801					
LCS 280-209801/29	Lab Control Sample	T	Water	353.2	
LCSD 280-209801/30	Lab Control Sample Duplicate	T	Water	353.2	
MB 280-209801/28	Method Blank	T	Water	353.2	
280-51248-2	DB01W	T	Water	353.2	
280-51248-2MS	Matrix Spike	T	Water	353.2	
280-51248-2MSD	Matrix Spike Duplicate	T	Water	353.2	
Analysis Batch:280-209837					
LCS 280-209837/58	Lab Control Sample	T	Water	350.1	
LCSD 280-209837/59	Lab Control Sample Duplicate	T	Water	350.1	
MB 280-209837/60	Method Blank	T	Water	350.1	
280-51186-B-2 MS	Matrix Spike	T	Water	350.1	
280-51186-B-2 MSD	Matrix Spike Duplicate	T	Water	350.1	
280-51248-2	DB01W	T	Water	350.1	
Analysis Batch:280-210108					
MB 280-210108/1	Method Blank	T	Water	Total Nitrogen	
280-51248-2	DB01W	T	Water	Total Nitrogen	
Prep Batch: 280-210397					
LCS 280-210397/3-A	Lab Control Sample	T	Water	365.2/365.3/365	
LCSD 280-210397/4-A	Lab Control Sample Duplicate	T	Water	365.2/365.3/365	
MB 280-210397/5-A	Method Blank	T	Water	365.2/365.3/365	
280-51248-2	DB01W	T	Water	365.2/365.3/365	
280-51248-2MS	Matrix Spike	T	Water	365.2/365.3/365	
280-51248-2MSD	Matrix Spike Duplicate	T	Water	365.2/365.3/365	
Analysis Batch:280-210630					
LCS 280-210397/3-A	Lab Control Sample	T	Water	365.1	280-210397
LCSD 280-210397/4-A	Lab Control Sample Duplicate	T	Water	365.1	280-210397
MB 280-210397/5-A	Method Blank	T	Water	365.1	280-210397
280-51248-2	DB01W	T	Water	365.1	280-210397
280-51248-2MS	Matrix Spike	T	Water	365.1	280-210397
280-51248-2MSD	Matrix Spike Duplicate	T	Water	365.1	280-210397

Report Basis

T = Total

Client: Waste Management

Job Number: 280-51248-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
HPLC/IC					
Analysis Batch:440-157224					
LCS 440-157224/2	Lab Control Sample	T	Water	218.6	
MB 440-157224/3	Method Blank	T	Water	218.6	
280-51248-2	DB01W	D	Water	218.6	
440-67999-H-2 MS	Matrix Spike	D	Water	218.6	
440-67999-H-2 MSD	Matrix Spike Duplicate	D	Water	218.6	

Report Basis

D = Dissolved

T = Total

Client: Waste Management

Job Number: 280-51248-2

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
280-51248-2	DB01W	71	81	73	74	74	42
MB 280-209177/1-A		72	88	81	79	83	101
LCS 280-209177/2-A		86	90	89	84	90	100
LCSD 280-209177/3-A		87	91	89	84	88	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: 280-51248-2

Method Blank - Batch: 280-209177

Method: 625
Preparation: 625

Lab Sample ID:	MB 280-209177/1-A	Analysis Batch:	280-209708	Instrument ID:	SMS_Y
Client Matrix:	Water	Prep Batch:	280-209177	Lab File ID:	Y8788.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	01/23/2014 2032	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	01/20/2014 1043			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	72	50 - 120
2-Fluorobiphenyl	88	36 - 120
2-Fluorophenol	81	30 - 120
Nitrobenzene-d5	79	45 - 120
Phenol-d5	83	36 - 120
Terphenyl-d14	101	41 - 120

Client: Waste Management

Job Number: 280-51248-2

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-209177

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-209177/2-A	Analysis Batch:	280-209708	Instrument ID:	SMS_Y
Client Matrix:	Water	Prep Batch:	280-209177	Lab File ID:	Y8769.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	01/23/2014 1141	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	01/20/2014 1043			Injection Volume:	0.5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-209177/3-A	Analysis Batch:	280-209708	Instrument ID:	SMS_Y
Client Matrix:	Water	Prep Batch:	280-209177	Lab File ID:	Y8770.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	01/23/2014 1209	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	01/20/2014 1043			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	69	67	44 - 120	3	35		
1,2-Dichlorobenzene	73	69	32 - 120	7	42		
1,3-Dichlorobenzene	69	66	23 - 120	5	47		
1,4-Dichlorobenzene	70	67	24 - 120	4	49		
2,2'-Oxybis(1-chloropropane)	73	72	37 - 120	0	30		
2,4,6-Trichlorophenol	88	90	51 - 120	3	30		
2,4-Dichlorophenol	87	89	46 - 120	2	30		
2,4-Dimethylphenol	67	68	44 - 119	1	35		
2,4-Dinitrophenol	85	83	20 - 121	1	61		
2,4-Dinitrotoluene	95	96	57 - 120	0	35		
2,6-Dinitrotoluene	94	91	56 - 120	3	30		
2-Chloronaphthalene	79	78	60 - 118	1	30		
2-Chlorophenol	90	90	34 - 120	0	30		
2-Methylphenol	84	83	38 - 120	2	35		
2-Nitrophenol	92	91	47 - 120	1	30		
3,3'-Dichlorobenzidine	40	44	18 - 120	9	50	J	J
4,6-Dinitro-2-methylphenol	100	96	40 - 120	4	55		
4-Bromophenyl phenyl ether	87	83	53 - 120	5	34		
4-Chloro-3-methylphenol	89	90	57 - 120	2	30		
4-Chlorophenyl phenyl ether	84	84	51 - 120	0	30		
4-Nitrophenol	90	88	53 - 120	3	42		
Acenaphthene	86	85	47 - 120	1	30		
Acenaphthylene	84	82	33 - 120	1	30		
Anthracene	88	85	52 - 120	3	30		
Benzidine	30	37	10 - 218	19	50		
Benzo[a]anthracene	91	89	54 - 120	2	30		
Benzo[a]pyrene	86	85	39 - 120	2	73		
Benzo[b]fluoranthene	94	91	51 - 120	3	90		
Benzo[g,h,i]perylene	89	85	48 - 120	4	64		
Benzo[k]fluoranthene	93	89	49 - 120	4	50		
Bis(2-chloroethoxy)methane	86	88	50 - 120	2	30		
Bis(2-chloroethyl)ether	91	85	35 - 120	7	30		
Bis(2-ethylhexyl) phthalate	94	93	56 - 120	1	30		
Butyl benzyl phthalate	94	91	53 - 120	3	30		
Chrysene	92	89	51 - 120	3	30		
Dibenz(a,h)anthracene	87	89	45 - 120	1	78		

Client: Waste Management

Job Number: 280-51248-2

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-209177

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-209177/2-A	Analysis Batch:	280-209708	Instrument ID:	SMS_Y
Client Matrix:	Water	Prep Batch:	280-209177	Lab File ID:	Y8769.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	01/23/2014 1141	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	01/20/2014 1043			Injection Volume:	0.5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-209177/3-A	Analysis Batch:	280-209708	Instrument ID:	SMS_Y
Client Matrix:	Water	Prep Batch:	280-209177	Lab File ID:	Y8770.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	01/23/2014 1209	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	01/20/2014 1043			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Diethyl phthalate	92	93	59 - 114	1	30		
Dimethyl phthalate	93	92	58 - 112	0	30		
Di-n-butyl phthalate	93	90	57 - 118	3	30		
Di-n-octyl phthalate	95	92	56 - 120	3	30		
Fluoranthene	91	89	58 - 120	3	30		
Fluorene	87	87	59 - 120	0	30		
Hexachlorobenzene	82	79	53 - 120	4	30		
Hexachlorobutadiene	64	62	27 - 116	3	41		
Hexachlorocyclopentadiene	14	16	10 - 120	13	82	J	J
Hexachloroethane	67	63	40 - 113	6	52		
Indeno[1,2,3-cd]pyrene	91	88	50 - 120	3	73		
Isophorone	78	79	50 - 120	1	30		
Naphthalene	75	73	37 - 120	4	30		
n-Decane	54	50	28 - 120	7	61		
Nitrobenzene	80	81	46 - 120	1	30		
N-Nitrosodimethylamine	78	77	37 - 120	1	30		
N-Nitrosodi-n-propylamine	81	80	50 - 120	2	30		
N-Nitrosodiphenylamine	90	88	46 - 203	3	50		
p-Cresol	87	86	42 - 120	1	39		
Pentachlorophenol	75	74	46 - 120	2	30		
Phenanthrene	92	88	54 - 120	4	30		
Phenol	87	88	37 - 112	1	30		
Pyrene	92	90	55 - 115	2	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
2,4,6-Tribromophenol	86	87	50 - 120
2-Fluorobiphenyl	90	91	36 - 120
2-Fluorophenol	89	89	30 - 120
Nitrobenzene-d5	84	84	45 - 120
Phenol-d5	90	88	36 - 120
Terphenyl-d14	100	98	41 - 120

Client: Waste Management

Job Number: 280-51248-2

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-209177

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-209177/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-209177/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/23/2014 1141			Analysis Date:	01/23/2014 1209
Prep Date:	01/20/2014 1043			Prep Date:	01/20/2014 1043
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	0.0551		0.0534	
1,2-Dichlorobenzene	0.0800	0.0800	0.0588		0.0549	
1,3-Dichlorobenzene	0.0800	0.0800	0.0556		0.0527	
1,4-Dichlorobenzene	0.0800	0.0800	0.0559		0.0537	
2,2'-Oxybis(1-chloropropane)	0.0800	0.0800	0.0581		0.0579	
2,4,6-Trichlorophenol	0.0800	0.0800	0.0703		0.0722	
2,4-Dichlorophenol	0.0800	0.0800	0.0695		0.0713	
2,4-Dimethylphenol	0.0800	0.0800	0.0535		0.0542	
2,4-Dinitrophenol	0.160	0.160	0.135		0.134	
2,4-Dinitrotoluene	0.0800	0.0800	0.0763		0.0764	
2,6-Dinitrotoluene	0.0800	0.0800	0.0751		0.0726	
2-Chloronaphthalene	0.0800	0.0800	0.0635		0.0627	
2-Chlorophenol	0.0800	0.0800	0.0717		0.0717	
2-Methylphenol	0.0800	0.0800	0.0673		0.0660	
2-Nitrophenol	0.0800	0.0800	0.0736		0.0731	
3,3'-Dichlorobenzidine	0.0800	0.0800	0.0323	J	0.0353	J
4,6-Dinitro-2-methylphenol	0.160	0.160	0.159		0.153	
4-Bromophenyl phenyl ether	0.0800	0.0800	0.0693		0.0661	
4-Chloro-3-methylphenol	0.0800	0.0800	0.0712		0.0724	
4-Chlorophenyl phenyl ether	0.0800	0.0800	0.0674		0.0672	
4-Nitrophenol	0.160	0.160	0.144		0.141	
Acenaphthene	0.0800	0.0800	0.0688		0.0683	
Acenaphthylene	0.0800	0.0800	0.0668		0.0659	
Anthracene	0.0800	0.0800	0.0705		0.0683	
Benzidine	0.0800	0.0800	ND		ND	
Benzo[a]anthracene	0.0800	0.0800	0.0725		0.0713	
Benzo[a]pyrene	0.0800	0.0800	0.0691		0.0679	
Benzo[b]fluoranthene	0.0800	0.0800	0.0752		0.0726	
Benzo[g,h,i]perylene	0.0800	0.0800	0.0710		0.0684	
Benzo[k]fluoranthene	0.0800	0.0800	0.0743		0.0715	
Bis(2-chloroethoxy)methane	0.0800	0.0800	0.0689		0.0702	
Bis(2-chloroethyl)ether	0.0800	0.0800	0.0730		0.0684	
Bis(2-ethylhexyl) phthalate	0.0800	0.0800	0.0755		0.0747	
Butyl benzyl phthalate	0.0800	0.0800	0.0751		0.0730	
Chrysene	0.0800	0.0800	0.0732		0.0708	
Dibenz(a,h)anthracene	0.0800	0.0800	0.0700		0.0709	
Diethyl phthalate	0.0800	0.0800	0.0738		0.0745	
Dimethyl phthalate	0.0800	0.0800	0.0741		0.0738	
Di-n-butyl phthalate	0.0800	0.0800	0.0743		0.0718	

Client: Waste Management

Job Number: 280-51248-2

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-209177

Method: 625
Preparation: 625

LCS Lab Sample ID:	LCS 280-209177/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-209177/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/23/2014 1141			Analysis Date:	01/23/2014 1209
Prep Date:	01/20/2014 1043			Prep Date:	01/20/2014 1043
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	0.0759		0.0733	
Fluoranthene	0.0800	0.0800	0.0730		0.0712	
Fluorene	0.0800	0.0800	0.0698		0.0697	
Hexachlorobenzene	0.0800	0.0800	0.0658		0.0632	
Hexachlorobutadiene	0.0800	0.0800	0.0509		0.0494	
Hexachlorocyclopentadiene	0.0800	0.0800	0.0112	J	0.0127	J
Hexachloroethane	0.0800	0.0800	0.0536		0.0504	
Indeno[1,2,3-cd]pyrene	0.0800	0.0800	0.0726		0.0702	
Isophorone	0.0800	0.0800	0.0625		0.0628	
Naphthalene	0.0800	0.0800	0.0604		0.0582	
n-Decane	0.0800	0.0800	0.0432		0.0402	
Nitrobenzene	0.0800	0.0800	0.0641		0.0648	
N-Nitrosodimethylamine	0.0800	0.0800	0.0623		0.0617	
N-Nitrosodi-n-propylamine	0.0800	0.0800	0.0652		0.0642	
N-Nitrosodiphenylamine	0.0800	0.0800	0.0719		0.0700	
p-Cresol	0.0800	0.0800	0.0695		0.0685	
Pentachlorophenol	0.160	0.160	0.120		0.118	
Phenanthrene	0.0800	0.0800	0.0734		0.0706	
Phenol	0.0800	0.0800	0.0695		0.0704	
Pyrene	0.0800	0.0800	0.0737		0.0724	

Client: Waste Management

Job Number: 280-51248-2

Method Blank - Batch: 440-157224

Method: 218.6
Preparation: N/A

Lab Sample ID:	MB 440-157224/3	Analysis Batch:	440-157224	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:	01/21/2014 0649	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: 440-157224

Method: 218.6
Preparation: N/A

Lab Sample ID:	LCS 440-157224/2	Analysis Batch:	440-157224	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:	01/21/2014 0636	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	49.7	99	90 - 110	

Method Reporting Limit Check - Batch: 440-157224

Method: 218.6
Preparation: N/A

Lab Sample ID:	MRL 440-157224/4	Analysis Batch:	440-157224	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:	01/21/2014 0702	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	1.09	109	50 - 150	

Client: Waste Management

Job Number: 280-51248-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 440-157224

Method: 218.6
Preparation: N/A

MS Lab Sample ID:	440-67999-H-2 MS	Analysis Batch:	440-157224	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:	01/21/2014 2240			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1000 uL
Leach Date:	N/A				

MSD Lab Sample ID:	440-67999-H-2 MSD	Analysis Batch:	440-157224	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:	01/21/2014 2253			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	103	105	90 - 110	1	10		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 440-157224

Method: 218.6
Preparation: N/A

MS Lab Sample ID:	440-67999-H-2 MS	Units:	ug/L	MSD Lab Sample ID:	440-67999-H-2 MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/21/2014 2240			Analysis Date:	01/21/2014 2253
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	51.7	52.4

Client: Waste Management

Job Number: 280-51248-2

Method Blank - Batch: 280-209053

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	MB 280-209053/1-A	Analysis Batch:	280-209348	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-209053	Lab File ID:	25A6012014.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/20/2014 2229	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	01/20/2014 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: 280-209053

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

Lab Sample ID:	LCS 280-209053/2-A	Analysis Batch:	280-209348	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-209053	Lab File ID:	25A6012014.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/20/2014 2231	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	01/20/2014 1230				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	1.00	1.00	100	88 - 110	
Cadmium	0.100	0.103	103	88 - 111	
Iron	1.00	0.987	99	89 - 115	
Lead	0.500	0.496	99	89 - 110	
Selenium	2.00	2.00	100	85 - 112	
Zinc	0.500	0.487	97	85 - 111	
Silver	0.0500	0.0505	101	85 - 115	

Client: Waste Management

Job Number: 280-51248-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-209053

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-51270-D-1-B MS	Analysis Batch:	280-209348	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-209053	Lab File ID:	25A6012014.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/20/2014 2244			Final Weight/Volume:	50 mL
Prep Date:	01/20/2014 1230				
Leach Date:	N/A				

MSD Lab Sample ID:	280-51270-D-1-C MSD	Analysis Batch:	280-209348	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-209053	Lab File ID:	25A6012014.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/20/2014 2247			Final Weight/Volume:	50 mL
Prep Date:	01/20/2014 1230				
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Arsenic	108	109	88 - 110	1	20		
Cadmium	109	110	88 - 111	0	20		
Iron	128	188	89 - 115	1	20	4	4
Lead	89	90	89 - 110	0	20		
Selenium	106	107	85 - 112	1	20		
Zinc	92	92	85 - 111	0	20		
Silver	123	123	85 - 115	0	20	F1	F1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-209053

Method: 200.7 Rev 4.4
Preparation: 200.7
Total Recoverable

MS Lab Sample ID:	280-51270-D-1-B MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	01/20/2014 2244		
Prep Date:	01/20/2014 1230		
Leach Date:	N/A		

MSD Lab Sample ID:	280-51270-D-1-C MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	01/20/2014 2247
Prep Date:	01/20/2014 1230
Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Arsenic	0.057		1.00	1.00	1.14		1.15	
Cadmium	0.0012	J	0.100	0.100	0.111		0.111	
Iron	41		1.00	1.00	42.2	4	42.8	4
Lead	0.0030	J	0.500	0.500	0.450		0.451	
Selenium	0.0069	J	2.00	2.00	2.13		2.15	
Zinc	0.095		0.500	0.500	0.554		0.556	
Silver	ND		0.0500	0.0500	0.0614	F1	0.0616	F1

Client: Waste Management

Job Number: 280-51248-2

Method Blank - Batch: 280-209679

Method: 245.1
Preparation: 245.1

Lab Sample ID:	MB 280-209679/1-A	Analysis Batch:	280-209898	Instrument ID:	MT_034
Client Matrix:	Water	Prep Batch:	280-209679	Lab File ID:	140123tab2.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	01/23/2014 1400	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	01/23/2014 1000				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND	^	0.000027	0.00020

Lab Control Sample - Batch: 280-209679

Method: 245.1
Preparation: 245.1

Lab Sample ID:	LCS 280-209679/2-A	Analysis Batch:	280-209898	Instrument ID:	MT_034
Client Matrix:	Water	Prep Batch:	280-209679	Lab File ID:	140123tab2.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	01/23/2014 1403	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	01/23/2014 1000				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00459	92	90 - 110	^

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-209679

Method: 245.1
Preparation: 245.1

MS Lab Sample ID:	280-51392-B-1-K MS	Analysis Batch:	280-209898	Instrument ID:	MT_034
Client Matrix:	Water	Prep Batch:	280-209679	Lab File ID:	140123tab2.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	01/23/2014 1407			Final Weight/Volume:	30 mL
Prep Date:	01/23/2014 1000				
Leach Date:	N/A				

MSD Lab Sample ID:	280-51392-B-1-L MSD	Analysis Batch:	280-209898	Instrument ID:	MT_034
Client Matrix:	Water	Prep Batch:	280-209679	Lab File ID:	140123tab2.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	01/23/2014 1410			Final Weight/Volume:	30 mL
Prep Date:	01/23/2014 1000				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	91	92	80 - 120	1	10	^	^

Client: Waste Management

Job Number: 280-51248-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-209679

Method: 245.1
Preparation: 245.1

MS Lab Sample ID:	280-51392-B-1-K MS	Units:	mg/L
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	01/23/2014 1407		
Prep Date:	01/23/2014 1000		
Leach Date:	N/A		

MSD Lab Sample ID:	280-51392-B-1-L MSD
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	01/23/2014 1410
Prep Date:	01/23/2014 1000
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	0.00455 ^	0.00459 ^

Client: Waste Management

Job Number: 280-51248-2

Method Blank - Batch: 280-209083

Method: 1664A
Preparation: 1664A

Lab Sample ID:	MB 280-209083/1-A	Analysis Batch:	280-209096	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	280-209083	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	01/18/2014 1332	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	01/18/2014 0920				
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: 280-209083

Method: 1664A
Preparation: 1664A

LCS Lab Sample ID:	LCS 280-209083/2-A	Analysis Batch:	280-209096	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	280-209083	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	01/18/2014 1332	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	01/18/2014 0920				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-209083/3-A	Analysis Batch:	280-209096	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	280-209083	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	01/18/2014 1332	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	01/18/2014 0920				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
HEM	90	87	81 - 107	3	22		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-209083

Method: 1664A
Preparation: 1664A

LCS Lab Sample ID:	LCS 280-209083/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-209083/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/18/2014 1332			Analysis Date:	01/18/2014 1332
Prep Date:	01/18/2014 0920			Prep Date:	01/18/2014 0920
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	35.8	34.8

Client: Waste Management

Job Number: 280-51248-2

Method Blank - Batch: 280-209837

Method: 350.1
Preparation: N/A

Lab Sample ID:	MB 280-209837/60	Analysis Batch:	280-209837	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\012314.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	01/23/2014 1527	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: 280-209837

Method: 350.1
Preparation: N/A

LCS Lab Sample ID:	LCS 280-209837/58	Analysis Batch:	280-209837	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\012314.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/23/2014 1522	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-209837/59	Analysis Batch:	280-209837	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\012314.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/23/2014 1525	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	104	104	90 - 110	1	10		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-209837

Method: 350.1
Preparation: N/A

LCS Lab Sample ID:	LCS 280-209837/58	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-209837/59
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/23/2014 1522			Analysis Date:	01/23/2014 1525
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	2.61	2.59

Client: Waste Management

Job Number: 280-51248-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-209837

Method: 350.1
Preparation: N/A

MS Lab Sample ID:	280-51186-B-2 MS	Analysis Batch:	280-209837	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\012314.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	01/23/2014 1628			Final Weight/Volume:	10 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-51186-B-2 MSD	Analysis Batch:	280-209837	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	E:\FLOW_4\012314.RST
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	01/23/2014 1630			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	111	111	90 - 110	0	10	F1	F1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-209837

Method: 350.1
Preparation: N/A

MS Lab Sample ID:	280-51186-B-2 MS	Units:	mg/L	MSD Lab Sample ID:	280-51186-B-2 MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/23/2014 1628			Analysis Date:	01/23/2014 1630
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	0.32	1.00	1.00	1.43	F1	1.43	F1

Client: Waste Management

Job Number: 280-51248-2

Method Blank - Batch: 280-209604

Method: 351.2
Preparation: 351.2

Lab Sample ID:	MB 280-209604/1-A	Analysis Batch:	280-209798	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-209604	Lab File ID:	012314.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	01/23/2014 1314	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	01/22/2014 1509				
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: 280-209604

Method: 351.2
Preparation: 351.2

LCS Lab Sample ID:	LCS 280-209604/2-A	Analysis Batch:	280-209798	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-209604	Lab File ID:	012314.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	01/23/2014 1312	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	01/22/2014 1509				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-209604/3-A	Analysis Batch:	280-209798	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-209604	Lab File ID:	012314.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	01/23/2014 1313	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	01/22/2014 1509				
Leach Date:	N/A				

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

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-209604

Method: 351.2
Preparation: 351.2

LCS Lab Sample ID:	LCS 280-209604/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-209604/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/23/2014 1312			Analysis Date:	01/23/2014 1313
Prep Date:	01/22/2014 1509			Prep Date:	01/22/2014 1509
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	5.74	5.78

Client: Waste Management

Job Number: 280-51248-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-209604

Method: 351.2
Preparation: 351.2

MS Lab Sample ID:	280-51248-2	Analysis Batch:	280-209798	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-209604	Lab File ID:	012314.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	01/23/2014 1317			Final Weight/Volume:	25 mL
Prep Date:	01/22/2014 1509				
Leach Date:	N/A				

MSD Lab Sample ID:	280-51248-2	Analysis Batch:	280-209798	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-209604	Lab File ID:	012314.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	01/23/2014 1318			Final Weight/Volume:	25 mL
Prep Date:	01/22/2014 1509				
Leach Date:	N/A				

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

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-209604

Method: 351.2
Preparation: 351.2

MS Lab Sample ID:	280-51248-2	Units: mg/L	
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	01/23/2014 1317		
Prep Date:	01/22/2014 1509		
Leach Date:	N/A		

MSD Lab Sample ID:	280-51248-2
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	01/23/2014 1318
Prep Date:	01/22/2014 1509
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Nitrogen, Kjeldahl	0.75	3.00	3.00	3.66	3.66

Client: Waste Management

Job Number: 280-51248-2

Method Blank - Batch: 280-209801

Method: 353.2
Preparation: N/A

Lab Sample ID:	MB 280-209801/28	Analysis Batch:	280-209801	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0122NXNC.R
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	01/22/2014 1855	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: 280-209801

Method: 353.2
Preparation: N/A

Lab Sample ID:	MRL 280-209801/18	Analysis Batch:	280-209801	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0122NXNC.R
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/22/2014 1840	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	0.0793	79	50 - 150	J

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-209801

Method: 353.2
Preparation: N/A

LCS Lab Sample ID:	LCS 280-209801/29	Analysis Batch:	280-209801	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0122NXNC.R
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/22/2014 1856	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-209801/30	Analysis Batch:	280-209801	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0122NXNC.R
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/22/2014 1858	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	102	90 - 110	1	10		

Client: Waste Management

Job Number: 280-51248-2

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-209801

Method: 353.2
Preparation: N/A

LCS Lab Sample ID:	LCS 280-209801/29	Units: mg/L		LCSD Lab Sample ID:	LCSD 280-209801/30
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/22/2014 1856			Analysis Date:	01/22/2014 1858
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	5.15	5.11

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-209801

Method: 353.2
Preparation: N/A

MS Lab Sample ID:	280-51248-2	Analysis Batch:	280-209801	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0122NXNC.R!
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/22/2014 1932			Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-51248-2	Analysis Batch:	280-209801	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0122NXNC.R!
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/22/2014 1934			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	93	100	90 - 110	4	10		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-209801

Method: 353.2
Preparation: N/A

MS Lab Sample ID:	280-51248-2	Units: mg/L		MSD Lab Sample ID:	280-51248-2
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/22/2014 1932			Analysis Date:	01/22/2014 1934
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	3.2	4.00	4.00	6.95	7.23

Client: Waste Management

Job Number: 280-51248-2

Method Blank - Batch: 280-210397

Method: 365.1
Preparation: 365.2/365.3/365

Lab Sample ID:	MB 280-210397/5-A	Analysis Batch:	280-210630	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-210397	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/29/2014 2217	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	01/28/2014 1700				
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: 280-210397

Method: 365.1
Preparation: 365.2/365.3/365

LCS Lab Sample ID:	LCS 280-210397/3-A	Analysis Batch:	280-210630	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-210397	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/29/2014 2217	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	01/28/2014 1700				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-210397/4-A	Analysis Batch:	280-210630	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-210397	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/29/2014 2217	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	01/28/2014 1700				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Phosphorus, Total	106	110	90 - 110	4	10		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-210397

Method: 365.1
Preparation: 365.2/365.3/365

LCS Lab Sample ID:	LCS 280-210397/3-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-210397/4-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/29/2014 2217			Analysis Date:	01/29/2014 2217
Prep Date:	01/28/2014 1700			Prep Date:	01/28/2014 1700
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	0.531	0.551

Client: Waste Management

Job Number: 280-51248-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-210397

Method: 365.1
Preparation: 365.2/365.3/365

MS Lab Sample ID:	280-51248-2	Analysis Batch:	280-210630	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-210397	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/29/2014 2217			Final Weight/Volume:	50 mL
Prep Date:	01/28/2014 1700				
Leach Date:	N/A				

MSD Lab Sample ID:	280-51248-2	Analysis Batch:	280-210630	Instrument ID:	WC_Konelab
Client Matrix:	Water	Prep Batch:	280-210397	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/29/2014 2217			Final Weight/Volume:	50 mL
Prep Date:	01/28/2014 1700				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Phosphorus, Total	110	119	90 - 110	5	10		F1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-210397

Method: 365.1
Preparation: 365.2/365.3/365

MS Lab Sample ID:	280-51248-2	Units:	mg/L	MSD Lab Sample ID:	280-51248-2
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/29/2014 2217			Analysis Date:	01/29/2014 2217
Prep Date:	01/28/2014 1700			Prep Date:	01/28/2014 1700
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual	
Phosphorus, Total	0.28	0.500	0.500	0.830	0.872	F1

Client: Waste Management

Job Number: 280-51248-2

Method Blank - Batch: 280-209703

Method: 410.4
Preparation: N/A

Lab Sample ID:	MB 280-209703/5	Analysis Batch:	280-209703	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:	01/23/2014 0849	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: 280-209703

Method: 410.4
Preparation: N/A

LCS Lab Sample ID:	LCS 280-209703/3	Analysis Batch:	280-209703	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:	01/23/2014 0849	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-209703/4	Analysis Batch:	280-209703	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:	01/23/2014 0849	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	100	100	90 - 110	1	11		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-209703

Method: 410.4
Preparation: N/A

LCS Lab Sample ID:	LCS 280-209703/3	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-209703/4
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/23/2014 0849			Analysis Date:	01/23/2014 0849
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	100	99.7

Client: Waste Management

Job Number: 280-51248-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-209703

Method: 410.4
Preparation: N/A

MS Lab Sample ID:	280-51205-A-1 MS	Analysis Batch:	280-209703	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:	01/23/2014 0849			Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-51205-A-1 MSD	Analysis Batch:	280-209703	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:	01/23/2014 0849			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	95	90 - 110	2	11		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-209703

Method: 410.4
Preparation: N/A

MS Lab Sample ID:	280-51205-A-1 MS	Units:	mg/L	MSD Lab Sample ID:	280-51205-A-1 MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/23/2014 0849			Analysis Date:	01/23/2014 0849
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
Chemical Oxygen Demand	17	J	50.0	50.0	63.4	64.9

Client: Waste Management

Job Number: 280-51248-2

Method Blank - Batch: 280-209264

Method: SM 2540D
Preparation: N/A

Lab Sample ID:	MB 280-209264/1	Analysis Batch:	280-209264	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:	01/20/2014 1747	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: 280-209264

Method: SM 2540D
Preparation: N/A

LCS Lab Sample ID:	LCS 280-209264/2	Analysis Batch:	280-209264	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:	01/20/2014 1747	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-209264/3	Analysis Batch:	280-209264	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:	01/20/2014 1747	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	102	101	86 - 114	1	20		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-209264

Method: SM 2540D
Preparation: N/A

LCS Lab Sample ID:	LCS 280-209264/2	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-209264/3
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/20/2014 1747			Analysis Date:	01/20/2014 1747
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	102	101

Client: Waste Management

Job Number: 280-51248-2

Duplicate - Batch: 280-209264

Method: SM 2540D
Preparation: N/A

Lab Sample ID:	280-51244-A-2 DU	Analysis Batch:	280-209264	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:	01/20/2014 1747	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	7.6	9.20	19	10	

Client: Waste Management

Job Number: 280-51248-2

Method Blank - Batch: 280-210108

Method: Total Nitrogen
Preparation: N/A

Lab Sample ID:	MB 280-210108/1	Analysis Batch:	280-210108	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:	01/27/2014 0824	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: 280-51248-2

Laboratory Chronicle

Lab ID: 280-51248-2 **Client ID:** DB01W

Sample Date/Time: 01/14/2014 09:45 Received Date/Time: 01/16/2014 09:20

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	280-51248-C-2-A		280-209708	280-209177	01/20/2014 10:43	1	TAL DEN	BMS
A:625	280-51248-C-2-A		280-209708	280-209177	01/23/2014 21:27	1	TAL DEN	MGH
A:218.6	280-51248-I-2		440-157224		01/21/2014 18:54	1	TAL IRV	QPD
P:200.7	280-51248-H-2-A		280-209348	280-209053	01/20/2014 12:30	1	TAL DEN	WAW
A:200.7 Rev 4.4	280-51248-H-2-A		280-209348	280-209053	01/20/2014 22:36	1	TAL DEN	JKH
P:245.1	280-51248-H-2-B		280-209898	280-209679	01/23/2014 10:00	1	TAL DEN	CRR
A:245.1	280-51248-H-2-B		280-209898	280-209679	01/23/2014 15:08	1	TAL DEN	CRR
P:1664A	280-51248-B-2-A		280-209096	280-209083	01/18/2014 09:20	1	TAL DEN	AFB
A:1664A	280-51248-B-2-A		280-209096	280-209083	01/18/2014 13:32	1	TAL DEN	AFB
A:350.1	280-51248-F-2		280-209837		01/23/2014 16:44	1	TAL DEN	SMG
P:351.2	280-51248-G-2-A		280-209798	280-209604	01/22/2014 15:09	1	TAL DEN	SMG
A:351.2	280-51248-G-2-A		280-209798	280-209604	01/23/2014 13:16	1	TAL DEN	SMG
A:353.2	280-51248-F-2		280-209801		01/22/2014 19:31	1	TAL DEN	DVA
P:365.2/365.3/365	280-51248-F-2-C		280-210630	280-210397	01/28/2014 17:00	1	TAL DEN	AJS
A:365.1	280-51248-F-2-C		280-210630	280-210397	01/29/2014 22:17	1	TAL DEN	AJS
A:410.4	280-51248-G-2		280-209703		01/23/2014 08:49	1	TAL DEN	CCJ
A:SM 2540D	280-51248-E-2		280-209264		01/20/2014 17:47	1	TAL DEN	ELJ
A:Total Nitrogen	280-51248-A-2		280-210108		01/27/2014 08:24	1	TAL DEN	RKS
A:Field Sampling	280-51248-A-2		280-209216		01/14/2014 09:45	1	TAL DEN	FS

Lab ID: 280-51248-2 MS **Client ID:** DB01W

Sample Date/Time: 01/14/2014 09:45 Received Date/Time: 01/16/2014 09:20

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:351.2	280-51248-G-2-B MS		280-209798	280-209604	01/22/2014 15:09	1	TAL DEN	SMG
A:351.2	280-51248-G-2-B MS		280-209798	280-209604	01/23/2014 13:17	1	TAL DEN	SMG
A:353.2	280-51248-F-2 MS		280-209801		01/22/2014 19:32	1	TAL DEN	DVA
P:365.2/365.3/365	280-51248-F-2-D MS		280-210630	280-210397	01/28/2014 17:00	1	TAL DEN	AJS
A:365.1	280-51248-F-2-D MS		280-210630	280-210397	01/29/2014 22:17	1	TAL DEN	AJS

Client: Waste Management

Job Number: 280-51248-2

Laboratory Chronicle

Lab ID: **280-51248-2 MSD** **Client ID:** **DB01W**

Sample Date/Time: 01/14/2014 09:45 Received Date/Time: 01/16/2014 09:20

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:351.2	280-51248-G-2-C MSD		280-209798	280-209604	01/22/2014 15:09	1	TAL DEN	SMG
A:351.2	280-51248-G-2-C MSD		280-209798	280-209604	01/23/2014 13:18	1	TAL DEN	SMG
A:353.2	280-51248-F-2 MSD		280-209801		01/22/2014 19:34	1	TAL DEN	DVA
P:365.2/365.3/365	280-51248-F-2-E MSD		280-210630	280-210397	01/28/2014 17:00	1	TAL DEN	AJS
A:365.1	280-51248-F-2-E MSD		280-210630	280-210397	01/29/2014 22:17	1	TAL DEN	AJS

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 280-209177/1-A		280-209708	280-209177	01/20/2014 10:43	1	TAL DEN	BMS
A:625	MB 280-209177/1-A		280-209708	280-209177	01/23/2014 20:32	1	TAL DEN	MGH
A:218.6	MB 440-157224/3		440-157224		01/21/2014 06:49	1	TAL IRV	QPD
P:200.7	MB 280-209053/1-A		280-209348	280-209053	01/20/2014 12:30	1	TAL DEN	WAW
A:200.7 Rev 4.4	MB 280-209053/1-A		280-209348	280-209053	01/20/2014 22:29	1	TAL DEN	JKH
P:245.1	MB 280-209679/1-A		280-209898	280-209679	01/23/2014 10:00	1	TAL DEN	CRR
A:245.1	MB 280-209679/1-A		280-209898	280-209679	01/23/2014 14:00	1	TAL DEN	CRR
P:1664A	MB 280-209083/1-A		280-209096	280-209083	01/18/2014 09:20	1	TAL DEN	AFB
A:1664A	MB 280-209083/1-A		280-209096	280-209083	01/18/2014 13:32	1	TAL DEN	AFB
A:350.1	MB 280-209837/60		280-209837		01/23/2014 15:27	1	TAL DEN	SMG
P:351.2	MB 280-209604/1-A		280-209798	280-209604	01/22/2014 15:09	1	TAL DEN	SMG
A:351.2	MB 280-209604/1-A		280-209798	280-209604	01/23/2014 13:14	1	TAL DEN	SMG
A:353.2	MB 280-209801/28		280-209801		01/22/2014 18:55	1	TAL DEN	DVA
P:365.2/365.3/365	MB 280-210397/5-A		280-210630	280-210397	01/28/2014 17:00	1	TAL DEN	AJS
A:365.1	MB 280-210397/5-A		280-210630	280-210397	01/29/2014 22:17	1	TAL DEN	AJS
A:410.4	MB 280-209703/5		280-209703		01/23/2014 08:49	1	TAL DEN	CCJ
A:SM 2540D	MB 280-209264/1		280-209264		01/20/2014 17:47	1	TAL DEN	ELJ
A:Total Nitrogen	MB 280-210108/1		280-210108		01/27/2014 08:24	1	TAL DEN	RKS

Client: Waste Management

Job Number: 280-51248-2

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 280-209177/2-A		280-209708	280-209177	01/20/2014 10:43	1	TAL DEN	BMS
A:625	LCS 280-209177/2-A		280-209708	280-209177	01/23/2014 11:41	1	TAL DEN	MGH
A:218.6	LCS 440-157224/2		440-157224		01/21/2014 06:36	1	TAL IRV	QPD
P:200.7	LCS 280-209053/2-A		280-209348	280-209053	01/20/2014 12:30	1	TAL DEN	WAW
A:200.7 Rev 4.4	LCS 280-209053/2-A		280-209348	280-209053	01/20/2014 22:31	1	TAL DEN	JKH
P:245.1	LCS 280-209679/2-A		280-209898	280-209679	01/23/2014 10:00	1	TAL DEN	CRR
A:245.1	LCS 280-209679/2-A		280-209898	280-209679	01/23/2014 14:03	1	TAL DEN	CRR
P:1664A	LCS 280-209083/2-A		280-209096	280-209083	01/18/2014 09:20	1	TAL DEN	AFB
A:1664A	LCS 280-209083/2-A		280-209096	280-209083	01/18/2014 13:32	1	TAL DEN	AFB
A:350.1	LCS 280-209837/58		280-209837		01/23/2014 15:22	1	TAL DEN	SMG
P:351.2	LCS 280-209604/2-A		280-209798	280-209604	01/22/2014 15:09	1	TAL DEN	SMG
A:351.2	LCS 280-209604/2-A		280-209798	280-209604	01/23/2014 13:12	1	TAL DEN	SMG
A:353.2	LCS 280-209801/29		280-209801		01/22/2014 18:56	1	TAL DEN	DVA
P:365.2/365.3/365	LCS 280-210397/3-A		280-210630	280-210397	01/28/2014 17:00	1	TAL DEN	AJS
A:365.1	LCS 280-210397/3-A		280-210630	280-210397	01/29/2014 22:17	1	TAL DEN	AJS
A:410.4	LCS 280-209703/3		280-209703		01/23/2014 08:49	1	TAL DEN	CCJ
A:SM 2540D	LCS 280-209264/2		280-209264		01/20/2014 17:47	1	TAL DEN	ELJ

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 280-209177/3-A		280-209708	280-209177	01/20/2014 10:43	1	TAL DEN	BMS
A:625	LCSD 280-209177/3-A		280-209708	280-209177	01/23/2014 12:09	1	TAL DEN	MGH
P:1664A	LCSD 280-209083/3-A		280-209096	280-209083	01/18/2014 09:20	1	TAL DEN	AFB
A:1664A	LCSD 280-209083/3-A		280-209096	280-209083	01/18/2014 13:32	1	TAL DEN	AFB
A:350.1	LCSD 280-209837/59		280-209837		01/23/2014 15:25	1	TAL DEN	SMG
P:351.2	LCSD 280-209604/3-A		280-209798	280-209604	01/22/2014 15:09	1	TAL DEN	SMG
A:351.2	LCSD 280-209604/3-A		280-209798	280-209604	01/23/2014 13:13	1	TAL DEN	SMG
A:353.2	LCSD 280-209801/30		280-209801		01/22/2014 18:58	1	TAL DEN	DVA
P:365.2/365.3/365	LCSD 280-210397/4-A		280-210630	280-210397	01/28/2014 17:00	1	TAL DEN	AJS
A:365.1	LCSD 280-210397/4-A		280-210630	280-210397	01/29/2014 22:17	1	TAL DEN	AJS
A:410.4	LCSD 280-209703/4		280-209703		01/23/2014 08:49	1	TAL DEN	CCJ
A:SM 2540D	LCSD 280-209264/3		280-209264		01/20/2014 17:47	1	TAL DEN	ELJ

Client: Waste Management

Job Number: 280-51248-2

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 440-157224/4		440-157224		01/21/2014 07:02	1	TAL IRV	QPD
A:353.2	MRL 280-209801/18		280-209801		01/22/2014 18:40	1	TAL DEN	DVA

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

Sample Date/Time: 01/21/2014 14:00 Received Date/Time: 01/21/2014 18:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:218.6	440-67999-H-2 MS		440-157224		01/21/2014 22:40	1	TAL IRV	QPD
P:200.7	280-51270-D-1-B MS		280-209348	280-209053	01/20/2014 12:30	1	TAL DEN	WAW
A:200.7 Rev 4.4	280-51270-D-1-B MS		280-209348	280-209053	01/20/2014 22:44	1	TAL DEN	JKH
P:245.1	280-51392-B-1-K MS		280-209898	280-209679	01/23/2014 10:00	1	TAL DEN	CRR
A:245.1	280-51392-B-1-K MS		280-209898	280-209679	01/23/2014 14:07	1	TAL DEN	CRR
A:350.1	280-51186-B-2 MS		280-209837		01/23/2014 16:28	1	TAL DEN	SMG
A:410.4	280-51205-A-1 MS		280-209703		01/23/2014 08:49	1	TAL DEN	CCJ

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

Sample Date/Time: 01/21/2014 14:00 Received Date/Time: 01/21/2014 18:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:218.6	440-67999-H-2 MSD		440-157224		01/21/2014 22:53	1	TAL IRV	QPD
P:200.7	280-51270-D-1-C MSD		280-209348	280-209053	01/20/2014 12:30	1	TAL DEN	WAW
A:200.7 Rev 4.4	280-51270-D-1-C MSD		280-209348	280-209053	01/20/2014 22:47	1	TAL DEN	JKH
P:245.1	280-51392-B-1-L MSD		280-209898	280-209679	01/23/2014 10:00	1	TAL DEN	CRR
A:245.1	280-51392-B-1-L MSD		280-209898	280-209679	01/23/2014 14:10	1	TAL DEN	CRR
A:350.1	280-51186-B-2 MSD		280-209837		01/23/2014 16:30	1	TAL DEN	SMG
A:410.4	280-51205-A-1 MSD		280-209703		01/23/2014 08:49	1	TAL DEN	CCJ

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

Sample Date/Time: 01/14/2014 09:22 Received Date/Time: 01/16/2014 09:20

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:SM 2540D	280-51244-A-2 DU		280-209264		01/20/2014 17:47	1	TAL DEN	ELJ

Lab References:

TAL DEN = TestAmerica Denver

TAL IRV = TestAmerica Irvine

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Honolulu
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Honolulu, HI 96826
Tel: 808-486-5227

TestAmerica Job ID: HXA0047
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:
1/24/2014 5:04:53 PM

Kristie Reilly, Project Manager
808-486-5227
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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Definitions/Glossary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HXA0047

Qualifiers

WetChem

Qualifier	Qualifier Description
L2	Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was below acceptance limits.
R2	The RPD exceeded the acceptance limit.

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: HXA0047

Job ID: HXA0047

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 22.1 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 following non conformances occurred during the process of analyzing BOD in batch 14A0024:
The LCS in BOD batch 14A0024 containing sample HXA0047-01 failed slightly low. The RPD between the sample and the duplicate in the batch was over the acceptable range which may be due to low analyte concentration in the sample.
The incubator temperature was out of acceptable range at 22°C (Range is 19-21°C). Reanalysis was not possible due to holding time and method parameters.

Sample Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HXA0047

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
HXA0047-01	280-51248-2 / DB01-W	Water - NonPotable	01/14/14 09:45	01/14/14 11:35

Detection Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HXA0047

Client Sample ID: 280-51248-2 / DB01-W **Lab Sample ID: HXA0047-01**

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HXA0047

Client Sample ID: 280-51248-2 / DB01-W

Date Collected: 01/14/14 09:45
Date Received: 01/14/14 11:35

Lab Sample ID: HXA0047-01

Matrix: Water - NonPotable

Method: SM5210B - General Chemistry Parameters

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
BOD - 5 Day	ND		2.00		mg/L		01/15/14 15:05	01/20/14 13:07	1.00

QC Sample Results

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HXA0047

Method: SM5210B - General Chemistry Parameters

Lab Sample ID: 14A0024-BLK1
Matrix: Water - NonPotable
Analysis Batch: 14A0024

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 14A0024_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
BOD - 5 Day	ND		2.00		mg/L		01/15/14 14:57	01/20/14 12:53	1.00

Lab Sample ID: 14A0024-BS1
Matrix: Water - NonPotable
Analysis Batch: 14A0024

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 14A0024_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
BOD - 5 Day	198	159	L2	mg/L		81	85 - 115

Lab Sample ID: 14A0024-DUP1
Matrix: Water - NonPotable
Analysis Batch: 14A0024

Client Sample ID: Duplicate
Prep Type: Total
Prep Batch: 14A0024_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
BOD - 5 Day	4.75		3.82	R2	mg/L		22	20

QC Association Summary

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HXA0047

WetChem

Analysis Batch: 14A0024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
14A0024-BLK1	Method Blank	Total	Water - NonPotable	SM5210B	14A0024_P
14A0024-BS1	Lab Control Sample	Total	Water - NonPotable	SM5210B	14A0024_P
14A0024-DUP1	Duplicate	Total	Water - NonPotable	SM5210B	14A0024_P
HXA0047-01	280-51248-2 / DB01-W	Total	Water - NonPotable	SM5210B	14A0024_P

Prep Batch: 14A0024_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
14A0024-BLK1	Method Blank	Total	Water - NonPotable	Default Prep GenChem	
14A0024-BS1	Lab Control Sample	Total	Water - NonPotable	Default Prep GenChem	
14A0024-DUP1	Duplicate	Total	Water - NonPotable	Default Prep GenChem	
HXA0047-01	280-51248-2 / DB01-W	Total	Water - NonPotable	Default Prep GenChem	

Lab Chronicle

Client: TestAmerica Denver
Project/Site: 60287037.02

TestAmerica Job ID: HXA0047

Client Sample ID: 280-51248-2 / DB01-W

Date Collected: 01/14/14 09:45
Date Received: 01/14/14 11:35

Lab Sample ID: HXA0047-01

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	14A0024_P	01/15/14 15:05	KR	TAL HON
Total	Analysis	GenChem SM5210B		1.00	14A0024	01/20/14 13:07	KR	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: HXA0047

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: HXA0047

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: 01/14/14	Chain of Custody Number: 168561
Address: 1001 Bishop Street, Suite 1600	Telephone Number (Area Code)/Fax Number: 808-356-5317 c: 808-523-[illegible]	Lab Number: HXA0047	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.: 60297037.02			

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	ZnAc/NaOH		Analysis (Attach list if more space is needed): 1614 Oil & Grease	1625 Sulfide	1625 SVOC*	410.4 COD	365.1 T Phos	350.1 Ammonia	353.2 NO2 NO3	4500 NO3 T Nitrogen	2007 LAS Metals	5M5210B BOD	218.6 CrVT	TKN	Special Instructions/ Conditions of Receipt
DB01-W	1/14/14	9:45		X				4	4	1					X	X	X	X	X	X	X	X	X	X	X	X	HXA0047-01
																											* aterpinol, benzoic acid, pentachlorophenol, p-cresol, 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	1/14/14	1135	1. Received By: [signature] Cooler Wet Ice 22.1C Intact	1/14/14	1135
2. Relinquished By: Kristie Reilly [signature]	1/14/14	12:43	2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

01/20/2014

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: WGSL Stormwater

Site No.: ~~DB011~~ new

Sample Point: DB011-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

~~DB011-W~~ new					
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 ____
01 14 14	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: Slightly turbid Odor: none Color: light tan Other: bugs swimming

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

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

FIELD COMMENTS

				East	West
A	9:45	7.81	20 sec/L		
B	10:00	7.85	22 sec/L	1/8 in = 0.025 ft³/sec	1/8 in = 0.025 ft³/sec
C	10:15	7.91	22 sec/L	1/8 in = 0.025 ft³/sec	1/8 in = 0.025 ft³/sec
D	10:30	7.92	22 sec/L	0 in = 0 ft³/sec - flow stopped	1/8 in = 0.025 ft³/sec
	(time)	(pH)	(flow)	0 in = 0 ft³/sec - no flow	1/8 in = 0.025 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
01 14 14	Margie Track	[signature]	AECOM
1.14.14	Michelle Wong	Michelle Wong	AECOM

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

Destination Laboratory Denver

Destination Laboratory PM (if known) _____

Drop Shipment Receipt Checklist

Client Name: AECOM/Waste Management Date/ Time Received: 1/14/14 1135

Received By: Nina Kim

Matrices: Aq. Carrier: Hand Airbill# :

Shipping container [illegible] 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 [illegible] 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: _____
[illegible] 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:
[illegible]	Yes	No ✓	Type: _____
Temperature Blank Present?	Yes	No ✓	

Sample Container Temperature: 22.1 °C

Samples drop shipped on ice?	Yes /	No	Type: Wet

Date of drop shipment: 1/14/13

Comments/ Sampling Handling Notes:

Aliquot for C/VI by 213.6 will be shipped once preservation is completed. ETA 1/17/13.

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client: Waste Management / AECOM	Project Manager: Mark Hofferbert	Date: 01/14/14	Chain of Custody Number: 168561
Address: 1001 Bishop Street, Suite 1600	Telephone Number (Area Code)/Fax Number: 808-356-5317 F: 808-523-3950	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	ZnAc/NaOH	1664 Oil & Grease	SM2540D 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 CrVI	TKN	Special Instructions/ Conditions of Receipt
DB01-W	1/14/14	9:45		X			4	4	1				X	X	X	X	X	X	X	X	X	X	X	X	*aterpineol, benzoic acid, pentachlorophenol, p-cresol, 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: Margie Theck for AECOM	Date: 1/14/14	Time: 1135	1. Received By: Nina Kim	Cooler wet ice 22 IC Intact	Date: 1/14/14	Time: 1135
2. Relinquished By: Kristie Reilly	Date: 1/14/14	Time: 12:43	2. Received By:		Date: 1/16/14	Time: 920
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

24 IR4 1/16/14

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: WGSL Stormwater

Site No.: ~~DB011-W~~ mw 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: 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
~~DB011-W~~ mw					

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 ____
01 14 14	781						

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 Odor: none Color: light tan Other: bugs swimming

Weather Conditions (required daily, or as conditions change): Direction/Speed: <5mpH SSW Outlook: partly cloudy Precipitation: Y or N

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

FIELD COMMENTS

				East	West
A	9:45	7.81	20 sec/L		
B	10:00	7.85	22 sec/L	1/8 in = 0.025 ft³/sec	1/8 in = 0.025 ft³/sec
C	10:15	7.91	22 sec/L	1/8 in = 0.025 ft³/sec	1/8 in = 0.025 ft³/sec
D	10:30	7.92	22 sec/L	0 in = 0 ft³/sec - flow stopped	1/8 in = 0.025 ft³/sec
	(time)	(pH)	(flow)	0 in = 0 ft³/sec - no flow	1/8 in = 0.025 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
01/14/14	Margie Trach	[signature]	AECOM
1/14/14	Michelle Wong	[signature]	AECOM

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

01/30/2014
TAL-8029WM (0108)

Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-51248-2

Login Number: 51248
List Number: 1
Creator: Knauf, James R

List Source: TestAmerica Denver

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: 280-51248-2

Login Number: 51248
List Number: 1
Creator: Freitag, Kevin R

List Source: TestAmerica Irvine
List Creation: 01/21/14 09:40 AM

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

2015 FEB 12 11:04AM

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 01/14, 02/04, 03/08, 06/03, and 10/19/2014

HI R50A533	WGSL-DB01
PERMIT NUMBER	DISCHARGE NUMBER

	MONITORING PERIOD						
	YEAR	MO	DAY		YEAR	MO	DAY
FROM	14	01	01	TO	14	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	0.9	3.9	cfs					0	5/365	Calculated/ Estimated
	PERMIT REQUIREMENT	Report	Report							1/365	Calculated/ Estimated
Biochemical Oxygen Demand	SAMPLE MEASUREMENT				< 2	5.9	12.4	mg/L	0	5/365	Composite
	PERMIT REQUIREMENT				Report	Report	Report			1/365	Composite
Chemical Oxygen Demand	SAMPLE MEASUREMENT				21	36	85	mg/L	0	5/365	Composite
	PERMIT REQUIREMENT				Report	Report	Report			1/365	Composite
Total Suspended Solids	SAMPLE MEASUREMENT				3.2	43	720	mg/L	1	5/365	Composite
	PERMIT REQUIREMENT				100	100	100			1/365	Composite
Total Phosphorus	SAMPLE MEASUREMENT				0.12	0.42	1.1	mg/L	0	5/365	Composite
	PERMIT REQUIREMENT				Report	Report	Report			1/365	Composite
Total Nitrogen	SAMPLE MEASUREMENT				0.43	5.8	8.9	mg/L	0	5/365	Composite
	PERMIT REQUIREMENT				Report	Report	Report			1/365	Composite
Nitrate + Nitrite Nitrogen	SAMPLE MEASUREMENT				< 0.1	6.5	8.4	mg/L	0	5/365	Composite
	PERMIT REQUIREMENT				Report	Report	Report			1/365	Composite
Oil and Grease	SAMPLE MEASUREMENT				< 5	< 5	< 5	mg/L	0	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	2015	2	11
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 01/14, 02/04, 03/08, 06/03, and 10/19/2014

HI R50A533	WGSL-DB01
PERMIT NUMBER	DISCHARGE NUMBER

	MONITORING PERIOD						
	YEAR	MO	DAY		YEAR	MO	DAY
FROM	14	01	01	TO	14	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				7.81	7.97	8.28	Standard Units	2	5/365	Grab
	PERMIT REQUIREMENT				5.5-8.0	5.5-8.0	5.5-8.0			1/365	Grab
Ammonia	SAMPLE MEASUREMENT				0.036	0.095	0.18	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) 0.018 (monthly avg)			1/365	Composite
Benzoic Acid	SAMPLE MEASUREMENT				< 0.05	0.042	0.042	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	0.0024	0.0024	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	mg/L	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 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	2015	2	11
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 01/14, 02/04, 03/08, 06/03, and 10/19/2014

HI R50A533	WGSL-DB01
PERMIT NUMBER	DISCHARGE NUMBER

	MONITORING PERIOD						
	YEAR	MO	DAY		YEAR	MO	DAY
FROM	14	01	01	TO	14	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				0.0044	0.005	0.005	mg/L	0	5/365	Composite
	PERMIT REQUIREMENT				0.36	0.36	0.36			1/365	Composite
Total Recoverable Cadmium	SAMPLE MEASUREMENT				0.00082	0.00086	0.0009	mg/L	0	5/365	Composite
	PERMIT REQUIREMENT				0.003	0.003	0.003			1/365	Composite
Total Recoverable Chromium IV	SAMPLE MEASUREMENT				0.00043	0.0019	0.0035	mg/L	0	5/365	Composite
	PERMIT REQUIREMENT				0.016	0.016	0.016			1/365	Composite
Total Recoverable Iron	SAMPLE MEASUREMENT				0.077	3.3	6.8	mg/L	4	5/365	Composite
	PERMIT REQUIREMENT				1.0	1.0	1.0			1/365	Composite
Total Recoverable Lead	SAMPLE MEASUREMENT				< 0.009	0.0076	0.01	mg/L	0	5/365	Composite
	PERMIT REQUIREMENT				0.029	0.029	0.029			1/365	Composite
Total Recoverable Mercury	SAMPLE MEASUREMENT				< 0.0002	0.000048	0.000059	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 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	2015	2	11
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 01/14, 02/04, 03/08, 06/03, and 10/19/2014

HI R50A533	WGSL-DB01
PERMIT NUMBER	DISCHARGE NUMBER

	MONITORING PERIOD						
	YEAR	MO	DAY		YEAR	MO	DAY
FROM	14	01	01	TO	14	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				0.021	0.039	0.069	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	2015	2	11
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

WASTE MANAGEMENT

WASTE MANAGEMENT
92-460 Farrington Hwy.
Kapolei, HI 96707
(808) 668-2985
(808) 668-1366 Fax

February 5, 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 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 (mg/L)	Effluent Limitation (mg/L)
Iron	2.7	1

Discharge from the site was the result of a rainfall event beginning in early morning hours of January 14, 2014. The sampling event occurred in the morning 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 0.025 ft^3/sec at the detention basin west outfall and 0.025 ft^3/sec at the east outfall for a total discharge flow of 0.05 ft^3/sec. Strom water discharge stopped at the east outfall midway through the sampling event. The Field Information Form is attached for your information.

Analytical laboratory data were received on January 30, 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 30, 2014.

No direct cause for the iron exceedance could be identified. Exceedances of iron from the compliance point have been reported in the past. It was noted that the iron concentration in the water discharged from the Western Diversion Flip Bucket collected during the same sampling event had concentrations at least 10 times higher than the compliance point concentration. It is suspected that naturally occurring background ion levels in surrounding soils is the primary source of the elevated iron 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 R. 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

February 6, 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 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 and renewed on December 9, 2013.

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

Sample Date	Sampling Point	Parameter	Result	Effluent Limitation
February 4, 2014	DB01-E	pH	8.28 to 8.18	5.5 – 8.0

Discharge from the site was the result of a rainfall event which began in the evening of February 3, 2014. The sampling event occurred on the morning of February 4, 2014. 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 averaged 0.34 ft^3/sec at the west outfall (DB01-W) and 0.30 ft^3/sec at the east outfall (DB01-E) for a total average discharge flow of 0.64 ft^3/sec. The pH field measurements ranged from 8.28 to 8.18 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 February 4, 2014.

No direct cause for the pH exceedance could be identified, but it was noted that similar pH values (8.48 to 7.97) were detected during the same sampling event in the water discharging

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

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

February 21, 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

Sample Date	Parameter	Result (mg/L)	Effluent Limitation (mg/L)
February 4, 2014	Iron	5	1
	Zinc	0.048	0.022

Discharge from the site was the result of a rainfall event which began in the evening of February 3, 2014. The sampling event occurred on the morning of February 4, 2014. 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 averaged 0.34 ft^3/sec at the west outfall (DB01-W) and 0.30 ft^3/sec at the east outfall (DB01-E) for a total average discharge flow of 0.64 ft^3/sec. The Field Information Form is attached for your information.

Analytical laboratory data were received on February 21, 2014 from TestAmerica Laboratories, Inc. - Denver. A representative of Waste Management of Hawaii (WMH) made a verbal notification of the potential exceedances to the CWB on February 21, 2014.

A pH exceedance (field measurement of 8.28 to 8.18 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 February 6, 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. It was noted that the iron and zinc concentration in the water discharged from the Western Diversion Flip Bucket collected during the same sampling event had concentrations more than three times higher than the compliance point concentration. It is suspected that naturally occurring background ion levels in surrounding soils is the primary source of the elevated iron and zinc 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

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

April 4, 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

Sample Date	Parameter	Result (mg/L)	Effluent Limitation (mg/L)
March 8, 2014	Zinc	0.024	0.022

Discharge from the site was the result of a rainfall event which began in the evening of March 7, 2014. The sampling event occurred on the morning of March 8, 2014. 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 discharge averaged 0.05 ft^3/sec at the east outfall (DB01-E). There was no flow at the west outfall (DB01-W). The Field Information Form is attached for your information.

Analytical laboratory data were received on April 3, 2014 from TestAmerica Laboratories, Inc. - Denver. A representative of Waste Management of Hawaii (WMH) made a verbal notification of the potential exceedances to the CWB on April 3, 2014.

No direct cause for the zinc exceedance could be identified. Exceedances of zinc from the compliance point have been reported in the past. It is suspected that naturally occurring background ion levels in surrounding soils is the primary source of the elevated zinc value.

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 R. Whelan
General Manager
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 OF HAWAII INC.
92-460 Farrington Highway
Kapolei, HI 96707
(808) 668-2985
(808) 668-1366 Fax

July 3, 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

Sample Date	Parameter	Result (mg/L)	Effluent Limitation (mg/L)
June 3, 2014	Iron	1.9	1
	Zinc	0.069	0.022

Discharge from the site was the result of a rainfall event which began in the evening of June 2, 2014. The sampling event occurred on the morning of June 3, 2014. 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 discharge averaged 0.025 ft^3/sec at the west outfall (DB01-W). There was no flow at the east outfall (DB01-E). The Field Information Form is attached for your information.

Analytical laboratory data were received on July 3, 2014 from TestAmerica Laboratories, Inc. - Denver. A representative of Waste Management of Hawaii (WMH) made a verbal notification of the potential exceedances to the CWB on July 3, 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. It is suspected that naturally

occurring background ion levels in surrounding soils is the primary source of the elevated iron and zinc 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

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

October 20, 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 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 and renewed on December 9, 2013.

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

Sample Date	Sampling Point	Parameter	Result	Effluent Limitation
October 19, 2014	DB01-E	pH	8.04 to 8.60	5.5 – 8.0

Discharge from the site was the result of a rainfall event which began in the afternoon of October 18, 2014. The sampling event occurred on the morning of October 19, 2014. 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 averaged 2.5 ft^3/sec at the west outfall (DB01-W) and 1.4 ft^3/sec at the east outfall (DB01-E) for a total average discharge flow of 3.9 ft^3/sec. The pH field measurements ranged from 8.04 to 8.60 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 20, 2014.

No direct cause for the pH exceedance could be identified. 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

WASTE MANAGEMENT
92-460 Farrington Hwy
Kapolei, HI 96707
(808) 668-2985
(808) 668-1366 Fax

November 12, 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

Sample Date [a]	Parameter	Result (mg/L)	Effluent Limitation (mg/L)
October 19, 2014	Iron	6.8	1
	Zinc	0.033	0.022
October 20, 2014	Iron	62	1
	Zinc	0.2	0.022
	Total Suspended Solids	720	100
	Oil and Grease	< 16 [b]	15

[a] Samples collected on October 19 and October 20, 2014 both represent the same rain event.
[b] Oil and Grease was not detected in the samples. However the laboratory reporting limit was elevated above the effluent limitation because of interference from the high concentration of solids in the sample. More information on this is presented in Attachment B.2, Report Narrative.

Continuous rainfall began on the morning of October 18, 2014. The sampling events occurred on the morning of October 19, 2014 (after discharge was observed) and on the afternoon of October 20, 2014. The samples collected on October 20 are for verification of the October 19 sample. During both sampling events 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 October 19 sampling event, the discharge averaged 1.4 ft^3/sec at the east outfall (DB01-E) and 2.5 ft^3/sec at the west outfall (DB01-W), for a total flow of 3.9 ft^3/sec. During the

October 20 event, the discharge averaged 1.6 ft^3/sec at the east outfall (DB01-E) and 1.5 ft^3/sec at the west outfall (DB01-W), for a total flow of 3.1 ft^3/sec. The Field Information Forms are attached for your information.

Analytical laboratory data were received on November 7, 2014 from TestAmerica Laboratories, Inc. - Denver. A representative of Waste Management of Hawaii (WMH) made a verbal notification of the potential exceedances to the CWB on November 11, 2014.

A pH exceedance (field measurement of 8.04 units, versus a limit of 5.5 to 8.0) was also noted during the October 19 sampling event. The notice of that exceedance was previously delivered to the CWB on October 20, 2014.

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. It is suspected that naturally occurring background ion levels in surrounding soils is the primary source of the elevated iron and zinc values. No Oil and Grease was actually detected in the stormwater samples, though the laboratory reporting limit was elevated.

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 Forms
Attachment B – Laboratory Reports

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

Attachment E
Inspection Reports

BI-ANNUAL INSPECTION LOG
WAIMANALO GULCH SANITARY LANDFILL
STORM WATER POLLUTION CONTROL PLAN

GENERAL INFORMATION

Date: 08/18/2014 (2014 Dry Season Inspection)

Personnel: Justin Lottig (WMH), Mark Hofferbert (AECOM)

Weather: Sunny, dry

Raining Yes ☐ No ☒

Rain totaled 0.01 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" to 12" of soil and/or approved alternate cover every day. Additional trash fencing currently being installed.
Bare or sparsely vegetated areas?	Yes	Alternate Cover area is sparsely vegetated but is being landscaped. Ash Cells are well graded, with perimeter swale construction nearing completion, and irrigation currently being installed. Stockpile area near Western Berm needs grass, except active face.
Settlement or depressions?	No	None observed.
Slope instability?	No	None observed, except at headwall of the 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 in swales
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?	No	None observed, though there may be some erosion of armor stone at Western Bypass Flip Bucket outfall.
Sediment accumulation?	Yes	North Detention Basin is approximately half full of sediment but standing water precludes excavation of sediment until water evaporates or is transferred back to lined landfill areas (could use for irrigation). South Detention Basin should be mowed to remove tall grass.
Standing water?	Yes	North Detention Basin appears ~ 75% full, though most of that volume is sediment, with only a few inches of water.
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	The sump log forms should be further updated and standardized.
Maintenance Area & Fuel Storage		
Are all solvents, oils, etc. properly stored?	Yes	Roofs and all secondary containment appeared intact.
Is the facility and surrounding area in proper order (good housekeeping)?	Yes	No oil staining observed, though some grease droplets were visible.
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 18, 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
08/18/2014	Culvert Inlet (at Farrington Highway)	Visual	No flow. No visible evidence of non-storm water discharge.	N/A	Justin Lottig (WMH) Mark Hofferbert (AECOM)
08/18/2014	DB01E (point of compliance)	Visual	No flow. No visible evidence of non-storm water discharge.	N/A	Justin Lottig (WMH) Mark Hofferbert (AECOM)
08/18/2014	DB01W (point of compliance)	Visual	No flow. No visible evidence of non-storm water discharge.	N/A	Justin Lottig (WMH) Mark Hofferbert (AECOM)
08/18/2014	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 8-18-14

(Rev. 04/11)

BI-ANNUAL INSPECTION LOG
WAIMANALO GULCH SANITARY LANDFILL
STORM WATER POLLUTION CONTROL PLAN

GENERAL INFORMATION

Date: 12/11/2014 (2014 Wet Season Inspection)

Personnel: Justin Lottig (WMH), Mark Hofferbert (AECOM)

Weather: Sunny, dry

Raining Yes ☐ No ☒

Rain totaled 0.05 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 minimized and covered with 6" to 12" of soil and/or approved alternate cover every day.
Bare or sparsely vegetated areas?	Yes	Some sparse vegetation noted, though established grass cover has significantly improved since last inspection. Clean soil stockpile area near Western Berm is unseeded.
Settlement or depressions?	No	None observed.
Slope instability?	No	None observed, except at headwall of the 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 (or minor only) observed in swales
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	No obstructions observed. Portions of the chain link fence around upper concrete Channel are in disrepair and should be replaced.
Outfall areas eroded?	No	None observed, though there may be some erosion of armor stone at Western Bypass Flip Bucket outfall.
Sediment accumulation?	Yes	North Detention Basin is approximately 75% full of sediment but standing water precludes excavation of sediment until water evaporates or is transferred back to lined landfill areas (could use for irrigation). Areas around and within South and North Detention Basins should be mowed to remove shrubs and tall grass.
Standing water?	Yes	North Detention Basin appears ~ 75% full, though most of that volume is sediment, with only a few inches of water.
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	Logs indicate that any exceedances of leachate levels (very few instances) were due to faulty indicators and repairs were made.
Maintenance Area & Fuel Storage		
Are all solvents, oils, etc. properly stored?	Yes	Roofs and all 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:	December 11, 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
12/11/2014	Culvert Inlet (at Farrington Highway)	Visual	No flow. No visible evidence of non-storm water discharge.	N/A	Justin Lottig (WMH) Mark Hofferbert (AECOM)
12/11/2014	DB01E (point of compliance)	Visual	No flow. No visible evidence of non-storm water discharge.	N/A	Justin Lottig (WMH) Mark Hofferbert (AECOM)
12/11/2014	DB01W (point of compliance)	Visual	No flow. No visible evidence of non-storm water discharge.	N/A	Justin Lottig (WMH) Mark Hofferbert (AECOM)
12/11/2014	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 1-14-15

(Rev. 04/11)

Attachment F
Flow Calculation Table

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					