December 10, 2014

Mr. Ross Steenson
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612

Subject: Stormwater Discharge Exceedance Report (October 31, 2014), Suisun Bay Reserve Fleet, Benicia, California

Dear Mr. Steenson:

On behalf of the United States Department of Transportation Maritime Administration (MARAD), Sustainable Group - Terraphase JV, LLC (SGTJV) has prepared this Exceedance Report for the Suisun Bay Reserve Fleet (SBRF) located in Benicia, California. This letter report was prepared in accordance with the requirements of the SBRF Stormwater Pollution Prevention Plan (SWPPP) dated March 30, 2012 and the State Water Resources Control Board Water Quality Order No. 97-03-DWQ National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000001 (General Permit) Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities ("Industrial Stormwater General Permit").

This report summarizes the analytical results from the first storm event (October 31, 2014) of the 2014 – 2015 reporting period that exceeded the target concentrations identified in the SWPPP, which were developed previously by the San Francisco Regional Water Quality Control Board (RWQCB) and MARAD. Final analytical results were received on November 14, 2014. This report includes the following:

- Summary of the sampling event on October 31, 2014;
- The analytical results from the sampling event on October 31, 2014 for total petroleum hydrocarbons (TPH) as diesel (TPHd) and as motor oil (TPHmo) that exceeded their target concentrations;
- The historical analytical data for the vessels including the constituents that exceeded the target concentrations;
- The best management practices (BMPs) implemented prior to the October 31, 2014 sampling event and an evaluation of the effectiveness of the BMPs for reducing runoff concentrations for pollutants of concern; and
- Follow-up activities to address the exceedances.

Sustainable Group - Terraphase JV, LLC
1480 Moraga Road, Suite I #374
Moraga, California 94556

Sampling Event Summary

On October 31, 2014, trained MARAD SBRF sampling personnel collected stormwater runoff samples from six sampling locations – the five remaining non-retention vessels and the parking lot. MARAD SBRF personnel collected stormwater samples from the vessels' scupper drains after the runoff was routed through the structural treatment measures. The structural treatment measures consisted of metal filter screens, walnut wattles, cocoa mats, and perlite wattles.

MARAD SBRF personnel wore disposable, powder-free gloves and changed them at each sampling location. Stormwater runoff was collected into clean five-gallon plastic buckets and then transferred into the appropriate sample containers for analysis. Samples were transported to the analytical laboratory on the same day they were collected.

The samples were analyzed for the following constituents at a certified analytical laboratory, in accordance with the requirements of the SWPPP:

- pH;
- Specific conductivity;
- Total suspended solids (TSS);
- Total oil and grease;
- Low-level mercury;
- TPHd and TPHmo; and
- CAM 17 metals, total concentrations.

There were no quality assurance/quality control issues noted by the laboratory that would affect the quality of the data or how the data may be used to make decisions.

Precipitation was not recorded in the 72 hours preceding the October 31, 2014 sampling event. The total rainfall on October 31st was reported to be 0.3 inches[1]. On October 31, 2014 MARAD SBRF personnel collected the first sample at 10:10 and the last sample was collected at 10:30. The grab samples from the vessels were collected during the first three hours of the storm event (first flush samples were collected) in accordance with the procedure documented in the SWPPP.

Exceedances Summary

The constituents detected above their respective target concentrations in one or more sampling locations were TPHd and TPHmo. The six sampling locations, constituents detected above target concentration, the respective analytical results in micrograms per liter (µg/L), and target concentrations are presented in the table below. The results which exceed the applicable target concentrations are highlighted.

[1] The weather station in Benicia, California listed on www.wunderground.com was used to determine the rainfall amount (http://www.wunderground.com/personal-weather-station/dashboard?ID=KCABENIC8).

Analytical Results – October 31, 2014

Sample Location	Copper (ug/L)	Lead (ug/L)	Nickel (ug/L)	Zinc (ug/L)	TPHd (ug/L)	TPHmo (ug/L)
Cape Blanco	78	16	<5.0	890	900	480
Cape Borda	79	12	8.3	2,300	**1,100**	**810**
Cape Breton	60	24	<5.0	1,100	630	530
Comet	40	5.5	<5.0	1,700	**1,200**	**910**
Meteor	48	16	<5.0	2,800	**1,100**	**660**
Parking Lot	8.5	11	<5.0	25	**1,100**	**1,100**
Target Levels	210	290	31	3,500	1,000	540

Notes and Abbreviations:
Results are presented in micrograms per liter (µg/L).
Results which exceed the applicable target concentrations are highlighted.
TPHd = total petroleum hydrocarbons, diesel
TPHmo = total petroleum hydrocarbons, motor oil

The TPHd results from the *Cape Borda* (1,100 µg/L), the *Comet* (1,200 µg/L), the *Meteor* (1,100 µg/L), and the parking lot (1,100 µg/L) represent exceedances of the TPHd target concentration (1,000 µg/L). The exceedances of the TPHd target concentration in vessel samples cannot be traced to specific sources on the vessels as there are no diesel fuel sources on the decks or upper structures, and no diesel fuel is used or transferred on the decks of these vessels. The exceedance of the TPHd target concentration from the parking lot stormwater sample may be from employee vehicles that have a petroleum leak.

The TPHmo results from the *Cape Borda* (810 µg/L), the *Comet* (910 µg/L), the *Meteor* (660 µg/L), and the parking lot (1,100 µg/L) represent exceedances of the TPHmo target concentration (540 µg/L). The exceedances of the TPHmo on the vessels may be from leaking hydraulic oil sources on the vessels, including the winches or cranes. After each rain event MARAD SBRF personnel inspect the vessels, sources, and stormwater to search for leaking equipment in order to secure the leak, drain the oil if the system is not needed again, or place oil-adsorbent mats and/or booms around the source. Any leaking sources are noted in the Corrective Action Log to ensure follow-up on these issues from identification through verification and closure.

Among the October 31, 2014 results, there were no exceedances of the copper, lead, nickel, or zinc target concentrations.

Historical Data

The October 31, 2014 concentrations of TPHd (1,100 µg/L) and TPHmo (1,100 µg/L) in the sample collected from the parking lot were above the target levels (1,000 µg/L and 540 µg/L, respectively) and below the concentrations from samples collected April 25, 2014 (1,900 µg/L and 1,800 µg/L).

The TPHd concentration in samples collected from the *Cape Borda* increased from 750 µg/L to 1,100 µg/L relative to February 26, 2014, but decreased from 1,900 µg/L to 1,100 relative to February 6, 2014. Relative to the April 2014 TPHd concentrations, the *Cape Blanco* result decreased from 1,200 µg/L to 900 µg/L, the *Cape Breton* decreased from 860 µg/L to 630 µg/L, the *Comet* result decreased from 1800 µg/L to 1,200 µg/L, and the *Meteor* result decreased from 1,200 µg/L to 1,100 µg/L. The October 31, 2014 result for the *Cape Blanco* and the *Cape Breton* are below the target concentration of 1,000 µg/L whereas the October 31, 2014 result for the *Cape Borda*, the *Comet*, and the *Meteor* were above the target concentration of 1,000 µg/L.

The TPHmo concentration in samples collected from the *Cape Borda* increased from 470 µg/L to 810 µg/L relative to February 26, 2014, and increased from 790 µg/L to 810 relative to February 6, 2014. Relative to the April 2014 TPHmo concentrations, the *Cape Blanco* result decreased from 840 µg/L to 480 µg/L, the *Cape Breton* result increased from 520 to 530 µg/L, the *Comet* result decreased from 1,100 µg/L to 910 µg/L, and the *Meteor* result decreased from 750 µg/L to 660 µg/L. The October 31, 2014 result for the *Cape Blanco* and the *Cape Breton,* are below the target concentration of 540 µg/L whereas the October 31, 2014 result for the *Cape Borda*, the *Comet,* and the *Meteor* were above the target concentration of 1,000 µg/L.

Historical concentrations of stormwater sample data for the vessels sampled on October 31, 2014 are displayed in the table below.

Historical Analytical Stormwater Data

Vessel Name		Cape Blanco		Cape Borda		Cape Breton		Comet		Meteor	
Contaminant		TPHd	TPHmo	TPHd	TPHmo	TPHd	TPHmo	TPHd	TPHmo	TPHd	TPHmo
Criteria		*1,000*	*540*	*1,000*	*540*	*1,000*	*540*	*1,000*	*540*	*1,000*	*540*
Sample Date	12/14/2010	--	--	--	--	--	--	--	--	--	--
	12/17/2010	--	--	--	--	--	--	**1,900**	**1,300**	--	--
	2/17/2011	--	--	--	--	620	490	--	--	--	--
	3/23/2011	220	--	200	--	--	--	--	--	410	--
	1/23/2012	--	--	--	--	--	--	630	**650**	--	--
	3/13/2012	770	**580**	**1,100**	**1,100**	990	**740**	--	--	**1,100**	**730**
	4/10/2012	--	--	--	--	--	--	510	330	--	--
	11/28/2012	--	--	--	--	--	--	--	--	--	--
	11/20/2013	**1,500**	**1,000**	--	--	--	--	**1,600**	**1,400**	**1,900**	**2,200**
	2/6/2014	710	**580**	**1,900**	**790**	550	**580**	**1,400**	**1,500**	630	**580**
	2/26/2014	**1,100**	**570**	750	470	580	**620**	**1,200**	**700**	**1,500**	**1,000**
	3/26/2014	570	500	--	--	510	**540**	840	**830**	840	**780**
	4/25/2014	**1,200**	**840**	--	--	860	520	**1,800**	**1,100**	**1,200**	**750**
	10/31/2014	900	480	**1,100**	**810**	630	530	**1,200**	**910**	**1,100**	**660**

Notes and Abbreviations:
Results are presented in micrograms per liter (µg/L)
Resulting concentrations over the target levels are in bold and highlighted in grey
TPHd = total petroleum hydrocarbons, diesel
TPHmo = total petroleum hydrocarbons, motor oil

Best Management Practices

During the stormwater monitoring over the last three years, control of particulates in stormwater on the vessels has been shown to reduce the concentrations of TSS and metals. Control of particulates that include exfoliated and exfoliating paint has included structural controls and procedural BMPs. The vessels' scupper drains are protected with structural controls including metal filter screens, cocoa mats, petroleum adsorbent mats, and walnut (for particulates) and perlite wattles (for petroleum hydrocarbons). The primary procedural BMP for particulates and exfoliated paint is regular sweeping. Additional BMPs include inspection and maintenance of the structural controls for particulate accumulation.

The vessels are part of the routine sweeping program and are dry swept in 90-day intervals, and the dates of cleaning are tracked (see table below).

Summary of Vessel Sweeping Activities

Sample Location	Date of Last Sweeping (Prior to Storm Event) (Prior to Storm Event)	Date of Next Sweeping (Post Storm Event)
Cape Blanco	10/15/2014	1/13/2015
Cape Borda	10/7/2014	1/5/2015
Cape Breton	10/10/2014	1/8/2015
Comet	10/24/2014	1/22/2015
Meteor	10/29/2014	1/27/2015

To address TPHmo and oil and grease concerns on the vessels, MARAD SBRF has employed structural controls including perlite wattles at the scupper drains and petroleum sorbent booms and pads on and around any leaking hydraulic oil sources (i.e. winches or cranes). The BMPs that are procedural controls employed for TPHmo and oil and grease include the inspection program of the vessels to check for spills and leaks of oil and the observations, notations, and maintenance as part of the corrective action process. Issues identified during inspections or informal vessel work activities that cannot be immediately mitigated are documented in the corrective action log and addressed during follow-up activities.

Other procedural controls or practices for TPHmo and oil and grease concerns include either securing leaking equipment or draining the oil from unnecessary systems; MARAD SBRF has evaluated covering the sources, but many of these sources such as cranes and winches are overhead and part of a larger structure that is not practical to attempt to cover or enclose. An impediment to draining the oil is that all of the oil cannot readily be drained due to the configuration of the reservoir or viscosity of the oil.

Follow-Up Activities

MARAD SBRF personnel will continue with their vessel sweeping program to remove paint particulates from the decks of the vessels. In addition, the existing structural controls (wattle, cocoa mats, petroleum adsorbent mats, and perlite and walnut wattle) will be maintained and if necessary, new or additional wattle and mats will be installed. MARAD SBRF personnel will ensure that the structural controls are secure and stormwater runoff is not able to bypass them prior to entering the scupper drains.

Considering the exceedances of the TPHmo concentrations in stormwater for the *Cape Borda*, *Comet*, and *Meteor*, MARAD SBRF personnel will inspect any oil sources to determine which additional or improved controls need to be employed. MARAD will continue to employ the controls and improvement identified above in the BMP section, and will evaluate all sources of oil on the decks and upper surfaces of the vessels, secure/seal any discovered leaks if originating from a drain/bolt, and place absorbent material around the source. MARAD will also consider other methods for addressing leaking equipment.

To further reduce TPH concentrations in vessel stormwater runoff MARAD SBRF has completed a pilot study that tested a scupper drain insert containing a filtration media blend of activated carbon and zeolites on two vessels with consistent TPHd and TPHmo exceedances, the *Comet* and the *Meteor*. SBRF personnel will implement these new BMPs on all non-retention vessels prior to the next qualifying storm event.

The stormwater treatment vault in the parking lot was inspected in April 2014. In June 2014 a new structural BMP was inserted into the treatment vault to filter and remove debris from parking lot stormwater runoff before the runoff reaches the filtration media. Follow-up with the stormwater treatment vault company may reveal additional steps to improving the treatment vault performance.

Additional stormwater samples will be collected, per the SWPPP, from the *Cape Borda,* the *Comet*, and the *Meteor* during a qualified storm event following implementation of the above-mentioned follow-up activities and BMPs.

If you have questions regarding this report, please contact Andrea Brown by phone (707.499.7084) or email (andrea.brown@terraphase.com).

Sincerely,
For Sustainable Group – Terraphase JV, LLC

Andrea Brown
Senior Staff Engineer

Attachments:

Laboratory Analytical Report (October 31, 2014 Storm Event)


Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 262159
ANALYTICAL REPORT

Suisun Bay Reserve Fleet	Project : CLIN 0002
2595 Lake Herman Rd.	Location : Storm water
Benicia, CA 94510	Level : II

Sample ID	Lab ID
COMET	262159-001
CAPE BLANCO	262159-002
PARKING LOT	262159-003
CAPE BORDA	262159-004
METEOR	262159-005
CAPE BRETON	262159-006

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Will Rice Date: 11/14/2014

Will S Rice
Project Manager
will.rice@ctberk.com

CA ELAP# 2896, NELAP# 4044-001

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**262159**
Client:	**Suisun Bay Reserve Fleet**
Project:	**CLIN 0002**
Location:	**Storm water**
Request Date:	**10/31/14**
Samples Received:	**10/31/14**

This data package contains sample and QC results for six water samples, requested for the above referenced project on 10/31/14. The samples were received cold and intact.

TPH-Extractables by GC (EPA 8015B):
No analytical problems were encountered.

Metals (EPA 6010B and EPA 7470A):
High recovery was observed for zinc in the MS for batch 217095; the parent sample was not a project sample, the BS/BSD were within limits, and the associated RPD was within limits. No other analytical problems were encountered.

Conductivity (SM2510B):
No analytical problems were encountered.

Total Oil & Grease (HEM) (EPA 1664A):
Matrix spikes were not performed for this analysis due to insufficient sample volume. High RPD was observed for oil & grease (HEM) in the BS/BSD for batch 217158; this analyte was not detected at or above the RL in the associated samples. Oil & grease (HEM) was detected between the MDL and the RL in the method blank for batch 217158; this analyte was not detected in samples at or above the RL. No other analytical problems were encountered.

Total Suspended Solids (TSS) (SM2540D):
High RPD was observed for total suspended solids in the MS/MSD for batch 217068; the parent sample was not a project sample, and the RPD was acceptable in the BS/BSD. No other analytical problems were encountered.

pH (EPA 9040C):
No analytical problems were encountered.

Low-level Mercury (EPA 1631):
Alpha Analytical Dublin in Dublin, CA performed the analysis (not NELAP certified). Please see the Alpha Analytical Dublin case narrative.

CHAIN OF CUSTODY

Curtis & Tompkins Laboratories
ENVIRONMENTAL ANALYTICAL TESTING LABORATORY
In Business Since 1878

2323 Fifth Street
Berkeley, CA 94710

Phone (510) 486-0900
Fax (510) 486-0532

C&T LOGIN # 162159

Project No: DTMA-94-R20120007 Sampler: PRESERVATION SERVICES

Project Name: SWPPP WATER SAMPLES Report To: ERIC LAWLOR

Project P. O. No: Company: SUISUN BAY RESERVE TRUST

EDD Format: Report Level ☐ II ☐ III ☐ IV Telephone: (707)745-0487

Turnaround Time: ☐ RUSH 10 Day ☐ Standard Email: LAWLOR.ERIC@DOT.GOV

Lab No.	Sample ID.	SAMPLING		MATRIX				# of Containers	CHEMICAL PRESERVATIVE				
		Date Collected	Time Collected	Water	Solid				HCl	H2SO4	HNO3	NaOH	None
1	Comet	10/31/2014	10:30	✓				6	✓		✓		
2	Cape Blanco	10/31/2014	10:10	✓				6	✓		✓		
3	Parking lot	10/31/2014	10:15	✓				6	✓		✓		
4	Cape Borda	10/31/2014	10:15	✓				6	✓		✓		
5	Meteor	10/31/2014	10:10	✓				6	✓		✓		
6	Cape Breton	10/31/2014	10:25	✓				6	✓		✓		
7		10/31/2014											

ANALYTICAL REQUEST

Notes:

SAMPLE RECEIPT
☐ Intact
☐ Cold
☐ On Ice
☐ Ambient

RELINQUISHED BY:
DATE: 10/31/14 TIME: 2:25
DATE: TIME:
DATE: TIME:

RECEIVED BY:
DATE: 10/31 TIME: 228
DATE: TIME:
DATE: TIME:

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 262159 Date Received 10/31/14 Number of coolers 2
Client Suisun Bay Reserve Fleet Project SWPPP Water Samples

Date Opened 10/31 By (print) SL (sign)
Date Logged in 10/31 By (print) WSR (sign)

1. Did cooler come with a shipping slip (airbill, etc) YES (NO)
Shipping info

2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
How many Name Date
2B. Were custody seals intact upon arrival? YES NO (N/A)
3. Were custody papers dry and intact when received? (YES) NO
4. Were custody papers filled out properly (ink, signed, etc)? (YES) NO
5. Is the project identifiable from custody papers? (If so fill out top of form) (YES) NO
6. Indicate the packing in cooler: (if other, describe)

☒ Bubble Wrap ☐ Foam blocks ☒ Bags ☐ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C) 1°, 2.4°

☐ Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

☒ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? YES (NO)
If YES, what time were they transferred to freezer?
9. Did all bottles arrive unbroken/unopened? (YES) NO
10. Are there any missing / extra samples? YES (NO)
11. Are samples in the appropriate containers for indicated tests? (YES) NO
12. Are sample labels present, in good condition and complete? (YES) NO
13. Do the sample labels agree with custody papers? (YES) NO
14. Was sufficient amount of sample sent for tests requested? (YES) NO
15. Are the samples appropriately preserved? (YES) NO N/A
16. Did you check preservatives for all bottles for each sample? (YES) NO N/A
17. Did you document your preservative check? (YES) NO N/A
18. Did you change the hold time in LIMS for unpreserved VOAs? YES NO (N/A)
19. Did you change the hold time in LIMS for preserved terracores? YES NO (N/A)
20. Are bubbles > 6mm absent in VOA samples? YES NO (N/A)
21. Was the client contacted concerning this sample delivery? YES (NO)
If YES, Who was called? By Date:

COMMENTS

Rev 10, 9/12

Curtis & Tompkins Sample Preservation for 262159

Sample	pH: <2	>9	>12	Other
-001a	[ ]	[ ]	[ ]	_____
b	[X]	[ ]	[ ]	_____
c	[ ]	[ ]	[ ]	_____
d	[ ]	[ ]	[ ]	_____
e	[ ]	[ ]	[ ]	_____
f	[ ]	[ ]	[ ]	_____
-002a	[ ]	[ ]	[ ]	_____
b	[X]	[ ]	[ ]	_____
c	[ ]	[ ]	[ ]	_____
d	[ ]	[ ]	[ ]	_____
e	[ ]	[ ]	[ ]	_____
f	[ ]	[ ]	[ ]	_____
-003a	[ ]	[ ]	[ ]	_____
b	[X]	[ ]	[ ]	_____
c	[ ]	[ ]	[ ]	_____
d	[ ]	[ ]	[ ]	_____
e	[ ]	[ ]	[ ]	_____
f	[ ]	[ ]	[ ]	_____
-004a	[ ]	[ ]	[ ]	_____
b	[X]	[ ]	[ ]	_____
c	[ ]	[ ]	[ ]	_____
d	[ ]	[ ]	[ ]	_____
e	[ ]	[ ]	[ ]	_____
f	[ ]	[ ]	[ ]	_____
-005a	[ ]	[ ]	[ ]	_____
b	[X]	[ ]	[ ]	_____
c	[ ]	[ ]	[ ]	_____
d	[ ]	[ ]	[ ]	_____
e	[ ]	[ ]	[ ]	_____
f	[ ]	[ ]	[ ]	_____
-006a	[ ]	[ ]	[ ]	_____
b	[X]	[ ]	[ ]	_____
c	[ ]	[ ]	[ ]	_____
d	[ ]	[ ]	[ ]	_____
e	[ ]	[ ]	[ ]	_____
f	[ ]	[ ]	[ ]	_____

Analyst: SL
Date: 10/31/14

Curtis & Tompkins, Ltd.

Detections Summary for 262159

Results for any subcontracted analyses are not included in this summary.

Client : Suisun Bay Reserve Fleet
Project : CLIN 0002
Location : Storm water

Client Sample ID : COMET Laboratory Sample ID : 262159-001

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	1,200		50	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Motor Oil C24-C36	910		300	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Barium	310		5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Copper	40		5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Lead	5.5		5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Zinc	1,700		20	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Specific Conductance	60		1.0	umhos/cm	TOTAL	1.000	SM2510B	METHOD
pH	5.2		1.0	SU	TOTAL	1.000	EPA 9040C	METHOD
Total Suspended Solids	10		5	mg/L	TOTAL	1.000	SM2540D	METHOD

Client Sample ID : CAPE BLANCO Laboratory Sample ID : 262159-002

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	900		50	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Motor Oil C24-C36	480		300	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Barium	160		5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Chromium	6.8		5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Copper	78		5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Lead	16		5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Zinc	890		20	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Specific Conductance	44		1.0	umhos/cm	TOTAL	1.000	SM2510B	METHOD
pH	5.4		1.0	SU	TOTAL	1.000	EPA 9040C	METHOD
Total Suspended Solids	53		5	mg/L	TOTAL	1.000	SM2540D	METHOD

Client Sample ID : PARKING LOT Laboratory Sample ID : 262159-003

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	1,100		50	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Motor Oil C24-C36	1,100		300	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Barium	180		5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Copper	8.5		5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Lead	11		5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Zinc	25		20	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Specific Conductance	17,400		1.0	umhos/cm	TOTAL	1.000	SM2510B	METHOD
pH	7.9		1.0	SU	TOTAL	1.000	EPA 9040C	METHOD
Total Suspended Solids	15		5	mg/L	TOTAL	1.000	SM2540D	METHOD

Curtis & Tompkins, Ltd.

Client Sample ID : CAPE BORDA Laboratory Sample ID : 262159-004

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	1,100		50	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Motor Oil C24-C36	810		300	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Barium	440		5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Copper	79		5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Lead	12		5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Nickel	8.3		5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Zinc	2,300		20	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Specific Conductance	76		1.0	umhos/cm	TOTAL	1.000	SM2510B	METHOD
pH	6.1		1.0	SU	TOTAL	1.000	EPA 9040C	METHOD
Total Suspended Solids	20		5	mg/L	TOTAL	1.000	SM2540D	METHOD

Client Sample ID : METEOR Laboratory Sample ID : 262159-005

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	1,100		50	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Motor Oil C24-C36	660		300	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Barium	2,600		5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Copper	48		5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Lead	16		5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Zinc	2,800		20	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Specific Conductance	55		1.0	umhos/cm	TOTAL	1.000	SM2510B	METHOD
pH	5.3		1.0	SU	TOTAL	1.000	EPA 9040C	METHOD
Total Suspended Solids	45		5	mg/L	TOTAL	1.000	SM2540D	METHOD

Client Sample ID : CAPE BRETON Laboratory Sample ID : 262159-006

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	630		50	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Motor Oil C24-C36	530		300	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Barium	220		5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Chromium	6.0		5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Copper	60		5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Lead	24		5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Zinc	1,100		20	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Specific Conductance	30		1.0	umhos/cm	TOTAL	1.000	SM2510B	METHOD
pH	5.3		1.0	SU	TOTAL	1.000	EPA 9040C	METHOD
Total Suspended Solids	14		5	mg/L	TOTAL	1.000	SM2540D	METHOD

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	262159	Location:	Storm water
Client:	Suisun Bay Reserve Fleet	Prep:	EPA 3520C
Project#:	CLIN 0002	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	10/31/14
Units:	ug/L	Received:	10/31/14
Diln Fac:	1.000	Prepared:	11/05/14
Batch#:	217152	Analyzed:	11/06/14

Field ID: COMET
Type: SAMPLE
Lab ID: 262159-001

Analyte	Result	RL
Diesel C10-C24	1,200	50
Motor Oil C24-C36	910	300

Surrogate	%REC	Limits
o-Terphenyl	101	66-129

Field ID: CAPE BLANCO
Type: SAMPLE
Lab ID: 262159-002

Analyte	Result	RL
Diesel C10-C24	900	50
Motor Oil C24-C36	480	300

Surrogate	%REC	Limits
o-Terphenyl	88	66-129

Field ID: PARKING LOT
Type: SAMPLE
Lab ID: 262159-003

Analyte	Result	RL
Diesel C10-C24	1,100	50
Motor Oil C24-C36	1,100	300

Surrogate	%REC	Limits
o-Terphenyl	108	66-129

Field ID: CAPE BORDA
Type: SAMPLE
Lab ID: 262159-004

Analyte	Result	RL
Diesel C10-C24	1,100	50
Motor Oil C24-C36	810	300

Surrogate	%REC	Limits
o-Terphenyl	105	66-129

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	262159	Location:	Storm water
Client:	Suisun Bay Reserve Fleet	Prep:	EPA 3520C
Project#:	CLIN 0002	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	10/31/14
Units:	ug/L	Received:	10/31/14
Diln Fac:	1.000	Prepared:	11/05/14
Batch#:	217152	Analyzed:	11/06/14

Field ID: METEOR
Type: SAMPLE
Lab ID: 262159-005

Analyte	Result	RL
Diesel C10-C24	1,100	50
Motor Oil C24-C36	660	300

Surrogate	%REC	Limits
o-Terphenyl	107	66-129

Field ID: CAPE BRETON
Type: SAMPLE
Lab ID: 262159-006

Analyte	Result	RL
Diesel C10-C24	630	50
Motor Oil C24-C36	530	300

Surrogate	%REC	Limits
o-Terphenyl	107	66-129

Type: BLANK
Lab ID: QC764520

Analyte	Result	RL
Diesel C10-C24	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
o-Terphenyl	108	66-129

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	262159	Location:	Storm water
Client:	Suisun Bay Reserve Fleet	Prep:	EPA 3520C
Project#:	CLIN 0002	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	217152
Units:	ug/L	Prepared:	11/05/14
Diln Fac:	1.000	Analyzed:	11/06/14

Type: BS Cleanup Method: EPA 3630C
Lab ID: QC764521

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,810	112	61-120

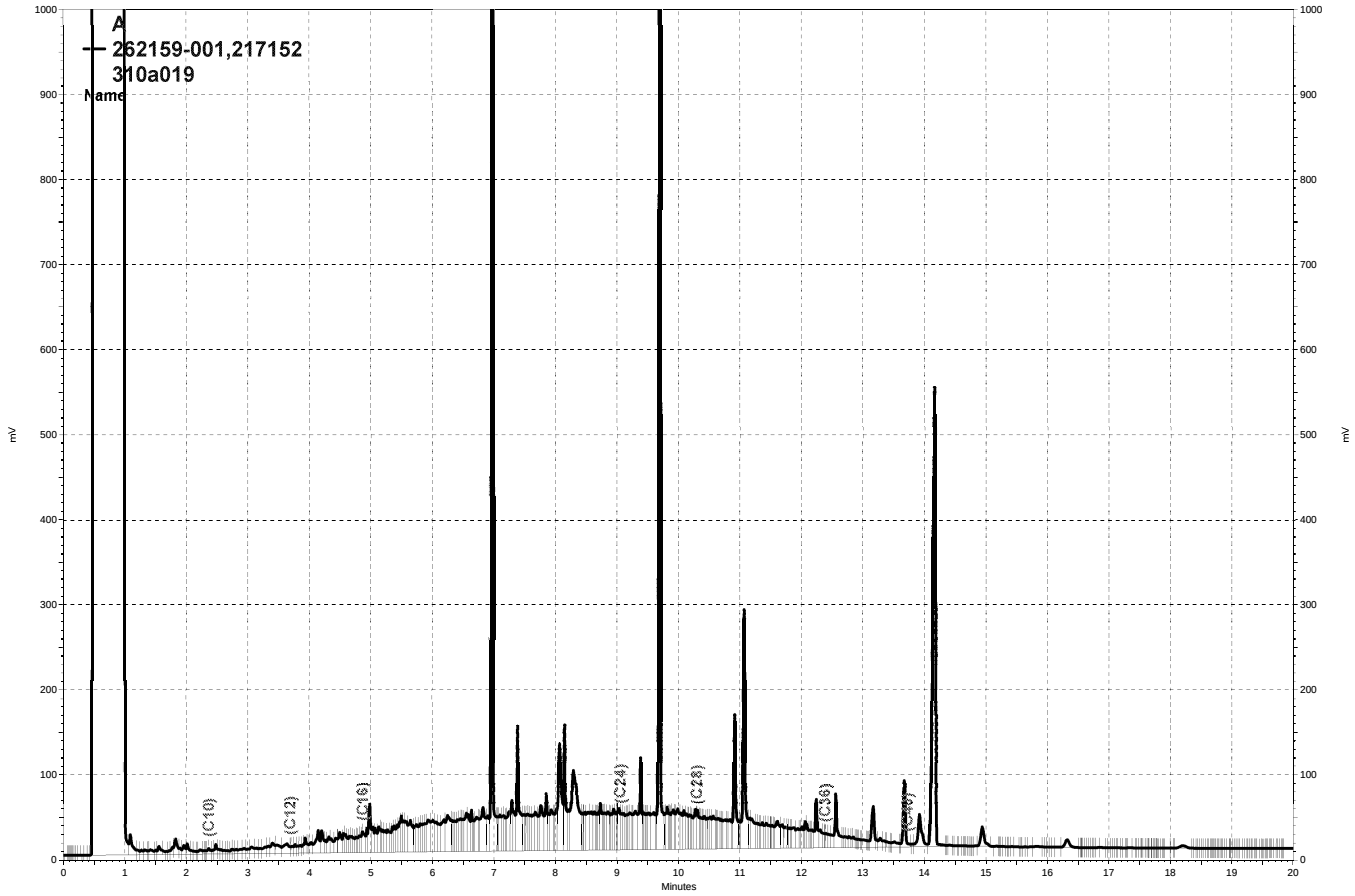
Surrogate	%REC	Limits
o-Terphenyl	116	66-129

Type: BSD Cleanup Method: EPA 3630C
Lab ID: QC764522

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,795	112	61-120	1	45

Surrogate	%REC	Limits
o-Terphenyl	116	66-129

RPD= Relative Percent Difference



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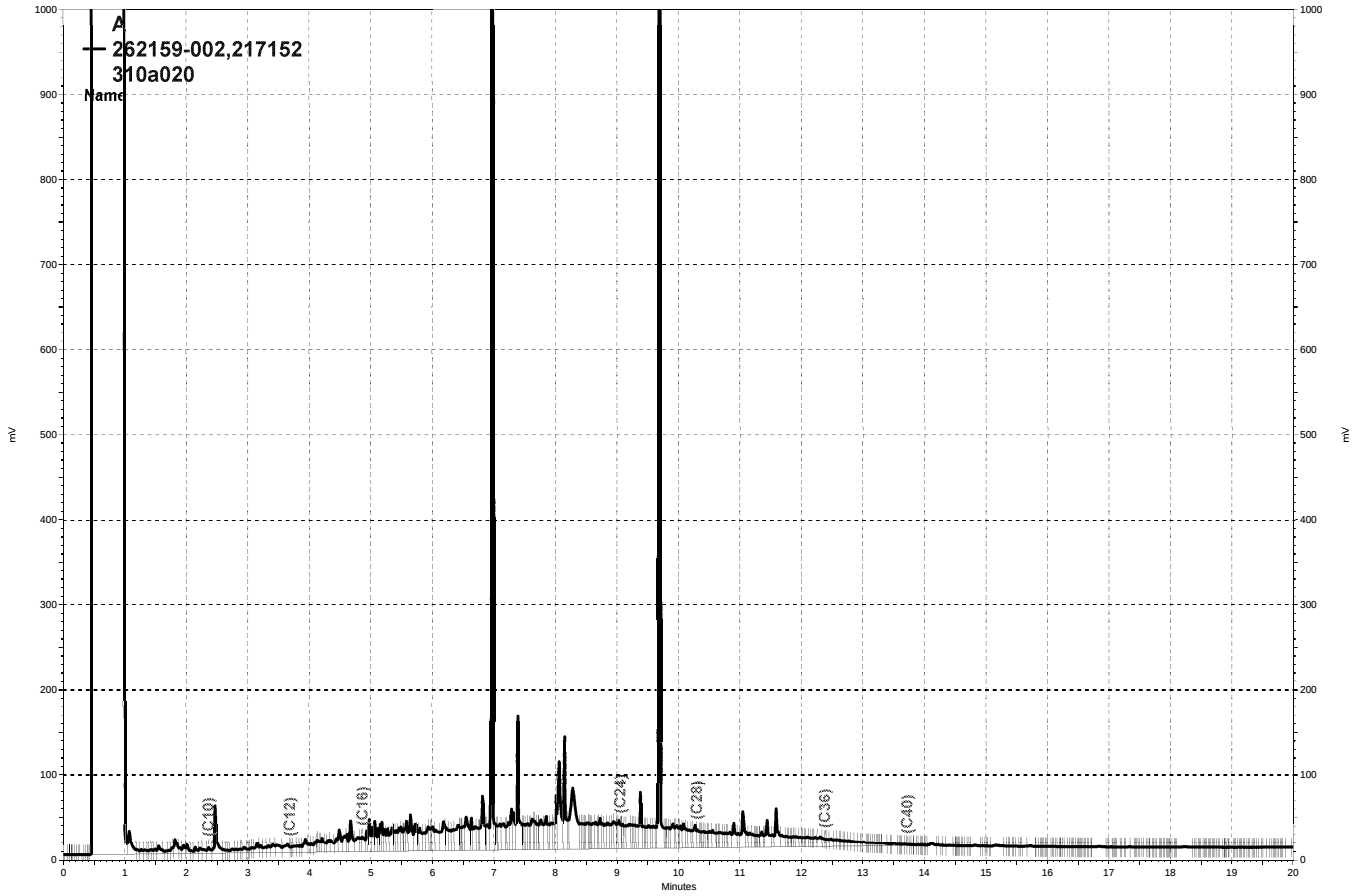

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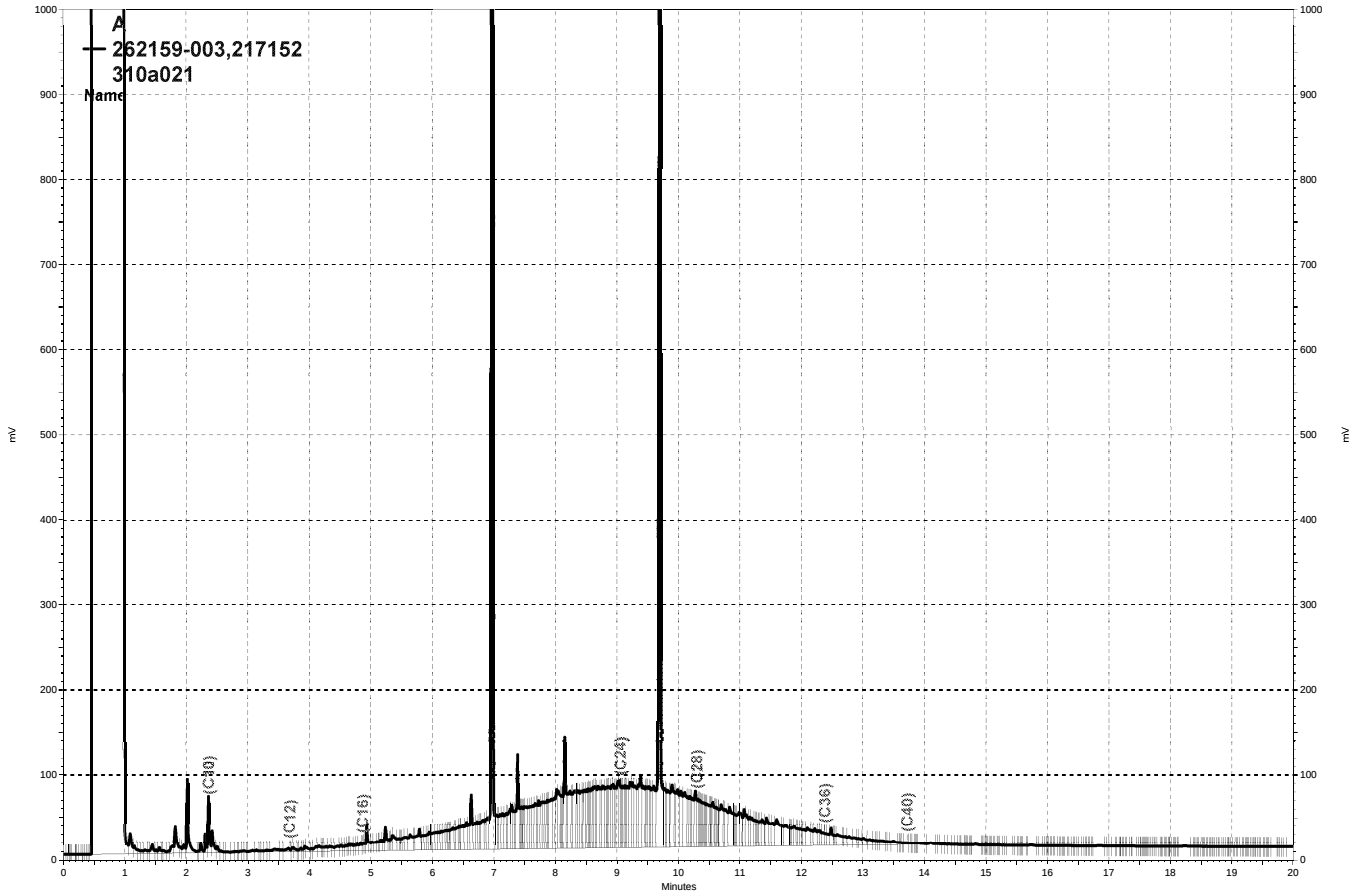

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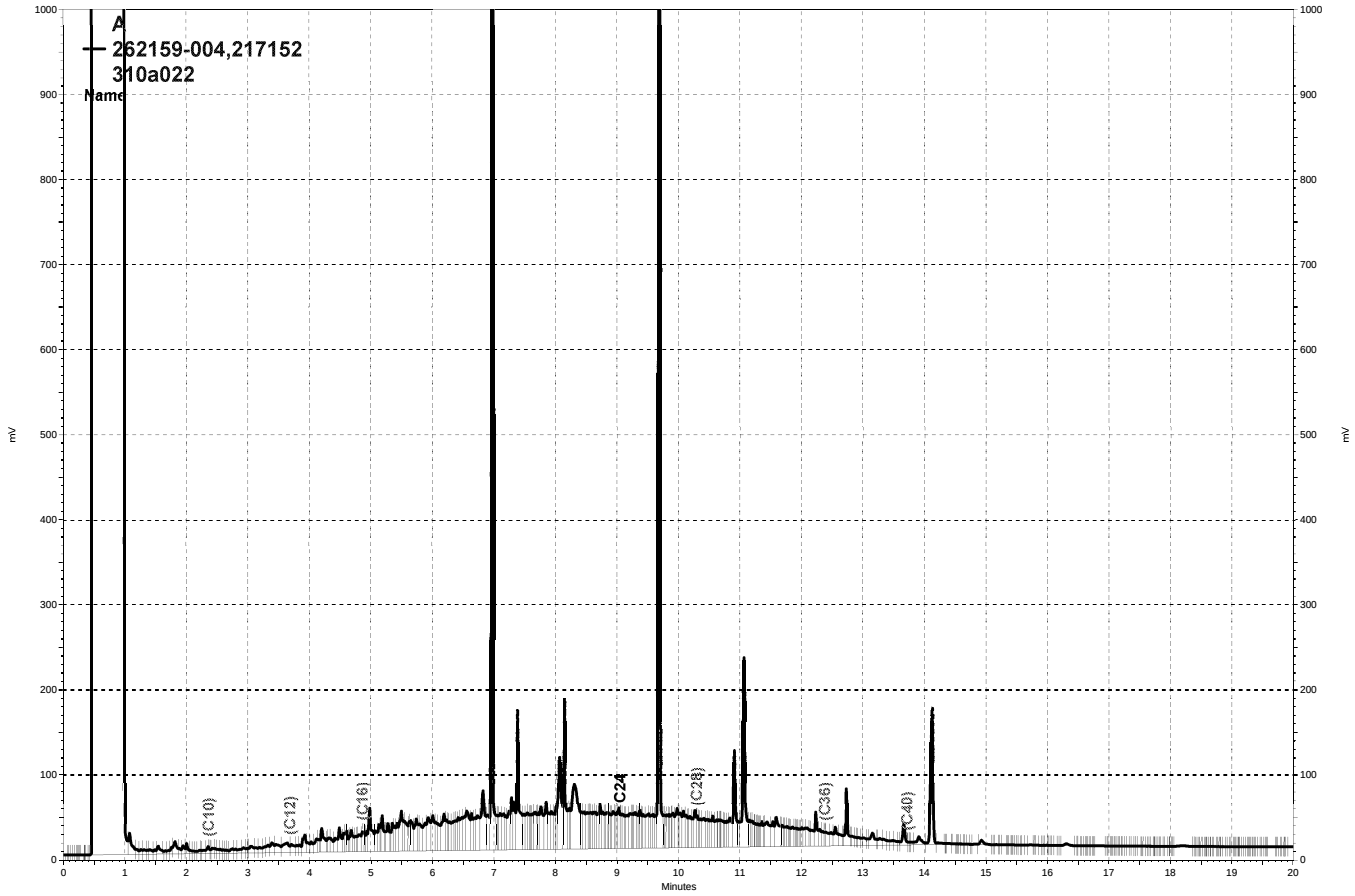

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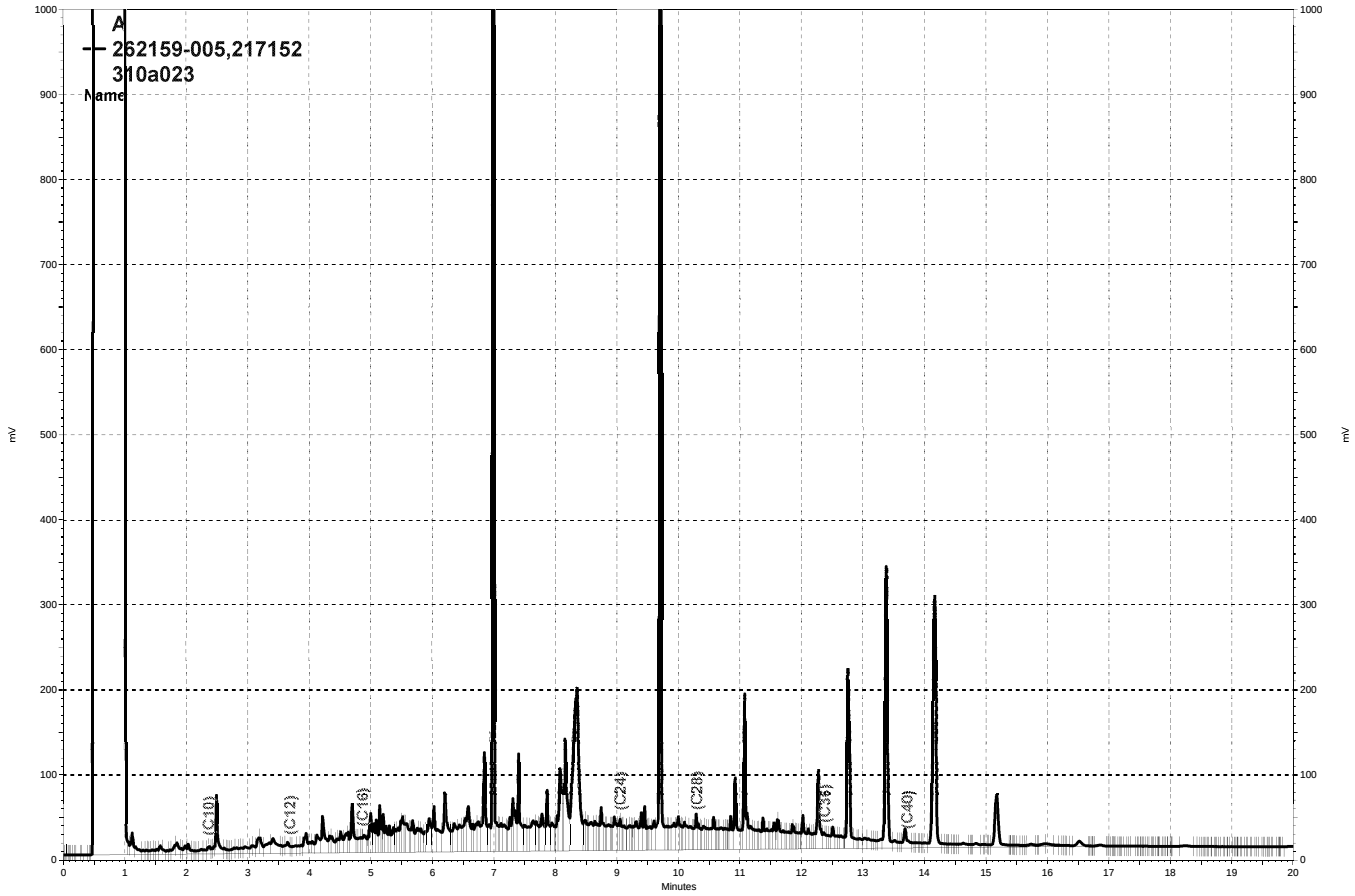

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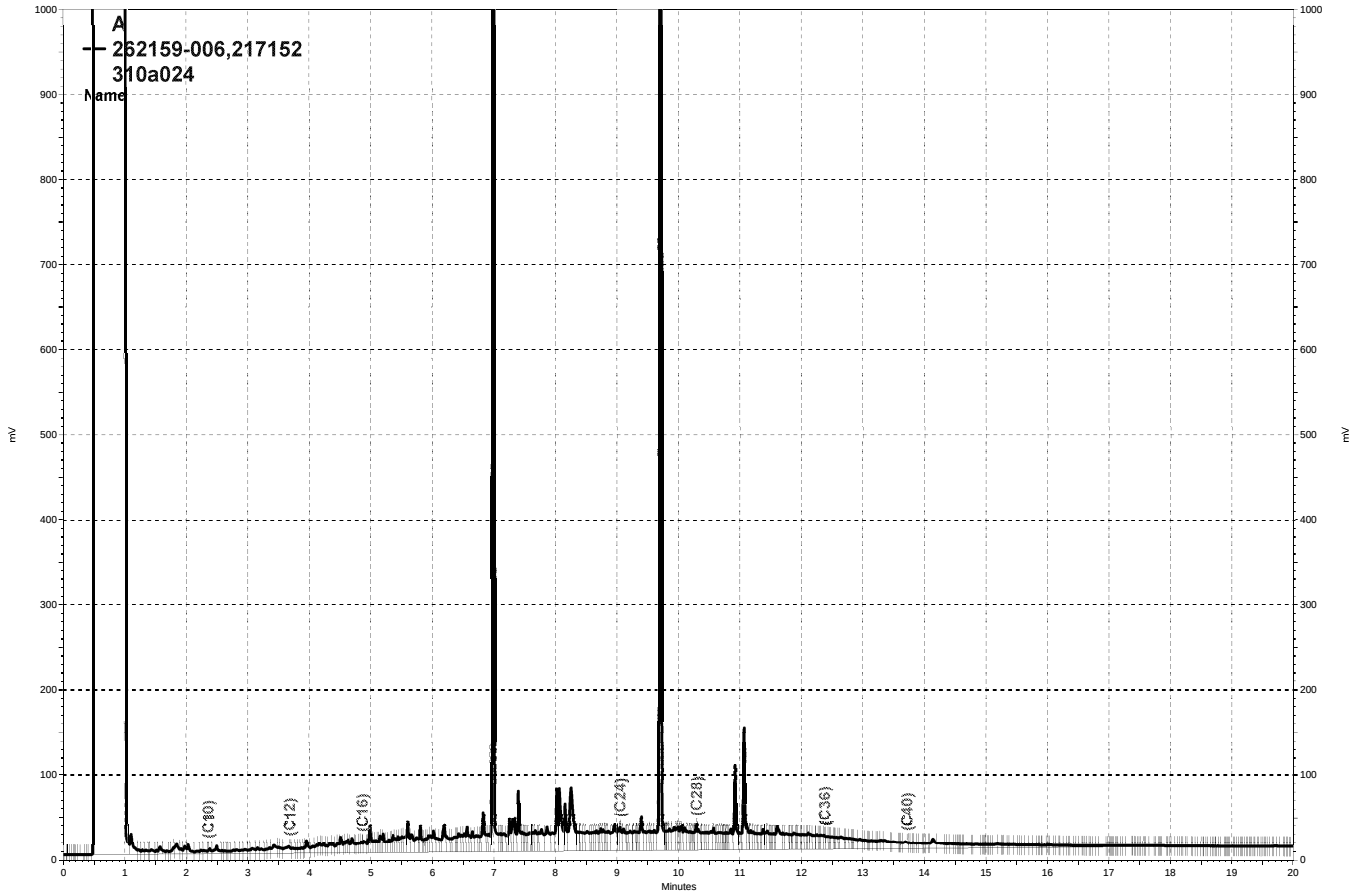

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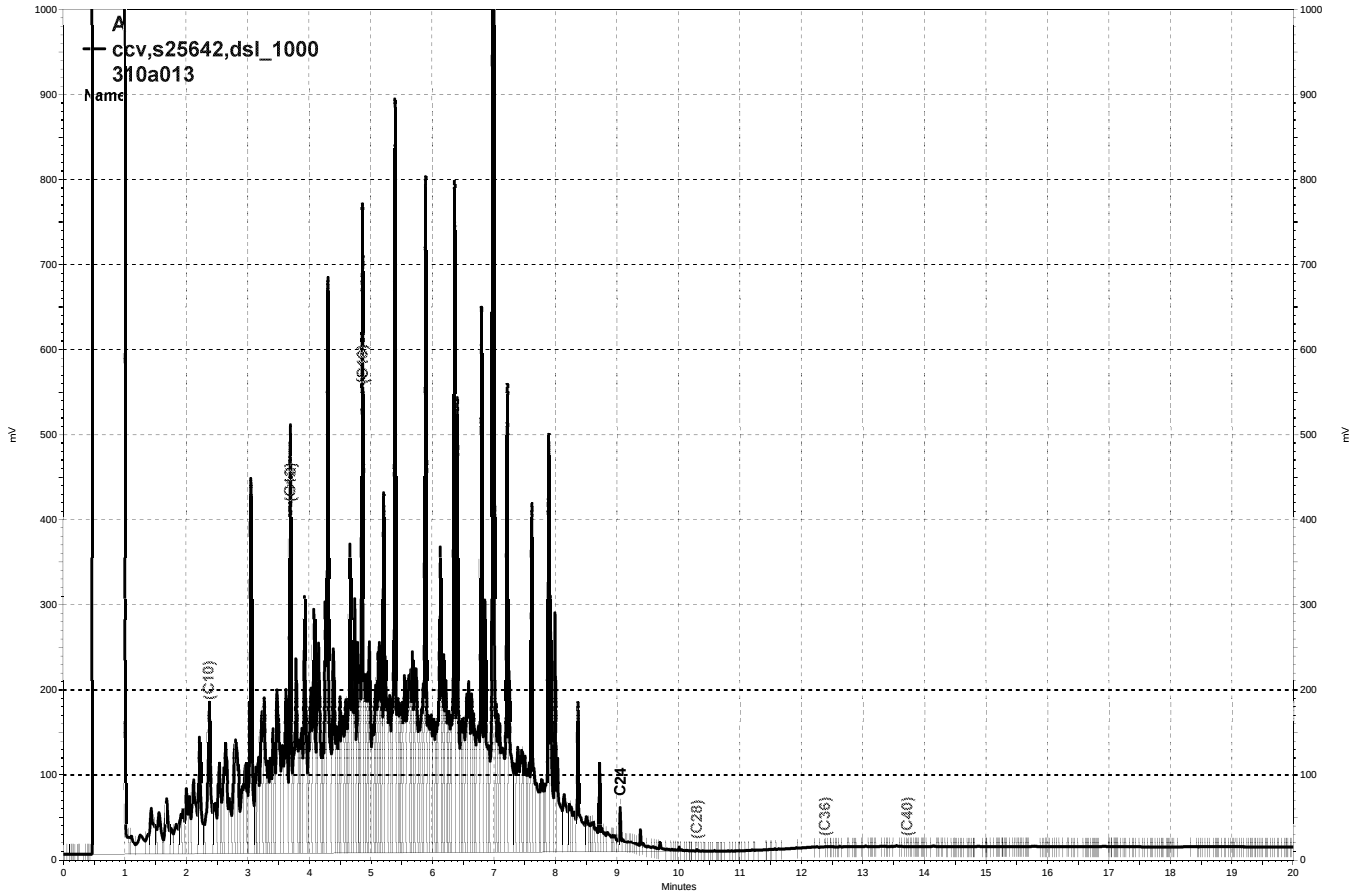

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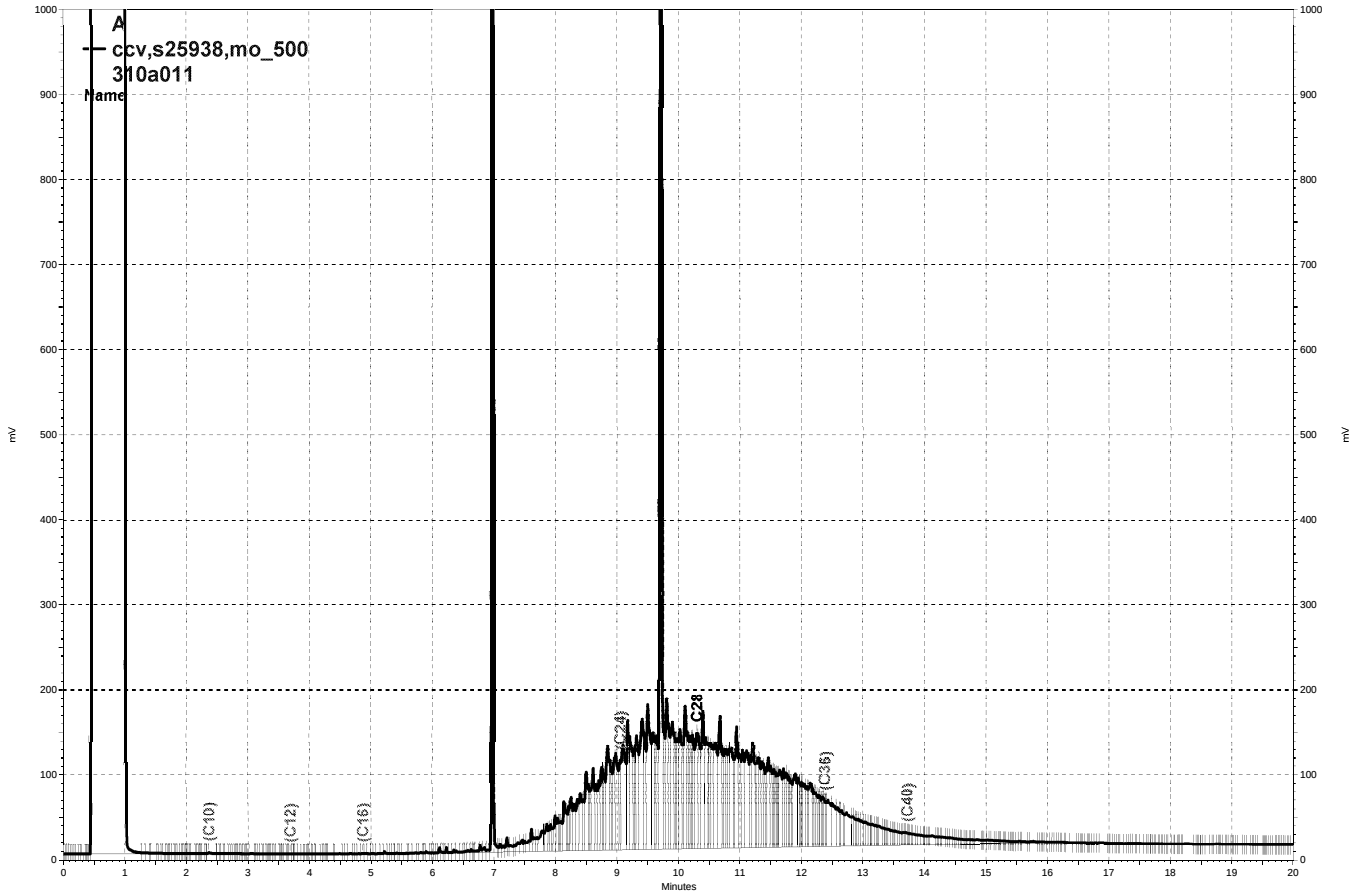

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Curtis & Tompkins, Ltd.

California Title 22 Metals

Lab #:	262159	Project#:	CLIN 0002
Client:	Suisun Bay Reserve Fleet	Location:	Storm water
Field ID:	COMET	Diln Fac:	1.000
Lab ID:	262159-001	Sampled:	10/31/14
Matrix:	Water	Received:	10/31/14
Units:	ug/L	Analyzed:	11/04/14

Analyte	Result	RL	Batch#	Prepared	Prep	Analysis
Antimony	ND	10	217095	11/04/14	EPA 3010A	EPA 6010B
Arsenic	ND	5.0	217095	11/04/14	EPA 3010A	EPA 6010B
Barium	310	5.0	217095	11/04/14	EPA 3010A	EPA 6010B
Beryllium	ND	2.0	217095	11/04/14	EPA 3010A	EPA 6010B
Cadmium	ND	5.0	217095	11/04/14	EPA 3010A	EPA 6010B
Chromium	ND	5.0	217095	11/04/14	EPA 3010A	EPA 6010B
Cobalt	ND	5.0	217095	11/04/14	EPA 3010A	EPA 6010B
Copper	40	5.0	217095	11/04/14	EPA 3010A	EPA 6010B
Lead	5.5	5.0	217095	11/04/14	EPA 3010A	EPA 6010B
Mercury	ND	0.20	217066	11/03/14	METHOD	EPA 7470A
Molybdenum	ND	5.0	217095	11/04/14	EPA 3010A	EPA 6010B
Nickel	ND	5.0	217095	11/04/14	EPA 3010A	EPA 6010B
Selenium	ND	10	217095	11/04/14	EPA 3010A	EPA 6010B
Silver	ND	5.0	217095	11/04/14	EPA 3010A	EPA 6010B
Thallium	ND	10	217095	11/04/14	EPA 3010A	EPA 6010B
Vanadium	ND	5.0	217095	11/04/14	EPA 3010A	EPA 6010B
Zinc	1,700	20	217095	11/04/14	EPA 3010A	EPA 6010B

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

California Title 22 Metals

Lab #:	262159	Project#:	CLIN 0002
Client:	Suisun Bay Reserve Fleet	Location:	Storm water
Field ID:	CAPE BLANCO	Diln Fac:	1.000
Lab ID:	262159-002	Sampled:	10/31/14
Matrix:	Water	Received:	10/31/14
Units:	ug/L	Analyzed:	11/04/14

Analyte	Result	RL	Batch#	Prepared	Prep	Analysis
Antimony	ND	10	217095	11/04/14	EPA 3010A	EPA 6010B
Arsenic	ND	5.0	217095	11/04/14	EPA 3010A	EPA 6010B
Barium	160	5.0	217095	11/04/14	EPA 3010A	EPA 6010B
Beryllium	ND	2.0	217095	11/04/14	EPA 3010A	EPA 6010B
Cadmium	ND	5.0	217095	11/04/14	EPA 3010A	EPA 6010B
Chromium	6.8	5.0	217095	11/04/14	EPA 3010A	EPA 6010B
Cobalt	ND	5.0	217095	11/04/14	EPA 3010A	EPA 6010B
Copper	78	5.0	217095	11/04/14	EPA 3010A	EPA 6010B
Lead	16	5.0	217095	11/04/14	EPA 3010A	EPA 6010B
Mercury	ND	0.20	217066	11/03/14	METHOD	EPA 7470A
Molybdenum	ND	5.0	217095	11/04/14	EPA 3010A	EPA 6010B
Nickel	ND	5.0	217095	11/04/14	EPA 3010A	EPA 6010B
Selenium	ND	10	217095	11/04/14	EPA 3010A	EPA 6010B
Silver	ND	5.0	217095	11/04/14	EPA 3010A	EPA 6010B
Thallium	ND	10	217095	11/04/14	EPA 3010A	EPA 6010B
Vanadium	ND	5.0	217095	11/04/14	EPA 3010A	EPA 6010B
Zinc	890	20	217095	11/04/14	EPA 3010A	EPA 6010B

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

California Title 22 Metals

Lab #:	262159	Project#:	CLIN 0002
Client:	Suisun Bay Reserve Fleet	Location:	Storm water
Field ID:	PARKING LOT	Diln Fac:	1.000
Lab ID:	262159-003	Sampled:	10/31/14
Matrix:	Water	Received:	10/31/14
Units:	ug/L		

Analyte	Result	RL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	ND	10	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Arsenic	ND	5.0	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Barium	180	5.0	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Beryllium	ND	2.0	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Cadmium	ND	5.0	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Chromium	ND	5.0	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Cobalt	ND	5.0	217095	11/04/14	11/05/14	EPA 3010A	EPA 6010B
Copper	8.5	5.0	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Lead	11	5.0	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Mercury	ND	0.20	217066	11/03/14	11/04/14	METHOD	EPA 7470A
Molybdenum	ND	5.0	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Nickel	ND	5.0	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Selenium	ND	10	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Silver	ND	5.0	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Thallium	ND	10	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Vanadium	ND	5.0	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Zinc	25	20	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

California Title 22 Metals

Lab #:	262159	Project#:	CLIN 0002
Client:	Suisun Bay Reserve Fleet	Location:	Storm water
Field ID:	CAPE BORDA	Diln Fac:	1.000
Lab ID:	262159-004	Sampled:	10/31/14
Matrix:	Water	Received:	10/31/14
Units:	ug/L		

Analyte	Result	RL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	ND	10	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Arsenic	ND	5.0	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Barium	440	5.0	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Beryllium	ND	2.0	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Cadmium	ND	5.0	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Chromium	ND	5.0	217095	11/04/14	11/05/14	EPA 3010A	EPA 6010B
Cobalt	ND	5.0	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Copper	79	5.0	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Lead	12	5.0	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Mercury	ND	0.20	217066	11/03/14	11/04/14	METHOD	EPA 7470A
Molybdenum	ND	5.0	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Nickel	8.3	5.0	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Selenium	ND	10	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Silver	ND	5.0	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Thallium	ND	10	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Vanadium	ND	5.0	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Zinc	2,300	20	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

California Title 22 Metals

Lab #:	262159	Project#:	CLIN 0002
Client:	Suisun Bay Reserve Fleet	Location:	Storm water
Field ID:	METEOR	Diln Fac:	1.000
Lab ID:	262159-005	Sampled:	10/31/14
Matrix:	Water	Received:	10/31/14
Units:	ug/L		

Analyte	Result	RL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	ND	10	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Arsenic	ND	5.0	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Barium	2,600	5.0	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Beryllium	ND	2.0	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Cadmium	ND	5.0	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Chromium	ND	5.0	217095	11/04/14	11/05/14	EPA 3010A	EPA 6010B
Cobalt	ND	5.0	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Copper	48	5.0	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Lead	16	5.0	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Mercury	ND	0.20	217066	11/03/14	11/04/14	METHOD	EPA 7470A
Molybdenum	ND	5.0	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Nickel	ND	5.0	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Selenium	ND	10	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Silver	ND	5.0	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Thallium	ND	10	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Vanadium	ND	5.0	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B
Zinc	2,800	20	217095	11/04/14	11/04/14	EPA 3010A	EPA 6010B

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

California Title 22 Metals

Lab #:	262159	Project#:	CLIN 0002
Client:	Suisun Bay Reserve Fleet	Location:	Storm water
Field ID:	CAPE BRETON	Diln Fac:	1.000
Lab ID:	262159-006	Sampled:	10/31/14
Matrix:	Water	Received:	10/31/14
Units:	ug/L	Analyzed:	11/04/14

Analyte	Result	RL	Batch#	Prepared	Prep	Analysis
Antimony	ND	10	217095	11/04/14	EPA 3010A	EPA 6010B
Arsenic	ND	5.0	217095	11/04/14	EPA 3010A	EPA 6010B
Barium	220	5.0	217095	11/04/14	EPA 3010A	EPA 6010B
Beryllium	ND	2.0	217095	11/04/14	EPA 3010A	EPA 6010B
Cadmium	ND	5.0	217095	11/04/14	EPA 3010A	EPA 6010B
Chromium	6.0	5.0	217095	11/04/14	EPA 3010A	EPA 6010B
Cobalt	ND	5.0	217095	11/04/14	EPA 3010A	EPA 6010B
Copper	60	5.0	217095	11/04/14	EPA 3010A	EPA 6010B
Lead	24	5.0	217095	11/04/14	EPA 3010A	EPA 6010B
Mercury	ND	0.20	217066	11/03/14	METHOD	EPA 7470A
Molybdenum	ND	5.0	217095	11/04/14	EPA 3010A	EPA 6010B
Nickel	ND	5.0	217095	11/04/14	EPA 3010A	EPA 6010B
Selenium	ND	10	217095	11/04/14	EPA 3010A	EPA 6010B
Silver	ND	5.0	217095	11/04/14	EPA 3010A	EPA 6010B
Thallium	ND	10	217095	11/04/14	EPA 3010A	EPA 6010B
Vanadium	ND	5.0	217095	11/04/14	EPA 3010A	EPA 6010B
Zinc	1,100	20	217095	11/04/14	EPA 3010A	EPA 6010B

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

California Title 22 Metals

Lab #:	262159	Location:	Storm water
Client:	Suisun Bay Reserve Fleet	Prep:	METHOD
Project#:	CLIN 0002	Analysis:	EPA 7470A
Analyte:	Mercury	Diln Fac:	1.000
Type:	BLANK	Batch#:	217066
Lab ID:	QC764170	Prepared:	11/03/14
Matrix:	Water	Analyzed:	11/04/14
Units:	ug/L		

Result	RL
ND	0.20

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

California Title 22 Metals

Lab #:	262159	Location:	Storm water
Client:	Suisun Bay Reserve Fleet	Prep:	METHOD
Project#:	CLIN 0002	Analysis:	EPA 7470A
Analyte:	Mercury	Batch#:	217066
Matrix:	Water	Prepared:	11/03/14
Units:	ug/L	Analyzed:	11/04/14
Diln Fac:	1.000		

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC764171	2.500	2.482	99	80-120		
BSD	QC764172	2.500	2.339	94	80-120	6	20

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

California Title 22 Metals

Lab #:	262159	Location:	Storm water
Client:	Suisun Bay Reserve Fleet	Prep:	METHOD
Project#:	CLIN 0002	Analysis:	EPA 7470A
Analyte:	Mercury	Batch#:	217066
Field ID:	ZZZZZZZZZZ	Sampled:	10/22/14
MSS Lab ID:	262007-005	Received:	10/24/14
Matrix:	Water	Prepared:	11/03/14
Units:	ug/L	Analyzed:	11/04/14
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC764173	<0.02080	2.500	2.446	98	57-127		
MSD	QC764174		2.500	2.535	101	57-127	4	42

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

California Title 22 Metals

Lab #:	262159	Location:	Storm water
Client:	Suisun Bay Reserve Fleet	Prep:	EPA 3010A
Project#:	CLIN 0002	Analysis:	EPA 6010B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC764282	Batch#:	217095
Matrix:	Water	Prepared:	11/04/14
Units:	ug/L	Analyzed:	11/04/14

Analyte	Result	RL
Antimony	ND	10
Arsenic	ND	5.0
Barium	ND	5.0
Beryllium	ND	2.0
Cadmium	ND	5.0
Chromium	ND	5.0
Cobalt	ND	5.0
Copper	ND	5.0
Lead	ND	5.0
Molybdenum	ND	5.0
Nickel	ND	5.0
Selenium	ND	10
Silver	ND	5.0
Thallium	ND	10
Vanadium	ND	5.0
Zinc	ND	20

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

California Title 22 Metals

Lab #:	262159	Location:	Storm water
Client:	Suisun Bay Reserve Fleet	Prep:	EPA 3010A
Project#:	CLIN 0002	Analysis:	EPA 6010B
Matrix:	Water	Batch#:	217095
Units:	ug/L	Prepared:	11/04/14
Diln Fac:	1.000	Analyzed:	11/04/14

Type: BS Lab ID: QC764283

Analyte	Spiked	Result	%REC	Limits
Antimony	100.0	93.49	93	78-120
Arsenic	100.0	103.5	103	80-120
Barium	100.0	103.9	104	80-120
Beryllium	100.0	105.7	106	80-120
Cadmium	100.0	110.5	111	80-120
Chromium	100.0	103.7	104	80-120
Cobalt	100.0	96.37	96	80-120
Copper	100.0	99.35	99	79-120
Lead	100.0	99.47	99	80-120
Molybdenum	100.0	99.90	100	80-120
Nickel	100.0	102.7	103	80-120
Selenium	100.0	103.3	103	80-120
Silver	100.0	98.97	99	80-120
Thallium	50.00	53.07	106	80-120
Vanadium	100.0	108.5	108	80-120
Zinc	100.0	108.5	109	80-120

Type: BSD Lab ID: QC764284

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	100.0	95.61	96	78-120	2	20
Arsenic	100.0	105.2	105	80-120	2	20
Barium	100.0	105.4	105	80-120	1	20
Beryllium	100.0	105.5	105	80-120	0	20
Cadmium	100.0	111.7	112	80-120	1	20
Chromium	100.0	105.9	106	80-120	2	20
Cobalt	100.0	97.16	97	80-120	1	20
Copper	100.0	101.2	101	79-120	2	20
Lead	100.0	100.4	100	80-120	1	20
Molybdenum	100.0	101.3	101	80-120	1	20
Nickel	100.0	105.0	105	80-120	2	20
Selenium	100.0	102.8	103	80-120	0	20
Silver	100.0	100.0	100	80-120	1	20
Thallium	50.00	52.74	105	80-120	1	20
Vanadium	100.0	110.0	110	80-120	1	20
Zinc	100.0	109.5	110	80-120	1	20

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

California Title 22 Metals

Lab #:	262159	Location:	Storm water
Client:	Suisun Bay Reserve Fleet	Prep:	EPA 3010A
Project#:	CLIN 0002	Analysis:	EPA 6010B
Field ID:	ZZZZZZZZZZ	Batch#:	217095
MSS Lab ID:	262154-001	Sampled:	10/31/14
Matrix:	Water	Received:	10/31/14
Units:	ug/L	Prepared:	11/04/14
Diln Fac:	1.000	Analyzed:	11/04/14

Type: MS Lab ID: QC764285

Analyte	MSS Result	Spiked	Result	%REC	Limits
Antimony	<2.348	100.0	99.68	100	76-120
Arsenic	<1.028	100.0	108.7	109	79-126
Barium	15.55	100.0	121.0	105	74-120
Beryllium	<0.1463	100.0	107.0	107	80-122
Cadmium	0.6093	100.0	112.6	112	76-122
Chromium	2.646	100.0	106.9	104	76-120
Cobalt	<0.8861	100.0	100.8	101	74-120
Copper	23.40	100.0	126.3	103	74-122
Lead	16.76	100.0	118.6	102	71-120
Molybdenum	1.210	100.0	104.6	103	78-120
Nickel	1.568	100.0	106.7	105	73-120
Selenium	<2.308	100.0	106.1	106	71-127
Silver	<1.126	100.0	99.45	99	58-128
Thallium	<2.777	50.00	51.98	104	71-120
Vanadium	1.330	100.0	111.0	110	80-120
Zinc	319.0	100.0	451.7	133 *	74-123

Type: MSD Lab ID: QC764286

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	100.0	93.58	94	76-120	6	20
Arsenic	100.0	100.2	100	79-126	8	20
Barium	100.0	114.4	99	74-120	6	25
Beryllium	100.0	100.0	100	80-122	7	20
Cadmium	100.0	105.8	105	76-122	6	20
Chromium	100.0	101.1	98	76-120	6	20
Cobalt	100.0	91.83	92	74-120	9	20
Copper	100.0	120.1	97	74-122	5	21
Lead	100.0	111.4	95	71-120	6	20
Molybdenum	100.0	97.12	96	78-120	7	20
Nickel	100.0	99.71	98	73-120	7	20
Selenium	100.0	100.1	100	71-127	6	35
Silver	100.0	94.22	94	58-128	5	22
Thallium	50.00	50.93	102	71-120	2	20
Vanadium	100.0	104.7	103	80-120	6	20
Zinc	100.0	422.9	104	74-123	7	20

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Total Oil & Grease (HEM)

Lab #:	262159	Location:	Storm water
Client:	Suisun Bay Reserve Fleet	Prep:	METHOD
Project#:	CLIN 0002	Analysis:	EPA 1664A
Analyte:	Oil & Grease (HEM)	Received:	10/31/14
Matrix:	Water	Prepared:	11/05/14 14:30
Units:	mg/L	Analyzed:	11/05/14 16:00
Batch#:	217158		

Field ID	Type	Lab ID	Result	RL	Diln Fac	Sampled
COMET	SAMPLE	262159-001	ND	4.72	0.9430	10/31/14 10:30
CAPE BLANCO	SAMPLE	262159-002	ND	5.21	1.042	10/31/14 10:10
PARKING LOT	SAMPLE	262159-003	ND	5.10	1.020	10/31/14 10:15
CAPE BORDA	SAMPLE	262159-004	ND	4.72	0.9430	10/31/14 10:15
METEOR	SAMPLE	262159-005	ND	4.72	0.9430	10/31/14 10:10
CAPE BRETON	SAMPLE	262159-006	ND	4.90	0.9800	10/31/14 10:25
	BLANK	QC764551	1.80 J	5.00	1.000	

J= Estimated value
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Total Oil & Grease (HEM)

Lab #:	262159	Location:	Storm water
Client:	Suisun Bay Reserve Fleet	Prep:	METHOD
Project#:	CLIN 0002	Analysis:	EPA 1664A
Analyte:	Oil & Grease (HEM)	Batch#:	217158
Matrix:	Water	Prepared:	11/05/14 14:30
Units:	mg/L	Analyzed:	11/05/14 16:00
Diln Fac:	1.000		

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC764552	40.00	31.30	78	78-114		
BSD	QC764553	40.00	37.70	94	78-114	19 *	18

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Conductivity

Lab #:	262159	Location:	Storm water
Client:	Suisun Bay Reserve Fleet	Prep:	METHOD
Project#:	CLIN 0002	Analysis:	SM2510B
Analyte:	Specific Conductance	Batch#:	217063
Matrix:	Water	Received:	10/31/14
Units:	umhos/cm	Analyzed:	11/03/14 14:26
Diln Fac:	1.000		

Field ID	Type	Lab ID	Result	RL	Sampled
COMET	SAMPLE	262159-001	60	1.0	10/31/14 10:30
CAPE BLANCO	SAMPLE	262159-002	44	1.0	10/31/14 10:10
PARKING LOT	SAMPLE	262159-003	17,400	1.0	10/31/14 10:15
CAPE BORDA	SAMPLE	262159-004	76	1.0	10/31/14 10:15
METEOR	SAMPLE	262159-005	55	1.0	10/31/14 10:10
CAPE BRETON	SAMPLE	262159-006	30	1.0	10/31/14 10:25
	BLANK	QC764158	ND	1.0	

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Conductivity

Lab #:	262159	Location:	Storm water
Client:	Suisun Bay Reserve Fleet	Prep:	METHOD
Project#:	CLIN 0002	Analysis:	SM2510B
Analyte:	Specific Conductance	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	217063
MSS Lab ID:	262164-005	Sampled:	10/31/14 10:25
Matrix:	Water	Received:	10/31/14
Units:	umhos/cm	Analyzed:	11/03/14 14:26

Type	Lab ID	MSS Result	Spiked	Result	RL	%REC	Limits	RPD	Lim
LCS	QC764159		1,000	997.0		100	90-110		
SDUP	QC764160	19.10		18.50	1.000			3	20

RL= Reporting Limit
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

pH

Lab #:	262159	Location:	Storm water
Client:	Suisun Bay Reserve Fleet	Prep:	METHOD
Project#:	CLIN 0002	Analysis:	EPA 9040C
Analyte:	pH	Batch#:	217011
Matrix:	Water	Received:	10/31/14
Units:	SU	Analyzed:	10/31/14 17:07
Diln Fac:	1.000		

Field ID	Lab ID	Result	RL	Sampled
COMET	262159-001	5.2	1.0	10/31/14 10:30
CAPE BLANCO	262159-002	5.4	1.0	10/31/14 10:10
PARKING LOT	262159-003	7.9	1.0	10/31/14 10:15
CAPE BORDA	262159-004	6.1	1.0	10/31/14 10:15
METEOR	262159-005	5.3	1.0	10/31/14 10:10
CAPE BRETON	262159-006	5.3	1.0	10/31/14 10:25

RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

pH			
Lab #:	262159	Location:	Storm water
Client:	Suisun Bay Reserve Fleet	Prep:	METHOD
Project#:	CLIN 0002	Analysis:	EPA 9040C
Analyte:	pH	Units:	SU
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000
Type:	SDUP	Batch#:	217011
MSS Lab ID:	262202-001	Sampled:	10/31/14 11:15
Lab ID:	QC763957	Received:	10/31/14
Matrix:	Water	Analyzed:	10/31/14 17:07

MSS Result	Result	RL	RPD	Lim
6.590	6.500	1.000	1	20

RL= Reporting Limit
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Total Suspended Solids (TSS)

Lab #:	262159	Location:	Storm water
Client:	Suisun Bay Reserve Fleet	Prep:	METHOD
Project#:	CLIN 0002	Analysis:	SM2540D
Analyte:	Total Suspended Solids	Sampled:	10/31/14
Matrix:	Water	Received:	10/31/14
Units:	mg/L	Prepared:	11/03/14
Diln Fac:	1.000	Analyzed:	11/04/14
Batch#:	217068		

Field ID	Type	Lab ID	Result	RL
COMET	SAMPLE	262159-001	10	5
CAPE BLANCO	SAMPLE	262159-002	53	5
PARKING LOT	SAMPLE	262159-003	15	5
CAPE BORDA	SAMPLE	262159-004	20	5
METEOR	SAMPLE	262159-005	45	5
CAPE BRETON	SAMPLE	262159-006	14	5
	BLANK	QC764180	ND	5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Total Suspended Solids (TSS)

Lab #:	262159	Location:	Storm water
Client:	Suisun Bay Reserve Fleet	Prep:	METHOD
Project#:	CLIN 0002	Analysis:	SM2540D
Analyte:	Total Suspended Solids	Batch#:	217068
Field ID:	ZZZZZZZZZZ	Sampled:	10/31/14
MSS Lab ID:	262164-005	Received:	10/31/14
Matrix:	Water	Prepared:	11/03/14
Units:	mg/L	Analyzed:	11/04/14
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC764181		50.00	48.00	96	80-120		
BSD	QC764182		50.00	48.00	96	80-120	0	5
MS	QC764183	15.00	50.00	59.00	88	52-132		
MSD	QC764184		50.00	66.00	102	52-132	11 *	5

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

Laboratory Job Number 262159

Subcontracted Products

Alpha Analytical Dublin

Alpha Analytical Laboratories Inc.
e-mail: clientservices@alpha-labs.com
Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267
Bay Area: 6398 Dougherty Rd., Suite 35, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309
Central Valley: 9090 Union Park Way, Suite 113, Elk Grove, CA 95624 • Phone: (916) 686-5190 • Fax: (916) 686-5192

ELAP Certificates 1551, 2728, and 2922

13 November 2014

Curtis & Tompkins, LTD.
Attn: Will Rice
2323 Fifth Street
Berkeley, CA 94710
RE: Stormwater Sampling
Work Order: 14K0117

Enclosed are the results of analyses for samples received by the laboratory on 11/03/14 21:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeanette Poplin

Jeanette L. Poplin For Robbie C. Phillips
Project Manager

Alpha Analytical Laboratories Inc.
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CHEMICAL EXAMINATION REPORT

Curtis & Tompkins, LTD.
2323 Fifth Street
Berkeley, CA 94710
Attn: Will Rice

Report Date: 11/13/14 10:24
Project No: 262159
Project ID: Stormwater Sampling

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
14K0117	11/03/2014 21:50	RP C&T	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Comet	14K0117-01	Water	10/31/14 10:30	11/03/14 21:50
Cape Blanco	14K0117-02	Water	10/31/14 10:10	11/03/14 21:50
Parking Lot	14K0117-03	Water	10/31/14 10:15	11/03/14 21:50
Cape Borda	14K0117-04	Water	10/31/14 10:15	11/03/14 21:50
Meteor	14K0117-05	Water	10/31/14 10:10	11/03/14 21:50
Cape Breton	14K0117-06	Water	10/31/14 10:25	11/03/14 21:50

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CHEMICAL EXAMINATION REPORT

Curtis & Tompkins, LTD.
2323 Fifth Street
Berkeley, CA 94710
Attn: Will Rice

Report Date: 11/13/14 10:24
Project No: 262159
Project ID: Stormwater Sampling

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
14K0117	11/03/2014 21:50	RP C&T	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
Comet (14K0117-01)			**Sample Type: Water**			**Sampled: 10/31/14 10:30**		
Metals by APHA/EPA Methods								
Mercury	EPA 1631E	AK40636	11/06/14 16:00	11/07/14 14:01	1	**12.5 ng/l**	**0.500**	
Cape Blanco (14K0117-02)			**Sample Type: Water**			**Sampled: 10/31/14 10:10**		
Metals by APHA/EPA Methods								
Mercury	EPA 1631E	AK40636	11/06/14 16:00	11/07/14 14:09	1	**7.43 ng/l**	**0.500**	
Parking Lot (14K0117-03)			**Sample Type: Water**			**Sampled: 10/31/14 10:15**		
Metals by APHA/EPA Methods								
Mercury	EPA 1631E	AK40636	11/06/14 16:00	11/07/14 14:17	10	**201 ng/l**	**5.00**	
Cape Borda (14K0117-04)			**Sample Type: Water**			**Sampled: 10/31/14 10:15**		
Metals by APHA/EPA Methods								
Mercury	EPA 1631E	AK40636	11/06/14 16:00	11/07/14 14:26	1	**10.5 ng/l**	**0.500**	
Meteor (14K0117-05)			**Sample Type: Water**			**Sampled: 10/31/14 10:10**		
Metals by APHA/EPA Methods								
Mercury	EPA 1631E	AK40636	11/06/14 16:00	11/07/14 14:34	1	**13.2 ng/l**	**0.500**	
Cape Breton (14K0117-06)			**Sample Type: Water**			**Sampled: 10/31/14 10:25**		
Metals by APHA/EPA Methods								
Mercury	EPA 1631E	AK40636	11/06/14 16:00	11/07/14 14:42	1	**11.9 ng/l**	**0.500**	

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CHEMICAL EXAMINATION REPORT

Curtis & Tompkins, LTD.
2323 Fifth Street
Berkeley, CA 94710
Attn: Will Rice

Report Date: 11/13/14 10:24
Project No: 262159
Project ID: Stormwater Sampling

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
14K0117	11/03/2014 21:50	RP C&T	

Metals by APHA/EPA Methods - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AK40636 - EPA 1631										
Blank (AK40636-BLK1)				Prepared: 11/06/14 Analyzed: 11/07/14						
Mercury	ND	0.500	ng/l							
LCS (AK40636-BS1)				Prepared: 11/06/14 Analyzed: 11/07/14						
Mercury	4.77	0.500	ng/l	5.00		95.4	77-123			
Matrix Spike (AK40636-MS1)	**Source: 14J2212-01**			Prepared: 11/06/14 Analyzed: 11/07/14						
Mercury	23.7	0.500	ng/l	25.0	0.636	92.3	71-125			
Matrix Spike (AK40636-MS2)	**Source: 14K0164-01**			Prepared: 11/06/14 Analyzed: 11/07/14						
Mercury	26.5	0.500	ng/l	25.0	6.67	79.2	71-125			
Matrix Spike Dup (AK40636-MSD1)	**Source: 14J2212-01**			Prepared: 11/06/14 Analyzed: 11/07/14						
Mercury	23.7	0.500	ng/l	25.0	0.636	92.3	71-125	0.0422	24	
Matrix Spike Dup (AK40636-MSD2)	**Source: 14K0164-01**			Prepared: 11/06/14 Analyzed: 11/07/14						
Mercury	27.3	0.500	ng/l	25.0	6.67	82.6	71-125	3.16	24	

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CHEMICAL EXAMINATION REPORT

Curtis & Tompkins, LTD.
2323 Fifth Street
Berkeley, CA 94710
Attn: Will Rice

Report Date: 11/13/14 10:24
Project No: 262159
Project ID: Stormwater Sampling

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
14K0117	11/03/2014 21:50	RP C&T	

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
PQL	Practical Quantitation Limit

14K0117

Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878
2323 Fifth Street
Berkeley, CA 94710
(510) 486-0900
(510) 486-0532

Project Number: 262159
Site: Storm water

Temp of 4°

Subcontract Laboratory:
Alpha Analytical Dublin
6398 Dougherty Rd. #35
Dublin, CA 94568
(925) 828-6226
ATTN: Robbie Phillips

Results due: Report Level: II

Please send report to: Will S Rice (will.rice@ctberk.com)
*** Please report using Sample ID rather than C&T Lab #.

Sample ID	Sampled	Matrix	Analysis	C&T Lab #	Comments
COMET	10/31 10:30	Water	1631	262159-001	
CAPE BLANCO	10/31 10:10	Water	1631	262159-002	
PARKING LOT	10/31 10:15	Water	1631	262159-003	
CAPE BORDA	10/31 10:15	Water	1631	262159-004	
METEOR	10/31 10:10	Water	1631	262159-005	
CAPE BRETON	10/31 10:25	Water	1631	262159-006	

Notes:	Relinquished By:	Received By:
		Ray Luzzi
	Date/Time: 11/03/14 @ 1700	Date/Time: 11-03-14 1700
	Will	Will
	Date/Time: 11-3-14 2150	Date/Time: 11-3-14 2150

Signature on this form constitutes a firm Purchase Order for the services requested above.