



03/04/13

Technical Report for

Golden Gate Tank Removal
640 Brooklyn Ave., Oakland, Ca.
9325

(415) 572 1555

Accutest Job Number: C26300

Sampling Dates: 02/14/13 - 02/19/13

Report to:

Golden Gate Tank Removal
1455 Yosemite Avenue
San Francisco, CA 94124
Data@ggtr.com; b.wheeler@ggtr.com;
annettechen@ggtr.com; tim@ggtr.com
ATTN: Tim Hallen

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Total number of pages in report: 36



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

James J. Rhudy
Lab Director

Client Service contact: Diane Theesen 408-588-0200

Certifications: CA (08258CA) AZ (AZ0762) DoD/ISO/IEC 17025:2005 (L2242)

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Test results relate only to samples analyzed.

Table of Contents

Sections:



Section 1: Sample Summary	3
Section 2: Summary of Hits	4
Section 3: Sample Results	5
3.1: C26300-1: 9325-R3	6
3.2: C26300-6: 9325 SP-COMP(A-D)	7
3.3: C26300-7: 9325 C-10	10
3.4: C26300-7A: 9325 C-10	12
Section 4: Misc. Forms	13
4.1: Chain of Custody	14
Section 5: GC/MS Volatiles - QC Data Summaries	16
5.1: Method Blank Summary	17
5.2: Blank Spike/Blank Spike Duplicate Summary	18
5.3: Matrix Spike/Matrix Spike Duplicate Summary	19
Section 6: GC Semi-volatiles - QC Data Summaries	20
6.1: Method Blank Summary	21
6.2: Blank Spike/Blank Spike Duplicate Summary	23
6.3: Matrix Spike/Matrix Spike Duplicate Summary	25
Section 7: Metals Analysis - QC Data Summaries	26
7.1: Prep QC MP5875: Pb	27
7.2: Prep QC MP5906: Pb	32

Sample Summary

Golden Gate Tank Removal

Job No: C26300

640 Brooklyn Ave., Oakland, Ca.
Project No: 9325

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
C26300-1	02/14/13	14:00 TH	02/20/13	AQ	Water	9325-R3
C26300-2	02/19/13	14:00 TH	02/20/13	SO	Soil	9325 SP-(A)
C26300-3	02/19/13	14:00 TH	02/20/13	SO	Soil	9325 SP-(B)
C26300-4	02/19/13	14:00 TH	02/20/13	SO	Soil	9325 SP-(C)
C26300-5	02/19/13	14:00 TH	02/20/13	SO	Soil	9325 SP-(D)
C26300-6	02/19/13	14:00 TH	02/20/13	SO	Soil	9325 SP-COMP(A-D)
C26300-7	02/19/13	14:00 TH	02/20/13	SO	Soil	9325 C-10
C26300-7A	02/19/13	14:00 TH	02/20/13	SO	Soil	9325 C-10

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Summary of Hits

Job Number: C26300
Account: Golden Gate Tank Removal
Project: 640 Brooklyn Ave., Oakland, Ca.
Collected: 02/14/13 thru 02/19/13



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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C26300-1 9325-R3

No hits reported in this sample.

C26300-6 9325 SP-COMP(A-D)

TPH (C10-C28)	13.1	9.8	2.5	mg/kg	SW846 8015B M
Lead	48.0	1.6		mg/kg	SW846 6010B

C26300-7 9325 C-10

Xylene (total) ^a	127 J	470	47	ug/kg	SW846 8260B
TPH (C10-C28)	4820	390	99	mg/kg	SW846 8015B M

C26300-7A 9325 C-10

Lead	7.1	1.7		mg/kg	SW846 6010B
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(a) Dilution required due to high concentration of non-target hydrocarbons.



Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: 9325-R3	Date Sampled: 02/14/13
Lab Sample ID: C26300-1	Date Received: 02/20/13
Matrix: AQ - Water	Percent Solids: n/a
Method: SW846 8015B M SW846 3510C	
Project: 640 Brooklyn Ave., Oakland, Ca.	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH300810.D	1	02/20/13	JH	02/20/13	OP7525	GHH921
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1060 ml	1.0 ml
Run #2		

TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	0.094	0.024	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
630-01-3	Hexacosane	78%		32-124%		

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: 9325 SP-COMP(A-D)	
Lab Sample ID: C26300-6	Date Sampled: 02/19/13
Matrix: SO - Soil	Date Received: 02/20/13
Method: SW846 8260B	Percent Solids: n/a ^a
Project: 640 Brooklyn Ave., Oakland, Ca.	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L23003.D	1	02/21/13	TN	n/a	n/a	VL728
Run #2							

	Initial Weight
Run #1	5.32 g
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	4.7	0.47	ug/kg	
108-88-3	Toluene	ND	4.7	0.47	ug/kg	
100-41-4	Ethylbenzene	ND	4.7	0.47	ug/kg	
1330-20-7	Xylene (total)	ND	9.4	0.94	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	4.7	0.94	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		70-130%
2037-26-5	Toluene-D8	100%		70-130%
460-00-4	4-Bromofluorobenzene	99%		70-130%

(a) All results reported on a wet weight basis.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

3.2
3

Client Sample ID: 9325 SP-COMP(A-D)	Date Sampled: 02/19/13
Lab Sample ID: C26300-6	Date Received: 02/20/13
Matrix: SO - Soil	Percent Solids: n/a ^a
Method: SW846 8015B M SW846 3545A	
Project: 640 Brooklyn Ave., Oakland, Ca.	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH300876.D	1	02/21/13	JH	02/20/13	OP7528	GHH922
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	10.2 g	1.0 ml
Run #2		

TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	13.1	9.8	2.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	85%		37-122%

(a) All results reported on a wet weight basis.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

52
3

Client Sample ID: 9325 SP-COMP(A-D)	Date Sampled: 02/19/13
Lab Sample ID: C26300-6	Date Received: 02/20/13
Matrix: SO - Soil	Percent Solids: n/a ^a
Project: 640 Brooklyn Ave., Oakland, Ca.	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	48.0	1.6	mg/kg	1	02/20/13	02/22/13 RS	SW846 6010B ¹	SW846 3050B ²

(1) Instrument QC Batch: MA3010

(2) Prep QC Batch: MP5875

(a) All results reported on a wet weight basis.

RL = Reporting Limit

Report of Analysis

Client Sample ID: 9325 C-10	Date Sampled: 02/19/13
Lab Sample ID: C26300-7	Date Received: 02/20/13
Matrix: SO - Soil	Percent Solids: n/a ^a
Method: SW846 8260B	
Project: 640 Brooklyn Ave., Oakland, Ca.	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^b	L23004.D	1	02/21/13	TN	n/a	n/a	VL728
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.35 g	5.0 ml	100 ul
Run #2			

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	230	23	ug/kg	
108-88-3	Toluene	ND	230	23	ug/kg	
100-41-4	Ethylbenzene	ND	230	23	ug/kg	
1330-20-7	Xylene (total)	127	470	47	ug/kg	J
1634-04-4	Methyl Tert Butyl Ether	ND	230	47	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		70-130%
2037-26-5	Toluene-D8	97%		70-130%
460-00-4	4-Bromofluorobenzene	102%		70-130%

(a) All results reported on a wet weight basis.

(b) Dilution required due to high concentration of non-target hydrocarbons.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: 9325 C-10	Date Sampled: 02/19/13
Lab Sample ID: C26300-7	Date Received: 02/20/13
Matrix: SO - Soil	Percent Solids: n/a ^a
Method: SW846 8015B M SW846 3545A	
Project: 640 Brooklyn Ave., Oakland, Ca.	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH300865.D	40	02/21/13	JH	02/20/13	OP7528	GHH922
Run #2							

	Initial Weight	Final Volume
Run #1	10.2 g	1.0 ml
Run #2		

TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	4820	390	99	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	98%		37-122%

(a) All results reported on a wet weight basis.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: 9325 C-10		Date Sampled: 02/19/13
Lab Sample ID: C26300-7A		Date Received: 02/20/13
Matrix: SO - Soil		Percent Solids: n/a ^a
Project: 640 Brooklyn Ave., Oakland, Ca.		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	7.1	1.7	mg/kg	1	03/01/13	03/01/13 RS	SW846 6010B ¹	SW846 3050B ²

(1) Instrument QC Batch: MA3023

(2) Prep QC Batch: MP5906

(a) All results reported on a wet weight basis.

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



ACCUTEST
LABORATORIES

CHAIN OF CUSTODY

2105 Lundy Ave, San Jose, CA 95131
(408) 588-0200 FAX: (408) 588-0201

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest NC Job #: C C26300

Client / Reporting Information		Project Information		Requested Analysis										Matrix Codes		
Company Name: Golden Gate Tank Removal, Inc.		Project Name:												WW- Wastewater		
Address: 1455 Yosemite Ave.		Street: 640 Brooklyn Ave.												GW- Ground Water		
City: San Francisco CA 94124		City: Oakland CA.												SW- Surface Water		
Project Contact: Tom Hallen		Project #: 9325												SO- Soil		
Phone #: 415-512-1555		EMAIL: adhen@ggr.com												OI-OI VIP-Wipe		
Sampler's Name		Client Purchase Order #												LIG - Non aqueous Liquid		
Accutest Sample ID		Collection												AIR DW- Drinking Water (Perchlorate Only)		
Sample ID / Field Point / Point of Collection		Date	Time	Sampled by	Mix	# of bottles	Y	SPK	HTG	TRSA	NOE	UNSPK	EDD	INCISE	LAB USE ONLY	
-1 9325-R-3		2/19	4:00	TMH	H ₂ O	1										
-2 -3 9325 SP-(A.D)		2/19	2:00	TMH	Soil	4										
4 -5 9325 C-10		2/19	2:00	TMH	Soil	1									-6) 4:1 COMPOSITE	
* -7 9385 C-10		2/19	8:00	TMH	Soil	1										

TPH-D 601
 BTE X 6208
 LEAD 6010
 MTBE 6208
 6208 355

2 DAYS

Turnaround Time (Business days)		Data Deliverable Information		Comments / Remarks	
<input type="checkbox"/> 10 Day <input type="checkbox"/> 6 Day <input type="checkbox"/> 3 Day (125% markup) <input type="checkbox"/> 2 Day (150% markup) <input type="checkbox"/> 1 Day (200% markup) <input type="checkbox"/> Same Day (300% markup)		Approved By/ Date: _____ <input type="checkbox"/> Commercial "A" - Results only <input checked="" type="checkbox"/> Commercial "B" - Results with QC summaries <input type="checkbox"/> Commercial "B+" - Results, QC, and chromatograms <input type="checkbox"/> FULT1 - Level 4 data package <input type="checkbox"/> EDF for Geotracker <input type="checkbox"/> EDD Format Provide EDF Global ID: _____ Provide EDF Logcode: _____		* 9325 C-10 18 HR TAT (ONLY) ALL OTHERS = 4 DAY	
Emergency T/A data available VIA LabLink					
Sample Custody must be documented below each time samples change possession, including courier delivery.					
Relinquished by Sampler: Tom Hallen	Date Time: 2/20/13 08:10	Received By: [Signature]	Date Time: 2/20/13 1000	Received By: Lee Barton	
Relinquished by:	Date Time:	Received By:	Date Time:	Received By:	
Relinquished by:	Date Time:	Received By:	Date Time:	Received By:	
Relinquished by:	Date Time:	Received By:	Date Time:	Received By:	
Custody Seal #		Appropriate Bottle / Pres. <input checked="" type="checkbox"/>		Headspace V/II NA	
		Labels match Cool? <input checked="" type="checkbox"/>		Separate Receiving Check List used: <input checked="" type="checkbox"/>	
				Cooler Temp: 2.4-1.0 = 1.4 °C	

4.1
4



Accutest Laboratories Sample Receipt Summary

Accutest Job Number: C26300 Client: GOLDEN GATE TANK REMOVAL Project: 640 BROOKLYN AVE., OAKLAND, CA.

Date / Time Received: 2/20/2013 Delivery Method: Accutest Courier Airbill #'s:

Cooler Temps (Initial/Adjusted): #1: (2.4/1.4); 0

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	<input type="checkbox"/>		<input checked="" type="checkbox"/>	3. COC Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Custody Seals Intact:	<input type="checkbox"/>		<input type="checkbox"/>	4. Smp'l Dates/Time OK	<input checked="" type="checkbox"/>		<input type="checkbox"/>

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Trip Blank listed on COC:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Samples preserved properly:	<input type="checkbox"/>		<input type="checkbox"/>	
4. VOCs headspace free:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Container labeling complete:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Sample container label / COC agree:	<input checked="" type="checkbox"/>		<input type="checkbox"/>

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. All containers accounted for:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
2. Bottles received for unspecified tests	<input type="checkbox"/>		<input checked="" type="checkbox"/>	
3. Sufficient volume recvd for analysis:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. Compositing instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Filtering instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments

Accutest Laboratories
V: 408.588.0200

2105 Lundy Avenue
P: 408.588.0201

San Jose, CA 95131
www.accutest.com

4.1
4

GC/MS Volatiles



QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: C26300
Account: GGTRCASF Golden Gate Tank Removal
Project: 640 Brooklyn Ave., Oakland, Ca.

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL728-MB	L22987.D	1	02/21/13	TN	n/a	n/a	VL728

The QC reported here applies to the following samples:

Method: SW846 8260B

C26300-6, C26300-7

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	0.50	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	0.50	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
108-88-3	Toluene	ND	5.0	0.50	ug/kg	
1330-20-7	Xylene (total)	ND	10	1.0	ug/kg	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	107%
2037-26-5	Toluene-D8	99%
460-00-4	4-Bromofluorobenzene	96%

5.1.1



Blank Spike/Blank Spike Duplicate Summary

Job Number: C26300
 Account: GGTRCASF Golden Gate Tank Removal
 Project: 640 Brooklyn Ave., Oakland, Ca.

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL728-BS	L22984.D	1	02/21/13	TN	n/a	n/a	VL728
VL728-BSD	L22985.D	1	02/21/13	TN	n/a	n/a	VL728

The QC reported here applies to the following samples:

Method: SW846 8260B

C26300-6, C26300-7

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	40	35.4	89	35.5	89	0	81-119/20
100-41-4	Ethylbenzene	40	36.0	90	36.4	91	1	80-119/21
1634-04-4	Methyl Tert Butyl Ether	40	39.3	98	39.8	100	1	79-127/19
108-88-3	Toluene	40	35.9	90	36.1	90	1	80-117/21
1330-20-7	Xylene (total)	120	102	85	102	85	0	81-122/22

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	111%	111%	70-130%
2037-26-5	Toluene-D8	97%	98%	70-130%
460-00-4	4-Bromofluorobenzene	101%	101%	70-130%

* = Outside of Control Limits.

5.2.1



Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C26300
 Account: GGTRCASF Golden Gate Tank Removal
 Project: 640 Brooklyn Ave., Oakland, Ca.

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C26320-1MS	L23005.D	1	02/21/13	TN	n/a	n/a	VL728
C26320-1MSD	L23006.D	1	02/21/13	TN	n/a	n/a	VL728
C26320-1	L23001.D	1	02/21/13	TN	n/a	n/a	VL728

The QC reported here applies to the following samples:

Method: SW846 8260B

C26300-6, C26300-7

CAS No.	Compound	C26320-1 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	37.9	31.8	84	34.8	81	9	81-119/20
100-41-4	Ethylbenzene	ND	37.9	28.0	74* a	33.2	77* a	17	80-119/21
1634-04-4	Methyl Tert Butyl Ether	ND	37.9	37.4	99	40.7	95	8	79-127/19
108-88-3	Toluene	ND	37.9	29.3	77* a	34.2	80	15	80-117/21
1330-20-7	Xylene (total)	ND	114	78.1	69* a	92.1	72* a	16	81-122/22

CAS No.	Surrogate Recoveries	MS	MSD	C26320-1	Limits
1868-53-7	Dibromofluoromethane	111%	110%	110%	70-130%
2037-26-5	Toluene-D8	96%	99%	100%	70-130%
460-00-4	4-Bromofluorobenzene	102%	102%	98%	70-130%

(a) Outside control limits.

* = Outside of Control Limits.

GC Semi-volatiles



QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: C26300
Account: GGTRCASF Golden Gate Tank Removal
Project: 640 Brooklyn Ave., Oakland, Ca.

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7525-MB	HH300797.D1		02/20/13	JH	02/20/13	OP7525	GHH921

The QC reported here applies to the following samples:

Method: SW846 8015B M

C26300-1

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	0.10	0.025	mg/l	

CAS No.	Surrogate Recoveries	Limits
630-01-3	Hexacosane	73% 32-124%

6.1.1



Method Blank Summary

Job Number: C26300
Account: GGTRCASF Golden Gate Tank Removal
Project: 640 Brooklyn Ave., Oakland, Ca.

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7528-MB	HH300803.D1		02/20/13	JH	02/20/13	OP7528	GHH921

The QC reported here applies to the following samples:

Method: SW846 8015B M

C26300-6, C26300-7

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	10	2.5	mg/kg	

CAS No.	Surrogate Recoveries	Limits
630-01-3	Hexacosane	89% 37-122%

6.1.2
6

Blank Spike/Blank Spike Duplicate Summary

Job Number: C26300
 Account: GGTRCASF Golden Gate Tank Removal
 Project: 640 Brooklyn Ave., Oakland, Ca.

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7525-BS	HH300798.D1		02/20/13	JH	02/20/13	OP7525	GHH921
OP7525-BSD	HH300799.D1		02/20/13	JH	02/20/13	OP7525	GHH921

The QC reported here applies to the following samples:

Method: SW846 8015B M

C26300-1

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	BSD mg/l	BSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	1	0.772	77*	0.725	73*	6	38-115/22

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
630-01-3	Hexacosane	84%*	80%*	32-124%

* = Outside of Control Limits.

6.2.1
6

Blank Spike/Blank Spike Duplicate Summary

Job Number: C26300
 Account: GGTRCASF Golden Gate Tank Removal
 Project: 640 Brooklyn Ave., Oakland, Ca.

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7528-BS	HH300804.D1		02/20/13	JH	02/20/13	OP7528	GHH921
OP7528-BSD	HH300805.D1		02/20/13	JH	02/20/13	OP7528	GHH921

The QC reported here applies to the following samples:

Method: SW846 8015B M

C26300-6, C26300-7

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	100	74.8	75%	75.6	76%	1	39-102/29

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
630-01-3	Hexacosane	78%	78%	37-122%

* = Outside of Control Limits.

6.2.2
6

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C26300
Account: GGTRCASF Golden Gate Tank Removal
Project: 640 Brooklyn Ave., Oakland, Ca.

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7528-MS	HH300868.D	50	02/21/13	JH	02/20/13	OP7528	GHH922
OP7528-MSD	HH300879.D	50	02/21/13	JH	02/20/13	OP7528	GHH922
C26300-7	HH300865.D	40	02/21/13	JH	02/20/13	OP7528	GHH922

The QC reported here applies to the following samples:

Method: SW846 8015B M

C26300-6, C26300-7

CAS No.	Compound	C26300-7 mg/kg	Spike Q	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	4820	98.7	4170	-658* ^a	4700	-122* ^a	12	39-102/29

CAS No.	Surrogate Recoveries	MS	MSD	C26300-7	Limits
630-01-3	Hexacosane	95%	85%	98%	37-122%

(a) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

6.3.1



Metals Analysis

QC Data Summaries

7

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: C26300
Account: GGTRCASF - Golden Gate Tank Removal
Project: 640 Brooklyn Ave., Oakland, Ca.

QC Batch ID: MP5875
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 02/20/13

Metal	RL	IDL	MDL	MB raw	final
Aluminum	20	1.3	2		
Antimony	2.0	.07	.087		
Arsenic	2.0	.07	.07		
Barium	20	.04	.035		
Beryllium	1.0	.02	.012		
Boron	10	.09	.2		
Cadmium	1.0	.02	.015		
Calcium	500	.71	7.6		
Chromium	1.0	.03	.054		
Cobalt	1.0	.02	.022		
Copper	2.5	.12	.19		
Iron	20	.64	1.6		
Lead	2.0	.07	.054	0.76	<2.0
Magnesium	500	2.7	1.5		
Manganese	1.5	.01	.054		
Molybdenum	2.0	.02	.024		
Nickel	1.0	.02	.024		
Potassium	1000	1.8	1.3		
Selenium	2.0	.18	.23		
Silicon		.12			
Silver	1.0	.03	.044		
Sodium	1000	1.5	4.8		
Strontium	1.0	.02	.017		
Thallium	2.0	.05	.073		
Tin	50	.02	.41		
Titanium	1.0	.04	.079		
Vanadium	1.0	.03	.025		
Zinc	2.0	.03	.098		

Associated samples MP5875: C26300-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

7.1.1
7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C26300
 Account: GGTRCASF - Golden Gate Tank Removal
 Project: 640 Brooklyn Ave., Oakland, Ca.

QC Batch ID: MP5875
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 02/20/13

Metal	C26310-1 Original MS	Spikelot MP1R4A	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	anr			
Beryllium				
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper				
Iron				
Lead	101 112	44.6	24.6N(a)	75-125
Magnesium				
Manganese				
Molybdenum				
Nickel	anr			
Potassium				
Selenium				
Silicon				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc	anr			

Associated samples MP5875: C26300-6

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

7.12



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C26300
 Account: GGTRCASF - Golden Gate Tank Removal
 Project: 640 Brooklyn Ave., Oakland, Ca.

QC Batch ID: MP5875
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 02/20/13

Metal	C26310-1 Original MSD	Spikelot MPIR4A	% Rec	MSD RPD	QC Limit
Aluminum					
Antimony					
Arsenic	anr				
Barium	anr				
Beryllium					
Boron					
Cadmium	anr				
Calcium					
Chromium	anr				
Cobalt					
Copper					
Iron					
Lead	101	124	45	51.1N(a) 10.2	20
Magnesium					
Manganese					
Molybdenum					
Nickel	anr				
Potassium					
Selenium					
Silicon					
Silver					
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Vanadium					
Zinc	anr				

Associated samples MP5875: C26300-6

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

7.1.2
7

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C26300
 Account: GGTRCASF - Golden Gate Tank Removal
 Project: 640 Brooklyn Ave., Oakland, Ca.

QC Batch ID: MP5875
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 02/20/13

Metal	BSP Result	Spikelot MPIR4A	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	anr			
Beryllium				
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper				
Iron				
Lead	48.6	50	97.2	80-120
Magnesium				
Manganese				
Molybdenum				
Nickel	anr			
Potassium				
Selenium				
Silicon				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc	anr			

Associated samples MP5875: C26300-6

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

7.1.3


SERIAL DILUTION RESULTS SUMMARY

Login Number: C26300
 Account: GGTRCASF - Golden Gate Tank Removal
 Project: 640 Brooklyn Ave., Oakland, Ca.

QC Batch ID: MP5875
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: ug/l

Prep Date: 02/20/13

Metal	C26310-1	Original SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	anr			
Beryllium				
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper				
Iron				
Lead	1100	1140	2.8	0-10
Magnesium				
Manganese				
Molybdenum				
Nickel	anr			
Potassium				
Selenium				
Silicon				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc	anr			

Associated samples MP5875: C26300-6

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

7.14
7

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: C26300
Account: GGTRCASF - Golden Gate Tank Removal
Project: 640 Brooklyn Ave., Oakland, Ca.

QC Batch ID: MP5906
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 03/01/13

Metal	RL	IDL	MDL	MB	
				raw	final
Aluminum	20	1.3	2		
Antimony	2.0	.07	.087		
Arsenic	2.0	.07	.07		
Barium	20	.04	.035		
Beryllium	1.0	.02	.012		
Boron	10	.09	.2		
Cadmium	1.0	.02	.015		
Calcium	500	.71	7.6		
Chromium	1.0	.03	.054		
Cobalt	1.0	.02	.022		
Copper	2.5	.12	.19		
Iron	20	.64	1.6		
Lead	2.0	.07	.054	0.26	<2.0
Magnesium	500	2.7	1.5		
Manganese	1.5	.01	.054		
Molybdenum	2.0	.02	.024		
Nickel	1.0	.02	.024		
Potassium	1000	1.8	1.3		
Selenium	2.0	.18	.23		
Silicon		.12			
Silver	1.0	.03	.044		
Sodium	1000	1.5	4.8		
Strontium	1.0	.02	.017		
Thallium	2.0	.05	.073		
Tin	50	.02	.41		
Titanium	1.0	.04	.079		
Vanadium	1.0	.03	.025		
Zinc	2.0	.03	.098		

Associated samples MP5906: C26300-7A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

7.2.1
7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C26300
 Account: GGTRCASF - Golden Gate Tank Removal
 Project: 640 Brooklyn Ave., Oakland, Ca.

QC Batch ID: MP5906
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 03/01/13

Metal	C26436-1 Original MS	Spikelot MPIR4	% Rec	QC Limits
Aluminum				
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron				
Lead	4.4	46.4	41.7	100.8 75-125
Magnesium				
Manganese				
Molybdenum	anr			
Nickel	anr			
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	anr			

Associated samples MP5906: C26300-7A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

7.2.2
 7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C26300
 Account: GGTRCASF - Golden Gate Tank Removal
 Project: 640 Brooklyn Ave., Oakland, Ca.

QC Batch ID: MP5906
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 03/01/13

Metal	C26436-1 Original MSD	Spikelot MPIR4	% Rec	MSD RPD	QC Limit
Aluminum					
Antimony	anr				
Arsenic	anr				
Barium	anr				
Beryllium	anr				
Boron					
Cadmium	anr				
Calcium	anr				
Chromium	anr				
Cobalt	anr				
Copper	anr				
Iron					
Lead	4.4	47.9	42	103.5	3.2 20
Magnesium					
Manganese					
Molybdenum	anr				
Nickel	anr				
Potassium					
Selenium	anr				
Silicon					
Silver	anr				
Sodium					
Strontium					
Thallium	anr				
Tin					
Titanium					
Vanadium	anr				
Zinc	anr				

Associated samples MP5906: C26300-7A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

7.2.2
7

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C26300
 Account: GGTRCASF - Golden Gate Tank Removal
 Project: 640 Brooklyn Ave., Oakland, Ca.

QC Batch ID: MP5906
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: mg/kg

Prep Date: 03/01/13

Metal	BSP Result	Spikelot MPIR4	% Rec	QC Limits
Aluminum				
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron				
Lead	54.3	50	108.6	80-120
Magnesium				
Manganese				
Molybdenum	anr			
Nickel	anr			
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	anr			

Associated samples MP5906: C26300-7A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

7.2.3
7

SERIAL DILUTION RESULTS SUMMARY

Login Number: C26300
 Account: GGTRCASF - Golden Gate Tank Removal
 Project: 640 Brooklyn Ave., Oakland, Ca.

QC Batch ID: MP5906
 Matrix Type: SOLID

Methods: SW846 6010B
 Units: ug/l

Prep Date: 03/01/13

Metal	C26436-1	Original SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron				
Lead	51.5	66.5	29.1*(a)	0-10
Magnesium				
Manganese				
Molybdenum	anr			
Nickel	anr			
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	anr			

Associated samples MP5906: C26300-7A

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Serial dilution indicates possible matrix interference.

7.2.4
7