APPENDIX 1
NOTIFICATIONS

EXIDE TECHNOLOGIES

May 22, 2014

Matthew A. Love
Director – Global Environmental Remediation

Exide Technologies
P.O. Box 14294
Reading, PA 19612 -4294
610.921.4054 tel
610.921.4062 fax
matt.love@exide.com
www.exide.com

Mr. Mack Borchardt
City of Frisco/Frisco Community Development Corporation
6101 Frisco Square Boulevard
Frisco, TX 75034

Re: Notice of Availability of Surface Water and Sediment Sampling Results
Stewart Creek

Dear Mr. Borchardt,

The City of Frisco ("City") recently granted Exide Technologies ("Exide") access to collect surface water and sediment samples from segments of Stewart Creek crossing the City's property. These samples have been collected and have been analyzed for arsenic, cadmium, and lead. Surface water results were compared to the following Human Health Contact Recreation PCLs: arsenic (0.025 mg/l), cadmium (0.149 mg/l), and lead (0.015 mg/l). None of these PCLs were exceeded in surface water samples. Sediment results were compared to the following Tier 1 human health PCLs: arsenic (24 mg/kg), cadmium (1,100 mg/kg), and lead (500 mg/kg). Arsenic concentrations in several samples collected from the City's property exceed the Tier 1 human health PCL. All other sediment results were below the Tier 1 human health PCLs.

The source of the arsenic in the sediment is uncertain given, among other things, the prevalent use of arsenic-containing chemicals for past cotton farming and other agricultural activities in the area. The source of the arsenic is currently being explored. Exposure to the sediment may be *possible* in the event any recreational activities take place in the creek. However, Exide has not observed any such recreational activities or indications of past recreational activities during any of our assessments or interim action work or otherwise. Consequently, no *actual or probable* human exposure to the sediments has been identified. Out of an abundance of caution, the City is provided this notice concerning the detection of arsenic. Please let us know if you have any different information concerning recreational use of Stewart Creek on or in the vicinity of your property.

The results of this sampling are included in a report submitted to the Texas Commission on Environmental Quality and the United States Environmental Protection Agency titled "*Affected Property Assessment Report, Exide Frisco Recycling Facility*" dated May 22, 2014 (the "APAR")*. Among other things, the APAR contains a narrative discussion of surface water and sediment sampling and results, maps showing sample

locations, data tables summarizing analytical results, and laboratory reports for all samples collected. The APAR also discusses historic sampling performed in this segment of Stewart Creek.

Please contact me if you have any difficulty identifying the sample results for City's property or should you have any questions.

Sincerely,

EXIDE TECHNOLOGIES

Matthew A. Love
Director, Global Environmental Remediation

cc: Gary Beyer - TCEQ

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* The APAR can be accessed from the web site established by Exide for this project (http://www.exidefriscoclosure.com). After logging on to the web site, click the heading "Documents and Data" at the top, then scroll down to the heading "Former Operating Plant Affected Property Assessment Report".

EXIDE TECHNOLOGIES

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May 22, 2014

Stewart Creek International Investments LP
5750 Genesis Court, Suite 105
Frisco, TX 75034-4163

Re: Notice of Availability of Sediment Sampling Results
Stewart Creek

Dear Sirs,

Stewart Creek International Investments LP ("SCII") recently granted Exide Technologies ("Exide") access to collect sediment samples from a segment of Stewart Creek crossing SCII's property. One sediment sample was collected from SCII's property and analyzed for arsenic, cadmium, and lead. Analytical results were compared to the following Tier 1 human health PCLs: arsenic (24 mg/kg), cadmium (1,100 mg/kg), and lead (500 mg/kg). The concentration of arsenic in this sample exceeds the Tier 1 human health PCL. All other results were below the Tier 1 human health PCLs.

The source of the arsenic in the sediment is uncertain given, among other things, the prevalent use of arsenic-containing chemicals for past cotton farming and other agricultural activities in the area. The source of the arsenic is currently being explored. Exposure to the sediment may be *possible* in the event any recreational activities take place in the creek. However, Exide has not observed any such recreational activities or indications of past recreational activities during any of our assessments or interim action work or otherwise. Consequently, no *actual or probable* human exposure to the sediments has been identified. Out of an abundance of caution, SCII is provided this notice concerning the detection of arsenic. Please let us know if you have any different information concerning recreational use of Stewart Creek on or in the vicinity of your property.

The results of this sampling are included in a report submitted to the Texas Commission on Environmental Quality and the United States Environmental Protection Agency titled "*Affected Property Assessment Report, Exide Frisco Recycling Facility*" dated May 22, 2014 (the "APAR")*. Among other things, the APAR contains a narrative discussion of sediment sampling and results, maps showing sample locations, data tables summarizing analytical results, and laboratory reports for all samples collected. The APAR also discusses historic sampling performed in this segment of Stewart Creek.

Please contact me if you have any difficulty identifying the sample results for SCII's property or should you have any questions.

Sincerely,

EXIDE TECHNOLOGIES

Matthew A. Love
Director, Global Environmental Remediation

cc: Gary Beyer - TCEQ

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EXIDE TECHNOLOGIES

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Director – Global Environmental Remediation

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matt.love@exide.com
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May 22, 2014

Bellevue Partners LTD
11518 Reeder Road
Dallas, TX 75229-2114

Re: Notice of Availability of Sediment Sampling Results
Stewart Creek

Dear Sirs,

Bellevue Partners LTD ("BP") recently granted Exide Technologies ("Exide") access to collect sediment samples from a segment of Stewart Creek crossing BP's property. One sediment sample was collected from BP's property. This sample was analyzed for arsenic, cadmium, and lead. Analytical results were compared to the following Tier 1 human health PCLs: arsenic (24 mg/kg), cadmium (1,100 mg/kg), and lead (500 mg/kg). The concentration of arsenic in this sample exceeds the Tier 1 human health PCL. All other results were below the Tier 1 human health PCLs.

The source of the arsenic in the sediment is uncertain given, among other things, the prevalent use of arsenic-containing chemicals for past cotton farming and other agricultural activities in the area. The source of the arsenic is currently being explored. Exposure to the sediment may be *possible* in the event any recreational activities take place in the creek. However, Exide has not observed any such recreational activities or indications of past recreational activities during any of our assessments or interim action work or otherwise. Consequently, no *actual or probable* human exposure to the sediments has been identified. Out of an abundance of caution, BP is provided this notice concerning the detection of arsenic. Please let us know if you have any different information concerning recreational use of Stewart Creek on or in the vicinity of your property.

The results of this sampling are included in a report submitted to the Texas Commission on Environmental Quality and the United States Environmental Protection Agency titled "*Affected Property Assessment Report, Exide Frisco Recycling Facility*" dated May 22, 2014 (the "APAR")*. Among other things, the APAR contains a narrative discussion of sediment sampling and results, maps showing sample locations, data tables summarizing analytical results, and laboratory reports for all samples collected. The APAR also discusses historic sampling performed in this segment of Stewart Creek.

Please contact me if you have any difficulty identifying the sample results for BP's property or should you have any questions.

Sincerely,

EXIDE TECHNOLOGIES

Matthew A. Love
Director, Global Environmental Remediation

cc: Gary Beyer - TCEQ

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EXIDE TECHNOLOGIES

May 22, 2014

Matthew A. Love
Director – Global Environmental Remediation

Exide Technologies
P.O. Box 14294
Reading, PA 19612 -4294
610.921.4054 tel
610.921.4062 fax
matt.love@exide.com
www.exide.com

Mr. Bert Fields Jr.
11835 Preston Road
Dallas, TX 75230-2708

Re: Notice of Availability of Surface Water and Sediment Sampling Results
Stewart Creek

Dear Mr. Fields,

You recently granted Exide Technologies ("Exide") access to collect surface water and sediment samples from a segment of Stewart Creek crossing your property. These samples have been collected and have been analyzed for arsenic, cadmium, and lead. Surface water results were compared to the following Human Health Contact Recreation PCLs: arsenic (0.025 mg/l), cadmium (0.149 mg/l), and lead (0.015 mg/l). None of these PCLs were exceeded in surface water samples. Sediment results were compared to the following Tier 1 human health PCLs: arsenic (24 mg/kg), cadmium (1,100 mg/kg), and lead (500 mg/kg). Arsenic concentrations in seven sediment samples collected from your property exceed the Tier 1 human health PCL. All other sediment results were below the Tier 1 human health PCLs.

The source of the arsenic in the sediment is uncertain given, among other things, the prevalent use of arsenic-containing chemicals for past cotton farming and other agricultural activities in the area. The source of the arsenic is currently being explored. Exposure to the sediment may be *possible* in the event any recreational activities take place in the creek. However, Exide has not observed any such recreational activities or indications of past recreational activities during any of our assessments or interim action work or otherwise. Consequently, no *actual or probable* human exposure to the sediments has been identified. Out of an abundance of caution, you are provided this notice concerning the detection of arsenic. Please let us know if you have any different information concerning recreational use of Stewart Creek on or in the vicinity of your property.

The results of this sampling are included in a report submitted to the Texas Commission on Environmental Quality and the United States Environmental Protection Agency titled "*Affected Property Assessment Report, Exide Frisco Recycling Facility*" dated May 22, 2014 (the "APAR")*. Among other things, the APAR contains a narrative discussion of surface water and sediment sampling and results, maps showing sample

locations, data tables summarizing analytical results, and laboratory reports for all samples collected. The APAR also discusses historic sampling performed in this segment of Stewart Creek.

Please contact me if you have any difficulty identifying the sample results for your property or should you have any questions.

Sincerely,

EXIDE TECHNOLOGIES

Matthew A. Love
Director, Global Environmental Remediation

cc: Gary Beyer - TCEQ

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EXIDE TECHNOLOGIES

May 22, 2014

Matthew A. Love
Director – Global Environmental Remediation

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Reading, PA 19612 -4294
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matt.love@exide.com
www.exide.com

Mr. Rob Jordan
Lake Manager, Lewisville/Ray Roberts Lake
United States Army Corps of Engineers
1801 N. Mill Street
Lewisville, TX 75057

Re: Notice of Availability of Surface Water and Sediment Sampling Results
Stewart Creek

Dear Sirs,

The United States Army Corps of Engineers ("USACE") recently granted Exide Technologies ("Exide") access to collect surface water and sediment samples from a segment of Stewart Creek crossing USACE's property. These samples have been collected and analyzed for arsenic, cadmium, and lead. Surface water results were compared to the following Human Health Contact Recreation PCLs: arsenic (0.025 mg/l), cadmium (0.149 mg/l), and lead (0.015 mg/l). None of these PCLs were exceeded in surface water samples. Sediment results were compared to the following Tier 1 human health PCLs: arsenic (24 mg/kg), cadmium (1,100 mg/kg), and lead (500 mg/kg). Arsenic concentrations in three samples collected from the USACE's property exceed the Tier 1 human health PCL. All other sediment results were below the Tier 1 human health PCLs.

The source of the arsenic in the sediment is uncertain given, among other things, the prevalent use of arsenic-containing chemicals for past cotton farming and other agricultural activities in the area. The source of the arsenic is currently being explored. Exposure to the sediment may be *possible* in the event any recreational activities take place in the creek. However, Exide has not observed any such recreational activities or indications of past recreational activities during any of our assessments or interim action work or otherwise. Consequently, no *actual or probable* human exposure to the sediments has been identified. Out of an abundance of caution, USACE is provided this notice concerning the detection of arsenic. Please let us know if you have any different information concerning recreational use of Stewart Creek on or in the vicinity of your property.

The results of this sampling are included in a report submitted to the Texas Commission on Environmental Quality and the United States Environmental Protection Agency titled "*Affected Property Assessment Report, Exide Frisco Recycling Facility*" dated May 22, 2014 (the "APAR")*. Among other things, the APAR contains a narrative

discussion of surface water and sediment sampling and results, maps showing sample locations, data tables summarizing analytical results, and laboratory reports for all samples collected. The APAR also discusses historic sampling performed in this segment of Stewart Creek.

Please contact me if you have any difficulty identifying the sample results for USACE's property or should you have any questions.

Sincerely,

EXIDE TECHNOLOGIES

Matthew A. Love
Director, Global Environmental Remediation

cc: Gary Beyer - TCEQ

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APPENDIX 2
BORING LOGS AND MONITORING WELL COMPLETION DETAILS

BORING LOG DESCRIPTION	PAGE
APAR PHASE II INVESTIGATION (GOLDER, 2014)	A2-1
APAR PHASE I INVESTIGATION AND SIR INVESTIGATION (PBW, 2012A)	A2-163
GEOTECHNICAL ENGINEERING REPORT (RONE, 2011)	A2-354
PHASE II RCRA FACILITY INVESTIGATION (JDC, 1998A)	A2-385
NOTIFICATION OF AN ON-SITE CLASS II INDUSTRIAL WASTE LANDFILL (RMT/JN, 1995)	A2- 402
PHASE I RCRA FACILITY INVESTIGATION (LAKE, 1991; LAKE, 1993)	A2- 421
PHASE I RCRA FACILITY INVESTIGATION ADDENDUM DISPOSAL AREA BORING DESCRIPTIONS (LAKE, 1993)	A2- 453

APAR PHASE II INVESTIGATION (GOLDER, 2014)

This log should not be used separately from the original report.

LOG OF 2013-AD-1A

DRILLING METHOD: Direct Push
NORTHING: 7,101,873 FT
DATE/TIME: 01/09/2014, 1345
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,792 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	4.0/4.0	0.0-0.5 (1342)	ML		0-0.5 FT, (ML) CLAYEY SILT; brown; dry, soft.
				0.5-2.0 (1343)	CL		0.5-2.0 FT, (CL) SILTY CLAY; brown; moist, soft.
					SM		2.0-2.5 FT, (SM) SILTY SAND; gray/brown; moist, compact.
					CL/SC		2.5-3.0 FT, (CL/SC) sandy SILTY CLAY; brown; dry, firm.
				2.0-4.0 (1344)	ML		3.0-4.0 FT, (ML) SANDY SILT; brown, friable; dry, soft.
							End of borehole at 4 FT BGS
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Admin Bldg
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-AD-3

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,762 FT
DATE/TIME: 01/09/2014, 1300
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,927 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (1310)			0-0.5 FT, Concrete
					CL		0.5-1.0 FT, (CL) SILTY CLAY; black/dark gray; dry, stiff.
				0.5-2.0 (1312)	CH		1.0-1.5 FT, (CH) CLAY; brown; dry, firm.
	1	NA	4.0/4.0		CL		1.5-4.0 FT, (CL) CLAY, trace gravel; black/dark gray; dry, firm.
				2.0-4.0 (1313)			
5							End of borehole at 4 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Admin Bldg
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-AD-4

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,685 FT
DATE/TIME: 01/09/2014, 1330
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,811 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (1326)	ML		0-0.25 FT, TOPSOIL, (ML) SILT; brown, organics; dry.
					ML		0.25-0.5 FT, (ML) SANDY SILT; light brown; dry, soft.
					CH		0.5-1.0 FT, (CL) CLAY; black; dry, very stiff.
				0.5-2.0 (1327)	CH		1.0-1.5 FT, (CL) CLAY; light brown/gray; dry, stiff.
	1	NA	4.0/4.0		CL		1.5-4.0 FT, (CL) SILTY CLAY, some fine gravel; black/dark gray, friable, trace calcareous nodules; dry, hard.
				2.0-4.0 (1328)			
5							End of borehole at 4 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Admin Bldg
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-AD-5

DRILLING METHOD: Direct Push
NORTHING: 7,101,826 FT
DATE/TIME: 01/09/2014, 1415
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,595 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	3.8/4.0	0.0-0.5 (1412)	CL		0-2.0 FT, (CL) SILTY CLAY; dark brown, orange mottling; dry, firm.
				0.5-2.0 (1413)			
				2.0-4.0 (1414)	CL		2.0-4.0 FT, (CL) SILTY CLAY, trace fine gravel; black, friable, trace calcareous nodules; dry, hard.
5							End of borehole at 4 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Admin Bldg
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-BSA-2A

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,283 FT
DATE/TIME: 01/09/2014, 1245
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,731 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-2.0 (1250)	ML/SM		0-1.5 FT, FILL (ML/SM) GRAVELLY SILT and SAND; brown/gray; dry.
	1	NA	4.0/4.0		CL/CH		1.5-4.0 FT, (CL/CH) SILTY CLAY and CLAY; dark gray; dry, very stiff.
							End of borehole at 4 FT BGS
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Bale Stabilization Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-BSB-8A

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,056 FT
DATE/TIME: 01/13/2014, 0930
DRILLER: SCI, Margarito Estrada
EASTING: 2,479,815 FT
TOTAL DEPTH: 20.75 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
							0-0.75 FT, Concrete
	1		3.5/4.0		ML		0.75-2.75 FT, FILL, (ML) SANDY SILT, some gravel; light brown; moist, soft.
					CL/SC		2.75-5.5 FT, (CL/SC) sandy SILTY CLAY; light brown; dry, soft-firm.
5	2		4.0/4.0		CL		5.5-7.5 FT, (CL) SILTY CLAY, trace fine gravel; brown/gray; moist, soft.
					CH		7.5-9.0 FT, (CL) CLAY; black; dry, very stiff.
	3	NA	4.0/4.0	8-10 (0950)	ML/SM		9.0-9.5 FT, (ML/SM) sandy CLAYEY SILT; light brown/black; moist, soft.
10					CH		9.5-13.0 FT, (CL) CLAY; black; slightly moist, soft-firm.
					ML/SM		13.0-13.5 FT, (ML/SM) sandy CLAYEY SILT; light brown/black; damp, soft.
	4		3.8/4.0		CH		13.5-15.5 FT, (CL) CLAY; black; damp-wet, very soft.
15					CH		15.5-16.75 FT, (CL) CLAY, some gravel at 16 FT; black; dry, firm.
	5		4.0/4.0		CH		16.75-19.75 FT, (CL) CLAY, some gravel at 19 FT; black; wet, very soft.
					GC/ML		

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Battery/Receiving Storage
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-BSB-8A

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,056 FT
DATE/TIME: 01/13/2014, 0930
DRILLER: SCI, Margarito Estrada
EASTING: 2,479,815 FT
TOTAL DEPTH: 20.75 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
					GC/ML		19.75-20.75 FT, (GC/ML) CLAYEY GRAVEL and SILT; brown; wet, dense. *(Continued)*
							End of borehole at 20.75 FT BGS
25							
30							
35							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Battery/Receiving Storage
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-C2L-01

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,103,855 FT
DATE/TIME: 01/14/2014, 1430
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,668 FT
TOTAL DEPTH: 15 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	5.0/5.0	0.0-0.5 (1435) 1-2 (1436)	CH		0-3.0 FT, (CH) CLAY; dark brown; dry, stiff.
					ML		3.0-4.5 FT, (ML) CLAYEY SILT; reddish brown, friable, platy; dry, hard.
5	2		5.0/5.0	4-5 (1437)	CH		4.5-13.5 FT, (CH) CLAY; gray, reddish brown and yellow mottling, some friable clay; dry, hard.
10	3		5.0/5.0	10-12 (1440) 12-13 (1441) 13-15 (1442)			13.5-15 FT, SHALE; dark gray, reddish brown and yellow mottling; dry, hard.
15							End of borehole at 15 FT BGS (REFUSAL)

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Class 2 Landfill
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-C2L-02

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,103,459 FT
DATE/TIME: 01/14/2014, 1130
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,901 FT
TOTAL DEPTH: 18 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (1138)	CL		0-1.0 FT, (CL) SILTY CLAY, trace fine gravel; brown; dry, firm-stiff.
				1-2 (1139)	CL		1.0-2.5 FT, (CL) SILTY CLAY; brown/black, layered; dry, firm.
	1		5.0/5.0				
					CH		2.5-7.0 FT, (CH) CLAY; black; dry, stiff.
5				4-5 (1140)			
	2	NA	5.0/5.0				
					CH		7.0-13.5 FT, (CH) CLAY; gray/reddish brown, yellowish mottling; dry, hard.
10							
	3		5.0/5.0				
					ML		13.5-14.0 FT, (ML) CLAYEY SILT, some sand; red, gray mottling; wet, soft-firm.
							14.0-18.0 FT, SHALE; dark gray, reddish brown and yellow mottling; hard.
15							
	4		3.0/3.0				
							End of borehole at 18 FT BGS (REFUSAL)

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Class 2 Landfill
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-C2L-03

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,103,191 FT
DATE/TIME: 01/09/14, 1130
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,793 FT
TOTAL DEPTH: 23.5 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.5-1.0 (1126)	CH		0-1.0 FT, (CH) CLAY; dark brown; dry, soft.
	1		4.5/5.0	2-4 (1127)	CH		1.0-5.0 FT, (CH) CLAY; brown, orange mottling, trace calcareous nodules; dry, stiff. 4.0 FT, gray, yellow mottling.
5				4-5 (1128)			
	2		5.0/5.0		CH		5.0-17.5 FT, (CH) CLAY; gray, red and yellow mottling, friable, trace calcareous nodules; dry, stiff.
10		NA					
	3		5.0/5.0				
15							
	4		5.0/5.0				
					CL		17.5-18.0 FT, (CL) SILTY CLAY; red, yellowish mottling, friable; dry, firm.
					CH		18.0-22.0 FT, (CH) CLAY; gray, red and yellow mottling, friable; dry, stiff.

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Class 2 Landfill
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-C2L-03

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,103,191 FT
DATE/TIME: 01/09/14, 1130
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,793 FT
TOTAL DEPTH: 23.5 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	5	NA	3.5 / 3.5		CH		18.0-22.0 FT, (CH) CLAY; gray, red and yellow mottling, friable; dry, stiff. (Continued) 20.0 FT, reddish mottling; hard.
							22.0-23.5 FT, SHALE; dark gray, reddish yellow mottling; hard, dry.
25							End of borehole at 23.5 FT BGS (REFUSAL) Boring was completed to 20.0 FT BGS on 01/09/14 with track mounted Geoprobe rig. To reach total depth, a truck mounted Geoprobe was used to complete the boring to 23.5 FT BGS on 01/14/14.
30							
35							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Class 2 Landfill
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-C2L-04

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,103,041 FT
DATE/TIME: 01/14/2014, 1015
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,728 FT
TOTAL DEPTH: 22.5 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (1024)	CH		0-0.5 FT, (CH) CLAY, trace fine gravel; black; dry, firm.
				1-2 (1025)	CL/GC		0.5-2.0 FT, (CL/GC) GRAVELLY CLAY; brown, black, reddish and white mottling; dry, firm.
	1		5.0/5.0		CH		2.0-6.0 FT, (CH) CLAY; dark brown; dry, very stiff.
5				4-5 (1026)			4.0 FT, some fine gravel
	2		5.0/5.0		CL/GC		6.0-8.0 FT, (CL/GC) GRAVELLY CLAY, some silt; light brown; dry, stiff. 6.25-6.5 FT, silty gravel; compact.
					CH		8.0-10.0 FT, (CH) CLAY, trace fine gravel; brown; dry, very stiff.
10		NA					
	3		5.0/5.0		CL/GC		10.0-19.0 FT, (CL/GC) GRAVELLY CLAY, some silt; brown, gray and reddish mottling, calcareous nodules; dry, stiff.
15							
	4		5.0/5.0				
					CH		19.0-22.0 FT, (CH) CLAY; gray, reddish brown mottling; dry, hard.

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Class 2 Landfill
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-C2L-04

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,103,041 FT
DATE/TIME: 01/14/2014, 1015
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,728 FT
TOTAL DEPTH: 22.5 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	5	NA	2.5/2.5		CH		19.0-22.0 FT, (CH) CLAY; gray, reddish brown mottling; dry, hard. *(Continued)*
							22.0-22.5 FT, SHALE; dark gray, reddish brown mottling; dry, hard.
							End of borehole at 22.5 FT BGS (REFUSAL)
25							
30							
35							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Class 2 Landfill
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-C2L-05

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,103,082 FT
DATE/TIME: 01/14/2014, 0815
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,098 FT
TOTAL DEPTH: 23 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (0818)	CL		0-0.75 FT, (CL) SILTY CLAY; gray, yellowish mottling; dry, stiff.
	1		5.0/5.0	1-2 (0819)	CH		0.75-9.0 FT, (CH) CLAY; black, trace calcareous nodules; dry, stiff-very stiff.
5				4-5 (0820)			5.0 FT, trace fine gravel.
	2		5.0/5.0				6.0 FT, brown; dry, very stiff.
					CL/GC		9.0-10.0 FT, (CL/GC) GRAVELLY CLAY; gray and brown, black and white mottling; dry, hard.
10		NA			CH		10.0-12.5 FT, (CH) CLAY, trace fine gravel; gray and brown, black and white mottling; dry, very stiff.
	3		5.0/5.0		ML/GM		12.5-14.0 FT, (ML/GM) GRAVELLY SILT, some clay; light brown and tan; dry, soft-firm.
					CL/GC		14.0-15.0 FT, (CL/GC) GRAVELLY CLAY, and gravel at 14.75-15 FT; light brown and tan; dry, firm.
15							
	4		5.0/5.0		CL/GC		15.0-20.0 FT, (CL/GC) CLAY and GRAVEL; light brown and tan; dry, firm.

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Class 2 Landfill
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-C2L-05

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,103,082 FT
DATE/TIME: 01/14/2014, 0815
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,098 FT
TOTAL DEPTH: 23 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
					CL		20.0-21.0 FT, (CL) SILTY CLAY; brown and black; wet, soft.
	5	NA	3.0/3.0				21.0-23.0 FT, SHALE; dark gray, reddish yellow mottling; dry, hard.
							End of borehole at 23 FT BGS (REFUSAL)
25							
30							
35							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Class 2 Landfill
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-C2L-06

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,103,315 FT
DATE/TIME: 01/14/2014, 1245
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,135 FT
TOTAL DEPTH: 24 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	4.5/5.0	0.0-0.5 (1255) 1-2 (1256)	CL		0-3.0 FT, (CL) CLAY, some silt, some gravel; brown; dry, firm-stiff.
5	2		5.0/5.0	4-5 (1257)	CH		3.0-9.75 FT, (CH) CLAY; black; dry, very stiff.
10	3		5.0/5.0		CL/GC		9.75-11.0 FT, (CL/GC) GRAVELLY CLAY; brown and gray, calcareous nodules; dry, hard.
					CH		11.0-13.5 FT, (CH) CLAY, trace fine gravel; brown; dry, stiff.
15	4		5.0/5.0		ML		13.5-16.5 FT, (ML) CLAYEY SILT; brown; moist, soft.
							16.5-16.8 FT, CALCITE; coarsely crystalline; white.
					ML/GM		16.8-18.5 FT, (ML/GM) CLAYEY SILT and GRAVEL; brown; dry, stiff.
					CH		18.5-20.0 FT, (CH) CLAY; gray, reddish brown mottling; dry, hard.

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Class 2 Landfill
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-C2L-06

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,103,315 FT
DATE/TIME: 01/14/2014, 1245
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,135 FT
TOTAL DEPTH: 24 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	5	NA	4.0 / 4.0		CH		20.0-22.5 FT, (CH) CLAY, some gravel; brown; very stiff.
							22.5-22.75 FT, CALCITE; coarsely crystalline; white.
					CH		22.75-23.0 FT, (CH) CLAY, some gravel; brown; very stiff.
							23.0-24.0 FT, SHALE; dark gray, reddish brown and yellow mottling; dry, hard.
							End of borehole at 24 FT BGS (REFUSAL)
25							
30							
35							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Class 2 Landfill
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-C2L-07

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,103,532 FT
DATE/TIME: 01/14/2014, 1330
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,172 FT
TOTAL DEPTH: 18 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (1328)	CL		0-1.5 FT, (CL) CLAY, some silt, trace fine gravel; brown; dry, firm.
	1		5.0/5.0	1-2 (1329)	CH		1.5-7.5 FT, (CH) CLAY; black; dry, stiff-very stiff.
5				4-5 (1330)			
	2	NA	5.0/5.0				7.5-17.5 FT, (CH) CLAY; gray, reddish brown and yellow mottling, interbedded friable layers; dry, hard.
10	3		5.0/5.0		CH		
15	4		3.0/3.0				
							17.5-18.0 FT, SHALE; dark gray, reddish brown and yellow mottling; dry, hard.
							End of borehole at 18 FT BGS (REFUSAL)

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Class 2 Landfill
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-C2L-08

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,103,900 FT
DATE/TIME: 01/14/2014, 1400
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,452 FT
TOTAL DEPTH: 20 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (1405)	CH		0-1.0 FT, (CH) CLAY; brown; dry, firm-stiff.
	1		4.0/5.0	1-2 (1406)	ML/GM		1.0-3.0 FT, (ML/GM) CLAYEY SILT and GRAVEL; light gray and brown; firm.
					CH		3.0-5.5 FT, (CH) CLAY; dark brown; dry, very stiff.
5				4-5 (1407)			
	2		4.0/4.0				
							5.5-19.0 FT, (CH) CLAY; gray, reddish brown and yellow mottling; dry, hard.
10	3	NA	3.0/3.0				
					CH		
	4		4.0/4.0				
15							
				15-17 (1416)			
	5		4.0/4.0	17-18 (1417)			
				18-20 (1418)			19.0-20.0 FT, SHALE; dark gray, reddish brown and yellow mottling; dry, hard.

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Class 2 Landfill
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-C2L-08

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,103,900 FT
DATE/TIME: 01/14/2014, 1400
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,452 FT
TOTAL DEPTH: 20 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
							End of borehole at 20 FT BGS
25							
30							
35							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Class 2 Landfill
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-C2L-09

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,103,008 FT
DATE/TIME: 01/14/2014, 0945
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,517 FT
TOTAL DEPTH: 22.5 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (0945)	CL		0-1.0 FT, (CL) CLAY, some gravel; brown; dry, firm-stiff.
	1		5.0/5.0	1-2 (0946)	CH		1.0-7.5 FT, (CH) CLAY; dark brown; dry, very stiff-hard.
5				4-5 (0947)			
	2		5.0/5.0		CL/GC		7.5-8.0 FT, (CL/GC) CLAY and GRAVEL; light gray and brown, friable; dry, compact.
					CL		8.0-11.5 FT, (CL) SILTY CLAY, some gravel; brown, white mottling; dry, very stiff.
10		NA					11.25 FT, and gravel for 0.25 FT
	3		5.0/5.0		CL		11.5-14.5 FT, (CL) CLAY, some silt; brown; dry, firm.
							13.5 FT, and silty gravel for 0.25 FT
15					ML/GM		14.5-17.25 FT, (ML/GM) GRAVELLY SILT, some clay; light brown and tan; dry, soft-firm.
	4		5.0/5.0		CL		17.25-19.5 FT, (CL) CLAY, trace gravel; brown and tan; dry, stiff.
					CH		19.5-22.0 FT, (CH) CLAY; gray, reddish brown mottling; dry, hard.

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Class 2 Landfill
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-C2L-09

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,103,008 FT
DATE/TIME: 01/14/2014, 0945
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,517 FT
TOTAL DEPTH: 22.5 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	5	NA	2.5/2.5		CH		19.5-22.0 FT, (CH) CLAY; gray, reddish brown mottling; dry, hard. *(Continued)*
							22.0-22.5 FT, SHALE; dark gray, reddish brown mottling; dry, hard.
							End of borehole at 22.5 FT BGS (REFUSAL)
25							
30							
35							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Class 2 Landfill
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-C2L-10

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,103,062 FT
DATE/TIME: 01/14/2014, 0900
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,295 FT
TOTAL DEPTH: 20 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (0906)	CL/GC		0-2.0 FT, (CL/GC) GRAVELLY CLAY; brown, black mottling; dry, firm.
	1		4.3/5.0	1-2 (0907)	CH		2.0-7.5 FT, (CH) CLAY, black; dry, stiff.
5				4-5 (0908)			
	2		5.0/5.0		CL		7.5-9.0 FT, (CL) CLAY, some fine gravel; brown; dry, very stiff.
					CL/GC		9.0-11.0 FT, (CL/GC) GRAVELLY CLAY; gray and brown, black and white mottling; dry, hard.
10		NA			ML/GM		11.0-14.0 FT, (ML/GM) CLAYEY SILT and GRAVEL; light brown/tan; dry, soft-firm.
	3		5.0/5.0		CH		14.0-19.0 FT, (CH) CLAY; gray, reddish mottling; dry, hard.
15							
	4		5.0/5.0				19.0-20.0 FT, SHALE; dark gray, reddish yellow mottling, fissile; dry, hard.

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Class 2 Landfill
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-C2L-10

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,103,062 FT
DATE/TIME: 01/14/2014, 0900
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,295 FT
TOTAL DEPTH: 20 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
							End of borehole at 20 FT BGS (REFUSAL)
25							
30							
35							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Class 2 Landfill
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-CUFT-10A

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,955 FT
DATE/TIME: 01/10/2014, 1145
DRILLER: SCI, Margarito Estrada
EASTING: 2,478,944 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (1141)	ML		0-0.5 FT, TOPSOIL (ML) CLAYEY SILT; brown; moist, soft.
	1	NA	2.5/4.0		CH/CL		0.5-4.0 FT, (CH/CL) CLAY and SILTY CLAY, trace fine gravel; black; moist, firm.
5							End of borehole at 4 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Crystallizer Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-CUFT-10B

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,949 FT
DATE/TIME: 01/10/2014, 1145
DRILLER: SCI, Margarito Estrada
EASTING: 2,478,928 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (1148)	ML		0-0.5 FT, (ML) CLAYEY SILT, trace gravel; dark brown; moist, soft.
	1	NA	3.5/4.0		CH/CL		0.5-4.0 FT, (CH/CL) CLAY and SILTY CLAY, trace rock inclusions; black; moist, firm.
							End of borehole at 4 FT BGS
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Crystallizer Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-CUFT-10C

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,917 FT
DATE/TIME: 01/10/2014, 1200
DRILLER: SCI, Margarito Estrada
EASTING: 2,478,953 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (1155)	ML		0-0.5 FT, TOPSOIL (ML) CLAYEY SILT; dark brown; damp, soft.
	1	NA	3.3/4.0		CH		0.5-4.0 FT, (CH) CLAY; dark brown, trace reddish mottling; damp, soft-firm.
							End of borehole at 4 FT BGS
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Crystallizer Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-CUFT-10D

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,949 FT
DATE/TIME: 01/10/2014, 1130
DRILLER: SCI, Margarito Estrada
EASTING: 2,478,963 FT
TOTAL DEPTH: 10 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (1125)	ML		0-0.25 FT, TOPSOIL (ML) SILT; brown; damp, soft.
					ML		0.25-0.8 FT, (ML) CLAYEY SILT, trace fine gravel; brown and gray, friable; dry, firm.
	1		4.0/4.0	2-4 (1126)	CH		0.8-5.0 FT, (CH) CLAY; dark brown, trace red mottling; dry, firm.
5		NA		4-6 (1127)			
	2		4.0/4.0	6-8 (1128)	CH		5.0-8.0 FT, (CH) CLAY; black; dry, very stiff.
	3		2.0/2.0	8-10 (1129)	CH		8.0-10.0 FT, (CH) CLAY; dark gray and black, some red mottling, trace calcareous nodules; dry, stiff-very stiff.
10							End of borehole at 10 FT BGS
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Crystallizer Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-CUFT-11

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,777 FT
DATE/TIME: 01/10/2014, 0915
DRILLER: SCI, Margarito Estrada
EASTING: 2,479,386 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	2.0 / 2.0	0.0-0.5 (0918) 0.5-2.0 (0919)	CH		0-4.0 FT, (CH) CLAY; brown; moist, soft. 2.0 FT, reddish mottling; firm-stiff.
	2		2.0 / 2.0	2.0-4.0 (0920)			
							End of borehole at 4 FT BGS
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Crystallizer Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-CUFT-14

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,786 FT
DATE/TIME: 01/10/2014, 0915
DRILLER: SCI, Margarito Estrada
EASTING: 2,479,526 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	4.0/4.0	0-2 (0913)	CH		0-2.75 FT, (CH) CLAY; dark brown and brown; dry, soft.
					SP		2.75-3.0 FT, (SP) SAND, some gravel; damp, compact.
				2-4 (0914)	CH		3.0-4.0 FT, (CH) CLAY; dark brown, gray and black; dry, firm.
							End of borehole at 4 FT BGS
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Crystallizer Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-CUFT-5A

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,932 FT
DATE/TIME: 01/10/2014, 0945
DRILLER: SCI, Margarito Estrada
EASTING: 2,479,179 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (0943)	ML/SM		0-0.3 FT, (ML/SM) GRAVELLY SILT and SAND; dry, compact.
	1	NA	4.0 / 4.0		CH		0.3-4.0 FT, (CH) CLAY; dark brown; dry, firm-stiff.
5							End of borehole at 4 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Crystallizer Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-CUFT-5B

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,932 FT
DATE/TIME: 01/10/2014, 0945
DRILLER: SCI, Margarito Estrada
EASTING: 2,479,173 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (0940)	CL		0-1.0 FT, (CL) SILTY CLAY, some gravel; moist, firm.
	1	NA	4.0/4.0		CH		1.0-4.0 FT, (CH) CLAY; dark brown and black; dry, firm.
							End of borehole at 4 FT BGS
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Crystallizer Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-CUFT-5C

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,891 FT
DATE/TIME: 01/10/2014, 1045
DRILLER: SCI, Margarito Estrada
EASTING: 2,479,181 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	4.0 / 4.0	0.0-0.5 (1051)	CH		0-4.0 FT, (CH) CLAY; black; dry, stiff.
5							End of borehole at 4 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Crystallizer Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-CUFT-5D

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,927 FT
DATE/TIME: 01/10/2014, 1000
DRILLER: SCI, Margarito Estrada
EASTING: 2,479,186 FT
TOTAL DEPTH: 12 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (0952)	CL		0-1.0 FT, (CL) SILTY CLAY, trace gravel; brown; moist, soft.
	1		3.8/4.0	2-4 (0953)	CH		1.0-12.0 FT, (CH) CLAY; dark brown; dry, firm.
5	2	NA	4.0/4.0	4-6 (0954)			4.0 FT, stiff.
				6-8 (0955)			
10	3		4.0/4.0	8-10 (0956)			
							End of borehole at 12 FT BGS
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Crystallizer Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-CUFT-6A

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,924 FT
DATE/TIME: 01/10/2014, 1015
DRILLER: SCI, Margarito Estrada
EASTING: 2,479,078 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (1014)	ML		0.0-0.5 FT, TOPSOIL, (ML) CLAYEY SILT; brown; moist, soft.
					ML/GM		0.5-1.0 FT, (ML/GM) CLAYEY SILT and GRAVEL; brown and gray; dry, soft.
	1	NA	4.0/4.0		CH		1.0-4.0 FT, (CH) CLAY; black; dry, stiff.
							End of borehole at 4 FT BGS
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Crystallizer Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-CUFT-6B

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,895 FT
DATE/TIME: 01/10/2014, 1045
DRILLER: SCI, Margarito Estrada
EASTING: 2,479,080 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	4.0 / 4.0	0.0-0.5 (1041)	CH		0-4.0 FT, (CH) CLAY; black; dry, stiff.
5							End of borehole at 4 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Crystallizer Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-CUFT-6C

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,934 FT
DATE/TIME: 01/10/2014, 1030
DRILLER: SCI, Margarito Estrada
EASTING: 2,479,082 FT
TOTAL DEPTH: 12 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	2.3/4.0	0.0-0.5 (1022)	CH		0-12.0 FT, (CH) CLAY; dark brown and black; dry, soft.
				2-4 (1023)			
5	2		4.0/4.0	4-6 (1024)			6.0 FT, stiff.
				6-8 (1025)			8.0 FT, black.
10	3		4.0/4.0	8-10 (1026)			
							End of borehole at 12 FT BGS
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Crystallizer Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-CUFT-7B

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,932 FT
DATE/TIME: 01/10/2014, 1100
DRILLER: SCI, Margarito Estrada
EASTING: 2,478,970 FT
TOTAL DEPTH: 10 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (1108)	ML		0-1.0 FT, (ML) CLAYEY SILT, some gravel; dark brown; moist, soft.
	1		3.3/4.0	2-4 (1109)	CH		1.0-10.0 FT, (CH) CLAY, trace fine gravel; black, red mottling; dry, stiff.
5	2	NA	4.0/4.0	4-6 (1110)			
				6-8 (1111)			
	3		2.0/2.0	8-10 (1112)			9.0 FT, grayish mottling, friable.
10							End of borehole at 10 FT BGS
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Crystallizer Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-FFTA-01

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,397 FT
DATE/TIME: 01/08/2014, 0930
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,828 FT
TOTAL DEPTH: 19 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
							0-0.25 FT, Concrete
					CL		0.25-0.75 FT, (CL) SILTY CLAY, trace gravel; brown; dry, very stiff.
		0.4		0.25-2.0 (1020)			0.75-6.0 FT, (CL) CLAY, some silt; brown, trace calcareous nodules; dry, very stiff.
	1		5.0/5.0				
		0.4		2.0-4.0 (1030)	CL		
5		0.8					5.0 FT, trace gravel.
	2	1.0	5.0/5.0				6.0-13.0 FT, (CL) CLAY, some silt; gray with reddish-orange mottling, calcareous nodules; dry, stiff.
		1.8			CL		9.0-10.0 FT, organics.
10							
	3	1.3	5.0/5.0				
		1.2			ML/GM		13.0-14.0 FT, (ML/GM) SILT and GRAVEL; light gray; damp, compact.
		1.9			CH		14.0-18.0 FT, (CH) CLAY; gray, reddish-orange mottling; dry, very stiff.
15							15.0-16.0 FT, organics.
	4	88	4.0/4.0				
		516		18.0-19.0 (1045)			18.0-19.0 FT, SHALE; dark gray, reddish-yellow mottling; dry, hard.
							End of borehole at 19 FT BGS

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Former Fire Fighter Training Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-FFTA-02

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,378 FT
DATE/TIME: 01/07/2014, 1515
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,781 FT
TOTAL DEPTH: 19 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
							0-0.25 FT, Concrete
	1	33.4	5.0/5.0	0.25-2 (1530)	CH		0.25-5.0 FT, (CH) CLAY; black, reddish mottling; moist, soft.
		71.7		2-4 (1545)			
5		4.8					
	2	7.5	5.0/5.0		CH		5.0-10.0 FT, (CH) CLAY; brown; moist, stiff.
		7.5					
10	3	6.0	5.0/5.0		CH		10.0-12.0 FT, (CH) CLAY; black; moist, soft. 11.0 FT, brown.
		4.7			ML		12.0-14.0 FT, (ML) GRAVELLY SILT; brown w/ reddish mottling; soft.
		1.9			CH		14.0-16.0 FT, (CH) CLAY; brown; moist, stiff.
15	4	2.4	4.0/4.0		CL/GC		16.0-17.0 FT, (CL/GC) gravelly SILTY CLAY; brown, calcareous nodules; moist, soft.
					CH		17.0-18.0 FT, (CH) CLAY; brown and gray, yellow and red mottling; dry, hard.
		3.9					18.0-19.0 FT, SHALE; dark gray; hard.
							End of borehole at 19 FT BGS (Refusal)

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Former Fire Fighter Training Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-FFTA-03

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,425 FT
DATE/TIME: 01/07/2014, 1100
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,753 FT
TOTAL DEPTH: 18 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
					ML		0-0.5 FT, FILL (ML) CLAYEY SILT, trace gravel; black; dry, soft.
	1	2.1	5.0/5.0	0-2 (1316)	CL		0.5-2.0 FT, (CL) SILTY CLAY, trace gravel; brown and dark gray, calcareous nodules; dry, firm.
		5.2		2-4 (1317)	CL		2.0-4.5 FT, (CL) SILTY CLAY, trace fine gravel; dark brown; dry, firm.
5		4.0			ML		4.5-10.0 FT, (ML) SANDY SILT; light gray and brownish orange, platy, calcareous nodules; firm. 5.0-6.0 FT, organics.
	2	5.5	5.0/5.0				
		4.5					
10					ML		10.0-10.5 FT, (ML) CLAYEY SILT; black; moist.
	3	5.2	5.0/5.0		GM		10.5-12.0 FT, (GM) SILTY GRAVEL; gray and brown; loose.
		6.7			CL		12.0-18.0 FT, (CL) SILTY CLAY; gray and brown; dry, stiff.
15		77.8		14-16 (1320)			
	4	9.9	3.0/3.0	16-18 (1323)			
							End of borehole at 18 FT BGS (Refusal)

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Former Fire Fighter Training Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-FOP-1A

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,866 FT
DATE/TIME: 01/09/2014, 1400
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,555 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	3.5/4.0	0.0-0.5 (1358)	CL		0-1.5 FT, (CL) CLAY, trace gravel; black and dark brown; dry, firm.
					ML		1.5-2.5 FT, (ML) CLAYEY SILT, trace fine gravel; gray and dark gray; dry, stiff.
					CL		2.5-4.0 FT, (CL) SILTY CLAY, trace fine gravel; black, friable, trace calcareous nodules; dry, hard.
5							End of borehole at 4 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Truck Staging/Admin Bldg
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-FWCS-12A

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,086 FT
DATE/TIME: 01/13/2014, 1100
DRILLER: SCI, Margarito Estrada
EASTING: 2,479,682 FT
TOTAL DEPTH: 12 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
					CL		0-1.0 FT, (CL) CLAY, some interbeds of silty clay; brown, tan mottling; dry, soft-firm.
	1		3.5/4.0	2.0-2.7 (1105)	CH		1.0-8.0 FT, (CH) CLAY; dark brown and black; dry, firm.
5	2	NA	4.0/4.0				6.5-7.0 FT, trace clayey silt, light brown. 6.75-7.25 FT, trace slag fragments, moist.
	3		4.0/4.0		CH		8.0-10.5 FT, (CH) CLAY; black; moist, firm.
10					CL		10.5-12.0 FT, (CL) CLAY, high plasticity, some sandy silt; wet, very soft. 11.75 FT, some gravel.
							End of borehole at 12 FT BGS.
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Stewart Creek Corridor
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-FWFS-5A

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,844 FT
DATE/TIME: 01/13/2014, 0900
DRILLER: SCI, Margarito Estrada
EASTING: 2,479,927 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1		4.0/4.0	0-2 (0912)	CL		0-2.0 FT, (CL) CLAY, some silty clay, trace fine gravel; brown; dry, firm.
				2-4 (0913)	CH		2.0-4.0 FT, (CH) CLAY; brown, trace yellowish mottling; dry, stiff.
5							End of borehole at 4 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Slag Treatment Bldg
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-MB-3

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,808 FT
DATE/TIME: 01/08/2014, 1215
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,461 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (1218)			0-0.75 FT, Concrete.
				0.5-2.0 (1222)	ML		0.75-1.75 FT, (ML) SILT; dark brown; dry, soft.
	1	NA	4.0/4.0	2.0-4.0 (1225)	CH/CL		1.75-4.0 FT, (CH/CL) CLAY and SILTY CLAY; dark brown, layered; dry, firm.
5							End of borehole at 4 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Maintenance Bldg
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-MB-4

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,869 FT
DATE/TIME: 01/08/2014, 1515
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,347 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
							0-0.8 FT, Concrete.
		0.6		0.08-1.3 (1515)	CL		0.8-2.0 FT, (CL) SILTY CLAY; black; moist, stiff.
	1	0.6	4.0/4.0	1.3-2.0 (1518)			
		0.5		2.0-4.0 (1520)	CH		2.0-4.0 FT, (CH) CLAY; black; dry, stiff.
							End of borehole at 4 FT BGS
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Maintenance Bldg
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-MB-5

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,720 FT
DATE/TIME: 01/08/2014, 1300
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,355 FT
TOTAL DEPTH: 20 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
							0-0.5 FT, Concrete.
	1	11.6	0.8/5.0	0-5 (1320)	CL		0.5-4.5 FT, (CL) SILTY CLAY; brown; dry, soft.
					SP		4.5-5.0 FT, (SP) SAND, coarse; light brown; loose.
5	2	76.5	2.8/5.0		CL		5.0-10.0 FT, (CL) SILTY CLAY; dark brown; damp, soft. 5.0 FT, gravel seam.
10	3	42.3	5.0/5.0	10-12 (1335)	CL		10.0-15.0 FT, (CL) CLAY, some silt, trace gravel; dark gray; wet, soft. 11.0 FT, moist.
		18.0					
		63.2					
15	4	60.7	5.0/5.0	14-16 (1345)	ML/CL		15.0-17.0 FT, (ML/CL) SILT and CLAY, some sand and gravel; layered; wet, firm.
					ML		17.0-18.5 FT, (ML) CLAYEY SILT, some gravel; alluvial; dry, firm.
		81.4		18-20 (1420)			18.5-20.0 FT, SHALE; dark gray, reddish brown mottling; dry, hard.

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Maintenance Bldg
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-MB-5

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,720 FT
DATE/TIME: 01/08/2014, 1300
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,355 FT
TOTAL DEPTH: 20 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
							End of borehole at 20 FT BGS
25							
30							
35							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Maintenance Bldg
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-MW-17B

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,077 FT
DATE/TIME: 01/10/2014, 1145
DRILLER: SCI, Margarito Estrada
EASTING: 2,479,603 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (1151)	ML		0-1.0 FT, (ML) CLAYEY SILT; dark brown; dry, stiff.
	1	NA	3.3/4.0		CL		1.0-4.0 FT, (CL) SILTY CLAY; dark gray, reddish mottling, friable; dry, hard.
							End of borehole at 4 FT BGS.
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: NW of Battery Storage Bldg
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-NDA-1A

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,386 FT
DATE/TIME: 01/09/2014, 1000
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,106 FT
TOTAL DEPTH: 5 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	5.0/5.0	2-4 (1015)	CL		0-3.0 FT, (CL) SILTY CLAY, trace fine gravel; brown and dark brown; dry, stiff.
					CL		3.0-5.0 FT, (CL) CLAY, trace gravel; dark brown, dry, stiff.
5							End of borehole at 5 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: North Disposal Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-NT-01

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,698 FT
DATE/TIME: 01/10/2014, 1600
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,314 FT
TOTAL DEPTH: 2 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	2.0 / 2.0	0.0-0.5 (1558) 0.5-2.0 (1559)	CH		0-2.0 FT, (CH) CLAY; dark brown; moist, soft.
							End of borehole at 2 FT BGS
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: North Tributary
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-NT-02

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,697 FT
DATE/TIME: 01/10/2014, 1615
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,580 FT
TOTAL DEPTH: 2 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	2.0 / 2.0	0.0-0.5 (1615)	ML		0-0.5 FT, (ML) CLAYEY SILT; dark brown; damp, soft.
				0.5-2.0 (1616)	CH		0.5-2.0 FT, (CH) CLAY; dark brown and black; dry, stiff-firm.
							End of borehole at 2 FT BGS
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: North Tributary
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-RMSB-5A

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,885 FT
DATE/TIME: 01/13/2014, 1615
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,146 FT
TOTAL DEPTH: 8 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
							0-1.5 FT, Concrete.
					GM/SM		1.5-2.5 FT, FILL (GM/SM) SILTY GRAVEL, fine to coarse, SAND, coarse; brown; wet, loose.
	1		2.3/2.5				2.5-5.75 FT, (CH) CLAY; black; moist, firm.
		NA			CH		
5							5.0 FT, wet, soft.
	2		4.0/4.0	5-7 (1628)	GC		5.75-6.25 FT, (GC) CLAYEY GRAVEL; black; wet, loose.
					CH		6.25-8.0 FT, (CH) CLAY; black; moist, firm.
							End of borehole at 8.0 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Raw Material Storage Bldg
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-RRS-2A

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: N/A
DATE/TIME: 01/10/2014, 1215
DRILLER: SCI, Margarito Estrada
EASTING: N/A
TOTAL DEPTH: 12 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
					GC/ML		0-1.0 FT, (GC/ML) CLAYEY GRAVEL and SILT; battery chip fragments; dry, very stiff.
	1		4.0/4.0		CL		1.0-2.5 FT, (CL) SILTY CLAY, some gravel; light brown, trace organics; dry, very stiff.
					CH		2.5-11.0 FT, (CH) CLAY, trace fine gravel; black; dry, very stiff.
5	2	NA	4.0/4.0				4.0 FT, firm.
	3		4.0/4.0				9.0 FT, very stiff.
10					CH		11.0-12.0 FT, (CH) CLAY; greenish gray; dry, stiff.
							End of borehole at 12 FT BGS
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Battery Breaker Bldg
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-RRS-4A-A

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,058 FT
DATE/TIME: 01/13/2014, 1645
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,186 FT
TOTAL DEPTH: 8 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
							0-1.25 FT, CONCRETE and FILL.
					GP/SP		1.25-1.5 FT, FILL (GP/SP) GRAVEL, fine, and SAND, coarse; wet.
					CH/GC		1.5-2.5 FT, (CH/GC) GRAVELLY CLAY; dark brown; moist, soft-firm.
	1	NA	2.5/2.5	3-4 (1652)	CH		2.5-5.0 FT, (CH) CLAY; dark brown; dry, firm-stiff.
5				4-5 (1653)	GC		5.0-6.0 FT, (GC) CLAYEY GRAVEL; light brown; wet, compact.
	2		4.0/4.0		CL		6.0-8.0 FT, (CL) SILTY CLAY, some gravel; moist, very soft.
							End of borehole at 8.0 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Battery Breaker Bldg
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-SDA-3B

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,606 FT
DATE/TIME: 01/09/2014, 1600
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,328 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (1605)	CL		0-1.0 FT, (CL) SILTY CLAY, some fine gravel; dark brown; dry, firm.
	1	NA	3.0/4.0		CH		1.0-3.0 FT, (CH) CLAY; brown; moist, soft.
					CH		3.0-4.0 FT, (CH) CLAY, some gravel; black; dry, stiff.
							End of borehole at 4 FT BGS
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: South Disposal Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-SDA-4B

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,638 FT
DATE/TIME: 01/10/2014, 0830
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,213 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	3.5/4.0	0.0-0.5 (0841)	CH		0-4.0 FT, (CH) CLAY; brown; moist, soft. 1.0 FT, fine gravel lens (~3 inches).
5							End of borehole at 4 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: South Disposal Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-STB-4A

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,776 FT
DATE/TIME: 01/13/2014, 1600
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,135 FT
TOTAL DEPTH: 5 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
							0-0.75 FT, Concrete.
					GP/SP		0.75-1.0 FT, FILL - (GP/SP) SAND, coarse, and GRAVEL, fine; light brown; wet, loose.
	1	NA	3.0/3.0	2-4 (1607)	CH		1.0-4.5 FT, (CH) CLAY; black; moist, soft-firm.
							4.0 FT, damp, soft.
	2		1.0/1.0		GP		4.5-4.75 FT, (GP) SANDY GRAVEL; black; wet, loose.
5					CH		4.75-5.0 FT, (CH) CLAY; black; dry, stiff.
							End of borehole at 5.0 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Slag Treatment Bldg
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2013-WMU14-1A

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,992 FT
DATE/TIME: 01/09/2014, 1445
DRILLER: SCI, Margarito Estrada
EASTING: 2,479,883 FT
TOTAL DEPTH: 10 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
							0-0.5 FT, Concrete.
					ML		0.5-1.0 FT, (ML) CLAYEY SILT, some sand and gravel; gray; wet, firm.
				0.9-2.0 (1440)	CH		1.0-2.0 FT, (CH) CLAY; dark gray; moist, soft. 1.3-1.75 FT, black staining.
	1		5.0/5.0		CL		2.0-3.5 FT, (CL) CLAY, trace gravel; light gray; moist, stiff.
5		NA					
	2		5.0/5.0	5.0-7.0 (1444)	CH		3.5-10.0 FT, (CH) CLAY; black; dry, soft-firm.
10							End of borehole at 10 FT BGS
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: NOR WMU 6, 14, 16
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF D-11A

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,905 FT
DATE/TIME: 01/09/2014, 1030
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,145 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (1035)	CL		0-0.5 FT, TOPSOIL (CL) SILTY CLAY; dark brown; soft.
	1	NA	2.5/4.0		CH		0.5-4.0 FT, (CH) CLAY; black; dry, firm.
							End of borehole at 4 FT BGS
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: North Tributary Corridor/North Wooded Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF D-12A

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,914 FT
DATE/TIME: 01/09/2014, 1045
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,333 FT
TOTAL DEPTH: 5 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	3.5/5.0	0.0-0.5 (1050)	CH		0-5.0 FT, (CH) CLAY, trace fine gravel; dark brown and black; dry, hard.
5							End of borehole at 5 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: North Tributary Corridor/North Wooded Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF D-13A

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,922 FT
DATE/TIME: 01/09/2014, 1100
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,530 FT
TOTAL DEPTH: 5 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (1104)	CH		0-1.0 FT, (CH) CLAY; dark brown; dry, stiff.
	1	NA	5.0/5.0		CH		1.0-5.0 FT, (CH) CLAY, trace fine gravel; dark gray; dry, stiff.
5							End of borehole at 5 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: North Tributary Corridor/North Wooded Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF E-11C

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,811 FT
DATE/TIME: 01/09/2014, 1015
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,050 FT
TOTAL DEPTH: 5 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (1025)	CH		0-0.5 FT, (CH) CLAY; brown; dry, firm.
	1	NA	5.0/5.0		CH		0.5-5.0 FT, (CH) CLAY, dark brown; dry, stiff.
5							End of borehole at 5 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: North Wooded Area/North Tributary Corridor
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF E-11D

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,709 FT
DATE/TIME: 01/10/2014, 1545
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,121 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (1545)	ML		0-0.25 FT, TOPSOIL (ML) SILT; dark brown; dry, soft.
	1	NA	3.3/4.0		CH		0.25-4.0 FT, (CH) CLAY, trace fine gravel; dark gray; dry, stiff.
							End of borehole at 4 FT BGS
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: North Wooded Area/North Tributary Corridor
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF E-12A

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,758 FT
DATE/TIME: 01/10/2014, 1600
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,294 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	3.0/4.0	0.0-0.5 (1601)	CH		0-4.0 FT, (CH) CLAY; dark brown; moist, soft-firm.
5							End of borehole at 4 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: North Wooded Area/North Tributary Corridor
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF E-13A

DRILLING METHOD: Direct Push
NORTHING: 7,102,771 FT
DATE/TIME: 01/10/2014, 1615
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,548 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	4.0/4.0	0.0-0.5 (1622)	CH		0-2.0 FT, (CH) CLAY; black; dry, stiff.
					CH/GC		2.0-4.0 FT, (CH/GC) GRAVELLY CLAY; dark brown, trace light brown mottling, trace calcareous nodules, trace white crystals; dry, stiff.
5							End of borehole at 4 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: North Wooded Area/North Tributary Corridor
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF E-14A

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,778 FT
DATE/TIME: 01/10/2014, 1630
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,731 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (1630)	ML		0-0.5 FT, (ML) CLAYEY SILT; dark brown and black; moist, soft.
	1	NA	4.0/4.0		CH		0.5-3.5 FT, (CH) CLAY; dark brown; dry, very stiff.
					CH/GC		3.5-4.0 FT, (CH/GC) GRAVELLY CLAY; dark brown and white; dry, stiff.
							End of borehole at 4 FT BGS
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: North Wooded Area/North Tributary Corridor
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF ECO-10A

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,182 FT
DATE/TIME: 01/10/2014, 1445
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,399 FT
TOTAL DEPTH: 1.5 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	1.5 / 1.5	0.0-0.5 (1443)			0-1.5 FT, LIMESTONE; yellowish tan, platy; dry, hard.
							End of borehole at 1.5 FT BGS (Refusal)
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: South Wooded Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF ECO-1A

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,375 FT
DATE/TIME: 01/09/2014, 1545
DRILLER: SCI, Margarito Estrada
EASTING: 2,481,023 FT
TOTAL DEPTH: 2 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	2.0 / 2.0	0.0-0.5 (1546)	CH		0-1.0 FT, (CH) CLAY; dark gray to black; moist, firm.
				0.5-2.0 (1547)	CH		1.0-2.0 FT, (CH) CLAY, trace fine gravel; light brown, reddish yellow mottling; moist, firm.
							End of borehole at 2 FT BGS
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: SE of South Disposal Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF ECO-2A

Golder Associates

DRILLING METHOD: Hand Auger
NORTHING: 7,101,290 FT
DATE/TIME: 01/09/2014, 1545
DRILLER: SCI, Margarito Estrada
EASTING: 2,481,023 FT
TOTAL DEPTH: 2 FT BGS
RIG: Hand Auger
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	2.0 / 2.0	0.0-0.5 (1554)	ML		0-1.0 FT, (ML) CLAYEY SILT, trace gravel; brown; dry, soft.
				0.5-2.0 (1555)	ML		1.0-2.0 FT, (ML) CLAYEY SILT; light brown; dry, soft.
							End of borehole at 2 FT BGS
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: SE of South Disposal Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF ECO-4A

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,109 FT
DATE/TIME: 01/10/2014, 1515
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,847 FT
TOTAL DEPTH: 2 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	2.0 / 2.0	0.0-0.5 (1510)	ML		0-0.25 FT, TOPSOIL - (ML) SILT, trace gravel; brown; dry, soft.
					CH		0.25-1.0 FT, (CH) CLAY, trace fine gravel; dry, very stiff.
				0.5-2.0 (1511)			1.0-2.0 FT, LIMESTONE; yellowish tan, platy; dry, hard.
							End of borehole at 2 FT BGS
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: South Wooded Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF ECO-4B

Golder Associates

DRILLING METHOD: Hand Auger
NORTHING: 7,101,151 FT
DATE/TIME: 01/13/2014, 1345
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,940 FT
TOTAL DEPTH: 2 FT BGS
RIG: Hand Auger
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	2.0 / 2.0	0.0-0.5 (1348) 0.5-2.0 (1349)	ML		0-1.75 FT, (ML) CLAYEY SILT, trace fine gravel; dark brown; dry, soft.
							1.75-2.0 FT, LIMESTONE; yellowish tan; dry, hard.
							End of borehole at 2 FT BGS (Refusal)
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: South Wooded Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF ECO-7C

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,203 FT
DATE/TIME: 01/14/2014, 1515
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,611 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	4.0/4.0	0.0-0.5 (1514)	ML		0-1.0 FT, (ML) CLAYEY SILT; dark brown; moist, firm-stiff. 1.0 FT, sand, silt, and fine gravel lense (~2 inches).
					CH		1.0-2.5 FT, (CH) CLAY, trace fine gravel; brown; dry, firm-stiff.
				2.0-3.0 (1515)	CL		2.5-4.0 FT, (CL) SILTY CLAY; brown and gray; dry, hard.
5							End of borehole at 4 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: South Wooded Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF ECO-7D

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,170 FT
DATE/TIME: 01/14/2014, 1500
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,614 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	3.0/4.0	0.0-0.5 (1505)	ML		0-1.0 FT, (ML) CLAYEY SILT, dark brown; moist, firm-stiff.
					CH		1.0-2.5 FT, (CH) CLAY; brown; moist, soft-firm.
					CL		2.5-4.0 FT, (CL) SILTY CLAY; brown and gray; dry, hard.
5							End of borehole at 4 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: South Wooded Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF ECO-8A

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,537 FT
DATE/TIME: 01/09/2014, 1600
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,457 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (1559)	CH		0-1.0 FT, (CH) CLAY; dark brown, organic matter; dry, stiff. 0.66 FT, gravel lense (~2 inches)
	1	NA	4.0/4.0		CH		1.0-4.0 FT, (CH) CLAY; black; dry, firm.
							End of borehole at 4 FT BGS
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: South Wooded Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF F-5A

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,507 FT
DATE/TIME: 01/10/2014, 1345
DRILLER: SCI, Margarito Estrada
EASTING: 2,478,846 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	3.3/4.0	0.0-0.25 (1349) 1.0 (1350)	CH		0-4.0 FT, (CH) CLAY; dark brown, reddish mottling; dry, stiff.
5							End of borehole at 4 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Lake Parcel
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF F-5B

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,527 FT
DATE/TIME: 01/10/2014, 1345
DRILLER: SCI, Margarito Estrada
EASTING: 2,478,845 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	3.5/4.0	0.0-0.25 (1347) 1.0 (1348)	CH		0-4.0 FT, (CH) CLAY; dark brown, reddish mottling; dry, stiff.
5							End of borehole at 4 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Lake Parcel
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF F-5C

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,506 FT
DATE/TIME: 01/10/2014, 1345
DRILLER: SCI, Margarito Estrada
EASTING: 2,478,867 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	3.5/4.0	0.0-0.25 (1351) 1.0 (1352)	CH		0-4.0 FT, (CH) CLAY; dark brown, reddish mottling; dry, stiff.
5							End of borehole at 4 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Lake Parcel
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF F-5D

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,487 FT
DATE/TIME: 01/10/2014, 1330
DRILLER: SCI, Margarito Estrada
EASTING: 2,478,845 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	3.0/4.0	0.0-0.25 (1338) 1.0 (1339)	CH		0-4.0 FT, (CH) CLAY; dark brown, reddish mottling; dry, stiff.
5							End of borehole at 4 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Lake Parcel
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF F-5E

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,507 FT
DATE/TIME: 01/10/2014, 1345
DRILLER: SCI, Margarito Estrada
EASTING: 2,478,825 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	3.0/4.0	0.0-0.25 (1342) 1.0 (1343)	CH		0-4.0 FT, (CH) CLAY; dark brown, reddish mottling; dry, stiff.
5							End of borehole at 4 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Lake Parcel
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF MW-27A

DRILLING METHOD: Hand Auger
NORTHING: 7,101,708 FT
DATE/TIME: 01/09/2014, 0915
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,181 FT
TOTAL DEPTH: 4 FT BGS
RIG: Hand Auger
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	1.0	4.0/4.0	0-2 (0925)	ML		0-0.5 FT, (ML) CLAYEY SILT; dark brown; dry, firm.
					CL		0.5-2.0 FT, (CL) SILTY CLAY; dark brown; dry, firm.
		0.2		2-4 (0930)	CH		2.0-4.0 FT, (CH) CLAY; dark brown; dry, firm.
5							End of borehole at 4 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: MW-27
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF MW-27B

DRILLING METHOD: Hand Auger
NORTHING: 7,101,702 FT
DATE/TIME: 01/09/2014, 0845
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,230 FT
TOTAL DEPTH: 4 FT BGS
RIG: Hand Auger
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	0.0	4.0/4.0	0-2 (0855)	ML		0-1.5 FT, (ML) CLAYEY SILT; dark brown; dry, soft.
					CL		1.5-2.0 FT, (CL) SILTY CLAY, trace fine gravel; dark brown; dry, firm.
					GP		2.0-2.5 FT, (GP) SANDY GRAVEL; gray; damp, compact.
		0.8		2-4 (0900)	CH		2.5-4.0 FT, (CH) CLAY, trace fine gravel; dark brown; dry, stiff.
5							End of borehole at 4 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: MW-27
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF MW-27C

Golder Associates

DRILLING METHOD: Hand Auger
NORTHING: 7,101,695 FT
DATE/TIME: 01/08/2014, 1615
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,287 FT
TOTAL DEPTH: 2 FT BGS
RIG: Hand Auger
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	0.5	2.0 / 2.0	0-2 (1620)	ML		0-2.0 FT, (ML) CLAYEY SILT; brown; dry, firm.
							End of borehole at 2 FT BGS
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: MW-27
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF MW-27D

Golder Associates

DRILLING METHOD: Hand Auger
NORTHING: 7,101,691 FT
DATE/TIME: 01/08/2014, 1545
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,338 FT
TOTAL DEPTH: 4 FT BGS
RIG: Hand Auger
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
							0-0.5 FT, Concrete.
		0.8		0-2 (1545)	CL/GC		0.5-1.0 FT, (CL/GC) GRAVELLY CLAY, some sand; light brown; wet, soft.
	1		4.0/4.0				1.0-4.0 FT, (CL) CLAY, trace gravel; black; moist, soft.
		0.4		2-4 (1550)	CL		
							End of borehole at 4 FT BGS
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: MW-27
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF MW-27E

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,667 FT
DATE/TIME: 01/13/2014, 0845
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,260 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	4.0 / 4.0	0-1 (0842)	CL		0-1.5 FT, (CL) CLAY, some layered silty clay; brown; slightly moist, soft-firm.
				1-2 (0843)	CH		1.5-4.0 FT, (CH) CLAY, trace fine gravel; brown; dry, firm.
				2-3 (0844)			
							End of borehole at 4 FT BGS
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: MW-27
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF MW-29A

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,747 FT
DATE/TIME: 01/13/2014, 0845
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,032 FT
TOTAL DEPTH: 5 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	4.0 / 4.0	0.0-0.5 (0852)	CL		0-2.0 FT, (CL) CLAY, some layered silty clay; brown; dry, soft-firm.
					CL/GC		2.0-3.0 FT, (CL/GC) gravelly SILTY CLAY; brown; moist, firm.
	2		1.0 / 1.0		CH		3.0-5.0 FT, (CL) CLAY; dark brown; dry, firm. 4.0 FT, soft.
5							End of borehole at 5 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Slag Treatment Bldg
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF MW-30A

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,080 FT
DATE/TIME: 01/09/2014, 1500
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,016 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	3.3/4.0	2-4 (1508)	GP/SP		0-1.0 FT, (GP/SP) SANDY GRAVEL, sub-angular; brown; moist, loose.
					CH		1.0-2.0 FT, (CH) CLAY; dark brown; moist, soft.
					CH		2.0-4.0 FT, (CH) CLAY; black; dry, stiff.
							End of borehole at 4 FT BGS
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Battery Breaker Bldg
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF MW-32

Golder Associates

DRILLING METHOD: HSA
NORTHING: 7,101,921 FT
DATE/TIME: 01/09/2014, 1545
DRILLER: SCI, Dan Spaust
EASTING: 2,479,831 FT
TOTAL DEPTH: 5 FT BGS
RIG: CME-75
SURFACE ELEVATION: 631.37 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
							0.0-0.58 FT, Concrete.
					CH		0.58-1.0 FT, FILL (CH) CLAY; dark gray, reddish yellow mottling; moist, stiff.
					CL		1.0-1.5 FT, FILL (CL) SILTY CLAY, trace fine to coarse, angular gravel; dark gray, reddish yellow mottling; wet, soft.
	1	NA	4.4/4.4		CH		1.5-5.0 FT, (CH) CLAY; dark gray; dry, very stiff. 4.0 FT, damp, stiff.
5							End of borehole at 5 FT BGS Borehole completed with flush-mount monitoring well. See well construction log for well installation and completion information.
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Wastewater Treatment Plant
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF MW-33/2013-FWFS-5B

Golder Associates

DRILLING METHOD: HSA
NORTHING: 7,101,872 FT
DATE/TIME: 01/10/2014, 1530
DRILLER: SCI, Dan Spaust
EASTING: 2,480,021 FT
TOTAL DEPTH: 5 FT BGS
RIG: CME-75
SURFACE ELEVATION: 632.93 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
							0.0-1.17 FT, Concrete, one inch steel at 0.5 FT.
					SP		1.17-1.25 FT, FILL (CL) SILTY CLAY; reddish yellow; wet, soft.
							1.25-1.5 FT, FILL (SP) SAND; brown; wet, loose.
				1-2 (1600)			1.5-5.0 FT, (CH) CLAY; dark gray; damp, firm.
	1	NA	3.8/3.8	2-4 (1602)	CH		2.0 FT, trace coarse gravel, stiff.
				4-5 (1604)			
5							End of borehole at 5 FT BGS Borehole completed with flush-mount monitoring well. See well construction log for well installation and completion information.
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Slag Treatment Bldg
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF MW-34

Golder Associates

DRILLING METHOD: HSA
NORTHING: 7,101,877 FT
DATE/TIME: 01/10/2014, 1030
DRILLER: SCI, Dan Spaust
EASTING: 2,480,097 FT
TOTAL DEPTH: 5 FT BGS
RIG: CME-75
SURFACE ELEVATION: 633.15 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
							0.0-0.7 FT, Concrete.
					CL		0.7-1.0 FT, FILL (CL) SILTY CLAY; reddish yellow; wet, soft.
	1	NA	4.3/4.3		CH		1.0-5.0 FT, (CH) CLAY; dark gray; damp, stiff. 1.75 FT, moist, firm. 2.0 FT, damp, stiff. 4.75 FT, some silt; very moist, firm.
5							End of borehole at 5 FT BGS Borehole completed with flush-mount monitoring well. See well construction log for well installation and completion information.
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Raw Material Storage Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF MW-35

Golder Associates

DRILLING METHOD: HSA
NORTHING: 7,101,736 FT
DATE/TIME: 01/10/2014, 0945
DRILLER: SCI, Dan Spaust
EASTING: 2,480,191 FT
TOTAL DEPTH: 5 FT BGS
RIG: CME-75
SURFACE ELEVATION: 632.82 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
							0.0-1.0 FT, Concrete.
					CL		1.0-1.5 FT, FILL (CL) SILTY CLAY, some gravel; dark gray; very moist, firm.
	1	NA	4.0/4.0	1-3 (1000)	CH		1.5-4.25, (CH) CLAY, trace fine to coarse gravel; dark gray, trace reddish yellow mottling; damp, stiff.
					CH		4.25-5.0 FT, (CH) CLAY, trace silt; dark gray, trace reddish yellow mottling; very moist, firm.
5							End of borehole at 5 FT BGS Borehole completed with flush-mount monitoring well. See well construction log for well installation and completion information.
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Raw Material Storage Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF MW-36

Golder Associates

DRILLING METHOD: HSA
NORTHING: 7,101,815 FT
DATE/TIME: 01/10/2014, 0845
DRILLER: SCI, Dan Spaust
EASTING: 2,480,274 FT
TOTAL DEPTH: 5 FT BGS
RIG: CME-75
SURFACE ELEVATION: 633.86 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
							0.0-0.8 FT, Concrete.
				0-2 (0900)	CL		0.8-1.0 FT, FILL (CL) SILTY CLAY, some gravel; dark gray; very moist, firm.
					CL		1.0-3.25 FT, (CL) SILTY CLAY; dark gray, reddish yellow mottling; damp, soft.
	1	NA	2.8/4.2				2.0 FT, moist, firm.
					CL/SC		3.25-4.0 FT, (CL/SC) SANDY CLAY, trace coarse gravel; dark gray; wet, soft.
					CH		4.0-5.0 FT, (CH) CLAY, trace fine gravel; brown; damp, stiff.
5							End of borehole at 5 FT BGS Borehole completed with flush-mount monitoring well. See well construction log for well installation and completion information.
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Raw Material Storage Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF MW-37

Golder Associates

DRILLING METHOD: HSA
NORTHING: 7,102,342 FT
DATE/TIME: 01/09/2014, 1015
DRILLER: SCI, Dan Spaust
EASTING: 2,479,077 FT
TOTAL DEPTH: 10 FT BGS
RIG: CME-75
SURFACE ELEVATION: 621.20 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	5.0/5.0		CH		0.0-5.5 FT, (CH) CLAY, trace silt; dark brown, yellowish red mottling; damp, stiff.
5	2		5.0/5.0		CH/CL		5.5-8.5 FT, (CL) CLAY, some silt, trace fine gravel; dark brown, reddish yellow mottling; moist, firm. 8.0 FT, some fine to coarse gravel; brown, reddish yellow and gray mottling.
							8.5-9.5 FT, SHALE; dark gray, yellowish red mottling, weathered, friable; damp, stiff.
10							9.5-10.0 FT, SHALE; dark gray; dry, very stiff. End of borehole at 10 FT BGS Borehole completed with flush-mount monitoring well. See well construction log for well installation and completion information.
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Storm Water Retention Pond
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF MW-38

Golder Associates

DRILLING METHOD: HSA
NORTHING: 7,102,173 FT
DATE/TIME: 01/09/2014, 0845
DRILLER: SCI, Dan Spaust
EASTING: 2,479,349 FT
TOTAL DEPTH: 15 FT BGS
RIG: CME-75
SURFACE ELEVATION: 623.50 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1		5.0/5.0		CL		0.0-4.25 FT, (CL) SILTY CLAY; dark brown; damp, stiff.
5	2	NA	3.0/5.0		CH		4.25-11.0 FT, (CH) CLAY, trace silt, trace fine gravel; brown, slight reddish yellow mottling; dry, very stiff.
10	3		5.0/5.0		CL/GC		11.0-12.75 FT, (CL/GC) GRAVELLY CLAY, fine to coarse, trace silt; brown, reddish yellow mottling; moist, firm.
					CH		12.75-14.75 FT, (CH) CLAY, trace fine to coarse gravel; brown, reddish yellow mottling; moist, stiff.
15							14.75-15.0 FT, SHALE; dark gray, yellowish red mottling; dry, very stiff.
							End of borehole at 15 FT BGS Borehole completed with flush-mount monitoring well. See well construction log for well installation and completion information.

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Storm Water Retention Pond
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF MW-39

DRILLING METHOD: HSA
NORTHING: 7,102,473 FT
DATE/TIME: 01/08/2014, 0945
DRILLER: SCI, Dan Spaust
EASTING: 2,479,631 FT
TOTAL DEPTH: 20 FT BGS
RIG: CME-75
SURFACE ELEVATION: 637.26 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	5.0/5.0		CH		0.0-4.5 FT, (CH) CLAY, trace silt, trace coarse rounded gravel, organics; brown, reddish yellow mottling; damp, stiff. 2.0 FT, some coarse rounded gravel, some gray mottling.
5	2		2.5/5.0		CH		4.5-10.0 FT, (CH) CLAY, trace silt, trace fine to coarse gravel; dark brown, reddish yellow mottling, friable; dry, very stiff.
10	3		5.0/5.0		CH		10.0-15.0 FT, (CH) CLAY, trace fine to coarse gravel; reddish yellow, gray mottling; damp, stiff.
15	4		3.0/5.0		CL		15.0-19.5 FT, (CL) SANDY CLAY; reddish yellow, light gray mottling, very moist, very soft.
							19.5-20.0 FT, SHALE; gray, yellow and reddish yellow mottling; dry, very stiff.

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Slag Landfill
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF MW-39

Golder Associates

DRILLING METHOD: HSA
NORTHING: 7,102,473 FT
DATE/TIME: 01/08/2014, 0945
DRILLER: SCI, Dan Spaust
EASTING: 2,479,631 FT
TOTAL DEPTH: 20 FT BGS
RIG: CME-75
SURFACE ELEVATION: 637.26 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
							End of borehole at 20 FT BGS Borehole completed with above ground monitoring well and protective steel casing. See well construction log for well installation and completion information.
25							
30							
35							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Slag Landfill
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF MW-40

DRILLING METHOD: HSA
NORTHING: 7,102,568 FT
DATE/TIME: 01/08/2014, 1115
DRILLER: SCI, Dan Spaust
EASTING: 2,479,900 FT
TOTAL DEPTH: 15 FT BGS
RIG: CME-75
SURFACE ELEVATION: 633.00 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1		0.0*/5.0		CH		0.0-7.0 FT, (CH) CLAY, trace silt, trace fine gravel, organics; brown, reddish yellow mottling; damp, stiff.
5							5.0 FT, some fine to coarse gravel.
	2	NA	5.0/5.0		CH		7.0-10.0 FT, (CH) CLAY, trace fine to coarse gravel; reddish yellow, gray mottling; moist, stiff.
10	3		5.0/5.0		CH		10.0-14.0 FT, (CH) CLAY; gray, yellow, reddish yellow, friable, transitioning to weathered SHALE; damp, stiff to very stiff.
							14.0-15.0 FT, SHALE; gray; dry, very stiff.
15							End of boring at 15 FT BGS Borehole completed with above ground monitoring well and protective steel casing. See well construction log for well installation and completion information. *Hand auger used to collect soil samples for lithology for 0-5.0 FT interval because no material was recovered in the CME-75 bearing head continuous sampler.

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Slag Landfill
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF MW-41

Golder Associates

DRILLING METHOD: HSA
NORTHING: 7,102,693 FT
DATE/TIME: 01/08/2014, 1330
DRILLER: SCI, Dan Spaust
EASTING: 2,480,074 FT
TOTAL DEPTH: 17 FT BGS
RIG: CME-75
SURFACE ELEVATION: 639.14 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1		5.0/5.0	0.0-0.5 (1340) 0.5-2.0 (1345)	CH		0.0-3.0 FT, (CH) CLAY, trace fine angular gravel; dark brown; dry, stiff.
5	2	NA	5.0/5.0		CH		3.0-10.0 FT, (CH) CLAY, trace silt, trace fine angular gravel; dark brown, friable; dry, very stiff. 5.0 FT, some gravel; damp, stiff. 8.0 FT, trace sand; moist.
10	3		1.8/5.0		SC/GC		10.0-11.5 FT, (SC/GC) gravelly CLAYEY SAND; reddish yellow; wet, loose.
					CL/GC		11.5-13.5 FT, (CL/GC) gravelly SANDY CLAY; reddish yellow; wet, firm.
15	4		2.0/2.0		CH		13.5-16.25 FT, (CH) CLAY; reddish yellow, gray mottling; dry, stiff.
							16.25-17.0 FT, SHALE; dark gray; dry, stiff.
							End of borehole at 17 FT BGS Borehole completed with above ground monitoring well and protective steel casing. See well construction log for well installation and completion information.

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: North Tributary
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF MW-42

Golder Associates

DRILLING METHOD: HSA
NORTHING: 7,102,696 FT
DATE/TIME: 01/08/2014, 1530
DRILLER: SCI, Dan Spaust
EASTING: 2,480,712 FT
TOTAL DEPTH: 15 FT BGS
RIG: CME-75
SURFACE ELEVATION: 638.71 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1		4.0/5.0	0.0-0.5 (1540) 0.5-2.0 (1545)	CH		0.0-7.5 FT, (CH) CLAY, trace fine angular gravel, organics; dark brown; dry, stiff. 4.0 FT, friable, damp.
5	2	NA	5.0/5.0		CH		7.5-10.0 FT, (CH) CLAY, trace fine to coarse angular gravel; brown, reddish yellow and gray mottling; moist, stiff.
10	3		5.0/5.0		SC/GC		10.0-11.5 FT, (SC/GC) gravelly CLAYEY SAND; reddish yellow; wet, compact.
					CL/GC		11.5-12.0 FT, (CL/GC) gravelly SANDY CLAY; reddish yellow; wet, soft.
					CH		12.0-14.0 FT, (CH) CLAY; reddish yellow, gray mottling; dry, very stiff.
							14.0-15.0 FT, SHALE; dark gray, reddish yellow mottling; dry, very stiff.
15							End of borehole at 15 FT BGS Borehole completed with above ground monitoring well and protective steel casing. See well construction log for well installation and completion information.

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: North Tributary
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF MW-43

Golder Associates

DRILLING METHOD: HSA
NORTHING: 7,102,422 FT
DATE/TIME: 01/07/2014, 1015
DRILLER: SCI, Dan Spaust
EASTING: 2,480,782 FT
TOTAL DEPTH: 20 FT BGS
RIG: CME-75
SURFACE ELEVATION: 645.87 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	2.1	5.0/5.0	0-2 (1200)	CH		0.0-6.0 FT, (CH) CLAY, trace gravel, trace organic; black; moist, soft.
		37.1		2-4 (1210)			2.0 FT, dry, firm.
		124					
5	2	124	1.3/5.0				5.0 FT, brown.
		185			CL		6.0-10.0 FT, (CL) SILTY CLAY, with fine gravel; gray; dry, stiff.
		492		8-10 (1220)			
10	3	2.8	1.3/5.0		ML		10.0-15.0 FT, (ML) CLAYEY SILT, with fine gravel; brown; dry, firm.
15	4	83.1	2.5/5.0		CH		15.0-17.0 FT, (CH) CLAY; brown and gray, reddish brown mottling; moist, stiff.
		238		17-20 (1230)			17.0-20.0 FT, SHALE; black; dry, stiff.

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Former Fire Fighter Training
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF MW-43

Golder Associates

DRILLING METHOD: HSA
NORTHING: 7,102,422 FT
DATE/TIME: 01/07/2014, 1015
DRILLER: SCI, Dan Spaust
EASTING: 2,480,782 FT
TOTAL DEPTH: 20 FT BGS
RIG: CME-75
SURFACE ELEVATION: 645.87 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
							End of borehole at 20 FT BGS Borehole completed with flush-mount monitoring well. See well construction log for well installation and completion information.
25							
30							
35							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Former Fire Fighter Training
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF MW-44

Golder Associates

DRILLING METHOD: HSA
NORTHING: 7,101,660 FT
DATE/TIME: 01/09/2014, 1230
DRILLER: SCI, Dan Spaust
EASTING: 2,480,550 FT
TOTAL DEPTH: 15 FT BGS
RIG: CME-75
SURFACE ELEVATION: 634.33 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1		4.8/5.0	0.0-0.5 (1245) 0.5-2.0 (1248) 2.0-4.0 (1250)	CH		0.0-5.0 FT, (CH) CLAY, trace fine gravel; dark brown; damp, stiff.
5	2	NA	1.8/5.0		CL		5.0-9.5 FT, (CL) SANDY CLAY, trace fine gravel; brown; very moist, soft.
					CH		9.5-11.0 FT, (CH) CLAY, trace fine gravel; dark brown; damp, stiff.
10	3		5.0/5.0		CL/GC		11.0-13.5 FT, (CL/GC) gravelly CLAY, trace silt; brown, gray and reddish yellow mottling; damp, stiff.
							13.5-14.5 FT, SHALE; dark gray, yellowish red mottling, weathered, friable; dry, stiff.
15							14.5-15.0 FT, SHALE; dark gray; dry, very stiff.
							End of borehole at 15 FT BGS Borehole completed with above ground monitoring well and protective steel casing. See well construction log for well installation and completion information.

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Truck Wash Station
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF MW-45

Golder Associates

DRILLING METHOD: HSA
NORTHING: 7,103,915 FT
DATE/TIME: 01/07/2014, 1415
DRILLER: SCI, Dan Spaust
EASTING: 2,480,303 FT
TOTAL DEPTH: 20 FT BGS
RIG: CME-75
SURFACE ELEVATION: 657.90 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	4.0/5.0	0.0-0.5 (1430) 1-2 (1440) 4-5 (1450)	CH		0.0-12.5 FT, (CH) CLAY, some coarse angular gravel, organics; brown; dry, stiff. 0.5 FT, some fine gravel. 2.0 FT, damp.
5	2		4.0/5.0				8.0 FT, reddish yellow mottling.
10	3		5.0/5.0		CL/GC		10.0 FT, trace coarse gravel. 12.5-15.0 FT, (CL/GC) gravelly SILTY CLAY, coarse; reddish yellow; very moist, soft. 14.0 FT, firm.
15	4		3.0/5.0	15-17 (1510) 17-18 (1520) 18-20 (1530)	CL		15.0-19.9 FT, (SC) SILTY CLAY; reddish yellow, friable; dry, firm.
							19.9-20.0 FT, SHALE; gray.

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Class 2 Landfill
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF MW-45

Golder Associates

DRILLING METHOD: HSA
NORTHING: 7,103,915 FT
DATE/TIME: 01/07/2014, 1415
DRILLER: SCI, Dan Spaust
EASTING: 2,480,303 FT
TOTAL DEPTH: 20 FT BGS
RIG: CME-75
SURFACE ELEVATION: 657.90 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
							End of borehole at 20 FT BGS Borehole completed with above ground monitoring well and protective steel casing. See well construction log for well installation and completion information.
25							
30							
35							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Class 2 Landfill
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF MW-46

Golder Associates

DRILLING METHOD: HSA
NORTHING: 7,101,919 FT
DATE/TIME: 01/09/2014, 1415
DRILLER: SCI, Dan Spaust
EASTING: 2,479,834 FT
TOTAL DEPTH: 20 FT BGS
RIG: CME-75
SURFACE ELEVATION: 631.38 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
							0.0-0.5 FT, Concrete.
					CH		0.5-1.0 FT, FILL (CH) CLAY, some coarse gravel; dark gray, reddish yellow mottling; moist, stiff.
					CL		1.0-1.5 FT, FILL (CL) SILTY CLAY, trace fine to coarse, angular gravel; dark gray, reddish yellow mottling; wet, firm.
	1		4.5/4.5		CH		1.5-7.5 FT, (CH) CLAY; dark gray; dry, very stiff. 3.5 FT, damp, stiff.
5							
	2		5.0/5.0		CL/GC		7.5-8.5 FT, (CL/GC) gravelly CLAY, fine to coarse, some silt; reddish yellow; moist, soft.
					CH		8.5-10.0 FT, (CH) CLAY, trace gravel; reddish yellow; dry, stiff.
10		NA					
	3		5.0/5.0		CL/GC		10.0-15.0 FT, (CL/GC) gravelly CLAY, fine to coarse, trace silt; reddish yellow, gray mottling; dry, stiff.
15							
	4		1.8/5.0				15.0-17.5 FT, SHALE and SAND, fine; reddish yellow and gray, weathered; dry, stiff.
							17.5-20.0 FT, SHALE; dark gray; dry, very stiff.

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Wastewater Treatment Plant
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF MW-46

Golder Associates

DRILLING METHOD: HSA
NORTHING: 7,101,919 FT
DATE/TIME: 01/09/2014, 1415
DRILLER: SCI, Dan Spaust
EASTING: 2,479,834 FT
TOTAL DEPTH: 20 FT BGS
RIG: CME-75
SURFACE ELEVATION: 631.38 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
							End of borehole at 20 FT BGS Borehole completed with flush-mount monitoring well. See well construction log for well installation and completion information.
25							
30							
35							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Wastewater Treatment Plant
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF SCC-10B

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,140 FT
DATE/TIME: 01/13/2014, 1200
DRILLER: SCI, Margarito Estrada
EASTING: 2,479,514 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	3.3/4.0	0.0-0.5 (1204)	CL		0.0-1.0 FT, (CL) CLAY, some silt; black; dry, stiff.
					SM		1.0-2.5 FT, (SM) SILTY SAND; brown; moist, compact.
					CH		2.5-4.0 FT, (CH) CLAY, trace fine gravel; dark gray and black, reddish brown mottling; moist, soft-firm.
5							End of borehole at 4 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Southwest Side of Slag Landfill
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF SCC-5A

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,692 FT
DATE/TIME: 01/10/2014, 0900
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,025 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	4.0/4.0	0.0-0.5 (0859)	CH		0.0-2.5 FT, (CH) CLAY, trace fine gravel; brown; moist, firm.
					CL		2.5-3.25 FT, (CL) SILTY CLAY, trace gravel; brown, layered, friable; stiff.
					CH		3.25-4.0 FT, (CH) CLAY, trace fine gravel; brown; moist, firm.
							End of borehole at 4 FT BGS
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Stewart Creek Corridor
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF SCC-5B

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,661 FT
DATE/TIME: 01/10/2014, 0845
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,068 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (0851)	CH		0.0-0.3 FT, TOPSOIL - (CH) CLAY; brown; damp, soft.
					GP/SP		0.3-0.75 FT, (GP/SP) SANDY GRAVEL; brown; damp, loose.
	1	NA	3.0/4.0		CH		0.75-4.0 FT, (CH) CLAY; dark brown; moist, firm.
							End of borehole at 4 FT BGS
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Stewart Creek Corridor
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF SRB-VS-11A

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,205 FT
DATE/TIME: 01/10/2014, 1415
DRILLER: SCI, Margarito Estrada
EASTING: 2,479,919 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (1416)	CL		0.0-1.0 FT, (CL) SILTY CLAY; dark brown; moist, firm-stiff.
	1	NA	3.8/4.0		CH		1.0-3.5 FT, (CH) CLAY, trace fine gravel; reddish brown, platy, friable; dry, very stiff.
					GP/SP		3.5-4.0 FT, (GP/SP) SANDY GRAVEL; light brown; dry, loose.
							End of borehole at 4 FT BGS
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Shooting Range Berm & S. Berm
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF SRB-VS-9E

DRILLING METHOD: Direct Push
NORTHING: 7,101,364 FT
DATE/TIME: 01/10/2014, 1400
DRILLER: SCI, Margarito Estrada
EASTING: 2,479,894 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	4.0/4.0	0.0-0.5 (1408)	CH		0.0-2.0 FT, (CH) CLAY; gray and brown; moist, soft-firm.
					CH		2.0-3.0 FT, (CH) CLAY; brown; dry, very stiff.
							3.0-4.0 FT, SHALE and CLAY; gray and reddish brown, yellow mottling, friable; dry, hard.
							End of borehole at 4 FT BGS
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Shooting Range Berm & S. Berm
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2014-AD-03A

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,762 FT
DATE/TIME: 04/04/2014, 1215
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,926 FT
TOTAL DEPTH: 8 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: 636 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
							0-0.5 FT, Concrete
	1	N/A	4.0/4.0	2-4 (1244)	ML		0.5-2.0 FT, (ML) CLAYEY SILT; dark brown/black; dry, firm.
					CH		2.0-4.0 FT, (CH) CLAY; dark brown/black; dry, firm.
5	2		4.0/4.0	4-6 (1245) 6-8 (1246)	CL		4.0-6.0 FT, (CL) SILTY CLAY; dark brown/black; dry, firm. 6.0 FT, moist.
							End of borehole at 8 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Administrative Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2014-AD-06

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,642 FT
DATE/TIME: 04/04/2014, 1300
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,942 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: 636 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
							0-0.5 FT, Concrete
				0.5-1 (1309)	CL		0.5-1.0 FT, (CL) SILTY CLAY, trace gravel; dark brown/black; dry, soft to firm.
	1	N/A	3.0/4.0	1-2.5 (1310)	CL		1.0-4.0 FT, (CL) SILTY CLAY; dark brown/black; dry, soft to firm.
				2.5-4 (1311)			
							End of borehole at 4 FT BGS
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Administrative Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2014-C2L-06A

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,103,401 FT
DATE/TIME: 03/31/2014, 0845
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,137 FT
TOTAL DEPTH: 5 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: 650 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	N/A	3.8/5.0	0.0-0.5 (0847)	CL		0.0-1.5 FT, (CL) CLAY, some silt, trace gravel; brown, trace white calcareous nodules; dry, firm-stiff.
				0.5-2.0 (0848)	CH		1.5-5.0 FT, (CH) CLAY; dark brown; dry, firm.
				2.0-4.0 (0849)			
5							End of borehole at 5 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Class 2 Landfill
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2014-C2L-06B

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,103,303 FT
DATE/TIME: 03/31/2014, 0900
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,058 FT
TOTAL DEPTH: 5 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: 659 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	N/A	3.0/5.0	0.0-0.5 (0909)	GP/SP		0.0-2.0 FT, (GP/SP) GRAVELLY SAND; light brown and gray; dry, loose.
				0.5-2.0 (0910)			
				2.0-4.0 (0911)	CH		2.0-4.0 FT, (CH) CLAY; dark brown and black; dry, firm.
							4.0-5.0 FT, Not Logged.
5							End of borehole at 5 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Class 2 Landfill
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2014-C2L-06C

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,103,214 FT
DATE/TIME: 03/31/2014, 0930
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,124 FT
TOTAL DEPTH: 5 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: 650 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	N/A	4.5/5.0	0.0-0.5 (0930) 0.5-2.0 (0931)	CL		0.0-3.0 FT, (CL) SILTY CLAY, some gravel; brown, reddish yellow mottling, trace white calcareous nodules, trace carbon nodules; dry, firm.
				2.0-4.0 (0932)	CL		3.0-4.0 FT, (CL) CLAY, some silt and gravel; brown, reddish yellow mottling, trace white calcareous nodules, trace carbon nodules; dry, firm.
							4.0-5.0 FT, Not Logged.
5							End of borehole at 5 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Class 2 Landfill
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2014-C2L-CO1A

Golder Associates

DRILLING METHOD: Hand Auger
NORTHING: 7,103,242 FT
DATE/TIME: 04/04/2014, 1330
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,193 FT
TOTAL DEPTH: 1 FT BGS
RIG: Hand Auger
SURFACE ELEVATION: 656 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	N/A	1.0 / 1.0	0-1 (1325)	CL		0-1.0 FT, (CL) SILTY CLAY, trace fine gravel; light brown/orange; dry, soft to firm.
							End of borehole at 1 FT BGS
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Class 2 Landfill
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2014-C2L-CO1B

Golder Associates

DRILLING METHOD: Hand Auger
NORTHING: 7,103,200 FT
DATE/TIME: 04/04/2014, 1345
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,225 FT
TOTAL DEPTH: 1 FT BGS
RIG: Hand Auger
SURFACE ELEVATION: 656 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	N/A	1.0 / 1.0	0-1 (1338)	CL		0-1.0 FT, (CL) SILTY CLAY, trace fine gravel; light brown/orange; dry, soft to firm.
							End of borehole at 1 FT BGS
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Class 2 Landfill
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2014-C2L-CO1C

Golder Associates

DRILLING METHOD: Hand Auger
NORTHING: 7,103,137 FT
DATE/TIME: 04/04/2014, 1330
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,206 FT
TOTAL DEPTH: 1 FT BGS
RIG: Hand Auger
SURFACE ELEVATION: 655 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	N/A	1.0 / 1.0	0-1 (1333)	CL		0-1.0 FT, (CL) SILTY CLAY, trace fine gravel; light brown/orange; dry, soft to firm.
							End of borehole at 1 FT BGS
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Class 2 Landfill
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2014-CUFT-15

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,943 FT
DATE/TIME: 04/04/2014, 1130
DRILLER: SCI, Margarito Estrada
EASTING: 2,478,859 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: 627 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0-0.5 (1130)	CL		0-1.0 FT, (CL) SILTY CLAY, trace gravel; dark brown/black, battery chips present; dry, soft to firm.
	1	N/A	3.3/4.0	0.5-2 (1131)	CL		1.0-4.0 FT, (CL) CLAY, some silt; dark brown/black, red mottling; dry, firm.
				2-4 (1132)			
5							End of borehole at 4 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Crystallizer Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2014-CUFT-16

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,951 FT
DATE/TIME: 04/04/2014, 1145
DRILLER: SCI, Margarito Estrada
EASTING: 2,478,764 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: 625 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0-0.5 (1145)	CL		0-1.0 FT, (CL) SILTY CLAY, trace gravel; dark brown/black, battery chips present; dry, soft to firm.
	1	N/A	3.0/4.0	0.5-2 (1146)	CL		1.0-4.0 FT, (CL) SILTY CLAY; dark brown/black; dry, firm.
				2-4 (1147)			
5							End of borehole at 4 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Crystallizer Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2014-CUFT-17

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,984 FT
DATE/TIME: 04/04/2014, 1200
DRILLER: SCI, Margarito Estrada
EASTING: 2,478,621 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: 626 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	N/A	3.8/4.0	0-0.5 (1200)	ML		0-1.0 FT, (ML) CLAYEY SILT, trace gravel; dark brown/black; dry, soft.
				0.5-2 (1201)	CL		1.0-4.0 FT, (CL) SILTY CLAY; dark brown/black; dry, soft to firm.
				2-3 (1202)			
5							End of borehole at 4 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Crystallizer Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2014-CUFT-18

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,940 FT
DATE/TIME: 04/04/2014, 1100
DRILLER: SCI, Margarito Estrada
EASTING: 2,479,079 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: 630 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	N/A	4.0/4.0	0-0.5 (1113)	CL		0-1.0 FT, (CL) CLAY, some silt, trace gravel; dark brown/black; dry, firm.
				0.5-2 (1114)	CL		1.0-4.0 FT, (CL) SILTY CLAY; dark brown/black, red mottling; dry, soft to firm.
				2-4 (1115)			
5							End of borehole at 4 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Crystallizer Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2014-CUFT-5B-A

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,909 FT
DATE/TIME: 04/04/2014, 1045
DRILLER: SCI, Margarito Estrada
EASTING: 2,479,204 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: 628 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0-0.5 (1054)	CL		0-1.0 FT, (CL) SILTY CLAY; dark brown/black; dry, soft to firm.
	1	N/A	3.3/4.0	0.5-2 (1055)	CH		1.0-4.0 FT, (CH) CLAY; dark brown/black; dry, soft to firm.
				2-4 (1056)			
5							End of borehole at 4 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Crystallizer Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2014-FFTA-04

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,336 FT
DATE/TIME: 03/31/2014, 1400
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,847 FT
TOTAL DEPTH: 5.5 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: 648 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
							0.0-0.5 FT, Concrete
	1	N/A	5.0/5.0	0.5-1.0 (1410) 1.0-2.0 (1411) 2.0-4.0 (1412)	CH		0.5-5.5 FT, (CH) CLAY; black; dry, stiff-hard. 3.0 FT, dark gray
5							
							End of borehole at 5.5 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Former Fire Fighter Training Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2014-FFTA-05

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,439 FT
DATE/TIME: 03/31/2014, 1345
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,779 FT
TOTAL DEPTH: 5 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: 647 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	N/A	5.0/5.0	0.0-0.5 (1345) 0.5-2.0 (1346) 2.0-4.0 (1347)	CL		0.0-3.5 FT, (CL) CLAY, some silt, trace fine gravel; dark gray and black; dry, hard.
					CL		3.5-4.0 FT, (CL) CLAY, some silt, some sand, some fine gravel; dry, very stiff.
							4.0-5.0 FT, Not Logged.
5							End of borehole at 5 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Former Fire Fighter Training Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2014-FFTA-06

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,418 FT
DATE/TIME: 04/01/2014, 1145
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,618 FT
TOTAL DEPTH: 14 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: 643 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	4.2	3.0/4.0	0.0-0.5 (1210)	CL		0.0-1.0 FT, (CL) SILTY CLAY, trace gravel; black; dry, hard.
		5.4		0.5-2.0 (1211)	CH		1.0-3.25 FT, (CH) CLAY, trace gravel; brown and gray; dry, firm.
		40.2		2.0-4.0 (1212)	CH		3.25-4.5 FT, (CH) CLAY, black and gray; dry, soft. 3.25 FT, some sandy silt and gravel for 0.25 FT.
5	2	4.6	4.0/4.0		CL		4.5-8.0 FT, (CL) sandy SILTY CLAY; gray and brown; damp, soft-firm.
		4.8					
10	3	9.0	1.5/4.0		CH		8.0-13.5 FT, (CH) CLAY; light brown and gray; damp, soft. 12.0 FT, some organic material; black.
	4	4.1	2.0/2.0				13.5 FT, some organic material; black.
							13.5-14.0 FT, SHALE, some clay; dry, hard.
15							End of borehole at 14 FT BGS (Refusal)

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: North of North Disposal Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2014-FFTA-07

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,435 FT
DATE/TIME: 04/01/2014, 1030
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,573 FT
TOTAL DEPTH: 12 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: 643 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	7.1	2.5/4.0	0.0-0.5 (1055)	CL		0.0-1.0 FT, (CL) SILTY CLAY, some organic material; dark brown and black; dry, stiff-hard.
		7.1		0.5-2.0 (1056)	ML/SP		1.0-2.0 FT, (ML/SP) SAND and SILT, some gravel; brown; dry, loose.
		5.5		2.0-4.0 (1057)	CH		2.0-6.0 FT, (CH) CLAY, trace silt and gravel; gray and brown, reddish mottling, white calcareous nodules; dry, stiff.
5	2	5.6	N/A/4.0				
		5.7			CH		6.0-8.0 FT, (CH) CLAY; gray and reddish brown; moist, stiff-hard. 8.0 FT, platy.
	3	10.6	N/A/4.0		ML/GP		8.0-12.0 FT (ML/GP) CLAYEY SILT and GRAVEL, some sand; gray, reddish mottling, platy, friable; dry, stiff.
10		4.8					12.0 FT, LIMESTONE.
							End of borehole at 12 FT BGS (Refusal)
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: North of North Disposal Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2014-FFTA-08

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,462 FT
DATE/TIME: 04/01/2014, 1100
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,620 FT
TOTAL DEPTH: 15 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: 643 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	4.7	3.5/4.0	0.0-0.5 (1132)	ML		0.0-0.5 FT, (ML) CLAYEY SILT, some gravel and organic material; brown; dry, hard.
		6.3		0.5-2.0 (1133)	CL		0.5-2.25 FT, (CL) SILTY CLAY, trace gravel; brown and gray; dry, stiff-hard.
		6.1		2.0-4.0 (1134)	SM		2.25-3.0 FT, (SM) SILTY SAND; brown; moist, compact. 2.25 FT, organic material for 0.25 FT. 2.75 FT, coarse gravel for 0.25 FT.
					CL/SP		3.0-5.5 FT, (CL/SP) SILTY CLAY and SAND; gray, platy, friable; damp, firm. 4.0 FT, trace sand.
5	2	4.1	4.0/4.0		CL		5.5-9.0 FT, (CL) SILTY CLAY, trace gravel; gray, reddish mottling; damp, firm. 8.5 FT, SANDY GRAVEL for 0.25 FT.
		4.9					
	3	5.8	4.0/4.0		CH		9.0-14.5 FT, (CH) CLAY and SHALE; gray, reddish yellow mottling; damp, hard. 13.25 FT, SAND for 0.25 FT, brown and gray; dry.
10		4.5					
	4	4.1	3.0/3.0				
							14.5-15.0 FT, SHALE; dark gray, yellowish mottling; dry, hard.
15							End of borehole at 15 FT BGS (Refusal)

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: North of North Disposal Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2014-NDA-7

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,403 FT
DATE/TIME: 04/01/2014, 0930
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,551 FT
TOTAL DEPTH: 15 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: 646 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	9.0 10.3 18.8	4.0/4.0	0.0-0.5 (1001) 0.5-2.0 (1002) 2.0-4.0 (1003)	CH		0.0-4.0 FT, (CH) CLAY; dark brown and black; dry, very stiff. 2.0 FT, trace gravel; brown, trace white calcareous nodules.
5	2	10.3 7.1	4.0/4.0		CL		4.0-7.0 FT, (CL) SILTY CLAY, trace sand; gray, reddish yellow mottling; dry, hard.
					ML		7.0-9.0 FT, (ML) CLAYEY SILT, some sand and gravel; gray and brown, friable, platy; damp, hard. 9.0 FT, coarse gravel for 0.25 FT.
10	3	16.7 11.2	4.0/4.0		CL		9.0-10.5 FT, (CL) SILTY CLAY, some sand and gravel; gray and brown, friable, platy; damp, hard.
					CH		10.5-11.5 FT, (CH) CLAY; red and gray, yellowish mottling; damp, stiff-hard.
	4	17.3	3.0/3.0		CH		11.5-14.5 FT, (CH) CLAY and SHALE; gray, reddish yellow mottling; damp, stiff-hard.
15							14.5-15.0 FT, SHALE; dark gray; dry, very hard. End of borehole at 15 FT BGS (Refusal)

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: North Disposal Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2014-NDA-8

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,410 FT
DATE/TIME: 04/01/2014, 1430
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,359 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	N/A	4.0/4.0	0.0-0.5 (1446)	CH		0.0-1.75 FT, (CH) CLAY; dark brown; dry, soft-firm.
				0.5-2.0 (1447)	GC		1.75-2.25 FT, (GC) CLAYEY GRAVEL, coarse; gray and brown; dry, compact.
				2.0-4.0 (1448)	CH		2.25-4.0 FT, (CH) CLAY; brown and gray, reddish mottling; moist, stiff. 3.75 FT, some gravel.
							End of borehole at 4 FT BGS
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: North Disposal Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2014-NDA-9

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,398 FT
DATE/TIME: 04/01/2014, 1400
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,108 FT
TOTAL DEPTH: 4 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: 639 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	N/A	3.0/4.0	0.0-0.5 (1415) 0.5-2.0 (1416) 2.0-4.0 (1417)	CH		0.0-4.0 FT, (CH) CLAY; dark brown and black; dry, soft-firm. 2.5 FT, trace gravel.
							End of borehole at 4 FT BGS
5							
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: North Disposal Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2014-NT-3

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,635 FT
DATE/TIME: 03/31/2014, 1045
DRILLER: SCI, Margarito Estrada
EASTING: 2,479,788 FT
TOTAL DEPTH: 5 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: 636 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	N/A	3.0/5.0	0.0-0.5 (1048) 0.5-2.0 (1049) 2.0-4.0 (1050)	CL		0.0-4.0 FT, (CL) CLAY, some silt, trace fine gravel; dark brown; dry, firm-stiff.
							4.0-5.0 FT, Not Logged.
5							End of borehole at 5 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: North Tributary
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2014-NT-4

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,580 FT
DATE/TIME: 03/31/2014, 1100
DRILLER: SCI, Margarito Estrada
EASTING: 2,479,519 FT
TOTAL DEPTH: 5 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: 639 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (1104)	CL		0.0-1.0 FT, (CL) CLAY, some silt; dark brown; dry, stiff-hard.
	1	N/A	4.0/5.0	0.5-2.0 (1105)	CL		1.0-4.0 FT, (CL) SILTY CLAY, some fine gravel; brown, reddish yellow mottling; dry, stiff-hard. 3.5 FT, trace calcareous nodules.
				2.0-4.0 (1106)			4.0-5.0 FT, Not Logged.
5							End of borehole at 5 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: North Tributary
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2014-SDA-6

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,659 FT
DATE/TIME: 03/31/2014, 1445
DRILLER: SCI, Margarito Estrada
EASTING: 2,479,999 FT
TOTAL DEPTH: 5 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: 636 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	N/A	4.8/5.0	0.0-0.5 (1451)	ML		0.0-1.0 FT, (ML) CLAYEY SILT, some gravel, trace organic material; dark brown; dry, hard.
				0.5-2.0 (1452)	CH		1.0-2.75 FT, (CH) CLAY; black; dry, soft-firm.
				2.0-4.0 (1453)	CH		2.75-4.0 FT, (CH) CLAY; gray and brown, reddish yellow mottling; damp, hard.
							4.0-5.0 FT, Not Logged.
5							End of borehole at 5 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: South Disposal Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2014-SDA-7

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,210 FT
DATE/TIME: 03/31/2014, 1530
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,015 FT
TOTAL DEPTH: 5 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: 676 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (1535)	CH		0.0-0.25 FT, (CH) CLAY; black; dry, hard.
					GP/ML		0.25-1.0 FT, (GP/ML) SANDY GRAVEL and SILT; gray and brown; dry, loose.
				0.5-2.0 (1536)			1.0-4.0 FT, (CL) SILTY CLAY; brown, platy, friable; dry, hard.
	1	N/A	5.0/5.0	2.0-4.0 (1537)	CL		
							4.0-5.0 FT, Not Logged.
5							End of borehole at 5 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: South Disposal Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2014-SL-5

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,602 FT
DATE/TIME: 03/31/2014, 1115
DRILLER: SCI, Margarito Estrada
EASTING: 2,479,957 FT
TOTAL DEPTH: 5 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: 634 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	N/A	3.5/5.0	0.0-0.5 (1122)	ML		0.0-1.0 FT, (ML) CLAYEY SILT; dark brown; dry, soft-firm.
				0.5-2.0 (1123)	ML		1.0-2.25 FT, (ML) SANDY SILT, some clay, some fine gravel; brown, reddish yellow mottling; dry, firm.
				2.0-4.0 (1124)	CH		2.25-4.0 FT, (CH) CLAY, some fine gravel; gray, reddish yellow mottling, trace carbon nodules; damp, soft-firm.
							4.0-5.0 FT, Not Logged.
5							End of borehole at 5 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Slag Landfill
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2014-SL-6

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,477 FT
DATE/TIME: 03/31/2014, 1145
DRILLER: SCI, Margarito Estrada
EASTING: 2,479,401 FT
TOTAL DEPTH: 5 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: 632 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	N/A	3.8/5.0	0.0-0.5 (1149)	CL		0.0-1.0 FT, (CL) SILTY CLAY, trace fine gravel; dark brown, reddish yellow mottling; dry, stiff.
				0.5-2.0 (1150)	CH		1.0-2.75 FT, (CH) CLAY, trace gravel; brown; dry, soft-firm.
				2.0-4.0 (1151)	ML/CH		2.75-4.0 FT, (ML/CH) GRAVELLY SILT and CLAY, some sand; brown, reddish yellow mottling, trace calcareous nodules; moist, firm. 3.5 FT, GRAVELLY SAND for 0.25 FT.
							4.0-5.0 FT, Not Logged.
5							End of borehole at 5 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Slag Landfill
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2014-SL-7

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,412 FT
DATE/TIME: 03/31/2014, 1200
DRILLER: SCI, Margarito Estrada
EASTING: 2,479,287 FT
TOTAL DEPTH: 5 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: 637 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	N/A	4.0/5.0	0.0-0.5 (1210) 0.5-2.0 (1211) 2.0-4.0 (1212)	ML		0.0-0.5 FT, TOPSOIL (ML) SILT; dark brown; dry, stiff.
					CH		0.5-4.0 FT, (CH) CLAY; dark brown and black; dry, very stiff-hard.
							4.0-5.0 FT, Not Logged.
5							End of borehole at 5 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Slag Landfill
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF 2014-TS-3

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,166 FT
DATE/TIME: 03/31/2014, 1415
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,979 FT
TOTAL DEPTH: 5 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: 650 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	N/A	4.8/5.0	0.0-0.5 (1424)	CH		0.0-2.25 FT, (CH) CLAY, trace fine gravel; black; dry, stiff.
				0.5-2.0 (1425)			
				2.0-4.0 (1426)	CH		2.25-4.0 FT, (CH) CLAY, trace silt, trace fine gravel; dark gray; dry, hard.
							4.0-5.0 FT, Not Logged.
5							End of borehole at 5 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: East of Oxide Bldg
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF B3RA

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,497 FT
DATE/TIME: 03/31/2014, 1615
DRILLER: SCI, Margarito Estrada
EASTING: 2,479,989 FT
TOTAL DEPTH: 5 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: 653 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	N/A	4.3/5.0	0.0-0.5 (1614)	CL		0.0-2.5 FT, (CL) CLAY, some silt, trace gravel; dark brown and black; dry, firm-stiff.
				0.5-2.0 (1615)			
				2.0-4.0 (1616)	CH		2.5-4.0 FT, (CH) CLAY; brown; dry, soft-firm.
							4.0-5.0 FT, Not Logged.
5							End of borehole at 5 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: West of South Disposal Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF D-11B

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,980 FT
DATE/TIME: 03/31/2014, 0945
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,129 FT
TOTAL DEPTH: 5 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: 644 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	N/A	4.0/5.0	0.0-0.5 (0950) 0.5-2.0 (0951)	CL		0.0-3.0 FT, (CL) CLAY, some silt, trace fine gravel; dark brown; dry, firm.
				2.0-4.0 (0952)	CH		3.0-4.0 FT, (CH) CLAY, trace fine gravel; brown and dark brown; dry, stiff-hard.
							4.0-5.0 FT, Not Logged.
5							End of borehole at 5 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: North Tributary Corridor and North Wooded Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF E-11C-A

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,807 FT
DATE/TIME: 03/31/2014, 1000
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,052 FT
TOTAL DEPTH: 6 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: 641 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	N/A	4.8/5.0	0.5-2.0 (1009) 2.0-4.0 (1010)	CH		0.0-4.0 FT, (CH) CLAY, trace silt; dark brown; dry, firm-stiff.
5	2	N/A	1.0/1.0	4.0-6.0 (1011)	CH		4.0-6.0 FT, (CH) CLAY, trace fine gravel; dry, hard.
10							End of borehole at 6 FT BGS
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: North Tributary Corridor and North Wooded Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF E-11E

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,102,720 FT
DATE/TIME: 03/31/2014, 1030
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,119 FT
TOTAL DEPTH: 5 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: 640 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	N/A	3.5/5.0	0.0-0.5 (1031) 0.5-2.0 (1032) 2.0-4.0 (1033)	ML		0.0-0.25 FT, TOPSOIL (ML) SILT; dark brown; moist, soft.
					CH		0.25-4.0 FT, (CH) CLAY, trace fine gravel; dark gray and brown; dry, stiff-hard.
							4.0-5.0 FT, Not Logged.
5							End of borehole at 5 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: North Tributary Corridor and North Wooded Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF ECO-8B

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,601 FT
DATE/TIME: 03/31/2014, 1630
DRILLER: SCI, Margarito Estrada
EASTING: 2,480,466 FT
TOTAL DEPTH: 5 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: 634 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	N/A	4.3/5.0	0.0-0.5 (1639) 0.5-2.0 (1640) 2.0-4.0 (1641)	ML		0.0-0.5 FT, (ML) CLAYEY SILT, some organic material; dark brown; dry, firm.
					CL		0.5-4.0 FT, (CL) CLAY, some gravel; dark brown and black; dry, firm.
							4.0-5.0 FT, Not Logged.
5							End of borehole at 5 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: South Wooded Area
REVIEWED BY: JW

This log should not be used separately from the original report.

LOG OF SRB-VS-11B

Golder Associates

DRILLING METHOD: Direct Push
NORTHING: 7,101,204 FT
DATE/TIME: 03/31/2014, 1545
DRILLER: SCI, Margarito Estrada
EASTING: 2,479,918 FT
TOTAL DEPTH: 5 FT BGS
RIG: Geoprobe
SURFACE ELEVATION: 683 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	N/A	4.5/5.0	0.5-2.0 (1546) 2.0-4.0 (1547)	ML		0.0-4.0 FT, (ML) CLAYEY SILT; dark gray, platy, friable; dry, hard. 1.5 FT, brown, white calcareous nodules.
							4.0-5.0 FT, Not Logged.
5							End of borehole at 5 FT BGS
10							
15							

PROJECT No: 130-2086
COMPILED BY: BEF
PROJECT: Exide Frisco
CHECKED BY: JDJ
LOCATION: Shooting Range Berm & South Berm
REVIEWED BY: JW

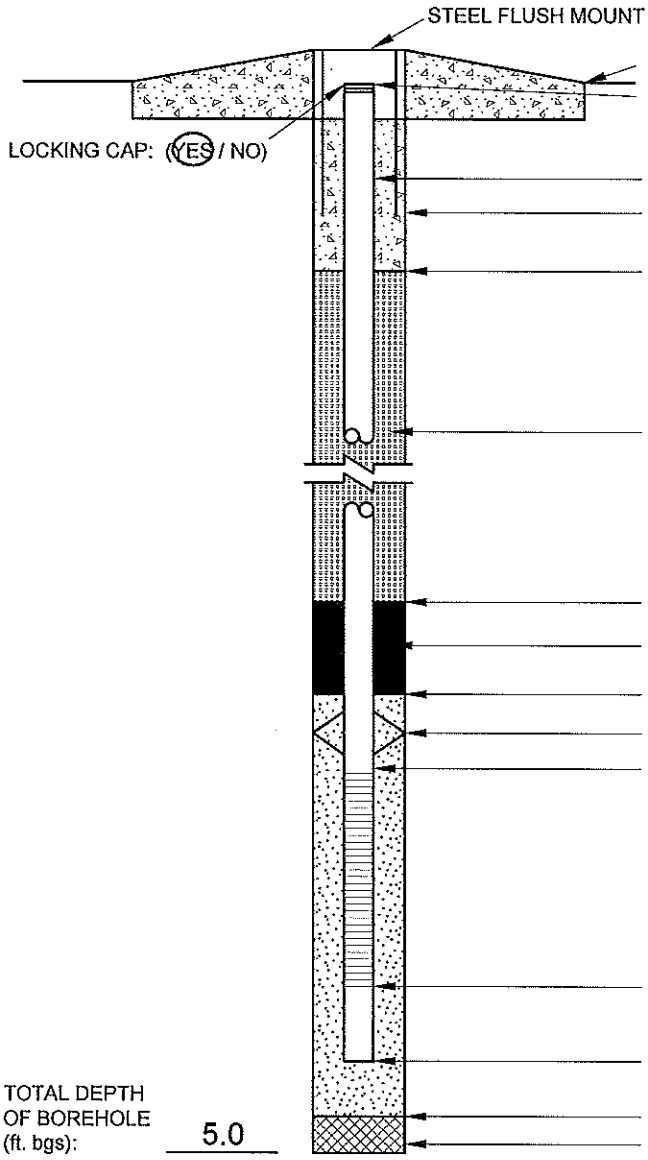
This log should not be used separately from the original report.

Golder Associates

FLUSH-MOUNT MONITORING WELL CONSTRUCTION LOG

MW-32

PROJECT NAME: Exide Frisco		PROJECT NUMBER: 130-2086
SITE NAME: Former Exide Recycling Facility		LOCATION: Frisco, Texas
CLIENT: Exide Technologies		SURFACE ELEVATION: 631.21 FT AMSL
GEOLOGIST: RMS	NORTHING: 7101921.30 FT	EASTING: 2479831.17 FT
DRILLER: Dan Spaust	STATIC WATER LEVEL: 4.16 FT BTOC	COMPLETION DATE: 1/14/2014
DRILLING COMPANY: SCI		DRILLING METHODS: HSA



GROUND SURFACE ELEVATION: 631.37 FT AMSL
TOP OF CASING ELEVATION: 630.96 FT AMSL
DIAMETER OF RISER PIPE (in.): 2.0
DIAMETER OF BOREHOLE (in.): 8.25
CONCRETE SEAL DEPTH (ft. bgs): 0.5
TYPE AND AMOUNT OF ANNULAR SEAL: N/A
TOP OF BENTONITE SEAL DEPTH (ft. bgs): 0.5
TYPE AND AMOUNT OF BENTONITE SEAL: Bent chips (~20 lbs)
TOP OF SAND PACK DEPTH (ft. bgs): 1.5
CENTRALIZER (yes / (no)) - TYPE: N/A
TOP OF SCREEN DEPTH (ft. bgs): 2.5
TYPE OF SCREEN: SCH 40 PVC slotted
SCREEN SLOT SIZE (in.): 0.010
SIZE OF SAND PACK: 20/40
AMOUNT OF SAND: 75 lbs
BOTTOM OF SCREEN DEPTH (ft. bgs): 5.0
BOTTOM OF WELL DEPTH (ft. bgs): 5.0
BOTTOM OF FILTER PACK (ft. bgs): 5.0
TYPE AND AMOUNT OF BACKFILL: N/A

ADDITIONAL NOTES: Static water level collected 01/21/2014.

CHECKED BY: JDJ/TRM
DATE CHECKED: 01/28/14; 5/12/14

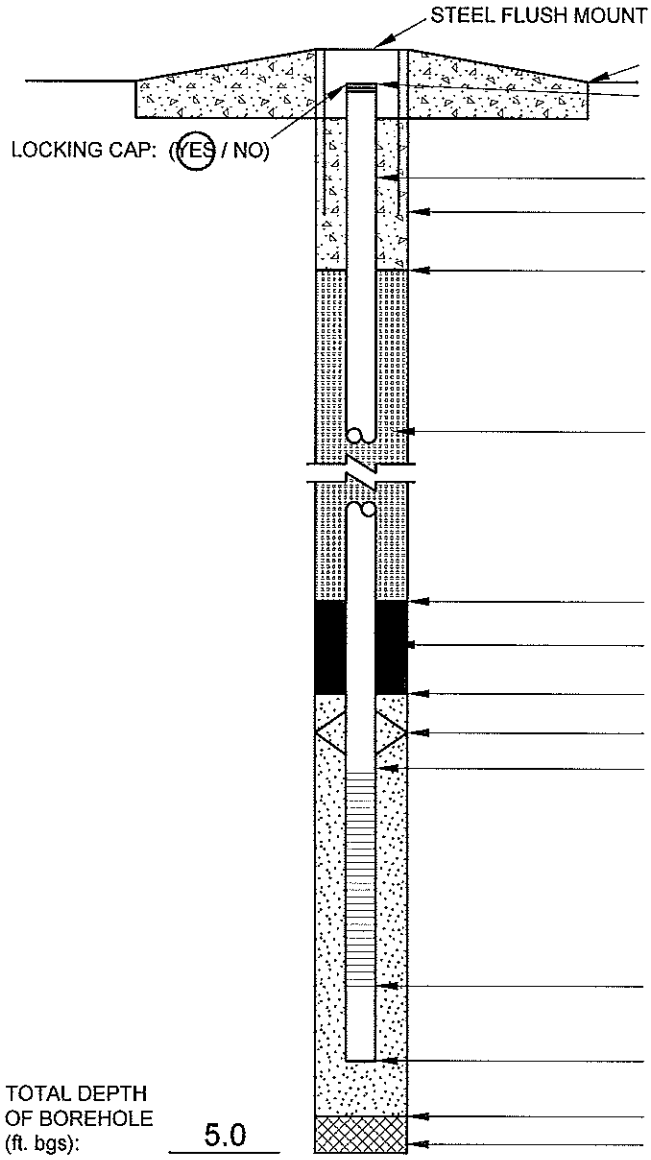
PREPARED BY: RMS

This log should not be used separately from the original report.

FLUSH-MOUNT MONITORING WELL CONSTRUCTION LOG

MW-33

PROJECT NAME: Exide Frisco		PROJECT NUMBER: 130-2086
SITE NAME: Former Exide Recycling Facility		LOCATION: Frisco, Texas
CLIENT: Exide Technologies		SURFACE ELEVATION: 633.08 FT AMSL
GEOLOGIST: RMS	NORTHING: 7101871.99 FT	EASTING: 2480020.99 FT
DRILLER: Dan Spaust	STATIC WATER LEVEL: 1.09 FT BTOC	COMPLETION DATE: 1/14/2014
DRILLING COMPANY: SCI		DRILLING METHODS: HSA



GROUND SURFACE ELEVATION: 632.93 FT AMSL
TOP OF CASING ELEVATION: 632.59 FT AMSL
DIAMETER OF RISER PIPE (in.): 2.0
DIAMETER OF BOREHOLE (in.): 8.25
CONCRETE SEAL DEPTH (ft. bgs): 0.5
TYPE AND AMOUNT OF ANNULAR SEAL: N/A
TOP OF BENTONITE SEAL DEPTH (ft. bgs): 0.5
TYPE AND AMOUNT OF BENTONITE SEAL: Bent chips (~25 lbs)
TOP OF SAND PACK DEPTH (ft. bgs): 1.5
CENTRALIZER (yes / (no)) - TYPE: N/A
TOP OF SCREEN DEPTH (ft. bgs): 2.5
TYPE OF SCREEN: SCH 40 PVC slotted
SCREEN SLOT SIZE (in.): 0.010
SIZE OF SAND PACK: 20/40
AMOUNT OF SAND: 75 lbs
BOTTOM OF SCREEN DEPTH (ft. bgs): 5.0
BOTTOM OF WELL DEPTH (ft. bgs): 5.0
BOTTOM OF FILTER PACK (ft. bgs): 5.0
TYPE AND AMOUNT OF BACKFILL: N/A

TOTAL DEPTH OF BOREHOLE (ft. bgs): 5.0

ADDITIONAL NOTES: Static water level collected 01/21/2014.

CHECKED BY: JDJ/TRM
DATE CHECKED: 01/28/14; 05/12/14

PREPARED BY: RMS

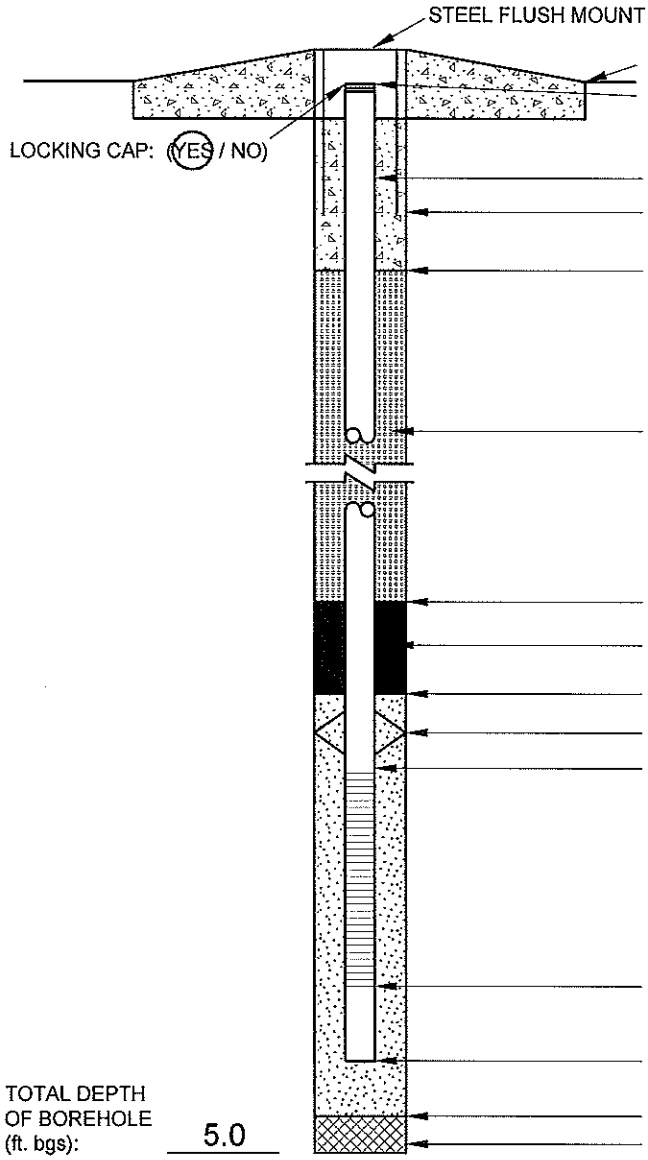
This log should not be used separately from the original report.

Golder Associates

FLUSH-MOUNT MONITORING WELL CONSTRUCTION LOG

MW-34

PROJECT NAME: Exide Frisco		PROJECT NUMBER: 130-2086
SITE NAME: Former Exide Recycling Facility		LOCATION: Frisco, Texas
CLIENT: Exide Technologies		SURFACE ELEVATION: 633.17 FT AMSL
GEOLOGIST: RMS	NORTHING: 7101877.20 FT	EASTING: 2480097.12 FT
DRILLER: Dan Spaust	STATIC WATER LEVEL: 4.31 FT BTOC	COMPLETION DATE: 1/14/2014
DRILLING COMPANY: SCI		DRILLING METHODS: HSA



GROUND SURFACE ELEVATION: 633.15 FT AMSL
TOP OF CASING ELEVATION: 632.83 FT AMSL
DIAMETER OF RISER PIPE (in.): 2.0
DIAMETER OF BOREHOLE (in.): 8.25
CONCRETE SEAL DEPTH (ft. bgs): 0.5
TYPE AND AMOUNT OF ANNULAR SEAL: N/A
TOP OF BENTONITE SEAL DEPTH (ft. bgs): 0.5
TYPE AND AMOUNT OF BENTONITE SEAL: Bent chips (~25 lbs)
TOP OF SAND PACK DEPTH (ft. bgs): 1.5
CENTRALIZER (yes / (no)) - TYPE: N/A
TOP OF SCREEN DEPTH (ft. bgs): 2.5
TYPE OF SCREEN: SCH 40 PVC slotted
SCREEN SLOT SIZE (in.): 0.010
SIZE OF SAND PACK: 20/40
AMOUNT OF SAND: 75 lbs
BOTTOM OF SCREEN DEPTH (ft. bgs): 5.0
BOTTOM OF WELL DEPTH (ft. bgs): 5.0
BOTTOM OF FILTER PACK (ft. bgs): 5.0
TYPE AND AMOUNT OF BACKFILL: N/A

ADDITIONAL NOTES: Static water level collected 01/21/2014.

CHECKED BY: JDJ/TRM
DATE CHECKED: 01/28/14; 05/12/14

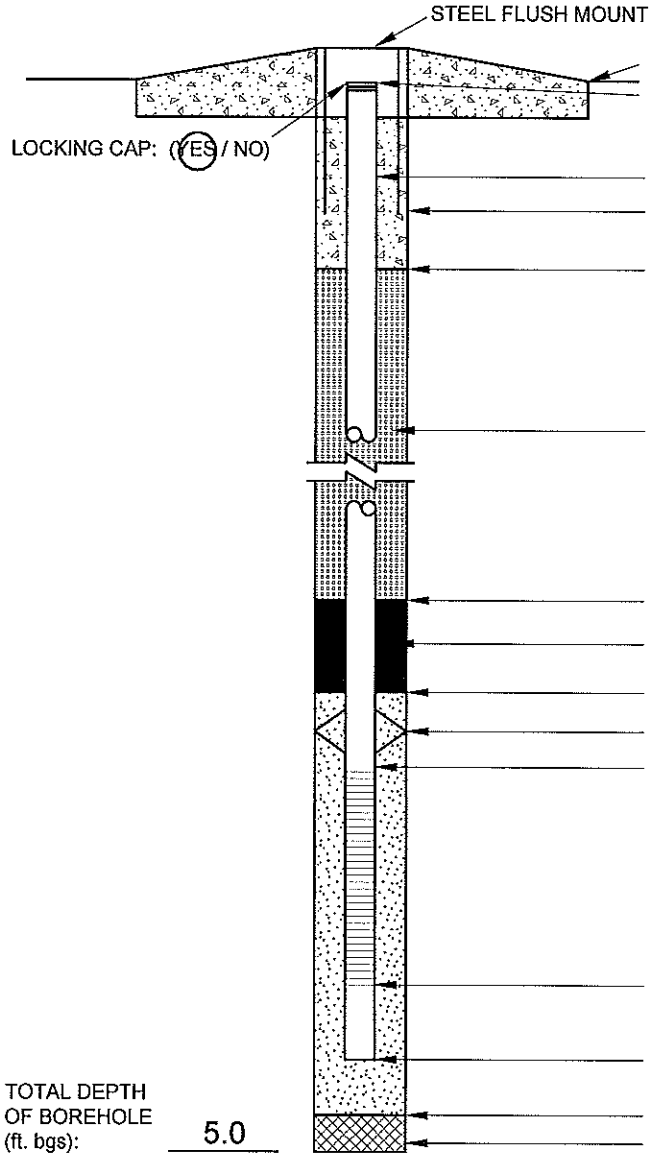
PREPARED BY: RMS

This log should not be used separately from the original report

FLUSH-MOUNT MONITORING WELL CONSTRUCTION LOG

MW-35

PROJECT NAME: Exide Frisco		PROJECT NUMBER: 130-2086
SITE NAME: Former Exide Recycling Facility		LOCATION: Frisco, Texas
CLIENT: Exide Technologies		SURFACE ELEVATION: 632.97 FT AMSL
GEOLOGIST: RMS	NORTHING: 7101736.25 FT	EASTING: 2480191.05 FT
DRILLER: Dan Spaust	STATIC WATER LEVEL: DRY	COMPLETION DATE: 1/14/2014
DRILLING COMPANY: SCI		DRILLING METHODS: HSA



GROUND SURFACE ELEVATION: 632.82 FT AMSL
TOP OF CASING ELEVATION: 632.55 FT AMSL
DIAMETER OF RISER PIPE (in.): 2.0
DIAMETER OF BOREHOLE (in.): 8.25
CONCRETE SEAL DEPTH (ft. bgs): 0.5
TYPE AND AMOUNT OF ANNULAR SEAL: N/A
TOP OF BENTONITE SEAL DEPTH (ft. bgs): 0.5
TYPE AND AMOUNT OF BENTONITE SEAL: Bent chips (~25 lbs)
TOP OF SAND PACK DEPTH (ft. bgs): 1.5
CENTRALIZER (yes / (no)) - TYPE: N/A
TOP OF SCREEN DEPTH (ft. bgs): 2.5
TYPE OF SCREEN: SCH 40 PVC slotted
SCREEN SLOT SIZE (in.): 0.010
SIZE OF SAND PACK: 20/40
AMOUNT OF SAND: 75 lbs
BOTTOM OF SCREEN DEPTH (ft. bgs): 5.0
BOTTOM OF WELL DEPTH (ft. bgs): 5.0
BOTTOM OF FILTER PACK (ft. bgs): 5.0
TYPE AND AMOUNT OF BACKFILL: N/A

ADDITIONAL NOTES: Static water level collected 01/21/2014.

CHECKED BY: JDJ/TRM
DATE CHECKED: 01/28/14; 05/12/14
PREPARED BY: RMS

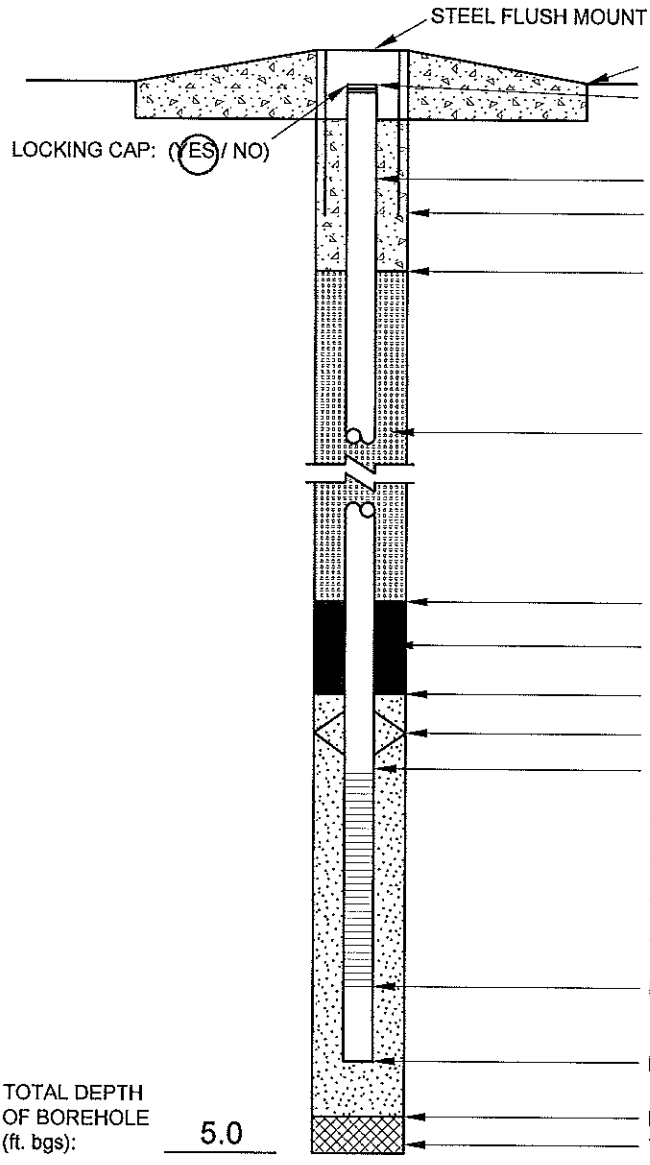
This log should not be used separately from the original report

Golder Associates

FLUSH-MOUNT MONITORING WELL CONSTRUCTION LOG

MW-36

PROJECT NAME: Exide Frisco	PROJECT NUMBER: 130-2086	
SITE NAME: Former Exide Recycling Facility	LOCATION: Frisco, Texas	
CLIENT: Exide Technologies	SURFACE ELEVATION: 633.94 FT AMSL	
GEOLOGIST: RMS	NORTHING: 7101814.87 FT	EASTING: 2480273.51 FT
DRILLER: Dan Spaust	STATIC WATER LEVEL: DRY	COMPLETION DATE: 1/14/2014
DRILLING COMPANY: SCI	DRILLING METHODS: HSA	



GROUND SURFACE ELEVATION: 633.86 FT AMSL
TOP OF CASING ELEVATION: 633.63 FT AMSL
DIAMETER OF RISER PIPE (in.): 2.0
DIAMETER OF BOREHOLE (in.): 8.25
CONCRETE SEAL DEPTH (ft. bgs): 0.5
TYPE AND AMOUNT OF ANNULAR SEAL: N/A
TOP OF BENTONITE SEAL DEPTH (ft. bgs): 0.5
TYPE AND AMOUNT OF BENTONITE SEAL: Bent chips (~25 lbs)
TOP OF SAND PACK DEPTH (ft. bgs): 1.5
CENTRALIZER (yes / (no) - TYPE: N/A
TOP OF SCREEN DEPTH (ft. bgs): 2.5
TYPE OF SCREEN: SCH 40 PVC slotted
SCREEN SLOT SIZE (in.): 0.010
SIZE OF SAND PACK: 20/40
AMOUNT OF SAND: 75 lbs
BOTTOM OF SCREEN DEPTH (ft. bgs): 5.0
BOTTOM OF WELL DEPTH (ft. bgs): 5.0
BOTTOM OF FILTER PACK (ft. bgs): 5.0
TYPE AND AMOUNT OF BACKFILL: N/A

TOTAL DEPTH OF BOREHOLE (ft. bgs): 5.0

ADDITIONAL NOTES: Static water level collected 01/21/2014.

CHECKED BY: JDJ/TRM
DATE CHECKED: 01/28/14; 05/12/14

PREPARED BY: RMS

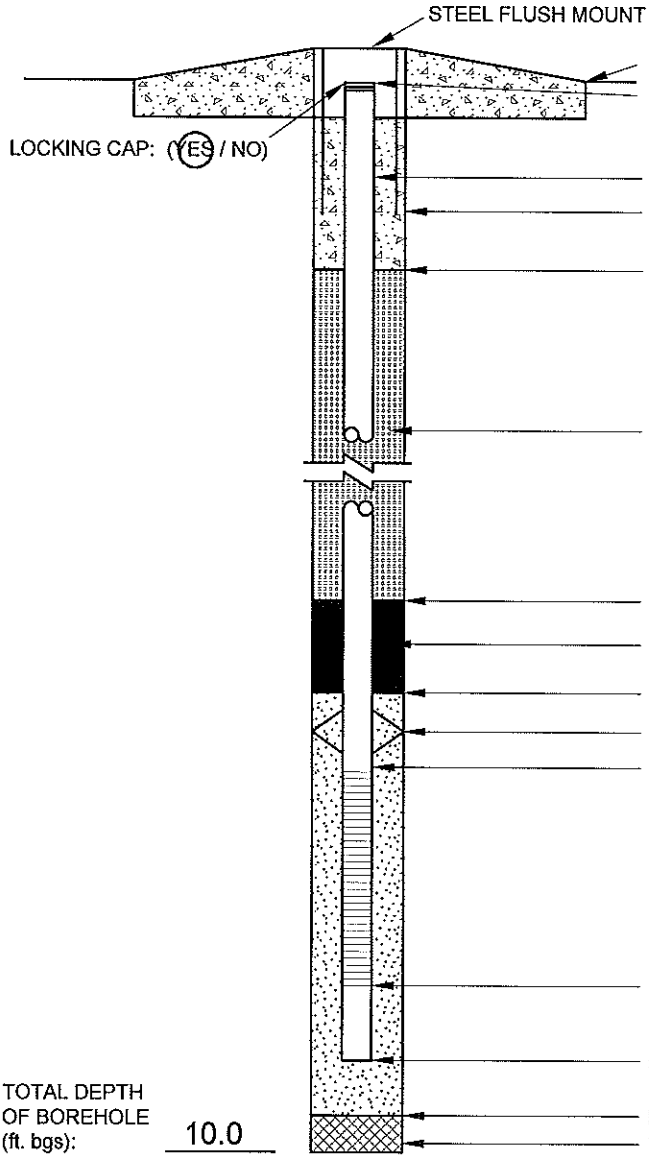
This log should not be used separately from the original report.

Golder Associates

FLUSH-MOUNT MONITORING WELL CONSTRUCTION LOG

MW-37

PROJECT NAME: Exide Frisco		PROJECT NUMBER: 130-2086
SITE NAME: Former Exide Recycling Facility		LOCATION: Frisco, Texas
CLIENT: Exide Technologies		SURFACE ELEVATION: 621.50 FT AMSL
GEOLOGIST: RMS	NORTHING: 7102342.00 FT	EASTING: 2479077.35 FT
DRILLER: Dan Spaust	STATIC WATER LEVEL: 8.11 FT BTOC	COMPLETION DATE: 1/14/2014
DRILLING COMPANY: SCI		DRILLING METHODS: HSA



GROUND SURFACE ELEVATION: 621.20 FT AMSL
TOP OF CASING ELEVATION: 620.95 FT AMSL
DIAMETER OF RISER PIPE (in.): 2.0
DIAMETER OF BOREHOLE (in.): 8.25
CONCRETE SEAL DEPTH (ft. bgs): 2.0*
TYPE AND AMOUNT OF ANNULAR SEAL: N/A
TOP OF BENTONITE SEAL DEPTH (ft. bgs): 2.0
TYPE AND AMOUNT OF BENTONITE SEAL: Bent chips (50 lbs)
TOP OF SAND PACK DEPTH (ft. bgs): 3.0
CENTRALIZER (yes / (no)) - TYPE: N/A
TOP OF SCREEN DEPTH (ft. bgs): 5.0
TYPE OF SCREEN: SCH 40 PVC slotted
SCREEN SLOT SIZE (in.): 0.010
SIZE OF SAND PACK: 20/40
AMOUNT OF SAND: 75 lbs
BOTTOM OF SCREEN DEPTH (ft. bgs): 10.0
BOTTOM OF WELL DEPTH (ft. bgs): 10.0
BOTTOM OF FILTER PACK (ft. bgs): 10.0
TYPE AND AMOUNT OF BACKFILL: N/A

ADDITIONAL NOTES: Static water level collected 01/21/2014.
* Driller indicates concrete is 2 feet thick.

CHECKED BY: JDJ/TRM
DATE CHECKED: 01/28/14;05/12/14
PREPARED BY: RMS

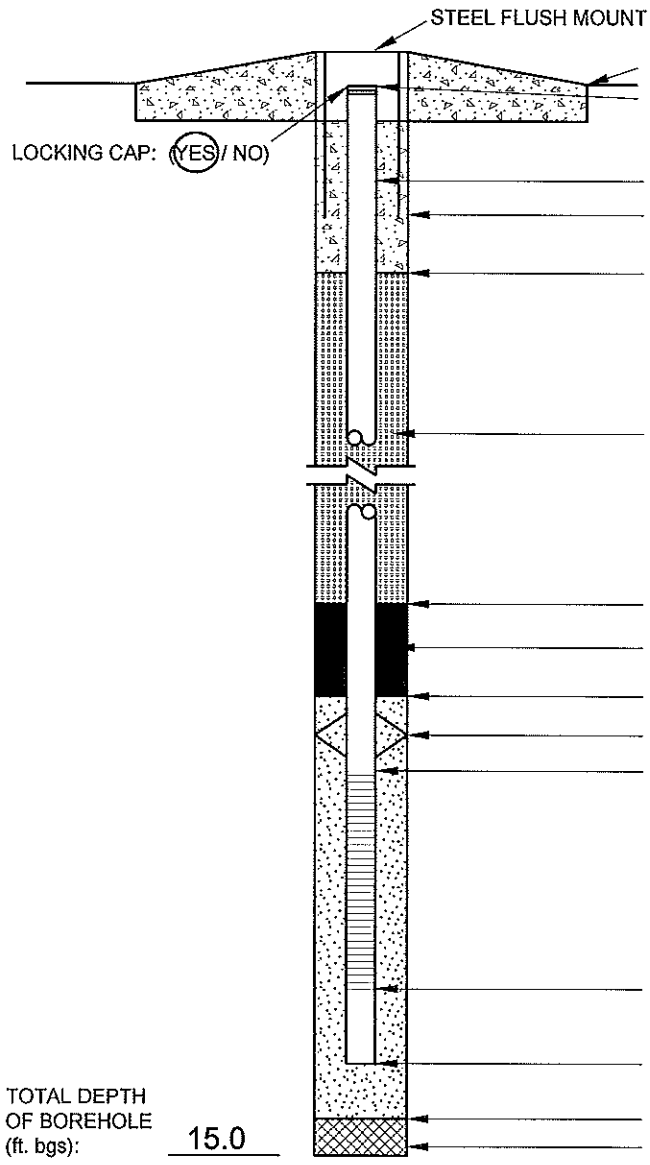
This log should not be used separately from the original report.

Golder Associates

FLUSH-MOUNT MONITORING WELL CONSTRUCTION LOG

MW-38

PROJECT NAME: Exide Frisco		PROJECT NUMBER: 130-2086
SITE NAME: Former Exide Recycling Facility		LOCATION: Frisco, Texas
CLIENT: Exide Technologies		SURFACE ELEVATION: 623.71 FT AMSL
GEOLOGIST: RMS	NORTHING: 7102173.07 FT	EASTING: 2479348.55 FT
DRILLER: Dan Spaust	STATIC WATER LEVEL: 7.10 FT BTOC	COMPLETION DATE: 1/14/2014
DRILLING COMPANY: SCI		DRILLING METHODS: HSA



GROUND SURFACE ELEVATION: 623.50 FT AMSL
TOP OF CASING ELEVATION: 623.14 FT AMSL
DIAMETER OF RISER PIPE (in.): 2.0
DIAMETER OF BOREHOLE (in.): 8.25
CONCRETE SEAL DEPTH (ft. bgs): 2.0*
TYPE AND AMOUNT OF ANNULAR SEAL: N/A
TOP OF BENTONITE SEAL DEPTH (ft. bgs): 2.0
TYPE AND AMOUNT OF BENTONITE SEAL: Bent chips (50 lbs)
TOP OF SAND PACK DEPTH (ft. bgs): 3.0
CENTRALIZER (yes (no) - TYPE: N/A
TOP OF SCREEN DEPTH (ft. bgs): 5.0
TYPE OF SCREEN: SCH 40 PVC slotted
SCREEN SLOT SIZE (in.): 0.010
SIZE OF SAND PACK: 20/40
AMOUNT OF SAND: 325 lbs
BOTTOM OF SCREEN DEPTH (ft. bgs): 15.0
BOTTOM OF WELL DEPTH (ft. bgs): 15.0
BOTTOM OF FILTER PACK (ft. bgs): 15.0
TYPE AND AMOUNT OF BACKFILL: N/A

ADDITIONAL NOTES: Static water level collected 01/21/2014.
* Driller indicates concrete is 2 feet thick.

CHECKED BY: JDJ/TRM
DATE CHECKED: 01/28/14; 05/12/14

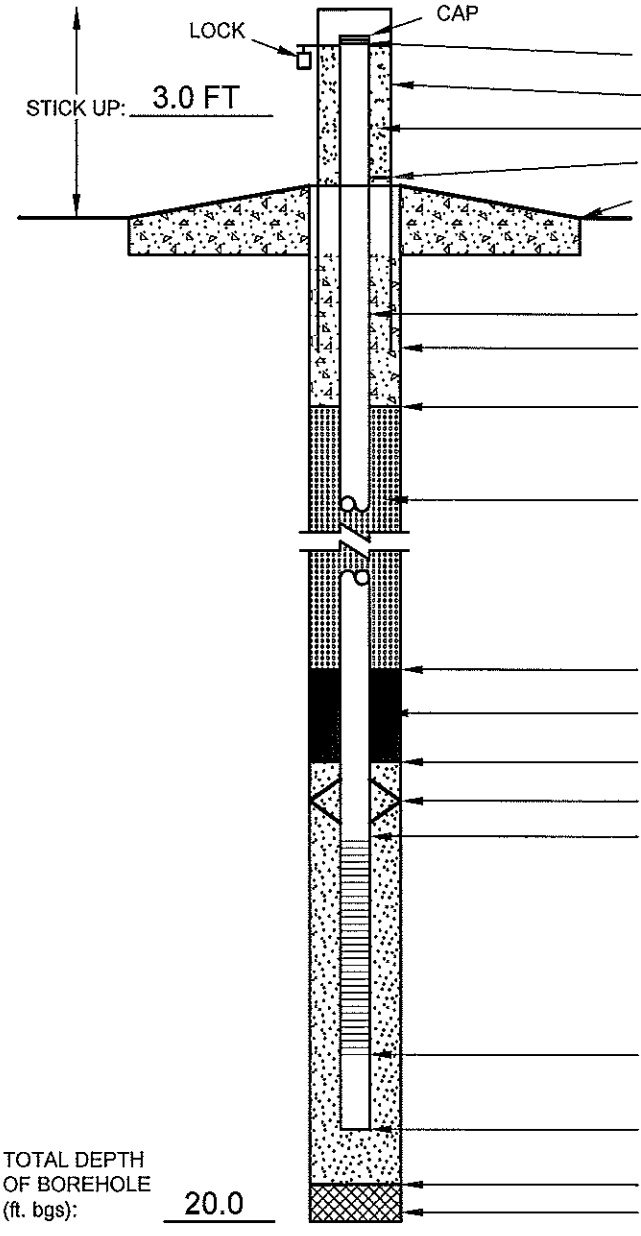
PREPARED BY: RMS

This log should not be used separately from the original report.

ABOVE GROUND MONITORING WELL CONSTRUCTION LOG

MW-39

PROJECT NAME: Exide Frisco		PROJECT NUMBER: 130-2086
SITE NAME: Former Exide Recycling Facility		LOCATION: Frisco, Texas
CLIENT: Exide Technologies		SURFACE ELEVATION: 640.29 FT AMSL
GEOLOGIST: RMS	NORTHING: 7102473.02 FT	EASTING: 2479631.37 FT
DRILLER: Dan Spaust	STATIC WATER LEVEL: 10.41 FT BTOC	COMPLETION DATE: 01/14/2014
DRILLING COMPANY: SCI		DRILLING METHODS: HSA



TOP OF CASING ELEVATION: 639.70 FT AMSL
PROTECTIVE CASING (yes) / no): Steel
PEA GRAVEL OR SAND None
WEEP HOLE
GROUND SURFACE ELEVATION: 637.26 FT AMSL

DIAMETER OF RISER PIPE (in.): 2.0
DIAMETER OF BOREHOLE (in.): 8.25
CONCRETE SEAL DEPTH (ft. bgs): 2.0*
TYPE AND AMOUNT OF ANNULAR SEAL: N/A

TOP OF BENTONITE SEAL DEPTH (ft. bgs): 2.0
TYPE AND AMOUNT OF BENTONITE SEAL: Bent chips (100 lbs)
TOP OF SAND PACK DEPTH (ft. bgs): 7.0
CENTRALIZER (yes / (no)) - TYPE: N/A
TOP OF SCREEN DEPTH (ft. bgs): 10.0
TYPE OF SCREEN: SCH 40 PVS slotted
SCREEN SLOT SIZE (in.): 0.010
SIZE OF SAND PACK: 20/40
AMOUNT OF SAND: 350 lbs
BOTTOM OF SCREEN DEPTH (ft. bgs): 20.0
BOTTOM OF WELL DEPTH (ft. bgs): 20.0
BOTTOM OF FILTER PACK (ft. bgs): 20.0
TYPE AND AMOUNT OF BACKFILL: N/A

ADDITIONAL NOTES: Static water level collected 01/21/2014.
* Driller indicates concrete is 2 feet thick.

CHECKED BY: JDJ/TRM
DATE CHECKED: 01/28/14; 5/12/14

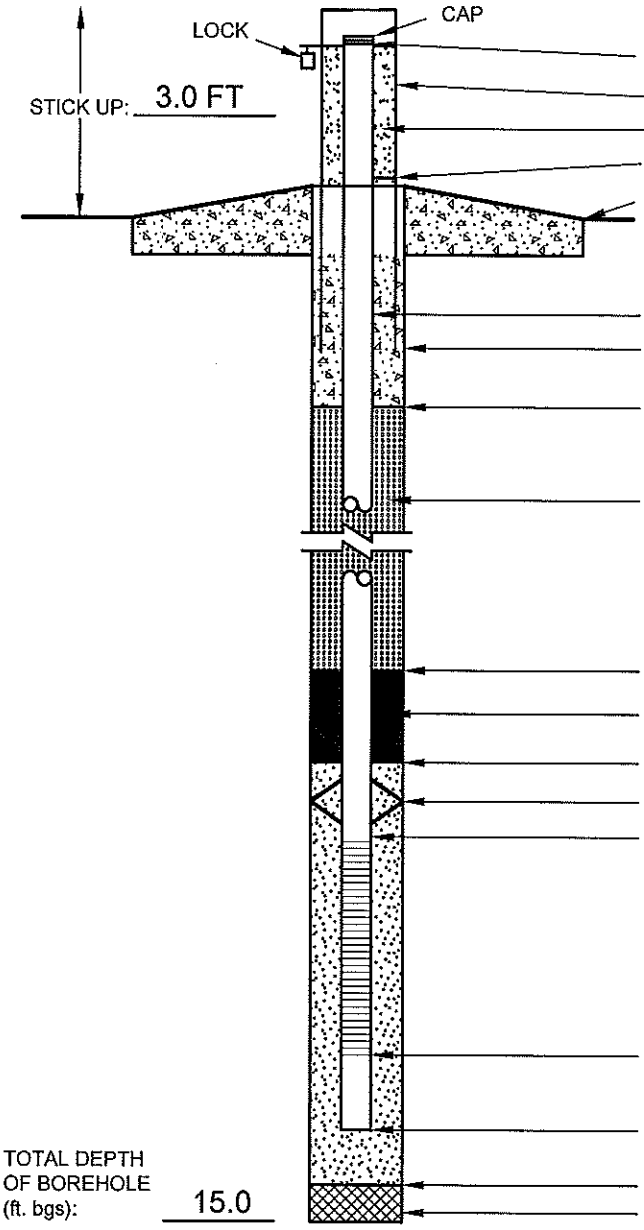
PREPARED BY: RMS

This log should not be used separately from the original report.

Golder Associates

ABOVE GROUND MONITORING WELL CONSTRUCTION LOG MW-40

PROJECT NAME: Exide Frisco	PROJECT NUMBER: 130-2086	
SITE NAME: Former Exide Recycling Facility	LOCATION: Frisco, Texas	
CLIENT: Exide Technologies	SURFACE ELEVATION: 636.03 FT AMSL	
GEOLOGIST: RMS	NORTHING: 7102568.11 FT	EASTING: 2479899.95 FT
DRILLER: Dan Spaust	STATIC WATER LEVEL: 5.40 FT BTOC	COMPLETION DATE: 01/14/2014
DRILLING COMPANY: SCI	DRILLING METHODS: HSA	



TOP OF CASING ELEVATION: 635.51 FT AMSL
PROTECTIVE CASING (yes) / no): Steel
PEA GRAVEL OR SAND None
WEEP HOLE
GROUND SURFACE ELEVATION: 633.00 FT AMSL
DIAMETER OF RISER PIPE (in.): 2.0
DIAMETER OF BOREHOLE (in.): 8.25
CONCRETE SEAL DEPTH (ft. bgs): 2.0*
TYPE AND AMOUNT OF ANNULAR SEAL: N/A
TOP OF BENTONITE SEAL DEPTH (ft. bgs): 2.0
TYPE AND AMOUNT OF BENTONITE SEAL: Bent chips (50 lbs)
TOP OF SAND PACK DEPTH (ft. bgs): 3.0
CENTRALIZER (yes / (no)) - TYPE: N/A
TOP OF SCREEN DEPTH (ft. bgs): 5.0
TYPE OF SCREEN: SCH 40 PVS slotted
SCREEN SLOT SIZE (in.): 0.010
SIZE OF SAND PACK: 20/40
AMOUNT OF SAND: 325 lbs
BOTTOM OF SCREEN DEPTH (ft. bgs): 15.0
BOTTOM OF WELL DEPTH (ft. bgs): 15.0
BOTTOM OF FILTER PACK (ft. bgs): 15.0
TYPE AND AMOUNT OF BACKFILL: N/A

ADDITIONAL NOTES: Static water level collected 01/21/2014.
* Driller indicates concrete is 2 feet thick.

CHECKED BY: JDJ/TRM
DATE CHECKED: 01/28/14; 5/12/14

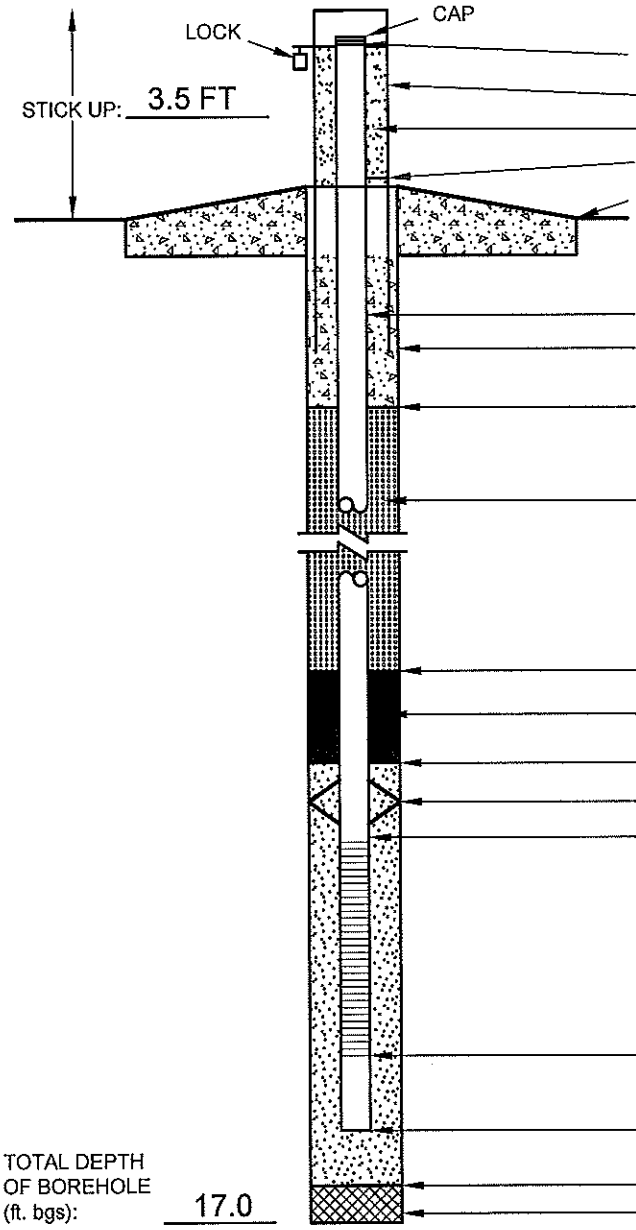
PREPARED BY: RMS

This log should not be used separately from the original report.

ABOVE GROUND MONITORING WELL CONSTRUCTION LOG

MW-41

PROJECT NAME: Exide Frisco		PROJECT NUMBER: 130-2086
SITE NAME: Former Exide Recycling Facility		LOCATION: Frisco, Texas
CLIENT: Exide Technologies		SURFACE ELEVATION: 642.75 FT AMSL
GEOLOGIST: RMS	NORTHING: 7102693.17 FT	EASTING: 2480073.57 FT
DRILLER: Dan Spaust	STATIC WATER LEVEL: 16.38 FT BTOC	COMPLETION DATE: 01/14/2014
DRILLING COMPANY: SCI		DRILLING METHODS: HSA



- TOP OF CASING ELEVATION: 642.17 FT AMSL
- PROTECTIVE CASING (yes) / no): Steel
- PEA GRAVEL OR SAND: None
- WEEP HOLE
- GROUND SURFACE ELEVATION: 639.17 FT AMSL
- DIAMETER OF RISER PIPE (in.): 2.0
- DIAMETER OF BOREHOLE (in.): 8.25
- CONCRETE SEAL DEPTH (ft. bgs): 2.0*
- TYPE AND AMOUNT OF ANNULAR SEAL: N/A
- TOP OF BENTONITE SEAL DEPTH (ft. bgs): 2.0
- TYPE AND AMOUNT OF BENTONITE SEAL: Bent chips (50 lbs)
- TOP OF SAND PACK DEPTH (ft. bgs): 4.0
- CENTRALIZER (yes / (no)) - TYPE: N/A
- TOP OF SCREEN DEPTH (ft. bgs): 6.0
- TYPE OF SCREEN: SCH 40 PVS slotted
- SCREEN SLOT SIZE (in.): 0.010
- SIZE OF SAND PACK: 20/40
- AMOUNT OF SAND: 325 lbs
- BOTTOM OF SCREEN DEPTH (ft. bgs): 16.0
- BOTTOM OF WELL DEPTH (ft. bgs): 16.0
- BOTTOM OF FILTER PACK (ft. bgs): 16.0
- TYPE AND AMOUNT OF BACKFILL: 1.0 ft of native soils

ADDITIONAL NOTES: The borehole collapsed one foot when the well was being placed and the bottom was set at 16 feet total depth.
Static water level collected 01/21/2014.
* Driller indicates concrete is 2 feet thick.

CHECKED BY: JDJ/TRM
DATE CHECKED: 01/28/14; 5/12/14

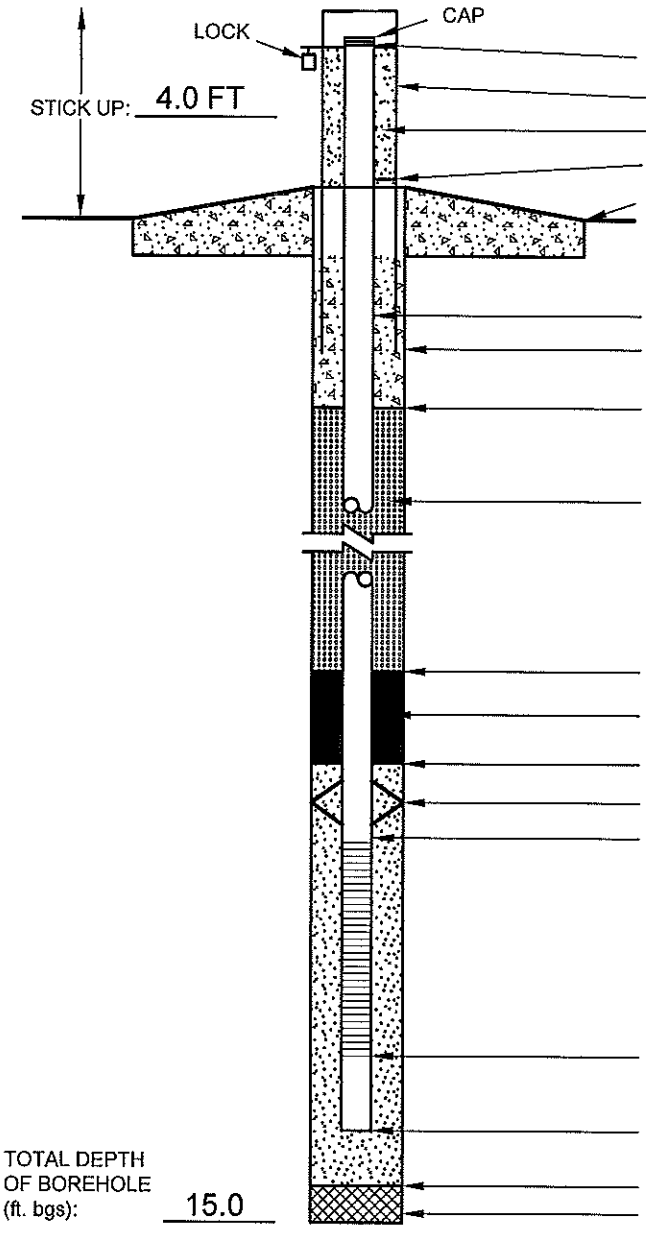
PREPARED BY: RMS

This log should not be used separately from the original report.

ABOVE GROUND MONITORING WELL CONSTRUCTION LOG

MW-42

PROJECT NAME: Exide Frisco		PROJECT NUMBER: 130-2086
SITE NAME: Former Exide Recycling Facility		LOCATION: Frisco, Texas
CLIENT: Exide Technologies		SURFACE ELEVATION: 642.90 FT AMSL
GEOLOGIST: RMS	NORTHING: 7102695.66 FT	EASTING: 2480711.60 FT
DRILLER: Dan Spaust	STATIC WATER LEVEL: 9.38 FT BTOC	COMPLETION DATE: 01/14/2014
DRILLING COMPANY: SCI		DRILLING METHODS: HSA



TOP OF CASING ELEVATION: 642.24 FT AMSL

PROTECTIVE CASING (yes) / no): Steel

PEA GRAVEL OR SAND None

WEEP HOLE

GROUND SURFACE ELEVATION: 638.71 FT AMSL

DIAMETER OF RISER PIPE (in.): 2.0

DIAMETER OF BOREHOLE (in.): 8.25

CONCRETE SEAL DEPTH (ft. bgs): 2.0*

TYPE AND AMOUNT OF ANNULAR SEAL: N/A

TOP OF BENTONITE SEAL DEPTH (ft. bgs): 2.0

TYPE AND AMOUNT OF BENTONITE SEAL: Bent chips (50 lbs)

TOP OF SAND PACK DEPTH (ft. bgs): 3.0

CENTRALIZER (yes / (no)) - TYPE: N/A

TOP OF SCREEN DEPTH (ft. bgs): 5.0

TYPE OF SCREEN: SCH 40 PVS slotted

SCREEN SLOT SIZE (in.): 0.010

SIZE OF SAND PACK: 20/40

AMOUNT OF SAND: 300 lbs

BOTTOM OF SCREEN DEPTH (ft. bgs): 15.0

BOTTOM OF WELL DEPTH (ft. bgs): 15.0

BOTTOM OF FILTER PACK (ft. bgs): 15.0

TYPE AND AMOUNT OF BACKFILL: N/A

ADDITIONAL NOTES: Three bollards installed around pad.
Static water level collected 01/21/2014.
* Driller indicates concrete is 2 feet thick.

CHECKED BY: JDJ/TRM

DATE CHECKED: 1/28/14; 5/12/14

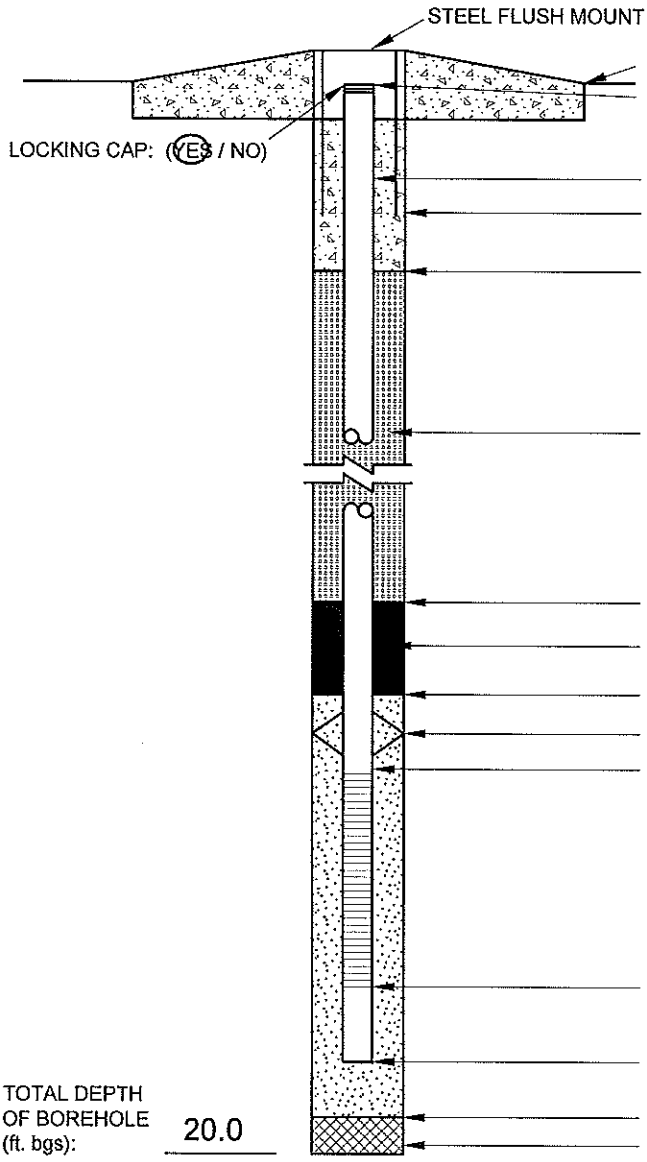
PREPARED BY: RMS

This log should not be used separately from the original report.

FLUSH-MOUNT MONITORING WELL CONSTRUCTION LOG

MW-43

PROJECT NAME: Exide Frisco		PROJECT NUMBER: 130-2086
SITE NAME: Former Exide Recycling Facility		LOCATION: Frisco, Texas
CLIENT: Exide Technologies		SURFACE ELEVATION: 646.10 FT AMSL
GEOLOGIST: JSX	NORTHING: 7102421.95 FT	EASTING: 2480782.14 FT
DRILLER: Dan Spaust	STATIC WATER LEVEL: 14.93 FT BTOC	COMPLETION DATE: 1/14/2014
DRILLING COMPANY: SCI		DRILLING METHODS: HSA



GROUND SURFACE ELEVATION: 645.87 FT AMSL
TOP OF CASING ELEVATION: 645.45 FT AMSL
DIAMETER OF RISER PIPE (in.): 2.0
DIAMETER OF BOREHOLE (in.): 8.25
CONCRETE SEAL DEPTH (ft. bgs): 2.0*
TYPE AND AMOUNT OF ANNULAR SEAL: N/A
TOP OF BENTONITE SEAL DEPTH (ft. bgs): 2.0
TYPE AND AMOUNT OF BENTONITE SEAL: Bent chips (N/A)
TOP OF SAND PACK DEPTH (ft. bgs): 7.0
CENTRALIZER (yes / no) - TYPE: N/A
TOP OF SCREEN DEPTH (ft. bgs): 10.0
TYPE OF SCREEN: SCH 40 PVC slotted
SCREEN SLOT SIZE (in.): 0.010
SIZE OF SAND PACK: 20/40
AMOUNT OF SAND: N/A
BOTTOM OF SCREEN DEPTH (ft. bgs): 20.0
BOTTOM OF WELL DEPTH (ft. bgs): 20.0
BOTTOM OF FILTER PACK (ft. bgs): 20.0
TYPE AND AMOUNT OF BACKFILL: N/A

TOTAL DEPTH OF BOREHOLE (ft. bgs): 20.0

ADDITIONAL NOTES: Static water level collected 01/21/2014.
* Driller indicates concrete is 2 feet thick.

CHECKED BY: JDJ/TRM
DATE CHECKED: 1/28/2014; 5/12/14

PREPARED BY: CWA

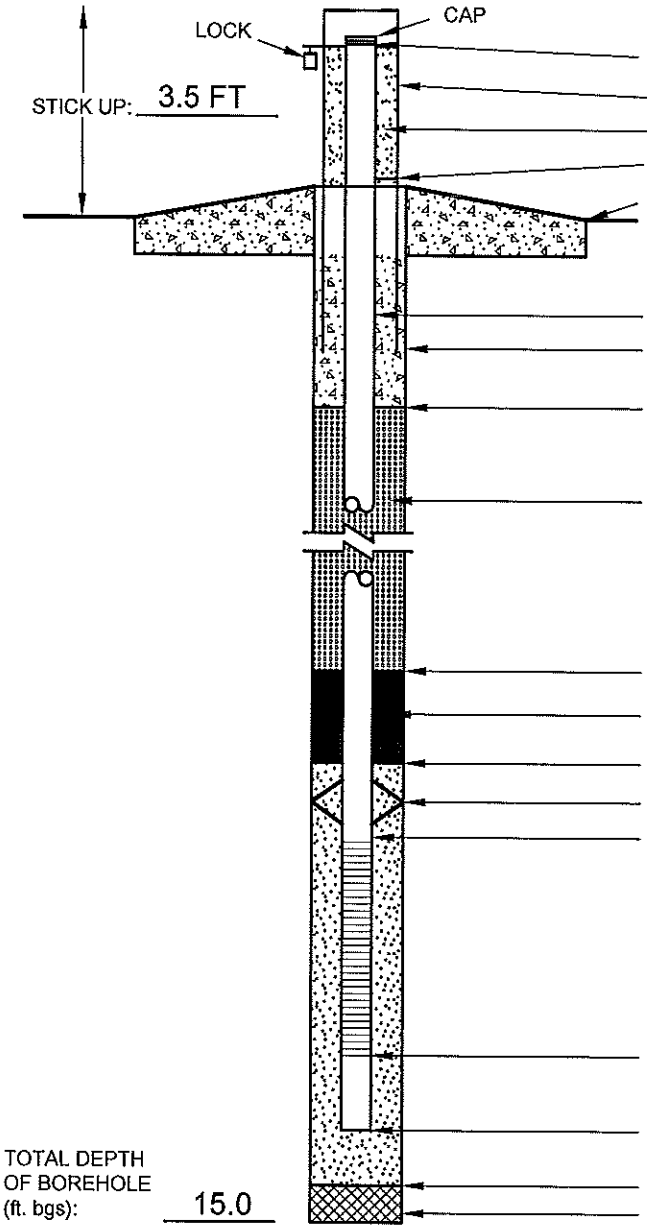
This log should not be used separately from the original report.

Golder Associates

ABOVE GROUND MONITORING WELL CONSTRUCTION LOG

MW-44

PROJECT NAME: Exide Frisco		PROJECT NUMBER: 130-2086
SITE NAME: Former Exide Recycling Facility		LOCATION: Frisco, Texas
CLIENT: Exide Technologies		SURFACE ELEVATION: 637.80 FT AMSL
GEOLOGIST: RMS	NORTHING: 7101659.80 FT	EASTING: 2480549.86 FT
DRILLER: Dan Spaust	STATIC WATER LEVEL: 9.21 FT BTOC	COMPLETION DATE: 01/14/2014
DRILLING COMPANY: SCI		DRILLING METHODS: HSA



- TOP OF CASING ELEVATION: 637.50 FT AMSL
- PROTECTIVE CASING (yes) / no): Steel
- PEA GRAVEL OR SAND None
- WEEP HOLE
- GROUND SURFACE ELEVATION: 634.33 FT AMSL
- DIAMETER OF RISER PIPE (in.): 2.0
- DIAMETER OF BOREHOLE (in.): 8.25
- CONCRETE SEAL DEPTH (ft. bgs): 2.0*
- TYPE AND AMOUNT OF ANNULAR SEAL: N/A
- TOP OF BENTONITE SEAL DEPTH (ft. bgs): 2.0
- TYPE AND AMOUNT OF BENTONITE SEAL: Bent chips (50 lbs)
- TOP OF SAND PACK DEPTH (ft. bgs): 3.0
- CENTRALIZER (yes / (no)) - TYPE: N/A
- TOP OF SCREEN DEPTH (ft. bgs): 5.0
- TYPE OF SCREEN: SCH 40 PVS slotted
- SCREEN SLOT SIZE (in.): 0.010
- SIZE OF SAND PACK: 20/40
- AMOUNT OF SAND: 325 lbs
- BOTTOM OF SCREEN DEPTH (ft. bgs): 15.0
- BOTTOM OF WELL DEPTH (ft. bgs): 15.0
- BOTTOM OF FILTER PACK (ft. bgs): 15.0
- TYPE AND AMOUNT OF BACKFILL: N/A

ADDITIONAL NOTES: Three bollards installed around pad.
Static water level collected 01/21/2014.
* Driller indicates concrete is 2 feet thick.

CHECKED BY: JDJ/TRM
DATE CHECKED: 1/28/14; 5/12/14

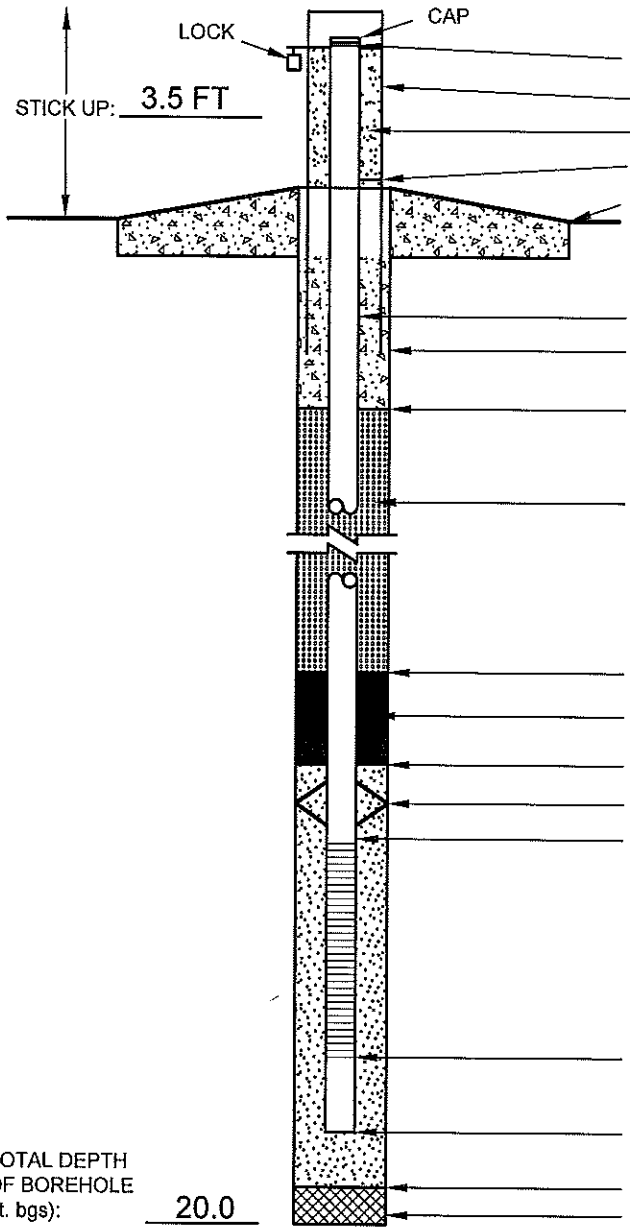
PREPARED BY: RMS

This log should not be used separately from the original report.

ABOVE GROUND MONITORING WELL CONSTRUCTION LOG

MW-45

PROJECT NAME: Exide Frisco		PROJECT NUMBER: 130-2086
SITE NAME: Former Exide Recycling Facility		LOCATION: Frisco, Texas
CLIENT: Exide Technologies		SURFACE ELEVATION: 661.42 FT AMSL
GEOLOGIST: RMS	NORTHING: 7103914.51 FT	EASTING: 2480303.20 FT
DRILLER: Dan Spaust	STATIC WATER LEVEL: 13.29 FT BTOC	COMPLETION DATE: 01/14/2014
DRILLING COMPANY: SCI		DRILLING METHODS: HSA



TOP OF CASING ELEVATION: 660.86 FT AMSL

PROTECTIVE CASING (yes) / no): Steel

PEA GRAVEL OR SAND None

WEEP HOLE

GROUND SURFACE ELEVATION: 657.90 FT AMSL

DIAMETER OF RISER PIPE (in.): 2.0

DIAMETER OF BOREHOLE (in.): 8.25

CONCRETE SEAL DEPTH (ft. bgs): 2.0*

TYPE AND AMOUNT OF ANNULAR SEAL: N/A

TOP OF BENTONITE SEAL DEPTH (ft. bgs): 2.0

TYPE AND AMOUNT OF BENTONITE SEAL: Bent chips (100 lbs)

TOP OF SAND PACK DEPTH (ft. bgs): 7.0

CENTRALIZER (yes / (no)) - TYPE: N/A

TOP OF SCREEN DEPTH (ft. bgs): 10.0

TYPE OF SCREEN: SCH 40 PVS slotted

SCREEN SLOT SIZE (in.): 0.010

SIZE OF SAND PACK: 20/40

AMOUNT OF SAND: 350 lbs

BOTTOM OF SCREEN DEPTH (ft. bgs): 20.0

BOTTOM OF WELL DEPTH (ft. bgs): 20.0

BOTTOM OF FILTER PACK (ft. bgs): 20.0

TYPE AND AMOUNT OF BACKFILL: N/A

ADDITIONAL NOTES: Three bollards installed around pad.
Static water level collected 01/21/2014.
* Driller indicates concrete is 2 feet thick.

CHECKED BY: JDJ/TRM

DATE CHECKED: 1/28/14; 5/12/14

PREPARED BY: RMS

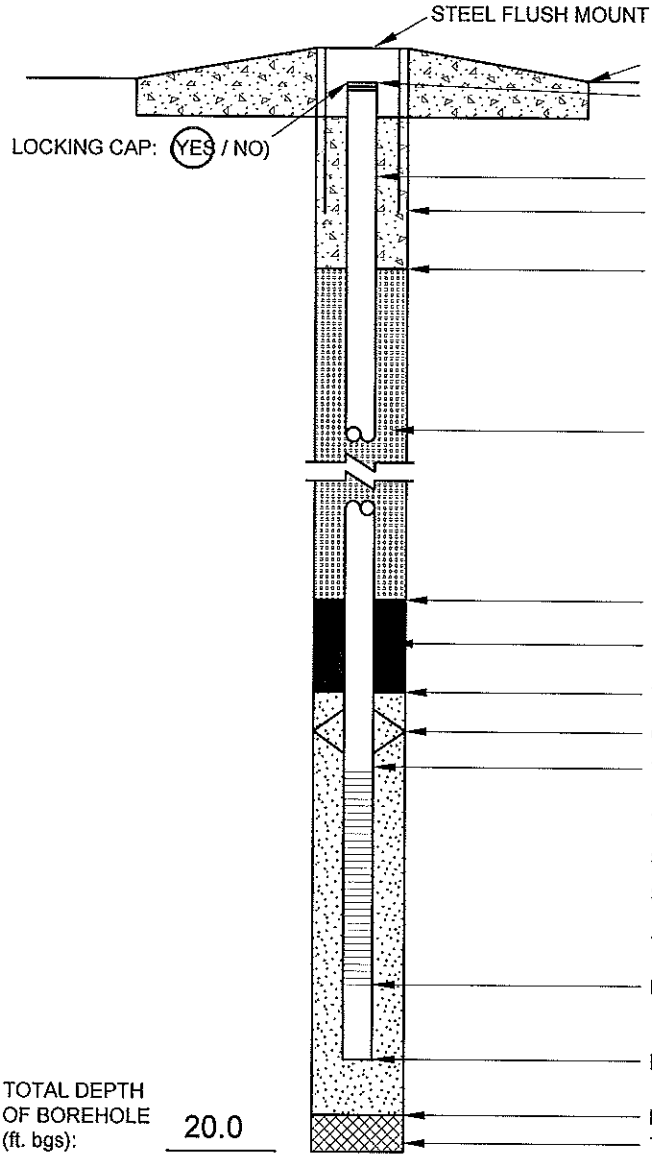
This log should not be used separately from the original report.

Golder Associates

FLUSH-MOUNT MONITORING WELL CONSTRUCTION LOG

MW-46

PROJECT NAME: Exide Frisco		PROJECT NUMBER: 130-2086
SITE NAME: Former Exide Recycling Facility		LOCATION: Frisco, Texas
CLIENT: Exide Technologies		SURFACE ELEVATION: 631.41 FT AMSL
GEOLOGIST: RMS	NORTHING: 7101919.46 FT	EASTING: 2479833.56 FT
DRILLER: Dan Spaust	STATIC WATER LEVEL: 5.21 FT BTOC	COMPLETION DATE: 1/14/2014
DRILLING COMPANY: SCI		DRILLING METHODS: HSA



GROUND SURFACE ELEVATION: 631.38 FT AMSL
TOP OF CASING ELEVATION: 630.98 FT AMSL
DIAMETER OF RISER PIPE (in.): 2.0
DIAMETER OF BOREHOLE (in.): 8.25
CONCRETE SEAL DEPTH (ft. bgs): 2.0*
TYPE AND AMOUNT OF ANNULAR SEAL: N/A
TOP OF BENTONITE SEAL DEPTH (ft. bgs): 2.0
TYPE AND AMOUNT OF BENTONITE SEAL: Bent chips (100 lbs)
TOP OF SAND PACK DEPTH (ft. bgs): 7.0
CENTRALIZER (yes / (no)) - TYPE: N/A
TOP OF SCREEN DEPTH (ft. bgs): 10.0
TYPE OF SCREEN: SCH 40 PVC slotted
SCREEN SLOT SIZE (in.): 0.010
SIZE OF SAND PACK: 20/40
AMOUNT OF SAND: 350 lbs
BOTTOM OF SCREEN DEPTH (ft. bgs): 20.0
BOTTOM OF WELL DEPTH (ft. bgs): 20.0
BOTTOM OF FILTER PACK (ft. bgs): 20.0
TYPE AND AMOUNT OF BACKFILL: N/A

ADDITIONAL NOTES: Static water level collected 01/21/2014.
* Driller indicates concrete is 2 feet thick.

CHECKED BY: JDJ/TRM
DATE CHECKED: 1/28/14; 5/12/14

PREPARED BY: RMS

This log should not be used separately from the original report.

APAR PHASE I INVESTIGATION AND SIR INVESTIGATION (PBW, 2012A)

Exide Technologies

Log of Boring: 2013-AD-1

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/14/2013	Drilling Method:	DPT
Driller:	Dan Spaust	Borehole Diameter (in.):	2
Driller's License:	3038	Total Depth (ft):	5
Field Supervisor:	Will Vienne, P.G.	Northing:	7101895.7037
Logged By:	Will Vienne, P.G.	Easting:	2480807.5725
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	4/4	0 - 0.5	FILL	(0 - 5.0) FILL, dark grayish brown, moist, soft to slightly firm, low plasticity, concrete fragment at 1.5', moderately organic clay at 0-0.6' with abundant root fragments, very fine clayey sand with Fe staining 0.6-2.9', silty clay with trace limestone granules from 2.9-4', wet clayey sand with Fe staining at 4-5'.
1		0.5 - 2		
2				
3		2 - 4		
4	1/1			
5				

PBW
Pastor, Behling & Wheeler, LLC
2201 Double Creek Dr., Suite 4004
Round Rock, TX 78664
Tel (512) 671-3434 Fax (512) 671-3446

Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-AD-2

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	4/29/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Will Vienne, P.G.	Northing:	7101914.0818
Logged By:	Will Vienne, P.G.	Easting:	2480989.7962
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	3.5/4	0.5 - 2	FILL	(0 - 4.0) FILL, sandy to silty clay, sandy clay from 0-3', silty clay from 3-4', brown, very dark gray from 3-4', common limestone granules, trace limestone pebbles, trace root/plant material.
1				
2				
3		2 - 4		
4	1/1	4 - 5		(4.0 - 5.0) FILL, clayey sand, gray, wet, no cementation, soft, abundant pebble and granule sized gravel.
5				

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Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-AD-2A

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/27/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	6
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101930.698
Logged By:	Tim Jennings, P.G.	Easting:	2481017.163
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	5/5		CON	(0 - 0.5) CONCRETE SLAB
1		0.5 - 2	CH	(0.5 - 1.7) Silty CLAY, grayish brown, trace fine gravel, moist, no cementation, soft, high plasticity.
2		2 - 4	CL	(1.7 - 5.5) Silty CLAY, light brownish-orange, few carbonate nodules (fine-very fine), moist, wet below 5.3', firm to soft, medium plasticity.
3				
4		4 - 5		
5	0.5/1			
6				

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Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies	Log of Boring: 2013-B4R-A

Frisco Recycling Center Frisco, TX	Completion Date:	4/29/2013	Drilling Method:	DPT
	Driller:	Margarito Estrada	Borehole Diameter (in.):	2
	Driller's License:	58164	Total Depth (ft):	5
PBW Project No. 1755	Field Supervisor:	Will Vienne, P.G.	Northing:	7101414.5525
	Logged By:	Will Vienne, P.G.	Easting:	2479942.58
	Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	3.6/4	0 - 0.5	CL	(0 - 5.0) Silty CLAY, brownish gray, slightly sandy at 4.0-5.0', some fissile fragments near base, dry, common Fe staining, no to moderate cementation, some cementation at 4.4-4.5', low plasticity.
1		0.5 - 2		
2				
3		2 - 4		
4	1/1	4 - 5		
5				

PBW
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Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-BB-1

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	5/21/2013	Drilling Method:	DPT
Driller:	Dan Spaust	Borehole Diameter (in.):	2
Driller's License:	3038	Total Depth (ft):	8
Field Supervisor:	Tim Jennings, P.G.	Northing:	7102006.534
Logged By:	Tim Jennings, P.G.	Easting:	2480117.377
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	3.1/4		CON	(0 - 0.9) CONCRETE SLAB
1		0.9 - 2	FILL	(0.9 - 1.3) FILL, sand and gravel road base.
2		2 - 3	CH/MH	(1.3 - 3.1) Clayey SILT, silty CLAY, dark grayish brown, ~20% medium sand from 1.3-1.6', wet, very soft, high plasticity.
3			NR	(3.1 - 4.0) No recovery.
4	1.4/4	4 - 5	CH	(4.0 - 5.4) Silty CLAY, light gray to black, wet, soft to firm, high plasticity.
5				
6			NR	(5.4 - 8.0) No recovery.
7				
8				

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Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies	Log of Boring: 2012-BG-1			
Frisco Recycling Center Frisco, TX	Completion Date:	3/29/2012	Drilling Method:	Hand Sampler
	Drilling Company:	NA	Borehole Diameter (in.):	2.25
	Driller:	NA	Total Depth (ft):	2
PBW Project No. 1755	Driller's License:	NA	Northing:	7098992.01
	Logged By:	Christopher Moore, P.G.	Easting:	2476012.67
	Sampling Method:	2"x 2' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0 1 2	0.9/2.0	0-2	CH	(0 - 2.0) CLAY, CH, light brown, moist, soft to firm, medium to high plasticity, no staining or foreign material observed, no odor.

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Notes:
Borehole backfilled with cuttings upon completion.
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-BG-2

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/29/2012	Drilling Method:	Hand Sampler
Drilling Company:	NA	Borehole Diameter (in.):	2.25
Driller:	NA	Total Depth (ft):	2
Driller's License:	NA	Northing:	7099083.46
Logged By:	Christopher Moore, P.G.	Easting:	2476047.00
Sampling Method:	2"x 2' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	1.3/2.0	0-2	CL	(0 - 2.0) SILTY CLAY, CL, dark brown, moist, soft to firm, medium plasticity, trace roots, no staining or foreign material observed, no odor.
1				
2				

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Notes:
Borehole backfilled with cuttings upon completion.
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-BG-3

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/29/2012	Drilling Method:	Hand Sampler
Drilling Company:	NA	Borehole Diameter (in.):	2.25
Driller:	NA	Total Depth (ft):	2
Driller's License:	NA	Northing:	7099093.22
Logged By:	Christopher Moore, P.G.	Easting:	2475820.22
Sampling Method:	2"x 2' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	1.5/2.0	0-2	CL	(0 - 2.0) SILTY CLAY, CL, dark brown, moist, soft to firm, medium plasticity, trace roots, no staining or foreign material observed, no odor.
1				
2				

PBW
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Notes:
Borehole backfilled with cuttings upon completion.
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-BG-4

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/29/2012	Drilling Method:	Hand Sampler
Drilling Company:	NA	Borehole Diameter (in.):	2.25
Driller:	NA	Total Depth (ft):	2
Driller's License:	NA	Northing:	7099222.60
Logged By:	Christopher Moore, P.G.	Easting:	2475950.23
Sampling Method:	Hand Auger	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	2.0/2.0	0-2	CL	(0 - 2.0) SILTY CLAY, CL, grayish brown, moist, soft to firm, medium plasticity, trace roots, no staining or foreign material observed, no odor.
1				
2				

PBW
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Notes:
Borehole backfilled with cuttings upon completion.
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-BG-5

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/29/2012	Drilling Method:	Hand Sampler
Drilling Company:	NA	Borehole Diameter (in.):	2.25
Driller:	NA	Total Depth (ft):	2
Driller's License:	NA	Northing:	7099109.89
Logged By:	Christopher Moore, P.G.	Easting:	2475620.3
Sampling Method:	2"x 2' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	1.4/2.0	0-2	CL	(0 - 2.0) SILTY CLAY, CL, grayish brown, moist, soft to firm, medium plasticity, trace sand, trace roots, no staining or foreign material observed, no odor.
1				
2				

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Notes:
Borehole backfilled with cuttings upon completion.
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-BG-6

Frisco Recycling Center Frisco, TX	Completion Date:	3/29/2012	Drilling Method:	Hand Sampler
	Drilling Company:	NA	Borehole Diameter (in.):	2.25
	Driller:	NA	Total Depth (ft):	2
PBW Project No. 1755	Driller's License:	NA	Northing:	7099308.28
	Logged By:	Christopher Moore, P.G.	Easting:	2475765.83
	Sampling Method:	Hand Auger	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0 1 2	2.0/2.0	0-2	CL	(0 - 2.0) SILTY CLAY, CL, grayish brown, moist, soft to firm, medium plasticity, trace roots, no staining or foreign material observed, no odor.

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Notes:
Borehole backfilled with cuttings upon completion.
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-BG-7

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/29/2012	Drilling Method:	Hand Sampler
Drilling Company:	NA	Borehole Diameter (in.):	2.25
Driller:	NA	Total Depth (ft):	2
Driller's License:	NA	Northing:	7099174.55
Logged By:	Christopher Moore, P.G.	Easting:	2475459.86
Sampling Method:	2"x 2' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	1.4/2.0	0-2	CL	(0 - 2.0) SILTY CLAY, CL, grayish brown, moist, soft to firm, medium plasticity, trace roots, no staining or foreign material observed, no odor.
1				
2				

PBW
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Notes:
Borehole backfilled with cuttings upon completion.
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies	Log of Boring: 2012-BG-8

Frisco Recycling Center Frisco, TX	Completion Date:	3/29/2012	Drilling Method:	Hand Sampler
	Drilling Company:	NA	Borehole Diameter (in.):	2.25
	Driller:	NA	Total Depth (ft):	2
PBW Project No. 1755	Driller's License:	NA	Northing:	7099468.68
	Logged By:	Christopher Moore, P.G.	Easting:	2475553.85
	Sampling Method:	Hand Auger	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0 1 2	2.0/2.0	0-2	CL	(0 - 2.0) SILTY CLAY, CL, grayish brown, moist, soft to firm, medium plasticity, trace roots, no staining or foreign material observed, no odor.

PBW
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Notes:
Borehole backfilled with cuttings upon completion.
This Log of Boring should not be used separately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-BG-9

Frisco Recycling Center Frisco, TX	Completion Date:	3/29/2012	Drilling Method:	Hand Sampler
	Drilling Company:	NA	Borehole Diameter (in.):	2.25
	Driller:	NA	Total Depth (ft):	2
PBW Project No. 1755	Driller's License:	NA	Northing:	7099228.98
	Logged By:	Christopher Moore, P.G.	Easting:	2474750.45
	Sampling Method:	2"x 2' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0 1 2	1.6/2.0	0-2	CL	(0 - 2.0) SILTY CLAY, CL, dark grayish brown, moist, soft to firm, medium plasticity, trace limestone gravel, trace roots, some dark red oxidized staining, no foreign material observed, no odor.

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Notes:
Borehole backfilled with cuttings upon completion.
This Log of Boring should not be used separately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-BG-10

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/29/2012	Drilling Method:	Hand Sampler
Drilling Company:	NA	Borehole Diameter (in.):	2.25
Driller:	NA	Total Depth (ft):	2
Driller's License:	NA	Northing:	7099466.86
Logged By:	Christopher Moore, P.G.	Easting:	2474833.08
Sampling Method:	Hand Auger	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	2.0/2.0	0-2	CL	(0 - 2.0) SILTY CLAY, CL, grayish brown, moist, soft to firm, medium plasticity, trace roots, no staining or foreign material observed, no odor.
1				
2				

PBW
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Notes:
Borehole backfilled with cuttings upon completion.
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-BS2-1

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	4/29/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Will Vienne, P.G.	Northing:	7101512.9229
Logged By:	Will Vienne, P.G.	Easting:	2480177.639
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	3.7/4	0.5 - 2	CL	(0 - 5.0) Silty CLAY, common limestone granules and calcareous precipitates, brownish gray, trace mottled Fe staining, dry, soft to firm, low to medium plasticity.
1				
2		2 - 4		
3				
4	1/1	4 - 5		
5				

PBW
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Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: BS-3

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/4/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Will Vienne, P.G.	Northing:	7101491.1574
Logged By:	Will Vienne, P.G.	Easting:	2480214.5135
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	5/5	1 - 2	CL	(0 - 5.0) CLAY/silty CLAY, dark brownish gray, roots and clay with abundant limestone and shale pebbles at 0-0.6', soft clay with abundant limestone clay granules at 0.6-3.3', firm silty clay at 3.3-5', slightly moist, soft to firm, low to medium plasticity.
1				
2		2 - 4		
3				
4		4 - 5		
5				

PBW
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Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies	Log of Boring: 2013-BS5-1

Frisco Recycling Center Frisco, TX	Completion Date:	4/29/2013	Drilling Method:	DPT
	Driller:	Margarito Estrada	Borehole Diameter (in.):	2
	Driller's License:	58164	Total Depth (ft):	5
PBW Project No. 1755	Field Supervisor:	Will Vienne, P.G.	Northing:	7101471.5118
	Logged By:	Will Vienne, P.G.	Easting:	2480114.1188
	Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	4/4	0.5 - 2	CL	(0 - 5.0) Sandy, silty CLAY, brownish gray,trace yellow precipitate below 2.9', moderate to abundant Fe staining, moist, soft, low plasticity.
1				
2		2 - 4		
3				
4	1/1	4 - 5		
5				

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Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies	Log of Boring: 2012-BSA-1

Frisco Recycling Center Frisco, TX	Completion Date:	1/4/2012	Drilling Method:	Geoprobe
	Drilling Company:	StrataCore	Borehole Diameter (in.):	2.25
	Driller:	Mario Robles	Total Depth (ft):	2
PBW Project No. 1755	Driller's License:	52694	Northing:	7102274.07
	Logged By:	Christopher Moore, P.G.	Easting:	2480624.4
	Sampling Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	2.0/2.0	0-2	CL	(0 - 2.0) SILTY CLAY, CL, mottled black and brown, moist, soft to firm, medium plasticity, some sand size carbonate nodules, no staining or foreign material observed, no odor.
1				
2				

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Notes:
Boring location hand probed to 3 feet to check for utilities.
Borehole plugged with bentonite chips upon completion.
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies	Log of Boring: 2012-BSA-2

Frisco Recycling Center Frisco, TX	Completion Date:	4/29/2013	Drilling Method:	DPT
	Driller:	Margarito Estrada	Borehole Diameter (in.):	2
	Driller's License:	58164	Total Depth (ft):	5
PBW Project No. 1755	Field Supervisor:	Will Vienne, P.G.	Northing:	7102274.2792
	Logged By:	Will Vienne, P.G.	Easting:	2480735.1448
	Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0				(0 - 5.0) CLAY and Silty CLAY, very dark gray, trace orange Fe mottling, trace limestone pebbles, moderately abundant limestone granules, dry to slightly moist, firm, low to medium plasticity.
1				
2	4/4		CL	
3		2 - 4		
4				
	1/1	4 - 5		
5				

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Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-BSA-3

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	1/4/2012	Drilling Method:	Geoprobe
Drilling Company:	StrataCore	Borehole Diameter (in.):	2.25
Driller:	Mario Robles	Total Depth (ft):	2
Driller's License:	52694	Northing:	7102224.29
Logged By:	Christopher Moore, P.G.	Easting:	2480672.30
Sampling Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	2.0/2.0	0-2	CL/CH	(0 - 2.0) CLAY, CL/CH, very dark brown, moist, firm, medium to high plasticity, some sand size carbonate nodules, gravel fill on surface, no staining observed, no odor.
1				
2				

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Notes:
Boring location hand probed to 3 feet to check for utilities.
Borehole plugged with bentonite chips upon completion.
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-BSA-4

Frisco Recycling Center Frisco, TX	Completion Date:	1/4/2012	Drilling Method:	Geoprobe
	Drilling Company:	StrataCore	Borehole Diameter (in.):	2.25
	Driller:	Mario Robles	Total Depth (ft):	2
PBW Project No. 1755	Driller's License:	52694	Northing:	7102173.2055
	Logged By:	Christopher Moore, P.G.	Easting:	2480638.61
	Sampling Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):	–

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0			CL	(0 - 0.5) SILTY CLAY, CL, brownish yellow, moist, soft, medium plasticity, trace gravel, no staining or foreign material observed, no odor.
1	2.0/2.0	0-2	CL/CH	(0.5 - 2.0) CLAY, CL/CH, very dark brown, moist, firm, medium to high plasticity, some sand size carbonate nodules, no staining observed, no odor. 1.7: black plastic fragment (1" x 1", 1/8" thick).
2				

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Notes:
Boring location hand probed to 3 feet to check for utilities.
Borehole plugged with bentonite chips upon completion.
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Exide Technologies

Log of Boring: 2012-BSA-5

Frisco Recycling Center Frisco, TX	Completion Date:	1/4/2012	Drilling Method:	Geoprobe
	Drilling Company:	StrataCore	Borehole Diameter (in.):	2.25
	Driller:	Mario Robles	Total Depth (ft):	2
PBW Project No. 1755	Driller's License:	52694	Northing:	7102165.32
	Logged By:	Christopher Moore, P.G.	Easting:	2480739.17
	Sampling Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	2.0/2.0	0-2	CL	(0 - 0.7) SILTY CLAY, CL, mottled very dark grayish brown and brown, moist, soft-firm, medium plasticity, some sand size carbonate nodules, gravel fill on surface, no staining observed, no odor.
1			CL/CH	(0.7 - 2.0) CLAY, CLCH, dark gray, moist, firm, medium to high plasticity, trace sand size carbonate nodules, no staining or foreign material observed, no odor.
2				

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Notes:
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Exide Technologies

Log of Boring: 2013-BSA-6

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/5/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7102200.9899
Logged By:	Roberta Russell	Easting:	2480652.3935
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	5/5	0 - 2	FILL	(0 - 0.3) FILL, sand w/gravel, light reddish brown, unconsolidated, dry, hard. (0.3 - 5.0) FILL, silty clay, trace gravel, reddish brown, plastic bag fragment and mulch @ 4.9', moist, firm, low plasticity.
1				
2				
3				
4				
5				

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Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-BSA-7

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/5/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7102250.9587
Logged By:	Roberta Russell	Easting:	2480715.8882
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	5/5	0 - 2	FILL	(0 - 1.3) FILL, surficial fill not associated with NDA, clay with sand and gravel, ~30-40% medium gravel and sand, no foreign objects (e.g. slag, battery chips or trash) observed, light reddish brown, dry, firm, low plasticity.
1				
2			CL	(1.3 - 5.0) Silty CLAY, dark reddish brown, trace calcareous nodules from 4.5-5', moist, firm, low plasticity.
3				
4				
5				

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Notes:

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Exide Technologies

Log of Boring: 2013-BSB-1

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	4/11/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	12
Field Supervisor:	Tim Jennings, P.G.	Northing:	7102047.0799
Logged By:	Roberta Russell	Easting:	2479711.821
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0			CON	(0 - 0.9) CONCRETE SLAB
1	3.4/4	0.9 - 2	FILL	(0.9 - 6.3) FILL, clayey sand, reddish yellow, increasing clay content with depth, with trace black, very fine gravel, moist, soft, low plasticity.
2				
3		2 - 4		
4	4/4	4 - 5		
5				
6				
7		6.3 - 7.7		(6.3 - 9.3) FILL, silty clay, dark reddish brown, trace slag (<0.1") from 6.3-7.7', gravel lens at 9.2-9.3', moist, firm, low plasticity.
8				
9		8 - 10		
10	4/4		CL	(9.3 - 12.0) Silty CLAY, dark reddish brown, trace red mottling, trace calcareous nodules, moist, wet at 11.6', firm, low plasticity.
11				
12		11.6		

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Notes:

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Exide Technologies

Log of Boring: 2013-BSB-2

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	4/11/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	12
Field Supervisor:	Tim Jennings, P.G.	Northing:	7102035.3349
Logged By:	Roberta Russell	Easting:	2479770.635
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0			CON	(0 - 0.9) CONCRETE SLAB
1		0.9 - 2	FILL	(0.9 - 5.4) FILL, clayey sand, reddish yellow, trace black staining from 4.0-5.4', greater clay content with depth, with trace black, well-rounded, very fine gravel from 0.9-1.1', moist, soft.
2	3.4/4			
3		2 - 4		
4		4 - 5		
5				
6	4/4			(5.4 - 8.9) FILL, silty clay, dark reddish brown, trace slag fragments (<0.1") from 5.7-6.6', large battery chip (~1.5") at 6.4', gravel lens at 7.2-7.4' (~40% fine-medium gravel in silty clay matrix), moist, soft, low plasticity.
7				
8				
9		8 - 10	CL	(8.9 - 12.0) Silty CLAY, dark reddish brown, moist, wet at 11.2', soft to firm, low plasticity.
10	4/4			
11		11.2		
12				

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Notes:

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Exide Technologies

Log of Boring: 2013-BSB-3

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	4/10/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	12
Field Supervisor:	Tim Jennings, P.G.	Northing:	7102029.7369
Logged By:	Roberta Russell	Easting:	2479797.551
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0			CON	(0 - 0.9) CONCRETE SLAB
1	4/4	0.9 - 2	FILL	(0.9 - 4.0) FILL, silty, clayey sand, reddish yellow, with a black, well-rounded and hard coarse pebble at 2.6' (likely Fe nodule), moist, soft to firm.
2				
3		2 - 4		
4				(4.0 - 5.0) FILL, sandy clay, reddish yellow, moist, soft, low plasticity.
5		4 - 5		(5.0 - 7.1) FILL, silty clay, dark reddish brown, silty gravel lens from 7-7.1' (~50% medium to coarse gravel), moist, soft to firm, low plasticity.
6	4/4			
7				(7.1 - 12.0) Silty CLAY, dark reddish brown, moist, wet at 11.0', firm, low plasticity.
8				
9		8 - 10	CL	
10	4/4			
11		11		
12				

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Notes:

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Exide Technologies

Log of Boring: 2013-BSB-4

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	4/10/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	12
Field Supervisor:	Tim Jennings, P.G.	Northing:	7102020.0503
Logged By:	Roberta Russell	Easting:	2479814.7476
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0			CON	(0 - 0.9) CONCRETE SLAB
1		0.9 - 2	FILL	(0.9 - 4.8) FILL, silty, clayey sand, reddish yellow, moist, soft.
2	3.1/4			
3		2 - 4		
4				
		4 - 5		
5				(4.8 - 7.2) FILL, silty clay, dark reddish brown, gravel lens (~70% fine to medium gravel) from 7.0-7.2', moist, soft to firm, low plasticity.
6	4/4			
7				
8				(7.2 - 12.0) Silty CLAY, dark reddish brown, moist, wet at 11.0', firm, low plasticity.
9		8 - 10	CL	
10	4/4			
11		11		
12				

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Notes:

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Exide Technologies

Log of Boring: 2013-BSB-5

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	4/11/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	12
Field Supervisor:	Tim Jennings, P.G.	Northing:	7102021.0899
Logged By:	Roberta Russell	Easting:	2479781.149
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0			CON	(0 - 0.9) CONCRETE SLAB
1		0.9 - 2	FILL	(0.9 - 5.6) FILL, clayey sand, reddish yellow, trace black staining, moist, soft, increasing clay content with depth.
2	3.1/4			
3		2 - 4		
4		4 - 5		
5				
6	4/4			(5.6 - 8.6) FILL, silty clay, dark reddish brown, trace slag fragments from 5.6-8', trace coarse gravel lens from 7.6-7.7'.
7				
8				
9		8 - 10	CL	(8.6 - 12.0) Silty CLAY, dark reddish brown, moist, wet at 11.2', firm, low plasticity.
10	4/4			
11		11.2		
12				

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Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-BSB-6

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	4/11/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	12
Field Supervisor:	Tim Jennings, P.G.	Northing:	7102030.9419
Logged By:	Roberta Russell	Easting:	2479850.401
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0			CON	(0 - 0.9) CONCRETE SLAB
1		0.9 - 2	FILL	(0.9 - 5.7) FILL, clayey sand, reddish yellow, moist, soft to firm, low plasticity.
2	2.5/4			
3		2 - 4		
4				
		4 - 5		
5				
6	4/4			(5.7 - 9.3) FILL, silty clay, dark reddish brown, gravel lens (~40% medium to coarse gravel in silty clay matrix) with abundant slag (~30% fine gravel-sized) at 7.2-7.3', slag fragment (<0.2") at 8.7', moist, firm, low plasticity.
7				
8				
9		8 - 10		
10	4/4		CL	(9.3 - 12.0) Silty CLAY, dark reddish brown, trace calcareous precipitates, moist, wet at 11.1', soft to firm, low plasticity.
11		11.1		
12				

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Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

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Exide Technologies

Log of Boring: 2013-BSB-7

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	4/10/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	12
Field Supervisor:	Tim Jennings, P.G.	Northing:	7102020.6659
Logged By:	Roberta Russell	Easting:	2479830.487
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0			CON	(0 - 0.9) CONCRETE SLAB
1	3.4/4	0.9 - 2	FILL	(0.9 - 5.3) FILL, clayey sand/sandy clay, reddish yellow, ~10% black and red well-rounded very fine gravel, moderate black staining, moist, soft to firm, low plasticity.
2				
3		2 - 4		
4		4 - 5		
5				
6	4/4			(5.3 - 9.1) FILL, silty clay, dark reddish brown with moderate yellowish brown staining, gravel lens from 7.0-7.1', slag fragments with some black metallic and trace red oxidized material at 7.1', moist, firm, low plasticity.
7				
8				
9		8 - 10		
10	4/4		CL	(9.1 - 12.0) Silty CLAY, dark reddish brown, trace calcareous precipitates, moist, wet at 11.0', soft to firm, low plasticity.
11		11		
12				

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Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-BSB-8

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	4/10/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	12
Field Supervisor:	Tim Jennings, P.G.	Northing:	7102044.5099
Logged By:	Roberta Russell	Easting:	2479811.731
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0			CON	(0 - 0.9) CONCRETE SLAB
1		0.9 - 2	FILL	(0.9 - 3.5) FILL, silty sand, reddish yellow, moist, unconsolidated.
2	3.5/4			
3		2 - 4		
4				(3.5 - 5.9) FILL, silty, sandy clay, reddish brown, moist, soft, low plasticity.
5		4 - 5		
6	2.5/4			(5.9 - 9.5) FILL, silty clay, dark reddish brown, slag fragments at 8.0 and 9.3', moist, soft, low plasticity.
7				
8				
9		8 - 10		
10	3.5/4		CL	(9.5 - 12.0) Silty CLAY, dark reddish brown, moist, wet at 11.0', firm, low plasticity.
11		11		
12				

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Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-BSB-9

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	4/10/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	20
Field Supervisor:	Tim Jennings, P.G.	Northing:	7102065.3359
Logged By:	Roberta Russell	Easting:	2479812.374
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0			CON	(0 - 0.9) CONCRETE SLAB
1	4/4	0.9 - 2	FILL	(0.9 - 3.3) FILL, silty sand, reddish yellow, very moist (possibly from concrete corer), soft.
2				
3		2 - 4		(3.3 - 6.0) FILL, sandy clay, reddish yellow, gravelly clay lens at 6.0', moist, soft, low plasticity.
4	3/4	4 - 5		
5				
6				(6.0 - 8.1) FILL, silty clay, dark reddish brown, moderate orange staining, moist, soft, low plasticity.
7				
8	4/4			(8.1 - 9.2) FILL, sandy clay, reddish brown, moist, soft, low plasticity.
9		8 - 10		(9.2 - 16.6) Silty CLAY, dark reddish brown, moist, wet at 11.0', firm, low plasticity.
10			CL	
11		11		
12	4/4			
13				
14				
15				
16	4/4			
17			GC	(16.6 - 17.8) Clayey GRAVEL, ~60% medium gravel, light reddish brown, wet, soft.
18			CL	(17.8 - 18.4) Silty CLAY, light reddish brown, wet, firm, low plasticity.
				(18.4 - 18.9) Calcareous CLAY, light reddish brown with orange staining, wet, firm, low plasticity.
19			GC	(18.9 - 19.8) Clayey GRAVEL, ~ 70% medium to coarse gravel, light reddish brown, wet, soft.
20			CL	(19.8 - 20.0) Calcareous CLAY, light reddish brown with orange staining, wet, firm, low plasticity.

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Notes:

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Exide Technologies

Log of Boring: 2013-BSB-10

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	4/11/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	12
Field Supervisor:	Tim Jennings, P.G.	Northing:	7102049.9659
Logged By:	Roberta Russell	Easting:	2479884.153
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0			CON	(0 - 0.9) CONCRETE SLAB
1	3.5/4	0.9 - 2	FILL	(0.9 - 4.9) FILL, clayey sand, reddish yellow, moist, soft to firm, low plasticity, greater clay content with depth; with black, well-rounded, coarse pebble at 4.0'.
2				
3		2 - 4		
4		4 - 5		
5	3.6/4			(4.9 - 10.4) FILL, silty clay, dark reddish brown, moist, soft to firm, low plasticity, ~10% slag (fine to medium gravel-sized) from 5.5-7.9', gravelly clay lens (~20% medium to coarse gravel in silty clay matrix) from 6.6-6.7'.
6				
7				
8		8 - 10		
9				
10	4/4			
11		11.4	CL	(10.4 - 12.0) Silty CLAY, dark reddish brown, moist to wet, soft to firm, low plasticity, saturated at 11.4'.
12				

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Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-BY-1

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	1/4/2012	Drilling Method:	Geoprobe
Drilling Company:	StrataCore	Borehole Diameter (in.):	2.25
Driller:	Mario Robles	Total Depth (ft):	2
Driller's License:	52694	Northing:	7102377.15
Logged By:	Christopher Moore, P.G.	Easting:	2479500.79
Sampling Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0	2.0/2.0	0	0-2	CL	(0 - 0.9) SILTY CLAY, CL, light yellowish brown, moist, firm, medium plasticity, some sand size carbonate nodules, no staining or foreign material observed, no odor.
1					(0.9 - 2.0) SILTY CLAY, CL, grayish brown, moist, firm, medium plasticity, some sand size carbonate nodules, no staining or foreign material observed, no odor.
2					

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Notes:
Boring location hand probed to 3.0 feet to check for utilities.
Borehole plugged with bentonite chips upon completion.
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-BY-2

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	1/4/2012	Drilling Method:	Geoprobe
Drilling Company:	StrataCore	Borehole Diameter (in.):	2.25
Driller:	Mario Robles	Total Depth (ft):	2
Driller's License:	52694	Northing:	7102343.16
Logged By:	Christopher Moore, P.G.	Easting:	2479613.26
Sampling Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0 1 2	2.0/2.0	0	0-2	CL	(0 - 2.0) SILTY CLAY, CL, mottled very dark gray and light yellowish brown, moist, firm, medium plasticity, some sand size carbonate nodules, no staining or foreign material observed to 1.9, no odor. 1.9: black plastic fragment (approximately 0.5 in x 1 in x 1/8 in thick)

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Notes:
Boring location hand probed to 2.5 feet to check for utilities.
Borehole plugged with bentonite chips upon completion.
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-BY-3

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	1/4/2012	Drilling Method:	Geoprobe
Drilling Company:	StrataCore	Borehole Diameter (in.):	2.25
Driller:	Mario Robles	Total Depth (ft):	2
Driller's License:	52694	Northing:	7102238.79
Logged By:	Christopher Moore, P.G.	Easting:	2479660.34
Sampling Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0 – 1 – 2	2.0/2.0	0	0-2	CL	(0 - 2.0) SILTY CLAY, CL, mottled very dark gray and light yellowish brown, moist, firm, medium plasticity, some sand size carbonate nodules, no staining or foreign material observed to 1.9, no odor. 1.9: gravel size slag fragment (black and oxidized orange, hard, dense, porus)

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Notes:
Boring location hand probed to 2.5 feet to check for utilities.
Borehole plugged with bentonite chips upon completion.
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-BY-4

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	1/4/2012	Drilling Method:	Geoprobe
Drilling Company:	StrataCore	Borehole Diameter (in.):	2.25
Driller:	Mario Robles	Total Depth (ft):	2
Driller's License:	52694	Northing:	7102230.77
Logged By:	Christopher Moore, P.G.	Easting:	2479578.92
Sampling Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0 - 1 - 2	2.0/2.0	0	0-2	CL	(0 - 2.0) SILTY CLAY, CL, mottled very dark gray and light yellowish brown, moist, firm, medium plasticity, some sand size carbonate nodules, no staining or foreign material observed to 1.9, no odor. 1.2: gravel. 1.7-1.9: gravel, 1.9: gravel size slag fragment (black and oxidized orange, hard, dense, porous)

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Notes:
Boring location hand probed to 1.5 feet to check for utilities.
Borehole plugged with bentonite chips upon completion.
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-BY-5

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	1/4/2012	Drilling Method:	Geoprobe
Drilling Company:	StrataCore	Borehole Diameter (in.):	2.25
Driller:	Mario Robles	Total Depth (ft):	2
Driller's License:	52694	Northing:	7102282.36
Logged By:	Christopher Moore, P.G.	Easting:	2479515.5369
Sampling Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0 – 1 – 2	2.0/2.0	0	0-2	CL/CH	(0 - 2.0) SILTY CLAY, CL, very dark gray, moist, firm, medium plasticity, some sand size carbonate nodules, no staining or foreign material observed to 1.9, no odor.

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Notes:
Boring location hand probed to 3.0 feet to check for utilities.
Borehole plugged with bentonite chips upon completion.
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-BY-4

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/5/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	2
Field Supervisor:	Tim Jennings, P.G.	Northing:	7102230.7699
Logged By:	Roberta Russell	Easting:	2479578.9168
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	2/2		FILL	(0 - 1.5) FILL, clayey silt, light yellowish brown, moist, hard, low plasticity.
1				
				(1.5 - 2.0) FILL, abundant slag, gravel with silt and clay, dry, firm.
2				

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Notes:

Borehole plugged with bentonite chips upon completion.

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Exide Technologies

Log of Boring: 2012-CUFT-1

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	1/6/2012	Drilling Method:	Geoprobe
Drilling Company:	StrataCore	Borehole Diameter (in.):	2.25
Driller:	Mario Robles	Total Depth (ft):	4
Driller's License:	52694	Northing:	7101785.23
Logged By:	Christopher Moore, P.G.	Easting:	2479393.50
Sampling Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Soil pH	Sample Interval	USCS	Lithologic Description
0					
1		6.5	0-2		(0 - 1.6) SILTY CLAY, CL, grayish brown, moist, soft, medium plasticity, no staining observed, no odor. 0-0.3: fine sand lenses, fill. 1.3: angular gravel fragment.
2	3.5/4.0			CL	(1.6 - 4.0) SILTY CLAY, CL, very dark gray, moist, firm medium plasticity, some oxidized lenses, trace sand size carbonate nodules, no foreign material observed, no odor.
3		6.82			
4					

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Notes:
Boring location hand probed to 4.0 feet to check for utilities.
Borehole plugged with bentonite chips upon completion.
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Exide Technologies

Log of Boring: 2012-CUFT-2

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	1/6/2012	Drilling Method:	Geoprobe
Drilling Company:	StrataCore	Borehole Diameter (in.):	2.25
Driller:	Mario Robles	Total Depth (ft):	4
Driller's License:	52694	Northing:	7101782.80
Logged By:	Christopher Moore, P.G.	Easting:	2479434.31
Sampling Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Soil pH	Sample Interval	USCS	Lithologic Description
0	4.0/4.0	6.38	0-2	CL	(0 - 2.1) SILTY CLAY, CL, yellowish brown and very dark gray, moist, soft to firm, medium plasticity, trace angular carbonate gravel (possible fill or reworked material), no staining observed, no odor
1					
2		6.32			(2.1 - 4.0) SILTY CLAY, CL, very dark gray, moist, firm medium plasticity, some oxidized lenses, trace sand size carbonate nodules, no foreign material observed, no odor.
3					
4					

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Notes:
Boring location hand probed to 4.5 feet to check for utilities.
Borehole plugged with bentonite chips upon completion.
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Exide Technologies

Log of Boring: 2013-CUFT-3

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/4/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Will Vienne, P.G.	Northing:	7101737.6536
Logged By:	Will Vienne, P.G.	Easting:	2479344.9752
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	4.5/5	0 - 0.5	CL	(0 - 5.0) CLAY, dark brownish gray, abundant limestone pebbles in clay matrix at 0-0.6', trace limestone granules below 0.6', white precipitate like substance at surface, moist 0-0.6', soft to slightly firm, low to medium plasticity.
1		0.5 - 2		
2				
3		2 - 4		
4		4 - 5		
5				

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Notes:

Borehole plugged with bentonite chips upon completion.

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Exide Technologies

Log of Boring: 2013-CUFT-4

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/4/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Will Vienne, P.G.	Northing:	7101888.98
Logged By:	Will Vienne, P.G.	Easting:	2479303.0138
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	4.6/5	0 - 0.5	CL	(0 - 5.0) CLAY, dark gray, trace limestone granules, moderately abundant decayed plant fragments, wet at 0-0.5', moist below 0.5', soft, low plasticity.
1		0.5 - 2		
2				
3		2 - 4		
4		4 - 5		
5				

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Notes:

Borehole plugged with bentonite chips upon completion.

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Exide Technologies	Log of Boring: 2013-CUFT-5

Frisco Recycling Center Frisco, TX	Completion Date:	3/4/2013	Drilling Method:	DPT
	Driller:	Margarito Estrada	Borehole Diameter (in.):	2
	Driller's License:	58164	Total Depth (ft):	5
PBW Project No. 1755	Field Supervisor:	Will Vienne, P.G.	Northing:	7101906.1421
	Logged By:	Will Vienne, P.G.	Easting:	2479178.0231
	Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0 1 2 3 4 5	4.7/5	0 - 0.5 0.5 - 2 2 - 4 4 - 5	CL	(0 - 5.0) Silty CLAY, v. dark gray, abundant limestone granules, moderately abundant decayed plant material, moist, soft to slightly firm, low plasticity.

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Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies	Log of Boring: 2013-CUFT-6

Frisco Recycling Center Frisco, TX	Completion Date:	3/4/2013	Drilling Method:	DPT
	Driller:	Margarito Estrada	Borehole Diameter (in.):	2
	Driller's License:	58164	Total Depth (ft):	5
PBW Project No. 1755	Field Supervisor:	Will Vienne, P.G.	Northing:	7101910.6793
	Logged By:	Will Vienne, P.G.	Easting:	2479083.0433
	Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	4.3/5	0 - 0.5	CL	(0 - 5.0) Silty CLAY, dark gray, trace limestone granules, moderately abundant decayed plant material, moist, soft, low to medium plasticity.
1		0.5 - 2		
2				
3		2 - 4		
4		4 - 5		
5				

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Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-CUFT-7

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/4/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Will Vienne, P.G.	Northing:	7101923.4133
Logged By:	Will Vienne, P.G.	Easting:	2478975.0661
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	5/5	0 - 0.5	CL	(0 - 5.0) Silty CLAY, slightly sandy at 0-0.4', dark gray, slightly moist, soft at 0-1.8', firm below 1.8', low plasticity.
1		0.5 - 2		
2				
3		2 - 4		
4		4 - 5		
5				

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Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-CUFT-7A

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/7/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101907.9099
Logged By:	Roberta Russell	Easting:	2478965.4179
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	4.8/5	0 - 0.5	CL	(0 - 5.0) Silty CLAY/CLAY, dark reddish brown, moist, firm, low to medium plasticity.
1		0.5 - 2		
2				
3		2 - 4		
4		4 - 5		
5				

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Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-CUFT-8

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/4/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Will Vienne, P.G.	Northing:	7101684.4603
Logged By:	Will Vienne, P.G.	Easting:	2479346.4925
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	5/5	0 - 0.5	CL	(0 - 5.0) Silty CLAY, grayish brown, moderate to abundant limestone granules throughout, firm, shale fragments at 2.8-3.2', soft and moist at 0-0.9', dry and firm below 0.9', low plasticity.
1		0.5 - 2		
2				
3		2 - 4		
4		4 - 5		
5				

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Notes:

Borehole plugged with bentonite chips upon completion.

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Exide Technologies

Log of Boring: 2013-CUFT-10

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/7/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101931.4899
Logged By:	Roberta Russell	Easting:	2478954.0769
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	4.4/5	0 - 0.5	FILL	(0 - 0.5) FILL, clayey silt w/gravel, dark brown, ~10% medium gravel, battery chip at 0.5', moist, soft, low plasticity silt.
1		0.5 - 2	CL	(0.5 - 5.0) SILTY CLAY, moist, firm, low to medium plasticity.
2				
3		2 - 4		
4		4 - 5		
5				

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Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: E-11

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	4/29/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	16
Field Supervisor:	Will Vienne, P.G.	Northing:	7102765.709
Logged By:	Roberta Russell	Easting:	2480143.5364
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	4/4	0 - 0.5	CL	(0 - 5.9) Silty CLAY, trace fine-medium gravel, trace carbonate precipitates below 4.5', dark reddish brown, trace Fe staining below 5.0', moist, firm, low plasticity.
1		0.5 - 2		
2				
3		2 - 4		
4	4/4	4 - 5		
5				
6		5 - 7	CL/ML	(5.9 - 12.0) Silty CLAY/clayey SILT, light grayish brown, abundant orange Fe staining, abundant calcareous precipitates, gravelly clay lenses (~30% medium gravel in clay matrix) at 5.9-6.0 and 6.6-6.7', gravelly clay lens (~10% gravel in clay matrix) from 11.3-12.0', moist, wet at 10.9', firm to hard, softer with depth, low plasticity.
7				
8	4/4	7 - 9		
9				
10		9 - 10.9		
11				
12	4/4		CL	(12.0 - 16.0) Gravelly CLAY, ~15-20% fine-medium gravel in clay matrix, light grayish brown with abundant orange Fe staining, wet, soft, low plasticity.
13				
14				
15				
16				

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Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: E-11A

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/6/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7102808.2937
Logged By:	Roberta Russell	Easting:	2480069.2399
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	5/5	0 - 0.5	CL	(0 - 5.0) Silty CLAY/CLAY, dark reddish brown, trace orange Fe-ox staining from 3-5', trace calcareous nodules from 3.3-5', moist, firm to hard, low to medium plasticity.
1		0.5 - 2		
2				
3		2 - 4		
4		4 - 5		
5				

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Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: E-11B

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/15/2013	Drilling Method:	DPT
Driller:	Dan Spaust	Borehole Diameter (in.):	2
Driller's License:	3038	Total Depth (ft):	5
Field Supervisor:	Will Vienne, P.G.	Northing:	7102809.7866
Logged By:	Will Vienne, P.G.	Easting:	2480025.1527
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	3.5/4	0 - 0.5	CL	(0 - 5.0) Slightly silty CLAY, very dark gray to dark brownish gray, soft and moist at 0-0.8', hard and dry at 0.8-5' with abundant limestone granules, low to medium plasticity clay.
1		0.5 - 2		
2				
3		2 - 3.5		
4	1/1	4 - 5		
5				

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Notes:

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Exide Technologies

Log of Boring: E-15A

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/6/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7102787.1342
Logged By:	Roberta Russell	Easting:	2480940.0881
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	5/5	0 - 0.5	CL	(0 - 0.5) SILTY CLAY, dark reddish brown, moist, soft, low plasticity.
1		0.5 - 2		(0.5 - 3.0) Gravelly CLAY, ~10% medium gravel, thin interbedded clayey medium to coarse gravel(~40% gravel), light brown, moist, soft.
2				
3		2 - 4	ML	(3.0 - 4.4) Sandy SILT w/clay and gravel,~20% medium to coarse gravel, light yellowish brown, moist, soft.
4		4 - 5	CL/ML	(4.4 - 5.0) Silty CLAY/clayey SILT, light grayish brown, abundant orange Fe-ox staining, moist, firm, low plasticity.
5				

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Notes:

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Exide Technologies

Log of Boring: ECO-3

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/6/2013	Drilling Method:	Hand Auger
Driller:	Margarito Estrada	Borehole Diameter (in.):	3
Driller's License:	58164	Total Depth (ft):	3
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101296.3389
Logged By:	Roberta Russell	Easting:	2480817.4415
Sampling Method:	3"X6" Hand Auger	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	0.5/0.5	0 - 0.5	CL	(0 - 3.0) Silty CLAY, dark reddish brown, abundant root material at 0-2', moist, soft to firm, low plasticity.
	0.5/0.5	0.5 - 2		
1	0.5/0.5			
	0.5/0.5			
2	0.5/0.5	2 - 3		
	0.5/0.5			
3				

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Notes:

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Exide Technologies

Log of Boring: ECO-6

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/4/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Will Vienne, P.G.	Northing:	7101325.3004
Logged By:	Will Vienne, P.G.	Easting:	2480600.8295
Sampling Method:	3"x 5' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	4.6/5	0.5 - 2	CL	(0 - 5.0) Silty CLAY, dark brownish gray, trace limestone granules, slightly moist to dry, soft to firm, soft at 0-2', firm at 2-5', low plasticity.
1				
2		2 - 4		
3				
4		4 - 5		
5				

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Notes:

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Exide Technologies

Log of Boring: ECO-7

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/6/2013	Drilling Method:	Hand Auger
Driller:	Margarito Estrada	Borehole Diameter (in.):	3
Driller's License:	58164	Total Depth (ft):	3
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101179.0319
Logged By:	Roberta Russell	Easting:	2480616.4118
Sampling Method:	3"X6" Hand Auger	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	0.5/0.5		CL/ML	(0 - 3.0) Silty CLAY/clayey SILT, dark reddish brown, abundant root material from 0-0.5', moist, soft to firm, low plasticity.
1	0.5/0.5	0.5 - 2		
	0.5/0.5			
2	0.5/0.5			
	0.5/0.5	2 - 3		
3	0.5/0.5			

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Notes:

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Exide Technologies

Log of Boring: ECO-7A

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/6/2013	Drilling Method:	Hand Auger
Driller:	Margarito Estrada	Borehole Diameter (in.):	3
Driller's License:	58164	Total Depth (ft):	3
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101171.2643
Logged By:	Roberta Russell	Easting:	2480616.2589
Sampling Method:	3"X6" Hand Auger	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	0.5/0.5	0 - 0.5	CL/ML	(0 - 2.5) Silty CLAY/clayey SILT, dark reddish brown, ~10% calcareous nodules, moist, soft to firm, low plasticity.
1	0.5/0.5	0.5 - 2		
	0.5/0.5			
2	0.5/0.5			
	0.5/0.5	2 - 3		
3	0.5/0.5		CL	(2.5 - 3.0) Silty CLAY, yellowish brown, dry, very hard, low plasticity.

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Notes:

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Exide Technologies

Log of Boring: ECO-7B

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/15/2013	Drilling Method:	Drive Sampler
Driller:	--	Borehole Diameter (in.):	2
Driller's License:	--	Total Depth (ft):	2
Field Supervisor:	Will Vienne, P.G.	Northing:	7101168.7735
Logged By:	Will Vienne, P.G.	Easting:	2480616.5561
Sampling Method:	6" Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	0.5/0.5	0 - 0.5	CL	(0 - 2.0) Slightly Sandy SILTY CLAY, dark brownish gray, becoming more brown with Fe staining with depth, increased clay content below 1', dry, soft to slightly firm, low plasticity.
	0.5/0.5	0.5 - 1		
1	0.5/0.5	1 - 1.5		
	0.5/0.5	1.5 - 2		
2				

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Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: ECO-8

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/4/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Will Vienne, P.G.	Northing:	7101519.2687
Logged By:	Will Vienne, P.G.	Easting:	2480460.2113
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	4.6/5	0.5 - 2	CL	(0 - 5.0) Silty CLAY, dark brownish gray, trace limestone pebbles, increasing firmness with depth, slightly moist, soft to slightly firm, low plasticity.
1				
2		2 - 4		
3				
4		4 - 5		
5				

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Notes:

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Exide Technologies

Log of Boring: ECO-9

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/4/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Will Vienne, P.G.	Northing:	7101336.2375
Logged By:	Will Vienne, P.G.	Easting:	2480435.6624
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	3.9/5	0.5 - 2	CL	(0 - 1.4) Silty CLAY, potential fill, weathered, very dark brownish gray, abundant limestone pebbles, fragmented and unconsolidated shale from 1-1.4', slightly moist, soft, low plasticity.
1				
2		2 - 3.9	SW	(1.4 - 5.0) Silty SAND, potential fill, light brown, very fine grained, dry, becoming clayey at 3.6-3.9', dry, unconsolidated.
3				
4				
5				

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Notes:

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Exide Technologies

Log of Boring: ECO-11

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/6/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7102588.4364
Logged By:	Roberta Russell	Easting:	2480247.5265
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	4.5/5	0 - 0.5	CL	(0 - 4.1) Silty CLAY, dark brown, moist, soft to firm, low plasticity.
1		0.5 - 2		
2				
3		2 - 4		
4		4 - 5		(4.1 - 5.0) Gravelly CLAY, ~20% fine gravel, dark brown, wet, soft, low plasticity clay.
5				

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Notes:

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Exide Technologies

Log of Boring: ECO-12

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/5/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7102508.9348
Logged By:	Roberta Russell	Easting:	2480906.7256
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	5/5	0 - 0.5	CL	(0 - 1.3) Silty CLAY, dark brown, trace gravel, moist, hard, low plasticity.
1		0.5 - 2	GC	(1.3 - 1.5) GRAVEL, w/CLAY, medium gravel, dark, soft.
2				(1.5 - 4.7) Silty CLAY, light reddish brown, moist, firm, low to medium plasticity.
3		2 - 4	CL	
4		4 - 5		
5				(4.7 - 5.0) Gravelly CLAY, ~10% medium gravel, moist, firm, low plasticity clay.

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Notes:

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Exide Technologies

Log of Boring: 2013-FOP-1

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/14/2013	Drilling Method:	DPT
Driller:	Dan Spaust	Borehole Diameter (in.):	2
Driller's License:	3038	Total Depth (ft):	5
Field Supervisor:	Will Vienne, P.G.	Northing:	7101872.2058
Logged By:	Will Vienne, P.G.	Easting:	2480549.0768
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	3.6/4	0 - 0.5	CL	(0 - 5.0) Silty CLAY, very dark brownish gray, dry, slightly firm to firm, low plasticity clay, moderately organic with abundant decayed plant fragments to 2.7', firmer with abundant limestone granules below 2.7', limestone pebbles at 2.7-2.8'.
1		0.5 - 2		
2				
3		2 - 4		
4	1/1	4 - 5		
5				

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Notes:

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Exide Technologies

Log of Boring: 2012-FWCS-1

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	1/18/2012	Drilling Method:	Hand Sampler
Drilling Company:	NA	Borehole Diameter (in.):	2.25
Driller:	NA	Total Depth (ft):	2
Driller's License:	NA	Northing:	7102016.84
Logged By:	Christopher Moore, P.G.	Easting:	2479679.40
Sampling Method:	2"x 2' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0					
1	0.6/2.0	0	0-2	CH	(0 - 2.0) CLAY, CH, very dark brown, moist, firm, medium plasticity, trace roots, no staining or foreign material observed, no odor.
2					

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Notes:
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Exide Technologies

Log of Boring: 2012-FWCS-1

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/5/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7102032.2705
Logged By:	Roberta Russell	Easting:	2479675.8982
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	4.5/5		FILL	(0 - 2.4) FILL, clayey silt/silty clay, reddish brown, slag fragment at 1.8', plastic chip at 2.1', trace orange staining, moist, soft to firm.
1				
2		2 - 4	ML	(2.4 - 5.0) Clayey SILT, dark reddish brown, moist, soft to firm, low plasticity.
3				
4		4 - 5		
5				

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Notes:

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Exide Technologies

Log of Boring: 2012-FWCS-1A

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/5/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7102026.4054
Logged By:	Roberta Russell	Easting:	2479670.9974
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	4/5		FILL	(0 - 1.0) GABION BASKET
1		1 - 2		(1.0 - 2.0) FILL, clayey silt, light reddish brown, slag/battery chip fragments at ~2', dry, hard.
2		2 - 4	ML/CL	(2.0 - 5.0) Clayey SILT/silty CLAY, dark reddish brown, trace red Fe-ox staining, moist.
3				
4		4 - 5		
5				

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Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-FWCS-1B

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/15/2013	Drilling Method:	Drive Sampler
Driller:	Dan Spaust	Borehole Diameter (in.):	2
Driller's License:	3038	Total Depth (ft):	3.1
Field Supervisor:	Will Vienne, P.G.	Northing:	7102016.0586
Logged By:	Will Vienne, P.G.	Easting:	2479668.7979
Sampling Method:	6" Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	NR		NR	(0 - 1.1) GABION BASKET, no recovery.
1	0.5/0.5	1.1 - 1.6	CL	(1.1 - 3.1) Silty CLAY, dark brown to gray, common decayed plant material, abundant limestone granules, moist at 1.1-2.6', wet at 2.6-3.1', soft, low to medium plasticity.
2	0.5/0.5	1.6 - 2.1		
	0.5/0.5	2.1 - 2.6		
3	0.5/0.5	2.6 - 3.1		

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Notes:

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Exide Technologies

Log of Boring: 2012-FWCS-2

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	1/19/2012	Drilling Method:	Hand Sampler
Drilling Company:	NA	Borehole Diameter (in.):	2.25
Driller:	NA	Total Depth (ft):	2
Driller's License:	NA	Northing:	7101912.01
Logged By:	Christopher Moore, P.G.	Easting:	2479827.17
Sampling Method:	2"x 2' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0					
1	1.3/2.0	0	0-2	CH	(0 - 2.0) CLAY, CH, very dark brown, moist, firm, medium plasticity, some sand, white crystalline material deposited in cracks to approximately 1 foot, no odor.
2					

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Tel (512) 671-3434 Fax (512) 671-3446

Notes:
Borehole plugged with bentonite chips upon completion.
This Log of Boring should not be used separately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-FWCS-3

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	1/19/2012	Drilling Method:	Hand Sampler
Drilling Company:	NA	Borehole Diameter (in.):	2.25
Driller:	NA	Total Depth (ft):	2
Driller's License:	NA	Northing:	7101904.02
Logged By:	Christopher Moore, P.G.	Easting:	2479836.71
Sampling Method:	2"x 2' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0					
1	1.0/2.0	0.1	0-2	CH	(0 - 2.0) CLAY, CH, very dark brown, moist, soft to firm, medium plasticity, some sand, no staining or foreign material observed, no odor.
2					

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Notes:
Borehole plugged with bentonite chips upon completion.
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-FWCS-4

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	1/19/2012	Drilling Method:	Hand Sampler
Drilling Company:	NA	Borehole Diameter (in.):	2.25
Driller:	NA	Total Depth (ft):	2
Driller's License:	NA	Northing:	7101885.93
Logged By:	Christopher Moore, P.G.	Easting:	2479858.70
Sampling Method:	2"x 2' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0					
1	1.0/2.0	0.1	0-2	CH	(0 - 2.0) CLAY, CH, very dark brown, moist to wet, soft to firm, medium plasticity, some sand, no staining or foreign material observed, no odor.
2					

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Notes:
Borehole plugged with bentonite chips upon completion.
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-FWCS-5

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	1/19/2012	Drilling Method:	Hand Sampler
Drilling Company:	NA	Borehole Diameter (in.):	2.25
Driller:	NA	Total Depth (ft):	2
Driller's License:	NA	Northing:	7101863.34
Logged By:	Christopher Moore, P.G.	Easting:	2479891.18
Sampling Method:	2"x 2' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0 - 1 - 2	1.1/2.0	0	0-2	CH	(0 - 2.0) CLAY, CH, very dark brown, moist, soft to firm, medium plasticity, some sand, white crystalline material present on surface, no staining or foreign material observed below surface, no odor.

PBW
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Notes:
Borehole plugged with bentonite chips upon completion.
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-FWCS-6

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	1/19/2012	Drilling Method:	Hand Sampler
Drilling Company:	NA	Borehole Diameter (in.):	2.25
Driller:	NA	Total Depth (ft):	2
Driller's License:	NA	Northing:	7101823.97
Logged By:	Christopher Moore, P.G.	Easting:	2479944.65
Sampling Method:	2"x 2' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0 – 1 – 2	0.9/2.0	0.1	0-2	CH	(0 - 2.0) CLAY, CH, very dark brown, moist to wet, soft to firm, medium plasticity, some sand, white crystalline material present on surface, no staining or foreign material observed below surface, no odor.

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Notes:
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Exide Technologies

Log of Boring: 2012-FWCS-7

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	1/19/2012	Drilling Method:	Hand Sampler
Drilling Company:	NA	Borehole Diameter (in.):	2.25
Driller:	NA	Total Depth (ft):	2
Driller's License:	NA	Northing:	7101804.83
Logged By:	Christopher Moore, P.G.	Easting:	2479965.58
Sampling Method:	2"x 2' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0					
1	1.3/2.0	0	0-2	CH	(0 - 2.0) CLAY, CH, very dark brown, moist to wet, soft to firm, medium plasticity, some sand, white crystalline material present on surface, no staining or foreign material observed below surface, no odor.
2					

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Notes:
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Exide Technologies

Log of Boring: 2012-FWCS-8

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	1/18/2012	Drilling Method:	Hand Sampler
Drilling Company:	NA	Borehole Diameter (in.):	2.25
Driller:	NA	Total Depth (ft):	2
Driller's License:	NA	Northing:	7101745.75
Logged By:	Christopher Moore, P.G.	Easting:	2480046.41
Sampling Method:	2"x 2' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0					
1	1.5/2.0	0	0-2	CH	(0 - 2.0) CLAY, CH, very dark brown, moist to wet, very soft, medium plasticity, no staining or foreign material observed, no odor.
2					

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Notes:
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This Log of Boring should not be used separately from the report to which it is attached.

Exide Technologies	Log of Boring: 2012-FWCS-9

Frisco Recycling Center Frisco, TX	Completion Date:	1/18/2012	Drilling Method:	Hand Sampler
	Drilling Company:	NA	Borehole Diameter (in.):	2.25
	Driller:	NA	Total Depth (ft):	2
PBW Project No. 1755	Driller's License:	NA	Northing:	7101706.18
	Logged By:	Christopher Moore, P.G.	Easting:	2480100.38
	Sampling Method:	2"x 2' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0 1 2	0.5/2.0	0	0-2	CH	(0 - 2.0) CLAY, CH, very dark gray, wet, very soft, medium plasticity, no staining or foreign material observed, no odor.

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Notes:
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Exide Technologies

Log of Boring: 2012-FWCS-12

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/15/2013	Drilling Method:	DPT
Driller:	Dan Spaust	Borehole Diameter (in.):	2
Driller's License:	3038	Total Depth (ft):	5
Field Supervisor:	Will Vienne, P.G.	Northing:	7102059.9189
Logged By:	Will Vienne, P.G.	Easting:	2479678.4051
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	2.7/4	2 - 2.7	CL	(0 - 5.0) Silty CLAY, very dark gray, moderately abundant decayed plant material, common limestone granules, moist, soft, low plasticity.
1				
2				
3				
4	1/1	4 - 5		
5				

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Notes:

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Exide Technologies

Log of Boring: 2012-FWFS-1

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/4/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Will Vienne, P.G.	Northing:	7101762.3225
Logged By:	Will Vienne, P.G.	Easting:	2479323.7294
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	5/5	0 - 0.5	CL	(0 - 5.0) CLAY, dark brownish gray, abundant limestone pebbles in clay matrix 0-0.5', trace limestone granules below 0.5', white precipitate-like material in fracture fills from 0-2', very dark gray organic clay at 3-5' with abundant decayed plant fragments, slightly moist to dry, low plasticity.
1		0.5 - 2		
2				
3		2 - 4		
4		4 - 5		
5				

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Notes:

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Exide Technologies

Log of Boring: 2012-FWFS-1

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/6/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	6
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101959.7756
Logged By:	Roberta Russell	Easting:	2479787.6109
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0			CON	(0 - 0.5) CONCRETE SLAB
1			CL	(0.5 - 6.0) Silty CLAY, trace gravel from 0.5-1.7', dark reddish brown, trace calcareous nodules, moist, soft to hard, low plasticity.
2	5/5			
3				
4		4 - 5		
5	1/1	5 - 6		
6				

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Notes:

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Exide Technologies

Log of Boring: 2013-FWFS-1A

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/5/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101951.4239
Logged By:	Roberta Russell	Easting:	2479776.2769
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	3/5	2 - 4	FILL	(0 - 3.5) FILL, gravel, gabion fill.
4		4 - 5	CL	(3.5 - 5.0) Silty CLAY, dark reddish brown,~30% calcareous nodules and fine gravel from 4-5', wet, soft.
5				

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Notes:

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This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-FWFS-4

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	4/29/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Will Vienne, P.G.	Northing:	7101873.4335
Logged By:	Will Vienne, P.G.	Easting:	2479897.671
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0				CON	(0 - 0.75) CONCRETE SLAB
1				FILL	(0.75 - 2.4) FILL, gravelly, sandy clay, dark gray and brownish gray, wet (possibly from concrete corer), limestone and granite gravel, unconsolidated.
2	3/4				
3		123	3 - 4	CL	(2.4 - 5.0) CLAY, very dark gray, trace limestone granules, moist, soft, low to medium plasticity.
4	1/1	258	4 - 5		
5					

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Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

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Exide Technologies

Log of Boring: 2012-FWFS-6

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	4/29/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Will Vienne, P.G.	Northing:	7101811.8251
Logged By:	Will Vienne, P.G.	Easting:	2479976.3353
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0				CON	(0 - 0.75) CONCRETE SLAB
1				FILL	(0.75 - 2.5) FILL, clayey sand with moderately abundant pebble-sized limestone and granite gravel, mottled dark gray and brownish gray, wet (possibly from concrete corer).
2	2.3/4				
3		115	2 - 4	CH	(2.5 - 5.0) CLAY, very dark gray, very moist, soft, medium to high plasticity.
4	1/1	108	4 - 5		
5					

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Notes:

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Exide Technologies

Log of Boring: 2012-FWFS-7A

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	5/21/2013	Drilling Method:	DPT
Driller:	Dan Spaust	Borehole Diameter (in.):	2
Driller's License:	3038	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101766.6481
Logged By:	Tim Jennings, P.G.	Easting:	2480011.6948
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	3/4	0 - 0.5	CL	(0 - 1.5) Silty CLAY, dark brown to light brown, moist, firm, medium plasticity, ~5% fine carbonate nodules.
1		0.5 - 2		
2			MH	(1.5 - 2.6) Clayey SILT, brown, wet, soft to firm, high plasticity.
		2 - 3	CL	(2.6 - 3.0) Gravelly CLAY, dark brown, wet, soft, medium plasticity, ~30-40% fine to medium gravel in clay matrix.
3			NR	(3.0 - 4.0) No recovery.
4	1/1	4 - 5	MH	(4.0 - 5.0) Clayey SILT, dark brown, wet, soft, high plasticity.
5				

PBW
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Notes:

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Exide Technologies

Log of Boring: 2012-FWFS-7B

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	5/21/2013	Drilling Method:	DPT
Driller:	Dan Spaust	Borehole Diameter (in.):	2
Driller's License:	3038	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101756.6481
Logged By:	Tim Jennings, P.G.	Easting:	2480011.6948
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	3/4	0 - 0.5	CL	(0 - 0.3) Silty CLAY, dark brown, dry, hard, medium plasticity.
1		0.5 - 2	CH/MH	(0.3 - 5.0) Silty CLAY/Clayey SILT, dark reddish brown, moist, wet below 2.5', firm to soft, high plasticity.
2		2 - 3		
3				
4	1/1	4 - 5		
5				

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Notes:

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Exide Technologies

Log of Boring: 2012-FWFS-8

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	4/29/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Will Vienne, P.G.	Northing:	7101748.9161
Logged By:	Will Vienne, P.G.	Easting:	2480053.981
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0				CON	(0 - 0.75) CONCRETE SLAB
1				FILL	(0.75 - 1.0) FILL, gravelly, clayey sand, reddish brown, very moist, unconsolidated, pebble-sized limestone and granite gravel. (1.0 - 2.0) FILL, clay, very dark gray, moist, soft to firm, low to medium plasticity, abundant slag at 1.8-2.0' (up to 1" diameter).
2	3.2/4				
3		203	2 - 4	CH	(2.0 - 5.0) CLAY, very dark gray, moist, soft, low to high plasticity, high plasticity below 4.0', silty from 2.0-4.0'.
4					
5	1/1	492	4 - 5		

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Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

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Exide Technologies

Log of Boring: 2012-FWFS-9

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	4/29/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Will Vienne, P.G.	Northing:	7101720.026
Logged By:	Will Vienne, P.G.	Easting:	2480094.8122
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0				CON	(0 - 0.75) CONCRETE SLAB
1				FILL	(0.75 - 1.3) FILL, gravelly (pebble-sized), clayey sand, light brown, wet (possibly from concrete corer).
2	3.4/4			CH	(1.3 - 5.0) CLAY, very dark gray, very moist, soft, medium to high plasticity, strong hydrocarbon odor at 4-5'.
3		1361	2.5 - 4		
4	1/1	1800	4 - 5		
5					

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Notes:

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This boring log should not be used seperately from the report to which it is attached.

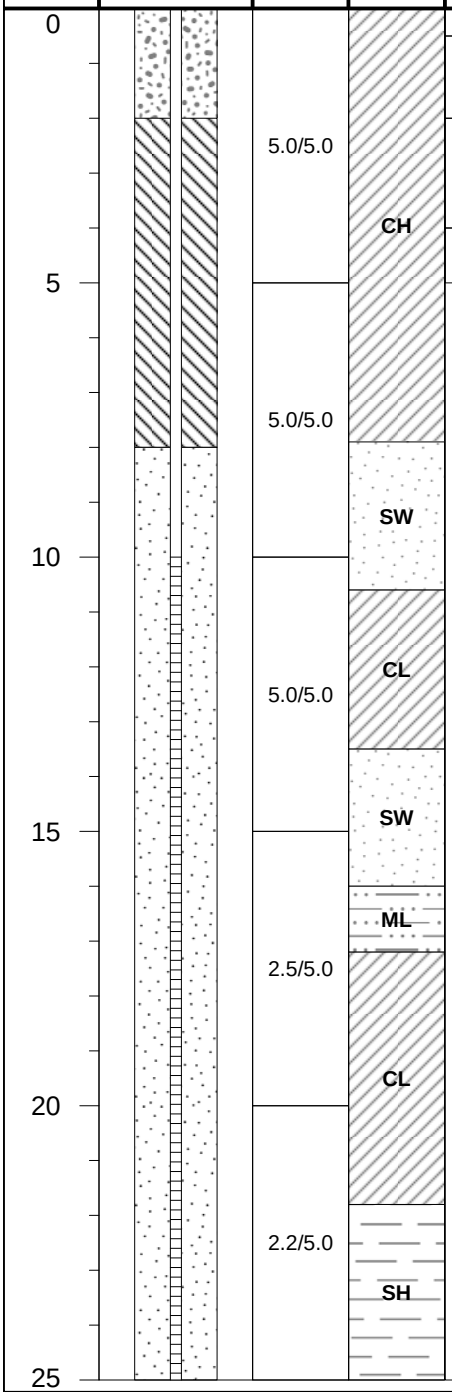
Exide Technologies

Log of Boring: LMW-21

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	2/27/2013	Drilling Method:	HSA
Drilling Company:	Strata Core Services, LLC	Borehole Diameter (in.):	7.75
Driller:	Chris Combs	Total Depth (ft):	25
Driller's License:	56033	Northing:	7103205.9759
Logged By:	Tim Jennings, P.G.	Easting:	2480099.7956
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	645.11
Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	648.28



Lithologic Description

(0 - 1.1) Sandy, gravelly CLAY; wet, very soft, slow dilatancy, high plasticity clay, ~20-30% fine sand and fine gravel.

(1.1 - 7.9) Silty CLAY, dark gray, moist, firm to hard, no dilatancy, medium to high plasticity, trace carbonate gravel below 5'.

(7.9 - 10.6) Clayey, gravelly SAND; light brown, fine to coarse sand, moist, soft to firm, medium plasticity clay, ~10-20% clay and ~10-20% fine to medium gravel.

(10.6 - 13.5) Clayey SILT, light brown, moist, soft to firm, slow dilatancy, medium plasticity.

(13.5 - 16.0) Gravelly, clayey SAND; light brown, fine to coarse sand, moist to wet, wet at 15.8-16', firm to soft, ~40-50% fine to medium gravel, ~5-10% clay above 15'.

(16.0 - 17.2) Sandy SILT, light brown, wet, soft, medium plasticity.

(17.2 - 21.8) Sandy, gravelly CLAY; wet to dry, firm to hard, medium plasticity clay, fine to medium gravel (~5-10%) and fine to coarse sand (~10-20%) in clay matrix.

(21.8 - 25.0) SHALE, brownish gray, dry, very hard.

PBW
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Notes:
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Annular Materials
(0.0 - 2.0) Concrete
(2.0 - 8.0) Bentonite Hole Plug
(8.0 - 25.0) 20/40 Silica Sand

Well Materials
(+3.16 - 10.0) Casing, 2" Sch 40 FJT PVC
(10.0 - 25.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

Exide Technologies

Log of Boring: LMW-22

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	2/27/2013	Drilling Method:	HSA
Drilling Company:	Strata Core Services, LLC	Borehole Diameter (in.):	7.75
Driller:	Dan Spaust	Total Depth (ft):	20
Driller's License:	3038M	Northing:	7102891.2829
Logged By:	Roberta Russell	Easting:	2480355.4657
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	643.32
Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	646.99

Depth (ft)	Well Materials	Recovery (ft/ft)	USCS	Sample	Lithologic Description
0		4.5/5.0	CL	0-0.5 0.5-2 2-4 4-5	(0 - 12.5) CLAY/Silty CLAY, dark reddish brown, yellowish brown from 9-12.5', moist, soft to firm, low to medium plasticity, ~10% calcareous nodules from 9-12.5'.
5		4.4/5.0			
10		4.0/5.0			(12.5 - 13.0) CLAY with gravel; yellowish brown, moist, soft, low plasticity, ~30-40% gravel in clay matrix. (13.0 - 16.0) Sandy CLAY, yellowish brown, moist, soft, low plasticity.
15		4.3/5.0			(16.0 - 17.0) Gravelly CLAY, yellowish brown, ~30-40% gravel in clay matrix. (17.0 - 19.5) Silty CLAY, grayish brown with orange staining, very moist, soft to firm, low plasticity.
20			SH		(19.5 - 20.0) SHALE, gray, dry, hard, low to medium plasticity.

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Notes:
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Annular Materials
(0.0 - 0.5) Concrete
(0.5 - 1.0) Bentonite Grout
(1.0 - 2.5) Bentonite Hole Plug
(2.5 - 20.0) 20/40 Silica Sand

Well Materials
(+3.67 - 5.0) Casing, 2" Sch 40 FJT PVC
(5.0 - 20.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

Exide Technologies

Log of Boring: 2013-MB-1

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/14/2013	Drilling Method:	DPT
Driller:	Dan Spaust	Borehole Diameter (in.):	2
Driller's License:	3038	Total Depth (ft):	5.5
Field Supervisor:	Will Vienne, P.G.	Northing:	7101768.9942
Logged By:	Will Vienne, P.G.	Easting:	2480378.5615
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0	4/4		0 - 2	CON	(0 - 0.5) CONCRETE SLAB
1		3.3		CL	(0.5 - 5.5) Silty CLAY, very dark brownish gray, slightly sandy at 0.5-2.5, moist, some perched water below concrete (may be from concrete corer).
2					
3		1.6	2 - 4		
4	1.5/1.5	14	4 - 5		
5					

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Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-MB-2

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/14/2013	Drilling Method:	DPT
Driller:	Dan Spaust	Borehole Diameter (in.):	2
Driller's License:	3038	Total Depth (ft):	4.5
Field Supervisor:	Will Vienne, P.G.	Northing:	7101789.6858
Logged By:	Will Vienne, P.G.	Easting:	2480309.4631
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0				CON	(0 - 0.5) CONCRETE SLAB
				FILL	(0.5 - 0.8) Road base material.
1	3.6/4	27.5	0 - 2	CL	(0.8 - 4.5) Silty CLAY, abundant silt, very dark gray, trace black staining, dry to moist, soft, low to no plasticity, refusal at 4.5'.
2					
		21.5	2 - 4		
3					
4					

PBW
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Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-MW10-1

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/5/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101995.4879
Logged By:	Roberta Russell	Easting:	2480989.1399
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	5/5	0 - 0.5	CH	(0 - 3.0) CLAY, dark reddish brown, moist, soft, medium to high plasticity.
1		0.5 - 2		
2				
3		2 - 4	ML	(3.0 - 5.0) Clayey SILT, dark reddish brown, calcareous nodules (10%), slightly moist, hard, low plasticity.
4		4 - 5		
5				

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Notes:

Borehole plugged with bentonite chips upon completion.

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Log of Boring: 2013-MW10-2

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/5/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101953.2098
Logged By:	Roberta Russell	Easting:	2480965.5869
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	5/5	0 - 0.5	FILL	(0 - 0.2) FILL, sand, dark reddish brown, moist, soft.
1		0.5 - 2	CL	(0.2 - 4.5) Silty CLAY, dark reddish brown, calcareous nodules from 2.5-4.5', moist, soft to firm, low plasticity.
2				
3		2 - 4		
4		4 - 5	ML	(4.5 - 5.0) Sandy SILT, trace medium gravel, light yellowish brown, calcareous, slightly moist, soft.
5				

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Notes:

Borehole plugged with bentonite chips upon completion.

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Exide Technologies

Log of Boring: 2013-MW10-3

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/5/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101988.5518
Logged By:	Roberta Russell	Easting:	2480897.199
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	5/5	0 - 0.5	FILL	(0 - 0.4) FILL, silty clay with sand and gravel, red Fe-ox staining, plastic chip present, moist, soft, low plasticity.
1		0.5 - 2	ML/CL	(0.4 - 5.0) Clayey SILT/SILTY clay, dark reddish brown, calcareous nodules from 2.6 - 5', moist, soft to firm, low plasticity.
2				
3		2 - 4		
4		4 - 5		
5				

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Notes:

Borehole plugged with bentonite chips upon completion.

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Exide Technologies

Log of Boring: 2013-MW-17A

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/15/2013	Drilling Method:	DPT
Driller:	Dan Spaust	Borehole Diameter (in.):	2
Driller's License:	3038	Total Depth (ft):	5
Field Supervisor:	Will Vienne, P.G.	Northing:	7102073.3953
Logged By:	Will Vienne, P.G.	Easting:	2479606.9524
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	4/4	0 - 0.5	CL	(0 - 5.0) Silty CLAY, very dark gray, dark brownish gray with increased silt below 4', soft to slightly firm, low plasticity, moderate to abundant decayed plant material, trace limestone granules and pebbles.
1		0.5 - 2		
2				
3		2 - 4		
4	1/1	4 - 5		
5				

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Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: MW-19

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	1/12/2012	Drilling Method:	HSA
Drilling Company:	StrataCore	Borehole Diameter (in.):	8.25
Driller:	Mario Robles	Total Depth (ft):	22
Driller's License:	52694	Northing:	7102589.0425
Logged By:	Christopher Moore, P.G.	Easting:	2481314.6445
Sampling Method:	3"x 5' Barrel	Ground Elev. (ft AMSL):	650.33

Depth (ft)	Well Materials	Recovery (ft/ft)	USCS	Lithologic Description
0		3.0/5.0	CH	(0 - 6.0) CLAY, CH, dark grayish brown, moist, firm, medium to high plasticity, trace gravel. 2.0-3.5: with limestone gravel.
5		3.7/5.0		(6.0 - 19.2) CLAY, CH, gray and yellowish brown, moist, firm, high plasticity. 9.5: wire fragment, possible fill/reworked material above.
10		3.9/5.0		Below 10.0: fractured, orange staining along fracture planes. 11.5-12.0: gravelly, moist to wet. 13.0-13.2: silty/gravelly, moist to wet. 13.9-14.2: gravelly, moist to wet.
15		4.5/5.0		
20		2.0/2.0	SH	(19.2 - 22.0) SHALE, dark gray, moist, hard, laminated, fissle.

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Notes:
Boring location hand probed to 5 feet to check for utilities.

This Log of Boring should not be used seperately from the report to which it is attached.

Initial Fluid Level (1/16/12)
Depth to water: 15.58 ft BGS

Annular Materials
(0.0 - 1.0) Concrete
(1.0 - 5.0) Bentonite Hole Plug
(5.0 - 22.0) 20/40 Silica Sand

Well Materials
(+2.6 - 7.0) Casing, 2" Sch 40 FJT PVC
(7.0 - 22.0) Screen, 2" Sch 40 FJT PVC, 0.01 slot

TOC Elevation (ft AMSL)
653.34

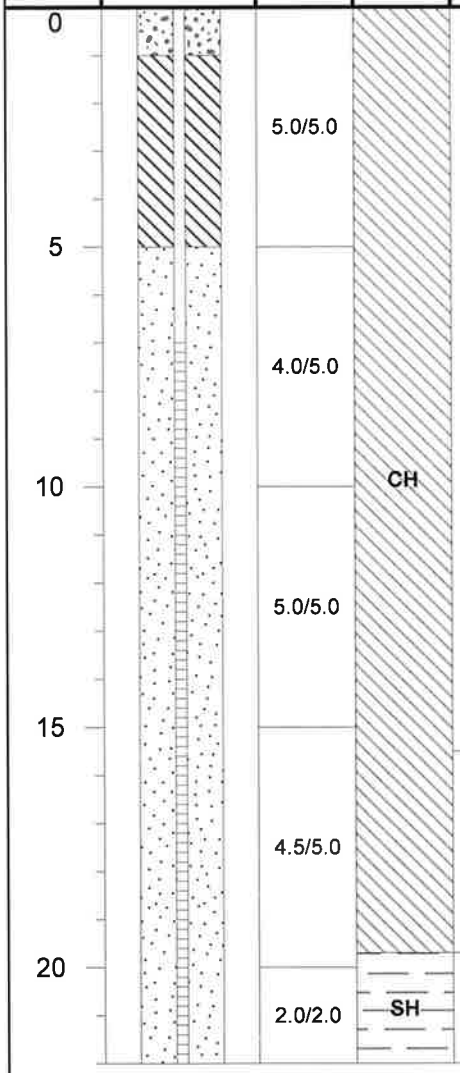
Exide Technologies

Log of Boring: MW-20

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	1/12/2012	Drilling Method:	HSA
Drilling Company:	StrataCore	Borehole Diameter (in.):	8.25
Driller:	Mario Robles	Total Depth (ft):	22
Driller's License:	52694	Northing:	7101791.617
Logged By:	Christopher Moore, P.G.	Easting:	2481082.2078
Sampling Method:	3"x 5' Barrel	Ground Elev. (ft AMSL):	641.73



Lithologic Description

(0 - 15.5) CLAY, CH, dark grayish brown, moist, firm, medium to high plasticity, trace sand size carbonate nodules, no odor, no staining or foreign material observed.

3.0-.3.9: some gravel size carbonate nodules.

(15.5 - 19.7) CLAY, CH, gray and yellowish brown, moist, firm, high plasticity, fractured, orange staining along fracture planes.

(19.7 - 22) SHALE, dark gray, moist, hard, laminated, fissle.

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Notes:
Boring location hand probed to 5 feet to check for utilities.

Initial Fluid Level (1/16/12)
Depth to water: 21.05 ft BGS

This Log of Boring should not be used seperately from the report to which it is attached.

Annular Materials
(0.0 - 1.0) Concrete
(1.0 - 5.0) Bentonite Hole Plug
(5.0 - 22.0) 20/40 Silica Sand

Well Materials
(+2.6 - 7.0) Casing, 2" Sch 40 FJT PVC
(7.0 - 22.0) Screen, 2" Sch 40 FJT PVC, 0.01 slot

TOC Elevation (ft AMSL)
644.7

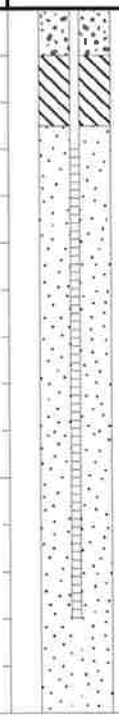
Exide Technologies

Log of Boring: MW-21

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/5/2013	Drilling Method:	HSA/DPT
Drilling Company:	Strata Core Services, LLC	Borehole Diameter (in.):	7.75
Driller:	Dan Spaust	Total Depth (ft):	15
Driller's License:	3038M	Northing:	7102518.8983
Logged By:	Tim Jennings, P.G.	Easting:	2480490.8249
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	633.66
Sampling Method:	5' Split Spoon/5' Samp Tube	TOC Elev. (ft AMSL):	635.99

Depth (ft)	Well Materials	Recovery (ft/ft)	USCS	Sample	Lithologic Description
0		3.8/5.0	CL	0-0.5	(0 - 1.0) Silty CLAY, light grayish brown, abundant orange staining (iron oxide), moist, soft, low to medium plasticity.
				0.5-2	(1.0 - 4.0) Gravelly CLAY, light brownish orange, very moist, soft to firm, low plasticity, ~20% medium gravel in clay matrix.
				2-4	
			CH	4-5	(4.0 - 5.0) CLAY, light grayish brown, abundant orange staining (iron oxide), moist, hard, medium to high plasticity.
5		2.5/2.5	CL		(5.0 - 5.5) Gravelly CLAY, light brown and orange, moist, firm, medium plasticity, 10-30% fine to medium gravel in clay matrix.
					(5.5 - 10.5) Silty CLAY, light brown, orange and gray laminations, moist, hard, medium plasticity, heavily weathered shale.
		2.5/2.5			
10		2.5/2.5			
			SH		(10.5 - 15.0) SHALE, gray, moist, hard, weathered shale.
		2.5/2.5			
15					

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Notes:
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Annular Materials
(0.0 - 1.0) Concrete
(1.0 - 2.5) Bentonite Hole Plug
(2.5 - 15.0) 20/40 Silica Sand

Well Materials
(+2.33 - 3.0) Casing, 2" Sch 40 FJT PVC
(3.0 - 13.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

Exide Technologies

Log of Boring: MW-22

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/5/2013	Drilling Method:	HSA/DPT
Drilling Company:	Strata Core Services, LLC	Borehole Diameter (in.):	7.75
Driller:	Dan Spaust	Total Depth (ft):	15
Driller's License:	3038M	Northing:	7102440.5654
Logged By:	Tim Jennings, P.G.	Easting:	2480046.6732
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	633.29
Sampling Method:	5' Split Spoon/5' Samp Tube	TOC Elev. (ft AMSL):	636.89

Depth (ft)	Well Materials	Recovery (ft/ft)	USCS	Sample	Lithologic Description
0		3.5/5.0	CL	0-0.5	(0 - 1.5) Gravelly CLAY, light grayish brown, abundant orange staining (iron oxide), moist, soft, low plasticity.
				0.5-2	
				2-4	(1.5 - 3.0) Silty CLAY, light grayish brown, abundant orange staining (iron oxide), moist, soft, low plasticity.
				4-5	(3.0 - 5.0) Gravelly CLAY, light grayish brown, abundant orange staining (iron oxide), moist, soft, low plasticity.
5		1.0/2.5			(5.0 - 7.7) Silty CLAY, light brown, orange and gray, moist, firm, medium plasticity.
		2.5/2.5	SH		(7.7 - 12.3) SHALE, gray, brown and orange; moist, firm, weathered.
10		2.5/2.5			
		2.5/2.5			(12.3 - 15.0) SHALE, gray, dry, hard.
15					

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Notes:
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Annular Materials
(0.0 - 1.0) Concrete
(1.0 - 2.5) Bentonite Hole Plug
(2.5 - 15.0) 20/40 Silica Sand

Well Materials
(+3.6 - 3.0) Casing, 2" Sch 40 FJT PVC
(3.0 - 13.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

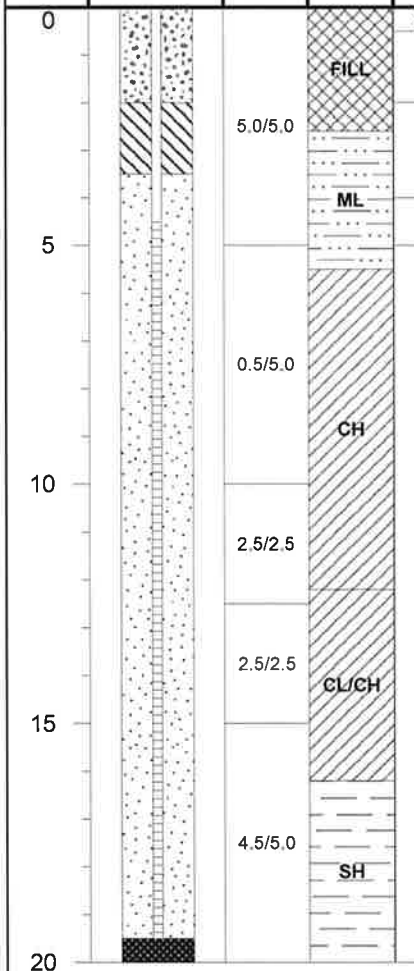
Exide Technologies

Log of Boring: MW-23

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/5/2013	Drilling Method:	HSA/DPT
Drilling Company:	Strata Core Services, LLC	Borehole Diameter (in.):	7.75
Driller:	Dan Spaust	Total Depth (ft):	20
Driller's License:	3038M	Northing:	7102124.8425
Logged By:	Tim Jennings, P.G.	Easting:	2480769.4386
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	644.32
Sampling Method:	5' Split Spoon/5' Samp Tube	TOC Elev. (ft AMSL):	644.15



Lithologic Description
(0 - 0.3) FILL, surficial fill not associated with NDA, no foreign objects (e.g. slag, battery chips or trash) observed, sand with clay, reddish brown, moist, soft.
(0.3 - 2.6) FILL, surficial fill not associated with NDA, no foreign objects (e.g. slag, battery chips or trash) observed, silty clay/clayey silt, trace gravel, dark reddish brown, moist, firm, low plasticity.
(2.6 - 5.5) Clayey SILT, dark reddish brown, dry, hard, low plasticity, ~15% calcareous nodules.
(5.5 - 10) Silty CLAY, light brown, moist, soft to firm, high plasticity, ~10-15% carbonate nodules in clay matrix (based on cuttings).
(10 - 12.2) Gravelly, sandy CLAY; light brown, moist to wet, ~20-30% fine to medium gravel and ~10-20% fine to medium sand in clay matrix.
(12.2 - 16.2) Silty CLAY, light brown, orange and gray, moist, firm to hard, laminated, possibly heavily weathered shale.
(16.2 - 17.7) SHALE, light brown, orange and gray, moist, firm, friable and weathered.
(17.7 - 20.0) SHALE, gray, moist, hard.

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Notes:
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Annular Materials
(0.0 - 2.0) Concrete
(2.0 - 3.5) Bentonite Hole Plug
(3.5 - 19.5) 20/40 Silica Sand
(19.5 - 20.0) Sloughed Material

Well Materials
(-.17 - 4.5) Casing, 2" Sch 40 FJT PVC
(4.5 - 19.5) Screen, 2" Sch 40 FJT PVC, 0.010 slot

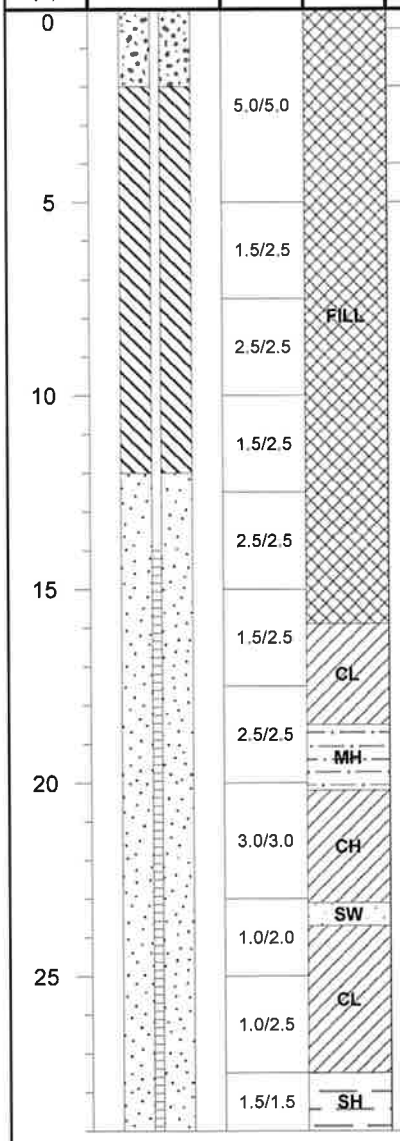
Exide Technologies

Log of Boring: MW-24

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/5/2013	Drilling Method:	HSA/DPT
Drilling Company:	Strata Core Services, LLC	Borehole Diameter (in.):	7.75
Driller:	Dan Spaust	Total Depth (ft):	29
Driller's License:	3038M	Northing:	7102133.0317
Logged By:	Tim Jennings, P.G.	Easting:	2479613.4306
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	639.62
Sampling Method:	5' Split Spoon/5' Samp Tube	TOC Elev. (ft AMSL):	642.96



Depth (ft)	Well Materials	Recovery (ft/ft)	USCS	Sample	Lithologic Description
0		5.0/5.0	FILL	0-0.5 0.5-2 2-4 4-5	(0 - 5.0) Silty clay/clayey silt FILL, moist, firm, low plasticity, dry and very hard 3-5'.
5		1.5/2.5	FILL		(5.0 - 12.8) Gravelly clay FILL, dark brown and dark grayish brown, light brown 7.5-9.5, moist, firm to hard, medium to high plasticity, ~5-10% fine to coarse gravel fill, large carbonate cobbles at 11'.
		2.5/2.5	FILL		
10		1.5/2.5	FILL		
		2.5/2.5	FILL		(12.8 - 15.9) Sandy clay FILL; dark reddish brown, moist, hard, low plasticity clay, iron oxide staining, very stiff.
15		1.5/2.5	CL		(15.9 - 18.5) Silty, sandy CLAY; dark reddish brown, trace iron oxide staining, moist, firm, medium plasticity, increasing moisture downward.
		2.5/2.5	MH		(18.5 - 20.2) Clayey SILT, dark brown, wet, soft, high plasticity.
20		3.0/3.0	CH		(20.2 - 23.1) Silty CLAY, grayish brown, moist to wet, firm, <5% fine calcareous nodules, wet sand interbedded at 22.5-22.6'.
		1.0/2.0	SW		(23.1 - 23.7) Clayey SAND, brown, wet, soft, sub-rounded sand, ~10-20% clay in fine to coarse sand.
25		1.0/2.5	CL		(23.7 - 27.5) Gravelly CLAY, light brown to brown, wet, firm, sub-rounded gravel, medium plasticity clay, ~30-40% fine gravel in clay matrix, sandy gravel 27.3-27.5'.
		1.5/1.5	SH		(27.5 - 28.4) SHALE, light brown, orange and gray, abundant iron oxide staining, weathered.
					(28.4 - 29.0) SHALE, gray, dry, very hard.

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Notes:
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Annular Materials
(0.0 - 2.0) Concrete
(2.0 - 12.0) Bentonite Hole Plug
(12.0 - 29.0) 20/40 Silica Sand

Well Materials
(+3.34 - 14.0) Casing, 2" Sch 40 FJT PVC
(14.0 - 29.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

Exide Technologies

Log of Boring: MW-25

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	2/27/2013	Drilling Method:	HSA
Drilling Company:	Strata Core Services, LLC	Borehole Diameter (in.):	7.75
Driller:	Chris Combs	Total Depth (ft):	22
Driller's License:	56033	Northing:	7101782.1994
Logged By:	Roberta Russell	Easting:	2479376.8891
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	633.36
Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	635.85

Depth (ft)	Well Materials	Recovery (ft/ft)	USCS	Sample	Lithologic Description
0		5.0/5.0	CL/ML		(0 - 20.0) Silty CLAY/Clayey SILT, dark reddish brown, moist, soft to firm, low plasticity, very moist at 13.5 to 15.0', gravelly clay lenses in very moist calcareous clay at 15.5-15.6', 16.5-16.7', 17.5-17.9'.
5		5.0/5.0			
10		5.0/5.0			
15		5.0/5.0			
20		1.0/1.0	GC		(20.0 - 20.5) GRAVEL with clay; wet, soft, low plasticity clay (~20% clay).
			SH		(20.5 - 21.0) SHALE, dry, hard.
		0.0/1.0	NR		(21.0 - 22.0) No recovery

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Notes:
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Annular Materials
(0.0 - 0.5) Concrete
(0.5 - 2.0) Bentonite Grout
(2.0 - 4.0) Bentonite Hole Plug
(4.0 - 22.0) 20/40 Silica Sand

Well Materials
(+2.49 - 7.0) Casing, 2" Sch 40 FJT PVC
(7.0 - 22.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

Exide Technologies

Log of Boring: MW-26

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/6/2013	Drilling Method:	HSA
Drilling Company:	Strata Core Services, LLC	Borehole Diameter (in.):	7.75
Driller:	Dan Spaust	Total Depth (ft):	15
Driller's License:	3038M	Northing:	7101865.0034
Logged By:	Tim Jennings, P.G.	Easting:	2479876.33
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	628.34
Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	631.93

Depth (ft)	Well Materials	Recovery (ft/ft)	USCS	Sample	Lithologic Description
0		4.0/5.0	CL		(0 - 1.0) Sandy CLAY, light reddish brown, moist, firm, low plasticity.
					(1.0 - 5.0) Silty CLAY, dark reddish brown, trace iron oxide orange staining, moist, wet at 3', soft to firm, low plasticity.
5		1.5/2.5	CH		(5.0 - 9.4) Silty CLAY, brown, moist to wet, firm, high plasticity.
		2.5/2.5			
10		1.5/2.5	CL		(9.4 - 10.8) Gravelly CLAY, brown, moist to wet, firm, medium plasticity clay, ~20-40% fine to medium gravel.
					(10.8 - 13.0) Silty CLAY, light brown and orange, laminated with trace iron oxide staining, moist to wet, firm, medium plasticity.
		1.5/2.5	SH		(13.0 - 15.0) SHALE, gray, orange and light brown, trace iron oxide above 14', dry, hard, very hard at 14.5 to 15', low plasticity, weathered.
15					

PBW
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Notes:
This log should not to be used separately from the report to which it is attached.

Annular Materials
(0.0 - 2.0) Concrete
(2.0 - 4.0) Bentonite Hole Plug
(4.0 - 15.0) 20/40 Silica Sand

Well Materials
(+3.59 - 5.0) Casing, 2" Sch 40 FJT PVC
(5.0 - 15.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

Exide Technologies

Log of Boring: MW-27

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/6/2013	Drilling Method:	HSA/DPT
Drilling Company:	Strata Core Services, LLC	Borehole Diameter (in.):	7.75
Driller:	Dan Spaust	Total Depth (ft):	15
Driller's License:	3038M	Northing:	7101675.2344
Logged By:	Tim Jennings, P.G.	Easting:	2480260.288
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	629.89
Sampling Method:	5' Split Spoon/5' Samp Tube	TOC Elev. (ft AMSL):	633.42

Depth (ft)	Well Materials	Recovery (ft/ft)	USCS	Sample	PID (ppm)	Lithologic Description
0		4.5/5.0	CL	0-0.5	0.1	(0 - 2.5) Silty CLAY, dark reddish brown, moist, soft, low to medium plasticity, moderate hydrocarbon odor below 1'.
				0.5-2		
				2-4	-	(2.5 - 5.0) Silty CLAY, yellowish brown, wet, very soft, low to medium plasticity, trace sand, some black staining, moderate hydrocarbon odor.
					0.3	
				4-5		
5		2.5/2.5	MH		125.4	(5.0 - 7.0) Sandy, clayey SILT; gray, moist to wet, soft, high plasticity clay, <5% fine gravel, moderate hydrocarbon odor.
					65	(7.0 - 8.0) Silty CLAY, gray, moist to wet, soft, high plasticity, trace calcareous nodules, moderate hydrocarbon odor.
		2.5/2.5	CH		13	(8.0 - 11.5) Sandy, gravelly CLAY; gray, moist to wet, locally wet, firm, high plasticity clay, ~10-20% fine to medium sand, ~5-10% fine gravel.
10		2.5/2.5			0.5	
			CL		0.5	(11.5 - 13.4) Gravelly CLAY, gray, moist, firm, medium plasticity clay, ~20-40% fine to medium gravel in clay matrix.
		2.5/2.5	SH		1.8	(13.4 - 14.6) SHALE, gray and orange, moist, hard, low plasticity, weathered.
15						(14.6 - 15.0) SHALE, gray, dry, hard.

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Annular Materials
(0.0 - 2.0) Concrete
(2.0 - 4.0) Bentonite Hole Plug
(4.0 - 15.0) 20/40 Silica Sand

Well Materials
(+3.53 - 5.0) Casing, 2" Sch 40 FJT PVC
(5.0 - 15.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

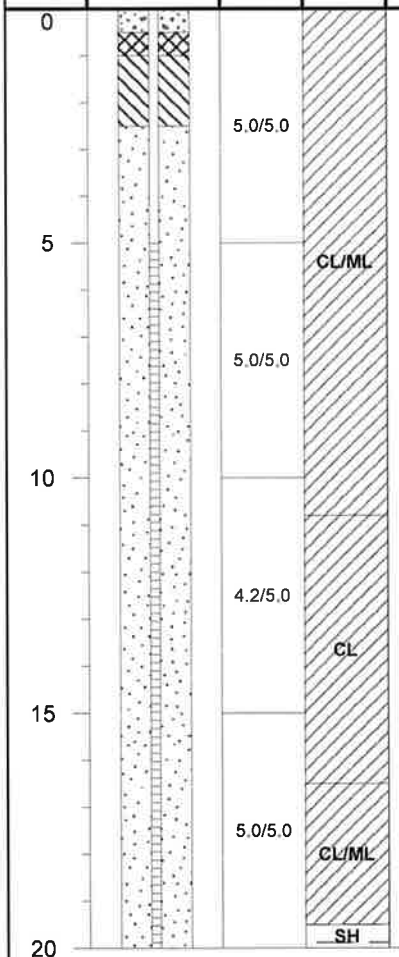
Exide Technologies

Log of Boring: MW-28

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	2/27/2013	Drilling Method:	HSA
Drilling Company:	Strata Core Services, LLC	Borehole Diameter (in.):	7.75
Driller:	Chris Combs	Total Depth (ft):	20
Driller's License:	56033	Northing:	7102977.6985
Logged By:	Roberta Russell	Easting:	2479831.956
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	639.47
Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	642.91



Lithologic Description

(0 - 10.8) Silty CLAY/Clayey SILT, dark reddish brown, soft to firm, low to medium plasticity, calcareous nodules starting at 7.5'.

(10.8 - 13.5) Gravelly CLAY, yellowish brown, moist, wet at 12.8', soft to firm, low to medium plasticity clay, calcareous nodules, ~10% gravel in clay matrix.

(13.5 - 16.5) Sandy CLAY, yellowish brown, wet, soft to firm, low plasticty clay, calcareous nodules.

(16.5 - 19.5) Silty CLAY/Clayey SILT, yellowish brown, moist, soft to firm, low to medium plasticity.

(19.5 - 20.0) SHALE, dry, hard.

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Notes:
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Annular Materials
(0.0 - 0.5) Concrete
(0.5 - 1.0) Bentonite Grout
(1.0 - 2.5) Bentonite Hole Plug
(2.5 - 20.0) 20/40 Silica Sand

Well Materials
(+3.44 - 5.0) Casing, 2" Sch 40 FJT PVC
(5.0 - 20.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

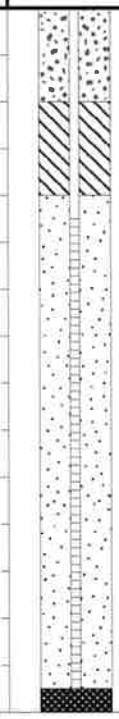
Exide Technologies

Log of Boring: MW-29

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/6/2013	Drilling Method:	HSA/DPT
Drilling Company:	Strata Core Services, LLC	Borehole Diameter (in.):	7.75
Driller:	Dan Spaust	Total Depth (ft):	15
Driller's License:	3038M	Northing:	7101741.6829
Logged By:	Tim Jennings, P.G.	Easting:	2480041.8696
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	629.39
Sampling Method:	5' Split Spoon/5' Samp Tube	TOC Elev. (ft AMSL):	633.51

Depth (ft)	Well Materials	Recovery (ft/ft)	USCS	Sample	Lithologic Description
0		5.0/5.0	CL/ML	0-0.5 0.5-2 2-4 4-5	(0 - 5.0) Silty CLAY/Clayey SILT, dark reddish brown, orange iron oxide staining from 0-0.5', moist, wet at 4', firm to hard, low plasticity, clayey gravel lens from 2.6-2.7'.
5		2.5/2.5	CH		(5.0 - 8.0) Silty CLAY, dark grayish brown, moist to wet, firm, high plasticity, fine to medium gravel in silty clay matrix at 5-5.8'.
		1.5/2.5			(8.0 - 11.4) Silty CLAY, light brown, moist, firm, high plasticity, <5% fine gravel.
10		1.5/2.5			(11.4 - 14.0) SHALE, gray and orange, trace iron oxide, moist, firm to hard, medium plasticity, weathered.
		2.5/2.5	SH		(14.0 - 15.0) SHALE, gray, dry, hard.
15					

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Notes:
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Annular Materials
(0.0 - 2.0) Concrete
(2.0 - 4.0) Bentonite Hole Plug
(4.0 - 14.5) 20/40 Silica Sand
(14.5 - 15.0) Sloughed Material

Well Materials
(+4.12 - 4.5) Casing, 2" Sch 40 FJT PVC
(4.5 - 14.5) Screen, 2" Sch 40 FJT PVC, 0.010 slot

Exide Technologies

Log of Boring: MW-30

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/28/2013	Drilling Method:	HSA
Drilling Company:	Strata Core Services, LLC	Borehole Diameter (in.):	7.75
Driller:	Dan Spaust	Total Depth (ft):	32.5
Driller's License:	3038M	Northing:	7102086.1889
Logged By:	Tim Jennings, P.G.	Easting:	2480011.0566
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	645.483805
Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	645.148475

Depth (ft)	Well Materials	Recovery (ft/ft)	USCS	Sample	Lithologic Description
0			CL	0-0.5	(0 - 0.5) Sandy Gravelly CLAY, dark grayish brown, moist, firm, medium plasticity, ~10-20% fine to coarse sand, ~20-30% fine to coarse gravel and cobbles (railroad balast).
		0.5/5	NR	0.5-2	(0.5 - 5.0) No Recovery
				2-4	
5				4-5	
		1.3/5	FILL		(5.0 - 20.9) FILL, silty clay, dark grayish brown, moist to wet, soft, medium to high plasticity, trace of fine gravel,
10		1/2.5			
		2.5/2.5			
15		2/5			
20		2.5/2.5			(20.9 - 26.5) FILL, gravelly clay, light brown, wet, soft, high plasticity, ~30-40% fine gravel in clay matrix, wood fragments locally to 25'.
		2.5/2.5			
25		2.5/2.5			(26.5 - 28.5) FILL, gravelly clay, wet, firm to hard, medium plasticity, ~40-50% fine to medium gravel in clay matrix, pieces of slag/lead at 28', shell fragments at 28-28.5'.
		2.5/2.5	SH		(28.5 - 30.5) SHALE, gray and orange, abundant fe ox staining, wet, hard, medium plasticity.
30		2.5/2.5			(30.5 - 32.5) SHALE, gray, moist, no cementation, very hard.

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Notes:
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Annular Materials
(0.0 - 2.0) Concrete
(2.0 - 10.0) Bentonite Hole Plug
(10.0 - 32.5) 20/40 Silica Sand

Well Materials
(0 - 12.0) Casing, 2" Sch 40 FJT PVC
(12.0 - 32.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

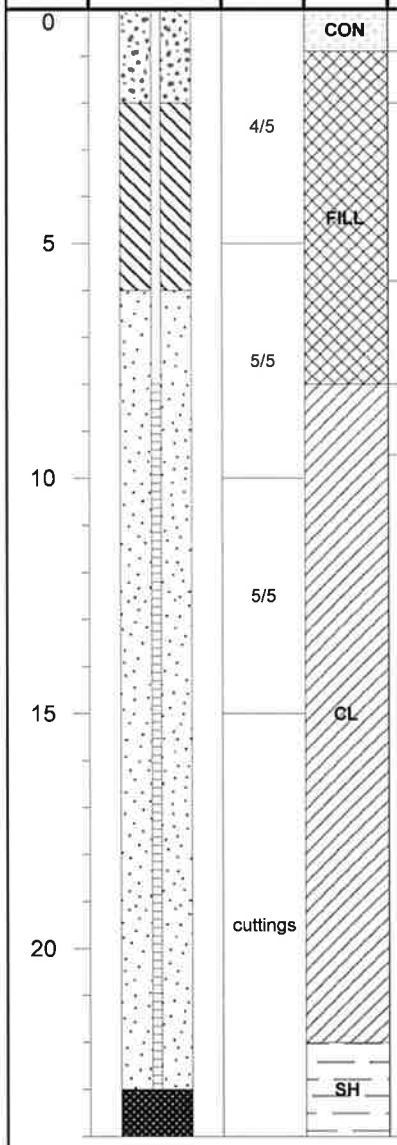
Exide Technologies

Log of Boring: MW-31

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	5/9/2013	Drilling Method:	HSA
Drilling Company:	Strata Core Services, LLC	Borehole Diameter (in.):	7.75
Driller:	Margarito Estrada	Total Depth (ft):	24
Driller's License:	58164	Northing:	7102001.9818
Logged By:	Tim Jennings, P.G.	Easting:	2479800.4009
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	637.17
Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	636.71



Lithologic Description

(0 - 0.9) CONCRETE SLAB

(0.9 - 5.8) FILL, clayey sand and sandy clay, orange, trace iron oxide nodules.

(5.8 - 8) FILL, silty clay, trace fine gravel, moist to wet, dark brown, trace battery chips at 5.8-8', wet at 9.5', slag observed.

(8 - 16) Silty clay, dark brown.

(16 - 21) Silty CLAY and clayey SILT, trace gravel and sand, greater sand content with depth, yellowish brown.

(21 - 22) Gravelly CLAY, ~20% fine to medium gravel in clay matrix.

(22 - 24) SHALE potentially, drilling more difficult.

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Notes:
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Annular Materials
(0.0 - 2.0) Concrete
(2.0 - 6.0) Bentonite Hole Plug
(6.0 - 23.0) 20/40 Silica Sand

Well Materials
(0 - 8.0) Casing, 2" Sch 40 FJT PVC
(8.0 - 23.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

Exide Technologies

Log of Boring: MW-31(R)

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	5/21/2013	Drilling Method:	DPT
Driller:	Dan Spaust	Borehole Diameter (in.):	2
Driller's License:	3038	Total Depth (ft):	12
Field Supervisor:	Tim Jennings, P.G.	Northing:	7103086.71
Logged By:	Tim Jennings, P.G.	Easting:	2480178.9987
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0			CON	(0 - 0.9) CONCRETE SLAB
1		0.9 - 2	FILL	(0.9 - 5.4) FILL, sandy clay, red and reddish gray, moist, firm, medium plasticity.
2	3.7/4			
3				
4				
5				
6	3.3/4	5.8 - 7.3		(5.4 - 7.0) FILL, silty clay, dark grayish black, moist, firm, high plasticity, fragments of limestone and slag below 6.7'.
7				(7.0 - 7.3) FILL, sand, gravel and slag, dry.
8		9.5	NR	(7.3 - 8.0) No recovery.
9			CH/MH	(8.0 - 12.0) Silty CLAY/Clayey SILT, dark gray, moist, wet below 9.5', firm to soft, high plasticity.
10	3.8/4			
11				
12				

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Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-NDA-1

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	1/10/2012	Drilling Method:	Geoprobe
Drilling Company:	StrataCore	Borehole Diameter (in.):	2.25
Driller:	Mario Robles	Total Depth (ft):	8
Driller's License:	52694	Northing:	7102385.51
Logged By:	Christopher Moore, P.G.	Easting:	2480118.633
Sampling Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0					(0 - 8.0) CLAY, CH, dark gray, moist, soft to firm, medium plasticity, trace sand size carbonate nodules, no odor. 2.0-2.5: black, gravel size slag fragments. 4.0-5.0 some sand. 4.5: wet, sample saturated, borehole filling with water.
1		0	0-2		
2	2.7/4.0				
3		0.1	2-4		
4				CH	
5		0			
6	3.5/4.0				
7		0.1			
8					

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Notes:
Boring location hand probed to 4.5 feet to check for utilities.
Borehole plugged with bentonite chips upon completion.
Saturated soils encountered at 4.5 feet. Boring terminated and water sample collected from base of boring.
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-NDA-1

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/5/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	6
Field Supervisor:	Will Vienne, P.G.	Northing:	7102386.1757
Logged By:	Roberta Russell	Easting:	2480118.7926
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	4.6/5		FILL	(0 - 1.7) FILL, silty clay, dark brown, abundant orange Fe-ox staining, 1" slag fragment at 1.6', moist, soft to firm, low plasticity.
1				
2			CL	(1.7 - 6.0) Silty CLAY, dark reddish brown, moist, wet at 4.1', soft to firm, low plasticity.
3				
4		4 - 5		
5	1/1	5 - 6		
6				

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Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-NDA-2

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	1/10/2012	Drilling Method:	Geoprobe
Drilling Company:	StrataCore	Borehole Diameter (in.):	2.25
Driller:	Mario Robles	Total Depth (ft):	18
Driller's License:	52694	Northing:	7102389.57
Logged By:	Christopher Moore, P.G.	Easting:	2480411.84
Sampling Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0					(0 - 4.0) CLAY, CH, dark gray, moist, soft, medium plasticity, some sand size carbonate nodules, no odor. 3.0-4.0: glass fragments, duct tape, black gravel size slag fragments with metallic odor.
1		0	0-2		
2	2.6/4.0				
3		0.1	2-4		
4					(4.0 - 11.0) CLAY, CH, dark gray, moist, firm, medium to high plasticity, some sand size carbonate nodules, no staining or foreign material observed.
5		0.1			
6	4.0/4.0				
7		0.1			
8					
9		0.1		CH	
10	4.0/4.0				
11		0.1			(11.0 - 13.3) CLAY, CH, gray, moist, firm to hard, high plasticity, laminated, yellowish brown/orange staining in laminae, no foreign material observed, no odor.
12					
13		0.1			(13.3 - 18.0) CLAY/SHALE, dark gray, moist firm to hard, high plasticity, laminated, fractured, yellowish brown/orange staining in fractures, no odor.
14	4.0/4.0				
15		0.1			
16					
17	2.0/2.0		16-18		
18					

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Notes:
Boring location hand probed to 4 feet to check for utilities.
Borehole plugged with bentonite chips upon completion.
Refusal at 18.0 feet, No water obeserved in borehole after 1 hour following completion.
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-NDA-3

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	1/10/2012	Drilling Method:	Geoprobe
Drilling Company:	StrataCore	Borehole Diameter (in.):	2.25
Driller:	Mario Robles	Total Depth (ft):	19
Driller's License:	52694	Northing:	7102442.92
Logged By:	Christopher Moore, P.G.	Easting:	2480662.06
Sampling Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0					(0 - 4.5) CLAY, CH, dark gray and very dark gray, moist, firm, medium plasticity, possible fill material, some angular gravel, 0.5-0.7 angular black plastic fragments, no odor.
1		0	0-2		
2	3.0/4.0				
3		0			
4					
5		0			(4.5 - 14.8) CLAY, CH, brownish yellow, moist, firm, moist to hard, medium to high plasticity, trace sand size carbonate nodules, no staining or foreign material observed, no odor. 10.0-14.8: mottled light gray, increased carbonate nodules. 12.2-12.4: sand lens, dry.
6	4.0/4.0				
7		0.1			
8					
9		0.1		CH	
10	4.0/4.0				
11		0.1			
12					
13		0.1			
14	3.6/4.0				
15		0.1			(14.8 - 19.0) CLAY, CH, dark gray, moist, firm to hard, high plasticity, laminated, fractured, yellowish brown/orange staining in fractures, no staining or foreign material observed, no odor.
16					
17	3.0/3.0				
18		0.1	17-19		
19					

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Notes:
Boring location hand probed to 4.5 feet to check for utilities.
Borehole plugged with bentonite chips upon completion.
Refusal at 19.0 feet, No water obeserved in borehole after 1 hour following completion.
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-NDA-4

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	2/22/2012	Drilling Method:	Hand Sampler
Drilling Company:	NA	Borehole Diameter (in.):	2.25
Driller:	NA	Total Depth (ft):	4
Driller's License:	NA	Northing:	7102395.75
Logged By:	Christopher Moore, P.G.	Easting:	2480119.01
Sampling Method:	2"x 2' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0					(0 - 4.0) CLAY, CH, dark gray, moist, soft to firm, medium plasticity, no staining or foreign material observed, no odor. Borehole filling with water at approximately 3 feet.
1	--	0			
2				CH	
3	1.2/2.0	0	2-4		
4					

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Notes:
Borehole plugged with bentonite chips upon completion.
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-NDA-5

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	2/22/2012	Drilling Method:	Hand Sampler
Drilling Company:	NA	Borehole Diameter (in.):	2.25
Driller:	NA	Total Depth (ft):	1
Driller's License:	NA	Northing:	7102459.95
Logged By:	Christopher Moore, P.G.	Easting:	2480666.14
Sampling Method:	2"x 2' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0	0.5/1.0	0	NA	CH	(0 - 1.0) CLAY, CH, dark grayish brown, moist, soft to firm, medium plasticity. Slag fragment at approximately 0.5 feet blocked sample barrel.
1					

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Notes:
Borehole plugged with bentonite chips upon completion.
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-NDA-6

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	2/22/2012	Drilling Method:	Hand Sampler
Drilling Company:	NA	Borehole Diameter (in.):	2.25
Driller:	NA	Total Depth (ft):	2
Driller's License:	NA	Northing:	7102503.41
Logged By:	Christopher Moore, P.G.	Easting:	2480665.79
Sampling Method:	2"x 2' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0	1.2/2.0	0	0-2	CH	(0 - 2.0) CLAY, CH, dark grayish brown, moist, soft to firm, medium plasticity, no staining or foreign material observed, no odor.
1					
2					

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Notes:
Borehole plugged with bentonite chips upon completion.
This Log of Boring should not be used seperately from the report to which it is attached.

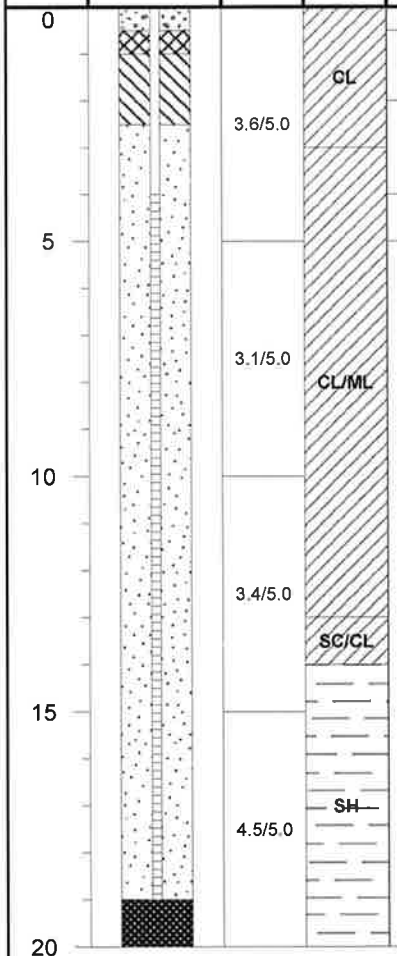
Exide Technologies

Log of Boring: PMW-19R

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	2/26/2013	Drilling Method:	HSA
Drilling Company:	Strata Core Services, LLC	Borehole Diameter (in.):	7.75
Driller:	Dan Spaust	Total Depth (ft):	20
Driller's License:	3038M	Northing:	7103664.081
Logged By:	Roberta Russell	Easting:	2480920.3742
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	678.45
Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	681.79



Depth (ft)	Recovery (ft/ft)	USCS	Sample	Lithologic Description
0	3.6/5.0	CL	0-0.5	(0 - 3.0) CLAY with trace gravel, dark reddish brown, moist, soft to firm, low to medium plasticity, abundant calcareous nodules.
			0.5-2	
			2-4	
5	3.1/5.0	CL/ML	4-5	(3.0 - 13.0) Clayey SILT/Silty CLAY, dark reddish brown, yellowish brown from 7-10', slightly moist, very hard, low plasticity, friable from 5-6.5'.
10	3.4/5.0	SC/CL		(13.0 - 14.0) Clayey SAND/Sandy CLAY, light yellowish brown with orange staining (iron oxide), moist, soft, low plasticity.
15	4.5/5.0	SH		(14.0 - 19.0) SHALE, dark gray with orange staining (iron oxide along fractures and bedding planes), dry to slightly moist, soft to firm, high plasticity, weathered.
20				(19.0 - 20.0) SHALE, dark gray, dry, very hard.

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Notes:
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Annular Materials
(0.0 - 0.5) Concrete
(0.5 - 1.0) Bentonite Grout
(1.0 - 2.5) Bentonite Hole Plug
(2.5 -19.0) 20/40 Silica Sand
(19.0 - 20.0) Sloughed Material

Well Materials
(+3.34 - 4.0) Casing, 2" Sch 40 FJT PVC
(4.0 - 19.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

Exide Technologies

Log of Boring: PMW-20R

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	2/26/2013	Drilling Method:	HSA
Drilling Company:	Strata Core Services, LLC	Borehole Diameter (in.):	7.75
Driller:	Chris Combs	Total Depth (ft):	25
Driller's License:	56033	Northing:	7103357.9244
Logged By:	Roberta Russell	Easting:	2480030.2079
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	645.2
Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	648.09

Depth (ft)	Well Materials	Recovery (ft/ft)	USCS	Sample	Lithologic Description
0			CH	0-0.5	(0 - 2.6) CLAY, dark reddish brown, moist, soft, high plasticity.
				0.5-2	
		5.0/5.0		2-4	(2.6 - 7.5) Clayey SILT, dark reddish brown, dry to moist, very hard, low plasticity, trace to moderate calcareous nodules.
				4-5	
5			ML		
		2.7/5.0			(7.5 - 11.0) Sandy CLAY/Clayey SAND, moist, soft to firm, low plasticity, more clay with depth, abundant calcareous nodules.
			SC/CL		
10					(11.0 - 19.5) CLAY, reddish yellow, with trace to moderate gravel, moist, firm, low to medium plasticity, very fine to medium gravel (5-20%) in clay matrix.
		5.0/5.0			
15			CL		
		5.0/5.0			
			GC		(19.5 - 20.0) GRAVEL with clay; reddish yellow, wet, very soft, ~20-30% clay matrix.
20			CL		(20.0 - 21.8) CLAY with gravel; reddish yellow, wet, soft to firm, low to medium plasticity clay, <5% carbonate gravel in clay.
		5.0/5.0	GC		(21.8 - 23.0) GRAVEL with clay; reddish yellow, wet, soft, 30-40% low to medium plasticity clay matrix in fine to medium gravel.
			CL		(23.0 - 23.5) CLAY with gravel; reddish yellow, very moist, hard, low to medium plasticity clay, 30-40% fine to medium gravel.
			SH		(23.5 - 25.0) SHALE, dark gray, dry, very hard, low to medium plasticity, fissile, slightly weathered.
25					

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Notes:
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Annular Materials
(0.0 - 2.0) Concrete
(2.0 - 7.0) Bentonite Grout
(7.0 - 9.0) Bentonite Hole Plug
(9.0 - 25.0) 20/40 Silica Sand

Well Materials
(+2.89 - 10.0) Casing, 2" Sch 40 FJT PVC
(10.0 - 25.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

Exide Technologies

Log of Boring: 2012-RMSA-1

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	1/6/2012	Drilling Method:	Geoprobe
Drilling Company:	StrataCore	Borehole Diameter (in.):	2.25
Driller:	Mario Robles	Total Depth (ft):	2.5
Driller's License:	52694	Northing:	7101962.48
Logged By:	Christopher Moore, P.G.	Easting:	2480181.93
Sampling Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Soil pH	Sample Interval	USCS	Lithologic Description
0					CON	(0 - 1.0) CONCRETE, cored.
1					GP	(1.0 - 2.5) GRAVEL, base material, angular limestone gravel, no staining or foreign material observed, no odor.
2	1.0/1.0	0	7.10	1.5-2.5		

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Notes:
Boring location hand probed to 2.0 feet to check for utilities.
Borehole plugged with bentonite chips upon completion and concrete patched.
Refusal at 2.5
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-RMSA-2

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	1/6/2012	Drilling Method:	Geoprobe
Drilling Company:	StrataCore	Borehole Diameter (in.):	2.25
Driller:	Mario Robles	Total Depth (ft):	2.5
Driller's License:	52694	Northing:	7101817.28
Logged By:	Christopher Moore, P.G.	Easting:	2480247.42
Sampling Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Soil pH	Sample Interval	USCS	Lithologic Description
0					CON	(0 - 0.5) CONCRETE, drilled out.
1	2.0/2.0	0.4	10.76	0.5-2.5	CL/CH	(0.5 - 1.4) CLAY, CL/CH, dark gray, moist, soft to very soft, medium plasticity, no staining or foreign material observed, no odor.
2					CL	(1.4 - 2.5) CLAY, CL, black, moist to wet, very soft, medium plasticity, no staining or foreign material observed, no odor.

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Notes:
Boring location hand probed to 4.0 feet to check for utilities.
Borehole plugged with bentonite chips upon completion and concrete patched.
Water entering the borehole from base of concrete upon removal of sampler. Water sample collected from base of boring.
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-RMSA-2

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/6/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Will Vienne, P.G.	Northing:	7101817.2841
Logged By:	Roberta Russell	Easting:	2480247.4183
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	4.1/5		CON	(0 - 0.6) CONCRETE SLAB
1				(0.6 - 5.0) Silty CLAY/clayey SILT, dark brown, very moist, soft to firm, low plasticity.
2				
3		2.5 - 4	CL/ML	
4		4 - 5		
5				

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Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-RMSA-3

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	1/6/2012	Drilling Method:	Geoprobe
Drilling Company:	StrataCore	Borehole Diameter (in.):	2.25
Driller:	Mario Robles	Total Depth (ft):	3
Driller's License:	52694	Northing:	7101783.35
Logged By:	Christopher Moore, P.G.	Easting:	2480191.27
Sampling Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Soil pH	Sample Interval	USCS	Lithologic Description
0					CON	(0 - 1.0) CONCRETE, drilled out.
1						
2	2.0/2.0	0.2	6.83	1-3	CL/CH	(1.0 - 3.0) CLAY, CL/CH, mottled very dark gray and black, moist, firm, medium plasticity, no staining or foreign material observed, no odor. 2.4-2.6: some sand.
3						

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Notes:
Boring location hand probed to 4.0 feet to check for utilities.
Borehole plugged with bentonite chips upon completion and concrete patched.
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-RMSA-4

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	1/6/2012	Drilling Method:	Geoprobe
Drilling Company:	StrataCore	Borehole Diameter (in.):	2.25
Driller:	Mario Robles	Total Depth (ft):	3.5
Driller's License:	52694	Northing:	7101861.10
Logged By:	Christopher Moore, P.G.	Easting:	2480122.65
Sampling Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Soil pH	Sample Interval	USCS	Lithologic Description
0					CON	(0 - 1.5) CONCRETE and asphalt, drilled out.
1						
					CL	(1.5 - 1.8) SILTY CLAY, CL, with sand and gravel, fill, grayish brown, moist to wet, soft to firm, low plasticity, no staining observed, no odor.
2	2.0/2.0	0.5	6.95	1.5-3.5	CL/CH	(1.8 - 3.5) CLAY, CL/CH, very dark gray, moist, soft, medium plasticity, trace woody organic fragments (native), no staining or foreign material observed, no odor.
3						

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Notes:
Boring location hand probed to 4.0 feet to check for utilities.
Borehole plugged with bentonite chips upon completion and concrete patched.
Water entering the borehole from base of concrete upon removal of sampler. Water sample collected from base of boring.
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-RMSA-5

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/6/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101856.8311
Logged By:	Roberta Russell	Easting:	2480261.4445
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	3/5	0 - 2	CON	(0 - 0.5) CONCRETE SLAB
1			CL	(0.5 - 5.0) Silty CLAY, wet from 0.5-2.5 (possibly from concrete corer), moist, soft to firm, low plasticity.
2				
3		2 - 4		
4		4 - 5		
5				

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Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-RMSA-6

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/6/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101795.7748
Logged By:	Roberta Russell	Easting:	2480248.438
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0	4.5/5		0 - 2.5	CON	(0 - 0.5) CONCRETE SLAB
1				ML	(0.5 - 2.0) Clayey SILT, dark brown, moist, soft to firm, low plasticity.
2					
3		35	2.5 - 4	CL	(2.0 - 3.3) Gravelly CLAY, dark brown-black, wet, very soft, low plasticity.
4			4 - 5		(3.3 - 5.0) Silty CLAY, dark brown-black, moist, firm, low plasticity.
5					

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Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-RMSA-7

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/6/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101813.4245
Logged By:	Roberta Russell	Easting:	2480271.7807
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	4.3/5	0 - 2	CON	(0 - 0.7) CONCRETE SLAB
1			FILL	(0.7 - 2.5) FILL, clayey gravel/gravelly clay, ~20% gravel, dark brown to light brown, wet (possibly from concrete corer).
2				
3		2 - 4	CL/ML	(2.5 - 5.0) Silty CLAY/clayey SILT, dark brown with black staining, moist, firm, low plasticity.
4		4 - 5		
5				

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Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-RMSB-1

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	5/8/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	15
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101909.9542
Logged By:	Roberta Russell	Easting:	2480142.5204
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0				CON	(0 - 1.5) CONCRETE SLAB
1					
2	4/5	1.2	1.5 - 2	CL	(1.5 - 9.8) Silty CLAY/CLAY, dark brown, moist, wet at 6.5', soft to firm, low to medium plasticity.
3		10.1	2 - 5		
4					
5		1.2	5 - 5.5		
6			6		
7	3/5				
8					
9					
10					(9.8 - 11.5) Sandy CLAY, grayish brown, wet, soft, low plasticity.
11					
12	3.5/5				(11.5 - 15.0) Silty CLAY, dark grayish brown, wet, soft, low to medium plasticity.
13					
14					
15					

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Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.
Open borehole evaluated with oil/water interface probe. No product indicated in borehole.
This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-RMSB-2

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	5/8/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	15
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101911.479
Logged By:	Roberta Russell	Easting:	2480173.4829
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0				CON	(0 - 2.5) CONCRETE SLAB
1					
2	4/5				
2.5				FILL	(2.5 - 2.9) FILL, gravel (fine-medium) with sand, tan, moist, unconsolidated.
3					(2.9 - 6.0) Silty CLAY with trace sand, dark brown, moist, wet at 6'.
4		3.6	2.5 - 5		
5					
6		29.7	5 - 6		(6.0 - 12.0) Sandy CLAY, grayish brown, wet, very soft, low plasticity.
7	3/5				
8					
9				CL	
10					
11					
12	4.5/5				(12.0 - 15.0) Silty CLAY, trace fine gravel, dark brown, wet, very hard, low to medium plasticity.
13					
14					
15					

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Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.
Open borehole evaluated with oil/water interface probe. No product indicated in borehole.
This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-RMSB-3

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	5/8/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	15
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101920.9601
Logged By:	Roberta Russell	Easting:	2480184.5299
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0				CON	(0 - 1.5) CONCRETE SLAB
1					
2		0.8	1.5 - 2	FILL	(1.5 - 6.2) FILL, clayey sand/sandy clay, grayish brown with orange Fe staining, moist, wet at 6.2', soft, low plasticity.
	2.7/5	1.9	2 - 2.5		
3					
4					
5		0.8	5 - 5.5		
6			6		
7				CL	(6.2 - 10.0) Silty CLAY, dark brown, moderate hydrocarbon odor.
	2.7/5				
8					
9					
10					(10.0 - 12.0) Sandy CLAY, dark grayish brown, wet, soft, low to medium plasticity.
11					
12					(12.0 - 15.0) Silty CLAY, dark brown, wet, very hard, low to medium plasticity.
	3.2/5				
13					
14					
15					

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Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.
Open borehole evaluated with oil/water interface probe. No product indicated in borehole.
This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-RMSB-4

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	5/7/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	15
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101919.0213
Logged By:	Roberta Russell	Easting:	2480206.1515
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0	5/5	28	0 - 2	FILL	(0 - 0.3) FILL, gravel (medium), gray, dry, unconsolidated. (0.3 - 3.8) FILL, clayey sand, orange to grayish brown with orange Fe staining, plastic chip noted in this interval while sampling.
1					
2		22	2 - 5		
3					
4				CL	(3.8 - 15.0) CLAY/silty CLAY, dark reddish brown, gravelly clay (~10% medium gravel in clay matrix) from 11.5-11.7', moist, wet at 6.0', firm to hard, low to medium plasticity.
5	2.5/5	1.4	5 - 6		
6		1.4			
7					
8					
9					
10	5/5				
11					
12					
13					
14					
15					

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Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.
Open borehole evaluated with oil/water interface probe. No product indicated in borehole.
This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-RMSB-5

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	5/7/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	15
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101877.9929
Logged By:	Roberta Russell	Easting:	2480144.0945
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0	3/5			CON	(0 - 1.3) CONCRETE SLAB
1		95.7	1.3 - 2	FILL	(1.3 - 3.5) FILL, road base, tan, dry.
2					
3		1957	2 - 5		(3.5 - 6.5) FILL, silty clay/clayey silt, ~30% medium gravel with clayey silt/silty clay matrix, tan, very moist, soft, tan, very moist, soft.
4					
5	5/5	600	5 - 7		
6					
7				CL	(6.5 - 15.0) Silty CLAY, dark reddish brown, grayish brown with depth, moist, wet at 9.0', soft to firm, low plasticity, gravelly clay (~20-30% fine to medium gravel in clay matrix) at 11.0-11.1 and 11.3-11.4', hydrocarbon odor from 9.0-10.0'.
8					
9		1240	9		
10	5/5				
11					
12					
13					
14					
15					

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Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.
Open borehole evaluated with oil/water interface probe. No product indicated in borehole.
This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-RMSB-6

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	5/7/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	15
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101879.5177
Logged By:	Roberta Russell	Easting:	2480175.057
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0	2.5/5			CON	(0 - 1.3) CONCRETE SLAB
1		1	1.3 - 2	FILL	(1.3 - 6.6) FILL, silty clay/clayey silt, trace black staining, moist, soft to firm, low plasticity.
2		1.5	2 - 2.5		
3					
4					
5		3.7	5 - 7		
6					
7	5/5		7.5	CL	(6.6 - 15.0) Silty CLAY, dark reddish brown, moist, wet at 7.5', soft, low to medium plasticity, moderate hydrocarbon odor.
8					
9					
10	5/5				
11					
12					
13					
14					
15					

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Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-RMSB-7

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	5/8/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	15
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101881.0426
Logged By:	Roberta Russell	Easting:	2480206.0194
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0				CON	(0 - 1.5) CONCRETE SLAB
1					
2		1.5	1.5 - 2	FILL	(1.5 - 1.7) FILL, clayey sand/sandy clay, orange, moist, soft, low plasticity. (1.7 - 7.0) Silty CLAY, dark brown, moist, wet at 6.5', soft, low plasticity.
3	3/5	2.1	2 - 4		
4					
5		1.5	5 - 6		
6			6.5		
7	5/5			CL	(7.0 - 12.0) Sandy CLAY, grayish brown, wet, soft, low plasticity.
8					
9					
10					
11					
12	4.5/5				(12.0 - 15.0) Silty CLAY, dark brown, trace calcareous precipitates, wet, very hard, low to medium plasticity.
13					
14					
15					

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Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.
Open borehole evaluated with oil/water interface probe. No product indicated in borehole.
This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-RMSB-8

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	5/8/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	15
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101841.0881
Logged By:	Roberta Russell	Easting:	2480146.938
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0	2/5			CON	(0 - 2.1) CONCRETE SLAB
1					
2		0.4	2.1 - 3.1	FILL	(2.1 - 3.1) FILL, sandy, gravelly clay, ~10% sand and gravel in clay matrix, tan, moderate hydrocarbon odor.
3					
4				NR	(3.1 - 5.0) No recovery.
5	3/5	1.2	5 - 7	CL/ML	(5.0 - 10.0) Silty CLAY/clayey SILT, dark reddish brown, wet at 7.5', soft, low to medium plasticity.
6					
7			7.5		
8					
9					
10	5/5			CL	(10.0 - 10.4) Sandy, gravelly CLAY, ~20% sand and gravel in clay matrix, grayish brown, wet, soft, low to medium plasticity, moderate hydrocarbon odor. (10.4 - 14.2) Sandy CLAY, grayish brown, wet, soft, low to medium plasticity, moderate hydrocarbon odor.
11					
12					
13					
14				GC	(14.2 - 14.7) Clayey GRAVEL, ~60% fine to medium gravel, grayish brown, wet, soft, moderate hydrocarbon odor.
15				CL	(14.7 - 15.0) Sandy CLAY, grayish brown, wet, soft, low to medium plasticity, moderate hydrocarbon odor.

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Notes:

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Exide Technologies

Log of Boring: 2013-RMSB-9

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	5/7/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	15
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101850.5528
Logged By:	Roberta Russell	Easting:	2480176.4834
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0				CON	(0 - 1.3) CONCRETE SLAB
1					
2	3/5	2.2	1.3 - 2	FILL	(1.3 - 6.5) FILL, silty clay, orange and brown, moist, soft to firm, low to medium plasticity.
		4,7	2 - 2.5		
3					
4					
5					
6		4.7	5 - 7		
7	5/5	148		CL	(6.5 - 15.0) Silty CLAY, dark reddish brown, moist, wet at 9.0', soft to firm, low plasticity, greater plasticity with depth, trace gravel from 13.0-15.0', moderate hydrocarbon odor.
8			8		
9					
10					
11					
12	5/5				
13					
14					
15					

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Notes:

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Exide Technologies

Log of Boring: 2013-RMSB-10

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	5/8/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	15
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101844.1378
Logged By:	Roberta Russell	Easting:	2480208.8629
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0	2.2/5			CON	(0 - 1.3) CONCRETE SLAB
1		1.1	1.3 - 2	FILL	(1.3 - 3.4) FILL, sandy clay/clayey sand, orange, moist, firm, low plasticity.
2		2.5	2 - 3		
3					
4					(3.4 - 8.2) Silty CLAY, dark brown, moist, wet at 7.0'.
5	5/5	3.7	5 - 6		
6					
7			7		
8				CL	(8.2 - 10.0) Sandy CLAY, dark grayish brown, wet, moderate hydrocarbon odor.
9					
10	3.5/5				(10.0 - 15.0) Silty CLAY/CLAY, dark brown, wet, firm, medium plasticity, moderate hydrocarbon odor.
11					
12					
13					
14					
15					

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Notes:

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Exide Technologies

Log of Boring: 2013-RO-1

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/5/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7102103.5329
Logged By:	Roberta Russell	Easting:	2479578.3769
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	4.5/5	0 - 0.5	CL	(0 - 1.0) Silty CLAY/CLAY, dark reddish brown, moist, soft to firm, low plasticity.
1		0.5 - 1		(1.0 - 1.1) Sandy CLAY, dark reddish brown with trace orange Fe-ox staining, moist, soft, low plasticity clay.
		1 - 1.5		(1.1 - 5.0) Silty CLAY/CLAY, dark reddish brown, light brown from 2.5 to 5', wet at 3.7', moist, soft, low to medium plasticity.
2		1.5 - 2		
3				
4				
5				

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Notes:

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Exide Technologies

Log of Boring: 2013-RO-2

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/5/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7102126.4439
Logged By:	Roberta Russell	Easting:	2479562.0249
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	4.7/5	0 - 0.5	CL	(0 - 4.5) CLAY/silty CLAY, dark reddish brown, moist, firm, low to medium plasticity.
1		0.5 - 1		
2		1 - 1.5		
3		1.5 - 2		
4				
5			NR	(4.5 - 4.7) Gravelly CLAY, dark reddish brown, wet, soft, low plasticity clay. (4.7 - 5.0) No recovery.

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Notes:

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Exide Technologies

Log of Boring: 2013-RO-3

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/15/2013	Drilling Method:	DPT
Driller:	Dan Spaust	Borehole Diameter (in.):	2
Driller's License:	3038	Total Depth (ft):	5
Field Supervisor:	Will Vienne, P.G.	Northing:	7102104.7761
Logged By:	Will Vienne, P.G.	Easting:	2479557.0085
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	3.2/4	0 - 0.5	CL	(0 - 5.0) Silty CLAY, dark brownish gray, very moist, soft, low to medium plasticity, abundant limestone granules, trace limestone pebbles.
1		0.5 - 2		
2				
3		2 - 4		
4	0.6/1	4 - 5		
5				

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Notes:

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Exide Technologies

Log of Boring: 2013-RRS-3A

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/27/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7102073.967
Logged By:	Roberta Russell	Easting:	2480071.193
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	5/5		CON	(0 - 0.8) CONCRETE SLAB
1		0.8 - 2	FILL	(0.8 - 1.9) FILL, sandy, gravelly clay, ~20-30% fine-coarse sand and fine gravel in high-plasticity clay matrix, wet to moist, soft.
2				
3		2 - 4	CH	(1.9 - 5.8) FILL, silty clay, trace fine gravel, dark grayish brown, moist, soft, high plasticity.
4				
5		4 - 5		

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Notes:

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This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-RRS-4A

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	5/21/2013	Drilling Method:	DPT
Driller:	Dan Spaust	Borehole Diameter (in.):	2
Driller's License:	3038	Total Depth (ft):	3
Field Supervisor:	Tim Jennings, P.G.	Northing:	7102060.752
Logged By:	Tim Jennings, P.G.	Easting:	2480183.5008
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	3/3		CON	(0 - 0.9) CONCRETE SLAB
1		0.9 - 2	FILL	(0.9 - 3.0) FILL, gravel, clay and sand fill, dry, possible slag fragment at 2.0', refusal at 3.0' at apparent concrete.
2		2 - 3		
3				

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Notes:

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Exide Technologies

Log of Boring: SCC-3

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/5/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101666.6928
Logged By:	Roberta Russell	Easting:	2480460.5413
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	5/5	0 - 0.5	FILL	(0 - 3.6) FILL, dark reddish brown, silty clay with sand and gravel, plastic chip at 1', moist, soft to firm, low plasticity.
1		0.5 - 2		
2				
3		2 - 4		
4			ML	(3.6 - 4.1) SILT w/GRAVEL,~30-40% gravel, light reddish brown, fine to medium grained gravel.
		4 - 5	CL	(4.1 - 5.0) Silty CLAY, dark reddish brown, moist, firm, medium plasticity.
5				

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Notes:

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Exide Technologies

Log of Boring: SCC-3A

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/5/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101641.6386
Logged By:	Roberta Russell	Easting:	2480461.4981
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	4.4/5	0 - 0.5	CL	(0 - 0.5) Sandy CLAY, dark reddish brown, moist, soft, low plasticity clay.
1		0.5 - 2	CH	(0.5 - 4.0) CLAY, dark reddish brown, abundant black staining from 3-4', moist, wet at 3', soft, high plasticity.
2				
3		2 - 4		
4		4 - 5	CL	(4.0 - 5.0) Sandy CLAY, light grayish brown, trace black staining, wet, soft, low plasticity clay.
5				

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Notes:

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Exide Technologies

Log of Boring: SCC-10

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/5/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7102156.5364
Logged By:	Roberta Russell	Easting:	2479518.8436
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	4.5/5		FILL	(0 - 0.7) FILL, dark reddish brown, silty clay with gravel, dry, soft.
1		0.5 - 2	CL	(0.7 - 3.0) Silty CLAY, dark reddish brown, moist, soft, low to medium plasticity.
2				
3		2 - 4	SW	(3.0 - 5.0) Silty SAND, ~30% calcareous sand, dark reddish brown, dry, soft.
4		4 - 5		
5				

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Notes:

Borehole plugged with bentonite chips upon completion.

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Exide Technologies

Log of Boring: SCC-10A

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/5/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7102143.1089
Logged By:	Roberta Russell	Easting:	2479512.8889
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	5/5	0 - 0.5	CL	(0 - 1.8) Silty CLAY, dark red to reddish brown, abundant orange Fe-ox staining, moist, soft, low plasticity.
1		0.5 - 2		
2			CL/SC	(1.8 - 2.3) Sandy CLAY/clayey SAND, dark reddish brown, some orange Fe-ox staining, moist, soft, low plasticity clay.
				(2.3 - 4.0) Silty CLAY/CLAY, dark reddish brown, moist, soft, low to medium plasticity.
3		2 - 4	CL	
4		4 - 5		(4.0 - 4.9) Gravelly CLAY, ~20% medium gravel, light reddish brown, moist, soft, low plasticity clay.
5				(4.9 - 5.0) CLAY, light reddish brown, wet, soft, medium plasticity.

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Notes:

Borehole plugged with bentonite chips upon completion.

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Exide Technologies

Log of Boring: SCC-11

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/6/2013	Drilling Method:	Hand Auger
Driller:	Margarito Estrada	Borehole Diameter (in.):	3
Driller's License:	58164	Total Depth (ft):	4
Field Supervisor:	Tim Jennings, P.G.	Northing:	7102319.6421
Logged By:	Roberta Russell	Easting:	2479301.9603
Sampling Method:	3"X6" Hand Auger	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	0.5/0.5		CL	(0 - 4.0) Silty CLAY/CLAY, dark reddish brown, greater plasticity with depth, moderate orange Fe-ox staining, moist, firm to hard, low to medium plasticity.
1	0.5/0.5	0.5 - 2		
	0.5/0.5			
2	0.5/0.5			
	0.5/0.5	2 - 4		
3	0.5/0.5			
	0.5/0.5			
4	0.5/0.5			

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Notes:

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Exide Technologies

Log of Boring: SCC-11A

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/6/2013	Drilling Method:	Hand Auger
Driller:	Margarito Estrada	Borehole Diameter (in.):	3
Driller's License:	58164	Total Depth (ft):	3
Field Supervisor:	Tim Jennings, P.G.	Northing:	7102283.5451
Logged By:	Roberta Russell	Easting:	2479298.0939
Sampling Method:	3"X6" Hand Auger	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	0.5/0.5	0 - 0.5	CL	(0 - 3.0) Silty CLAY, dark reddish brown, trace red Fe staining, moist, soft to firm, low plasticity.
	0.5/0.5	0.5 - 2		
1	0.5/0.5			
	0.5/0.5			
2	0.5/0.5	2 - 3		
	0.5/0.5			
3				

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Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-SDA-1

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	1/4/2012	Drilling Method:	Geoprobe
Drilling Company:	StrataCore	Borehole Diameter (in.):	2.25
Driller:	Mario Robles	Total Depth (ft):	4
Driller's License:	52694	Northing:	7101558.98
Logged By:	Christopher Moore, P.G.	Easting:	2480088.96
Sampling Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	4.0/4.0	0-2	CL	(0 - 3.0) SILTY CLAY, CL, light olive brown, moist, soft, medium plasticity, trace sand size carbonate nodules, no staining or foreign material observed, no odor.
1				
2				
3		2-4		(3.0 - 4.0) SILTY CLAY, CL, grayish brown, moist, soft to firm, medium plasticity, fractured, orange staining in fractures, no foreign material observed, no odor.
4				

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Notes:
Boring location hand probed to 4.0 feet to check for utilities.
Borehole plugged with bentonite chips upon completion.
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-SDA-2

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	1/4/2012	Drilling Method:	Geoprobe
Drilling Company:	StrataCore	Borehole Diameter (in.):	2.25
Driller:	Mario Robles	Total Depth (ft):	4
Driller's License:	52694	Northing:	7101557.95
Logged By:	Christopher Moore, P.G.	Easting:	2480184.84
Sampling Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	4.0/4.0	0-2 2-4	CL	(0 - 4.0) SILTY CLAY, CL, dark grayish brown, moist, soft to firm, medium plasticity, trace sand size carbonate nodules, no staining or foreign material observed, no odor.
1				
2				
3				
4				

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Notes:
Boring location hand probed to 4.0 feet to check for utilities.
Borehole plugged with bentonite chips upon completion.
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-SDA-3

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	1/4/2012	Drilling Method:	Geoprobe
Drilling Company:	StrataCore	Borehole Diameter (in.):	2.25
Driller:	Mario Robles	Total Depth (ft):	4
Driller's License:	52694	Northing:	7101552.75
Logged By:	Christopher Moore, P.G.	Easting:	2480291.52
Sampling Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	4.0/4.0	0-2 2-4	CL	(0 - 4.0) SILTY CLAY, CL, very dark gray, moist, soft, medium plasticity, trace sand size carbonate nodules, no staining or foreign material observed, no odor.
1				
2				
3				
4				

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Notes:
Boring location hand probed to 4.0 feet to check for utilities.
Borehole plugged with bentonite chips upon completion.
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-SDA-3A

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/4/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Will Vienne, P.G.	Northing:	7101576.8349
Logged By:	Will Vienne, P.G.	Easting:	2480331.1409
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	5/5	0 - 0.5	CL	(0 - 5.0) Silty CLAY, dark brownish gray, trace limestone pebbles and granules, slightly moist, slightly soft to slightly firm, low to medium plasticity.
1		0.5 - 2		
2				
3		2 - 4		
4		4 - 5		
5				

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Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-SDA-4

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	1/4/2012	Drilling Method:	Geoprobe
Drilling Company:	StrataCore	Borehole Diameter (in.):	2.25
Driller:	Mario Robles	Total Depth (ft):	4
Driller's License:	52694	Northing:	7101174.44
Logged By:	Christopher Moore, P.G.	Easting:	2479970.62
Sampling Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	4.0/4.0	0-2	ML	(0 - 0.3) SILT, ML, dark grayish brown, with clay, moist, soft, low to medium plasticity, some roots, no staining or foreign material observed, no odor.
1				(0.3 - 4.0) SILT, ML, very pale brown, weathered limestone, dry to moist, very soft, non-plastic, some limestone fragments, no staining or foreign material observed, no odor.
2		2-4		
3				
4				

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Notes:
Boring location hand probed to 1.5 feet to check for utilities.
Borehole plugged with bentonite chips upon completion.
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-SDA-4A

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/4/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Will Vienne, P.G.	Northing:	7101587.5249
Logged By:	Will Vienne, P.G.	Easting:	2480227.9279
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	5/5	0 - 0.5	CL	(0 - 5.0) CLAY and silty CLAY, dark brownish gray, abundant limestone pebbles and fragmented shale in clay matrix at 0-0.7' with abundant roots, trace carbonate granules and pebbles below 0.7', slightly moist, soft to slightly firm, low to medium plasticity.
1		0.5 - 2		
2				
3		2 - 4		
4		4 - 5		
5				

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Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-SDA-5

Frisco Recycling Center Frisco, TX		Completion Date:	1/4/2012	Drilling Method:	Geoprobe
		Drilling Company:	StrataCore	Borehole Diameter (in.):	2.25
		Driller:	Mario Robles	Total Depth (ft):	2.9
PBW Project No. 1755		Driller's License:	52694	Northing:	7101170.31
		Logged By:	Christopher Moore, P.G.	Easting:	2480098.36
		Sampling Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	2.9/2.9	0-2	ML	(0 - 1.1) SILT, ML, brown, moist, soft, low plasticity, no staining or foreign material observed, no odor. 0.9-1.1: limestone fragments.
1				(1.1 - 2.9) SILT, ML, very pale brown, weathered limestone, dry to moist, very soft, non-plastic, some limestone fragments, no staining or foreign material observed, no odor.
2		2-2.9		

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Notes:
Boring location hand probed to 1.5 feet to check for utilities.
Borehole plugged with bentonite chips upon completion.
Refusal at 2.9
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-SL-1

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	1/10/2012	Drilling Method:	Geoprobe
Drilling Company:	StrataCore	Borehole Diameter (in.):	2.25
Driller:	Mario Robles	Total Depth (ft):	5.5
Driller's License:	52694	Northing:	7102343.75
Logged By:	Christopher Moore, P.G.	Easting:	2479384.49
Sampling Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0					(0 - 5.5) CLAY, CH, dark gray, moist, firm, medium plasticity, fill, with angular gravel, no odor. 2.0-2.5: with black, gravel size slag fragments.
1		0	0-2		
2	4.0/4.0				
3		0.1	2-4	CH	
4					
5	0/1.5				

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Notes:
Boring location hand probed to 2.0 feet to check for utilities.
Borehole plugged with bentonite chips upon completion.
No recovery below 4.0 feet Refusal at 5.5 feet.
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-SL-1

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/6/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	6
Field Supervisor:	Will Vienne, P.G.	Northing:	7102343.7519
Logged By:	Roberta Russell	Easting:	2479384.4867
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	3.6/5		FILL	(0 - 0.6) FILL, clayey silt, dark reddish brown, moist, soft, low plasticity.
1				(0.6 - 1.6) FILL, silty clay, light grayish brown, orange Fe staining, moist, firm, low plasticity.
2			CL	(1.6 - 2.5) CLAY, dark gray, dry.
3			FILL	(2.5 - 3.0) FILL, silty clay, trace gravel, gray, abundant orange staining, moist, firm, low plasticity.
4		4 - 5		(3.0 - 6.0) FILL, abundant slag, dark gray, dry.
5	0.5/1	5 - 6		
6				

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Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-SL-2

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	1/10/2012	Drilling Method:	Geoprobe
Drilling Company:	StrataCore	Borehole Diameter (in.):	2.25
Driller:	Mario Robles	Total Depth (ft):	8
Driller's License:	52694	Northing:	7102486.2
Logged By:	Christopher Moore, P.G.	Easting:	2479520.54
Sampling Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0					(0 - 1.2) CLAY, CH, dark gray, moist, soft, medium plasticity, no staining or foreign material observed, no odor.
1		0	0-2		
2	4.0/4.0			CH	(1.2 - 8.0) CLAY, CH, light grayish brown and light gray, moist, soft to firm, medium plasticity, some sand size carbonate nodules, no staining or foreign material observed, no odor. 7.5: Wet, silty.
3		0			
4					
4		0			
5					
6	4.0/4.0	0	5-7		
7					
7		0			
8					

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Notes:
Boring location hand probed to 4.5 feet to check for utilities.
Borehole plugged with bentonite chips upon completion.
Saturated soils encountered at 7.5 feet. Boring terminated at 8.0 feet and water sample collected from base of boring.
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2012-SL-3

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	1/10/2012	Drilling Method:	Geoprobe
Drilling Company:	StrataCore	Borehole Diameter (in.):	2.25
Driller:	Mario Robles	Total Depth (ft):	12
Driller's License:	52694	Northing:	7102514.89
Logged By:	Christopher Moore, P.G.	Easting:	2479697.92
Sampling Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0					(0 - 3.5) CLAY, CH, dark gray, moist, soft to firm, medium plasticity, no staining or foreign material observed, no odor.
1		0	0-2		
2	4.0/4.0				
3		0.1			
4					(3.5 - 9.0) CLAY, CH, light grayish brown and light gray, moist, firm, medium plasticity, some sand size carbonate nodules, no staining or foreign material observed, no odor.
5		0			
6	4.0/4.0			CH	
7		0.1			
8					
9		0.1	8-10		(9.0 - 12.0) CLAY, CH, light gray, moist, firm to hard, high plasticity, laminated, orange staining along laminations, fractured, no foreign material observed, no odor. 10.3-10.8: sand laminae, wet.
10	3.5/4.0				
11		0.1			
12					

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Notes:
Boring location hand probed to 4.0 feet to check for utilities.
Borehole plugged with bentonite chips upon completion.
Saturated soils encountered at 10.3 feet. Boring terminated at 12.0 feet and water sample collected from base of boring.
This Log of Boring should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-SL-4

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/7/2013	Drilling Method:	Hand Auger
Driller:	Margarito Estrada	Borehole Diameter (in.):	3
Driller's License:	58164	Total Depth (ft):	4
Field Supervisor:	Tim Jennings, P.G.	Northing:	7102263.8969
Logged By:	Roberta Russell	Easting:	2479414.9719
Sampling Method:	3"X6" Hand Auger	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	0.5/0.5	0 - 0.5	CL/ML	(0 - 4.0) Silty CLAY/clayey SILT, dark brown, orange and red Fe staining, ~10% calcareous nodules, moist, soft to firm, low plasticity.
1	0.5/0.5	0.5 - 2		
	0.5/0.5			
2	0.5/0.5			
	0.5/0.5	2 - 4		
3	0.5/0.5			
	0.5/0.5			
4	0.4/0.5			

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Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: SRB-VS-9

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	5/21/2013	Drilling Method:	DPT
Driller:	Dan Spaust	Borehole Diameter (in.):	2
Driller's License:	3038	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101361.944
Logged By:	Tim Jennings, P.G.	Easting:	2479938.26
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	4/4	0.9 - 2	CL	(0 - 3.1) Silty CLAY, brown, dry to moist, firm, medium plasticity.
1				
2				
3		2 - 4		
4	1/1	4 - 5	SH	(3.1 - 5.0) Weathered shale, brown, moist to dry, hard.
5				

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Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-STB-1

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/6/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Will Vienne, P.G.	Northing:	7101857.2181
Logged By:	Roberta Russell	Easting:	2480006.9654
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	3.6/5		CON	(0 - 0.7) CONCRETE SLAB
1		0 - 2	FILL	(0.7 - 3.0) FILL, gravel with sand and clay, light brown, wet (possibly from concrete corer), unconsolidated or soft clay.
2				
3		2 - 4	CL	(3.0 - 5.0) SILTY CLAY/CLAY, dark brown to black, very moist, soft, low to medium plasticity.
4		4 - 5		
5				

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Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-STB-2

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/7/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101809.889
Logged By:	Roberta Russell	Easting:	2480060.3992
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0	2.5/5			CON	(0 - 1.0) CONCRETE SLAB
1				FILL	(1.0 - 3.0) FILL, light to dark brown, gravel.
2					
3		0.7	2.5 - 4		(3.0 - 3.4) FILL, light yellowish brown, clayey gravel, moist, firm.
4		1.7	4 - 5	CL	(3.4 - 5.0) SILTY CLAY, dark brown, ~10% calcareous nodules, moist, firm to hard, low plasticity.
5					

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Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-STB-3

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/6/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101843.085
Logged By:	Roberta Russell	Easting:	2480095.1282
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	3.7/5		CON	(0 - 0.7) CONCRETE SLAB
1		0 - 2	FILL	(0.7 - 2.0) FILL, gravelly clay, ~10-20% medium gravel, yellowish brown, wet (possibly from concrete corer), firm, low plasticity.
2				
3		2 - 4	CH	(2.0 - 5.0) CLAY, dark gray, moist, firm to hard, medium to high plasticity.
4				
5		4 - 5		

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Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-STB-4

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/6/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101763.9043
Logged By:	Roberta Russell	Easting:	2480125.1415
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0	2.7/5		0 - 2	CON	(0 - 1.0) CONCRETE SLAB
1				FILL	(1.0 - 2.0) FILL, gravel, wet (possibly from concrete corer).
2		22	2 - 4	CL	(2.0 - 5.0) Silty CLAY, black to dark gray, moderate hydrocarbon odor, wet, soft, low plasticity.
3					
4			4 - 5		
5					

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Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-STB-5

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/14/2013	Drilling Method:	DPT
Driller:	Dan Spaust	Borehole Diameter (in.):	2
Driller's License:	3038	Total Depth (ft):	1.5
Field Supervisor:	Will Vienne, P.G.	Northing:	7101810.1084
Logged By:	Will Vienne, P.G.	Easting:	2480039.3263
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0	1.5/2	35.3	0 - 1.5	CON	(0 - 0.5) CONCRETE SLAB
1				FILL	(0.5 - 1.2) FILL, crushed black asphalt-like material and reddish granite, abundant feldspar and quartz, wet (may be from concrete corer), unconsolidated, granule to pebble sized.
					(1.2 - 1.5) FILL, sand, brown, abundant Fe staining, moist, unconsolidated, moderate sorting, very fine to fine grained, refusal at 1.5'.

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Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

This boring log should not be used seperately from the report to which it is attached.

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Log of Boring: 2013-STB-6

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/14/2013	Drilling Method:	DPT
Driller:	Dan Spaust	Borehole Diameter (in.):	2
Driller's License:	3038	Total Depth (ft):	1.1
Field Supervisor:	Will Vienne, P.G.	Northing:	7101799.4733
Logged By:	Will Vienne, P.G.	Easting:	2480030.8108
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0	0.6/1.1	50.1	0.5 - 1.1	CON	(0 - 0.5) CONCRETE SLAB
1				FILL	(0.5 - 0.8) FILL, crushed black asphalt-like material, reddish granite, granule to pebble sized, moist, unconsolidated. (0.8 - 1.1) FILL, sand, heavy black stain at 0.8-1', moist, unconsolidated, very fine to fine grained, moderate sorting, refusal at 1.1'.

PBW
Pastor, Behling & Wheeler, LLC
2201 Double Creek Dr., Suite 4004
Round Rock, TX 78664
Tel (512) 671-3434 Fax (512) 671-3446

Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-STB-7

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/14/2013	Drilling Method:	DPT
Driller:	Dan Spaust	Borehole Diameter (in.):	2
Driller's License:	3038	Total Depth (ft):	1.2
Field Supervisor:	Will Vienne, P.G.	Northing:	7101819.0361
Logged By:	Will Vienne, P.G.	Easting:	2480034.4435
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0	0.7/1.2	32.6	0.5 - 1.2	CON	(0 - 0.5) CONCRETE SLAB
1				FILL	(0.5 - 1.2) FILL, crushed black asphalt-like material and reddish granite, granule to pebble sized, wet (may be from concrete corer), refusal at 1.2'.

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Exide Technologies

Log of Boring: 2013-STB-8

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/14/2013	Drilling Method:	DPT
Driller:	Dan Spaust	Borehole Diameter (in.):	2
Driller's License:	3038	Total Depth (ft):	1.3
Field Supervisor:	Will Vienne, P.G.	Northing:	7101852.704
Logged By:	Will Vienne, P.G.	Easting:	2479989.8386
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0	0.5/1.3	60.7	0.5 - 1.3	CON	(0 - 0.8) CONCRETE SLAB
1				FILL	(0.8 - 1.2) FILL, black asphalt-like material and reddish granite, granule to pebble sized, wet (may be from concrete corer), unconsolidated.
					(1.2 - 1.3) FILL, sand, brown with Fe staining, very fine to fine grained, medium sorting, wet (may be from concrete corer), refusal at 1.3'.

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Notes:

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Exide Technologies

Log of Boring: 2013-STB-9

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	5/7/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	8
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101812.453
Logged By:	Roberta Russell	Easting:	2479995.8612
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0				CON	(0 - 0.5) CONCRETE SLAB
1	2/5	0.2	0.5 - 1	FILL	(0.5 - 1.6) FILL, clayey sand, orange, trace black staining, moist, soft.
2				CL	(1.6 - 5.5) Silty CLAY, dark brown, moist, hard, medium plasticity.
3					
4					
5			5 - 5.5		
6	3/3				(5.5 - 5.7) Gravelly, sandy CLAY, ~30% fine gravel and sand in clay matrix, wet, dark brown with orange Fe staining, wet, soft. (5.7 - 8.0) Silty CLAY, dark brown, wet, firm to hard, medium plasticity.
7					
8					

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Notes:

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Exide Technologies

Log of Boring: 2013-STB-10

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/14/2013	Drilling Method:	DPT
Driller:	Dan Spaust	Borehole Diameter (in.):	2
Driller's License:	3038	Total Depth (ft):	1.1
Field Supervisor:	Will Vienne, P.G.	Northing:	7101831.6381
Logged By:	Will Vienne, P.G.	Easting:	2479971.7708
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0	0.4/1.1	0.4		CON	(0 - 0.5) CONCRETE SLAB
			0.5 - 1.1	FILL	(0.5 - 0.6) FILL, crushed black asphalt-like material and red granite, granule to pebble sized, wet (may be from concrete corer), unconsolidated.
1					(0.6 - 1.1) FILL, sand, brown, heavy Fe staining, very fine to fine grained, moderate sorting, wet (may be from concrete corer), unconsolidated.

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Notes:

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Exide Technologies

Log of Boring: 2013-STB-11

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/14/2013	Drilling Method:	DPT
Driller:	Dan Spaust	Borehole Diameter (in.):	2
Driller's License:	3038	Total Depth (ft):	1.4
Field Supervisor:	Will Vienne, P.G.	Northing:	7101768.0406
Logged By:	Will Vienne, P.G.	Easting:	2480094.6771
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0	0.9/1.4	67.8	0.5 - 1.4	CON	(0 - 0.5) CONCRETE SLAB
1				FILL	(0.5 - 1.1) FILL, black asphalt-like material and reddish granite, granule to pebble sized, wet (may be from concrete corer).
					(1.1 - 1.4) FILL, sand, brown with Fe staining, very fine to fine grained, moderate sorting, wet (may be from concrete corer), refusal at 1.4'.

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Notes:

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Exide Technologies

Log of Boring: 2013-STB-12

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/14/2013	Drilling Method:	DPT
Driller:	Dan Spaust	Borehole Diameter (in.):	2
Driller's License:	3038	Total Depth (ft):	1.2
Field Supervisor:	Will Vienne, P.G.	Northing:	7101780.8028
Logged By:	Will Vienne, P.G.	Easting:	2480016.3817
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0	0.7/1.2	46.6		CON	(0 - 0.5) CONCRETE SLAB
1			0.5 - 1.2	FILL	(0.5 - 0.9) FILL, crushed black asphalt-like material and red granite, moist (may be from concrete corer), unconsolidated. (0.9 - 1.2) FILL, sand, brown with heavy Fe staining, very fine to fine grained, moderate sorting, wet (may be from concrete corer), unconsolidated.

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Notes:

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Exide Technologies

Log of Boring: 2013-TS-1

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/14/2013	Drilling Method:	DPT
Driller:	Dan Spaust	Borehole Diameter (in.):	2
Driller's License:	3038	Total Depth (ft):	4
Field Supervisor:	Will Vienne, P.G.	Northing:	7102097.0348
Logged By:	Will Vienne, P.G.	Easting:	2480985.384
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	4/4	0 - 0.5	CL	(0 - 4.0) Silty CLAY, very dark brown gray, weathered, dry, slightly firm to firm, low plasticity clay, root fragments at 0-0.3', trace limestone granules in moderately organic clay at 0-2.2', abundant limestone granules below 2.2'.
1		0.5 - 2		
2				
3		2 - 4		
4				

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Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-TS-2

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/14/2013	Drilling Method:	DPT
Driller:	Dan Spaust	Borehole Diameter (in.):	2
Driller's License:	3038	Total Depth (ft):	4
Field Supervisor:	Will Vienne, P.G.	Northing:	7102252.6153
Logged By:	Will Vienne, P.G.	Easting:	2480976.5784
Sampling Method:	4' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	4/4	0 - 0.5 0.5 - 2 2 - 4	CL	(0 - 4.0) Silty CLAY, dark brownish gray, dry, slightly firm to firm, low plasticity clay, trace root fragments from 0-0.4', trace limestone granules in moderately organic clay at 0-2.3', gray brown below 2.3' with abundant limestone granules.
1				
2				
3				
4				

PBW
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Notes:

Borehole plugged with bentonite chips upon completion.

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Exide Technologies

Log of Boring: VCP-MW-1

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	2/28/2013	Drilling Method:	HSA
Drilling Company:	Strata Core Services, LLC	Borehole Diameter (in.):	7.75
Driller:	Chris Combs	Total Depth (ft):	10
Driller's License:	56033	Northing:	7101501.9575
Logged By:	Tim Jennings, P.G.	Easting:	2479866.9837
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	652.99
Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	655.88

Depth (ft)	Well Materials	Recovery (ft/ft)	USCS	PID (ppm)	Lithologic Description
0				0.9	(0 - 3.6) Clayey SILT, grayish brown, moist to wet, soft to firm, high plasticity.
			MH	1.2	
		5.0/5.0		1.2	
				0.7	
				0.5	(3.6 - 7.5) SHALE, light brown, orange and gray, moist, firm to hard, medium plasticity, weathered.
5				1.3	
			SH	1.1	
		5.0/5.0		1.3	(7.5 - 10.0) SHALE, dark gray, dry, hard.
				0.9	
10				0.8	

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Notes:

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Annular Materials
(0.0 - 1.0) Concrete
(1.0 - 2.0) Bentonite Hole Plug
(2.0 - 10.0) 20/40 Silica Sand

Well Materials
(+2.89 - 2.5) Casing, 2" Sch 40 FJT PVC
(2.5 - 10.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

Exide Technologies

Log of Boring: VCP-MW-2

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	3/1/2013	Drilling Method:	HSA
Drilling Company:	Strata Core Services, LLC	Borehole Diameter (in.):	7.75
Driller:	Chris Combs	Total Depth (ft):	20
Driller's License:	56033	Northing:	7101872.3093
Logged By:	Tim Jennings, P.G.	Easting:	2479265.8773
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	627.74
Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	631.16

Depth (ft)	Well Materials	Recovery (ft/ft)	USCS	PID (ppm)	Lithologic Description
0		5.0/5.0	MH	6.2	(0 - 4.0) Clayey SILT, dark grayish brown, moist, soft to firm, high plasticity, abundant roots to 4'.
				7.0	
				9.3	
				8.7	
5		5.0/5.0	CL	7.2	(4.0 - 9.0) Silty CLAY, dark grayish brown, moist soft, medium plasticity, rust colored mottling locally, friable, abundant roots, iron oxide mottling below 6'.
				8.8	
				7.2	
				8.1	
				8.1	
10		5.0/5.0	CL/CH	9.3	(9.0 - 11.1) Silty CLAY, dark grayish brown, moist firm, medium to high plasticity, light gray laminae.
				8.5	
			CH	7.0	(11.1 - 13.6) Gravelly CLAY, light brown and orange, moist to wet, firm, high plasticity clay, ~20-30% fine to medium gravel in clay matrix, increasing moisture with depth.
				6.6	
				3.2	(13.6 - 15.6) Silty CLAY, light brown to orange, wet, soft, high plasticity, <5% fine to coarse sand.
15				7.2	
		3.5/5.0		8.1	(15.6 - 18.2) SHALE, gray to light brown, moist, hard, abundant iron oxide along bedding planes, weathered.
				5.4	
			SH	5.2	
				12.0	(18.2 - 20.0) SHALE, dark gray, dry, hard.
20				25.1	

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Notes:

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Annular Materials
(0.0 - 2.0) Concrete
(2.0 - 4.0) Bentonite Hole Plug
(4.0 - 20.0) 20/40 Silica Sand

Well Materials
(+3.42 - 5.0) Casing, 2" Sch 40 FJT PVC
(5.0 - 20.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

Exide Technologies

Log of Boring: VCP-MW-3

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	2/28/2013	Drilling Method:	HSA
Drilling Company:	Strata Core Services, LLC	Borehole Diameter (in.):	7.75
Driller:	Chris Combs	Total Depth (ft):	15
Driller's License:	56033	Northing:	7102743.5737
Logged By:	Tim Jennings, P.G.	Easting:	2478984.5144
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	631.34
Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	634.06

Depth (ft)	Well Materials	Recovery (ft/ft)	USCS	PID (ppm)	Lithologic Description
0		4.3/5.0	CH/MH	0..8	(0 - 3.4) Silty CLAY/Clayey SILT, dark grayish brown, moist, soft to firm, high plasticity, abundant roots at 0-0.5'.
				0.1	
				0.5	
				0.3	(3.4 - 7.3) Silty gravelly CLAY; light brown, moist, firm to hard, medium plasticity clay, ~10-30% fine calcareous gravel.
				1.1	
5		2.4/5.0	CL	0.6	
				0.6	
				0.1	
			NR	-	(7.3 - 7.6) Silty CLAY, light brown, moist firm to hard, medium plasticity, orange and green laminated. (7.6 - 10.0) No Recovery
				-	
10		5.0/5.0	CH	0.4	(10.0 - 13.0) Silty CLAY, light brown, wet, soft, high plasticity.
				0.5	
				0.4	
			SH	1.1	(13.0 - 15.0) SHALE, gray, moist, firm to hard, medium plasticity, abundant iron oxide partings, weathered.
				0.4	
15					

PBW
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Notes:

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Annular Materials
(0.0 - 2.0) Concrete
(2.0 - 4.0) Bentonite Hole Plug
(4.0 - 15.0) 20/40 Silica Sand

Well Materials
(+2.72 - 5.0) Casing, 2" Sch 40 FJT PVC
(5.0 - 15.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

Exide Technologies

Log of Boring: VCP-MW-4

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	2/28/2013	Drilling Method:	HSA
Drilling Company:	Strata Core Services, LLC	Borehole Diameter (in.):	7.75
Driller:	Chris Combs	Total Depth (ft):	15
Driller's License:	56033	Northing:	7102521.1042
Logged By:	Tim Jennings, P.G.	Easting:	2479285.0237
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	632.18
Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	635.43

Depth (ft)	Well Materials	Recovery (ft/ft)	USCS	PID (ppm)	Lithologic Description
0			MH	0	(0 - 1.8) Clayey SILT, dark grayish brown, moist soft, high plasticity, trace calcareous nodules.
				0	
		2.5/5.0		0.4	(1.8 - 5.3) Silty CLAY, brown to light brown, moist, soft to firm, medium to high plasticity, trace to 5% calcareous nodules.
			CL/CH	-	
				-	
5				0.1	(5.3 - 6.6) Gravelly CLAY/Clayey GRAVEL, sub-rounded gravel, moist, soft to firm, medium plasticity clay, ~40-60% fine to medium gravel in clay matrix.
			CL/GC	0	
		3.0/5.0		0.1	(6.6 - 10.7) Silty CLAY, orange, brown and gray mottled, moist, firm, medium to high plasticity.
			CL/CH	-	
				-	
10				1	
				0	(10.7 - 15.0) SHALE, orangish brown to gray, moist to dry, firm to hard, medium plasticity, abundant iron oxide along bedding planes.
		5.0/5.0	SH	0.1	
				0.3	
15				0.1	

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Notes:

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Annular Materials
(0.0 - 1.0) Concrete
(1.0 - 3.0) Bentonite Hole Plug
(3.0 - 15.0) 20/40 Silica Sand

Well Materials
(+3.25 - 5.0) Casing, 2" Sch 40 FJT PVC
(5.0 - 15.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

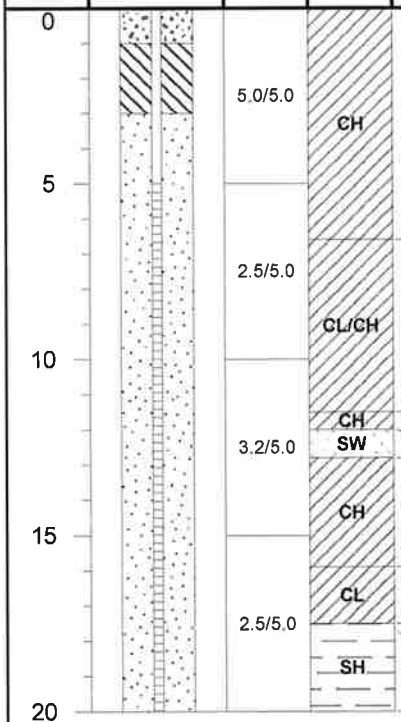
Exide Technologies

Log of Boring: VCP-MW-5

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	2/27/2013	Drilling Method:	HSA
Drilling Company:	Strata Core Services, LLC	Borehole Diameter (in.):	7.75
Driller:	Chris Combs	Total Depth (ft):	20
Driller's License:	56033	Northing:	7102925.8587
Logged By:	Tim Jennings, P.G.	Easting:	2480000.584
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	640.8
Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	643.97



Lithologic Description

(0 - 6.6) Silty CLAY, dark grayish brown, moist to dry, firm to hard, high plasticity, few (<5%) small calcareous nodules below 3.3', dry below 3.5'.

(6.6 - 11.5) Sandy, silty CLAY; light brown, light gray and orange laminated, moist, very hard, medium to high plasticity, ~10-20% fine to coarse sand in clay matrix.

(11.5 - 12.0) Sandy, gravelly CLAY; brown orange, moist, firm, high plasticity clay.

(12.0 - 12.8) Clayey, gravelly SAND; wet, soft, ~20-30% clay, ~10-20% fine to medium gravel.

(12.8 - 15.9) Sandy, gravelly CLAY; brown orange, moist, firm, high plasticity clay, ~10-20% fine sand and fine gravel, possibly calcareous nodules.

(15.9 - 17.5) CLAY, orange and gray mottled, moist, firm, medium plasticity, <5% fine to medium gravel and calcareous nodules, possible reworked shale.

(17.5 - 17.7) SHALE, gray, moist, firm, high plasticity.

(17.7 - 20.0) SHALE, gray, very hard, poor recovery.

PBW

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Notes:
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Annular Materials
(0.0 - 1.0) Concrete
(1.0 - 3.0) Bentonite Hole Plug
(3.0 - 20.0) 20/40 Silica Sand

Well Materials
(+3.17 - 5.0) Casing, 2" Sch 40 FJT PVC
(5.0 - 20.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

Exide Technologies

Log of Boring: VCP-MW-6

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	2/27/2013	Drilling Method:	HSA
Drilling Company:	Strata Core Services, LLC	Borehole Diameter (in.):	7.75
Driller:	Chris Combs	Total Depth (ft):	20
Driller's License:	56033	Northing:	7103251.5523
Logged By:	Tim Jennings, P.G.	Easting:	2479837.0804
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	641.1
Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	644.71

Depth (ft)	Well Materials	Recovery (ft/ft)	USCS	Lithologic Description
0		5.0/5.0	CH	(0 - 6.6) Silty CLAY, dark grayish brown, moist to dry, soft to hard, high plasticity, <5% calcareous nodules, hard and dry below 3.7', brown, ~5-10% calcareous nodules at 5-6.6', very stiff 6-6.6'.
5		3.7/5.0	CL/CH	(6.6 - 10.0) Silty, gravelly CLAY; brown orange, moist, hard to very hard, medium to high plasticity clay, well laminated, ~10-20% fine to medium gravel and calcareous nodules.
10		3.7/5.0	MH	(10.0 - 15.0) Clayey SILT, moist to wet, soft, high plasticity, ~20-30% fine to medium gravel and fine to coarse sand from 12.3-12.8', wet below 12.3'.
15		5.0/5.0	SM/SW	(15.0 - 16.5) Silty, gravelly SAND; brown, wet, soft, ~10% fines, ~20-30% fine to medium sub-rounded gravel in fine to coarse sand.
			CH	(16.5 - 17.1) Silty CLAY, brown, wet, soft, high plasticity, trace fine gravel in clay matrix.
			SH	(17.1 - 20.0) SHALE, gray and brown, moist, firm to hard, iron oxide staining along bedding planes, weathered.
20				

PBW

Pastor, Behling & Wheeler, LLC
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Round Rock, TX 78664
Tel (512) 671-3434 Fax (512) 671-3446

Notes:
This log should not to be used separately from the report to which it is attached.

Annular Materials
(0.0 - 1.0) Concrete
(1.0 - 3.0) Bentonite Hole Plug
(3.0 - 20.0) 20/40 Silica Sand

Well Materials
(+3.61 - 5.0) Casing, 2" Sch 40 FJT PVC
(5.0 - 20.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

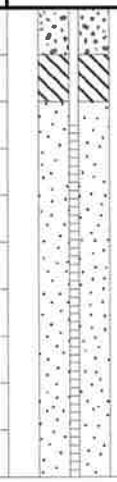
Exide Technologies

Log of Boring: VCP-MW-7

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	4/18/2013	Drilling Method:	HSA
Drilling Company:	Sunbelt Environmental	Borehole Diameter (in.):	8.25
Driller:	Joe Garcia	Total Depth (ft):	10
Driller's License:	58780	Northing:	7100967.0459
Logged By:	Carolyn Sexton	Easting:	2481078.6125
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	683.116976
Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	685.176513

Depth (ft)	Well Materials	Recovery (ft/ft)	USCS	PID (ppm)	Lithologic Description
0		4.0/4.0	CL	0	(0 - 0.8) Silty CLAY, dark gray brown, moist, soft, low plasticity, trace med. size gravel in top 0.5', gradational contact.
				0	(0.8 - 1.1) Chalky, silty LIMESTONE, weathered, orange iron oxide staining.
				0	(1.1 - 6.2) Chalky, silty LIMESTONE, light tan, brittle, dry, hard, <5% dark brown and orange ironstone nodules from 4.0-4.2'.
			LS	0	
				0	
5				0	
		5.0/5.0		0	(6.2 - 10) Chalky, silty SHALE, dark gray, fissile, blocky at base, dry, hard.
				0	
			SH	0	
		1.0/1.0		0	
10					

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Notes:

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Annular Materials
(0.0 - 1.0) Concrete
(1.0 - 2.0) Bentonite Hole Plug
(2.0 - 10.0) Industrial Quartz Sand

Well Materials
(+2.06 - 2.5) Casing, 2" Sch 40 PVC
(2.5 - 10.0) Screen, 2" Sch 40 PVC, 0.010 slot

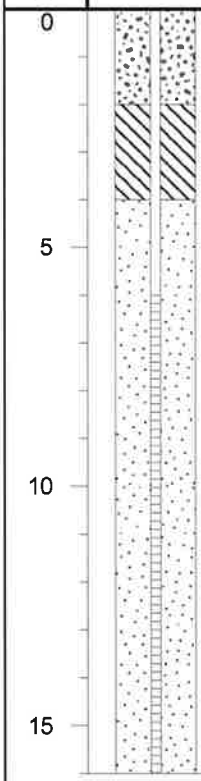
Exide Technologies

Log of Boring: VCP-MW-8

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	4/17/2013	Drilling Method:	HSA
Drilling Company:	Sunbelt Environmental	Borehole Diameter (in.):	8.25
Driller:	Joe Garcia	Total Depth (ft):	16
Driller's License:	58781	Northing:	7102884.3737
Logged By:	Carolyn Sexton	Easting:	2481077.5726
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	648.101225
Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	651.023133



PID (ppm)	Lithologic Description
0	(0 - 3.6) FILL, gray brown, dry, with silty clay, coarse sand to large gravel, asphalt-like nodules, calcareous nodules.
0	
0	
0	
0	(3.6 - 7.4) Silty CLAY, dark brown, moist, low plasticity, ~10% graded angular fine to med. sand and calcareous nodules.
0	
0	
0	
0	(7.4 - 11.1) Silty CLAY, medium-brown to gray, moist to wet, low to med. plasticity, ~10-20% coarse sand to medium gravel.
0	
0	
0	(11.1 - 15.9) Slightly silty CLAY, gray brown, moist to wet, low to med. plasticity, ~30-40% gravel from 11.1-11.3'.
0	
0	
0	
0	(15.9 - 16) LIMESTONE, grayish tan, competent, microcrystaline to very fine grained, contains veins of secondary crystals.

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Notes:

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Annular Materials
(0.0 - 2.0) Concrete
(2.0 - 4.0) Bentonite Hole Plug
(4.0 - 16.0) Industrial Quartz Sand

Well Materials
(+2.92 - 6.0) Casing, 2" Sch 40 PVC
(6.0 - 16.0) Screen, 2" Sch 40 PVC, 0.010 slot

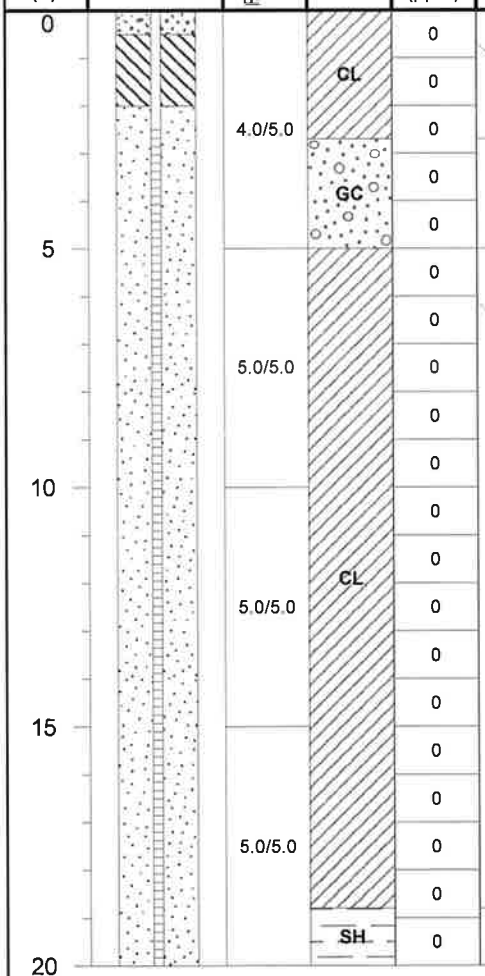
Exide Technologies

Log of Boring: VCP-MW-9

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	4/17/2013	Drilling Method:	HSA
Drilling Company:	Sunbelt Environmental	Borehole Diameter (in.):	8.25
Driller:	Joe Garcia	Total Depth (ft):	20
Driller's License:	58782	Northing:	7103297.5194
Logged By:	Carolyn Sexton	Easting:	2481042.4147
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	664.314339
Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	666.957891



Lithologic Description

(0 - 0.7) Silty CLAY, dark brown, slighly moist, firm, low plasticity, with root fragments and angular coarse sand to med. gravel.

(0.7 - 2.7) Silty CLAY, dark brown to black, slightly moist, firm to hard, low plasticity, with calcareous nodules and 10-20% angular coarse sand to fine gravel.

(2.7 - 5) Clayey GRAVEL, yellow-brown, moist to wet, firm, low plasticity, ~40-50% fine to med. carbonate gravel in clay matrix.

(5 - 6.1) Silty CLAY, gray with orange iron oxide staining, moist, soft to firm, low to medium plasticity, calcareous nodule lense from 5.5-5.6', laminated fine sand from 5.9-6.05'.

(6.1 - 18.8) Silty CLAY, gray with orange iron oxide staining, moist, firm, low plasticity, moderately weathered throughout, contains horizontal carbonate and inron oxide staining and vertical iron oxide filled fractures.

(18.8 - 20) SHALE, dark gray, moist, firm, low plasticity, unweathered.

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Notes:

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Annular Materials
(0.0 - 0.5) Concrete
(0.5 - 2.0) Bentonite Hole Plug
(2.0 - 20.0) Industrial Quartz Sand

Well Materials
(+2.64 - 2.5) Casing, 2" Sch 40 PVC
(2.5 - 20.0) Screen, 2" Sch 40 PVC, 0.010 slot

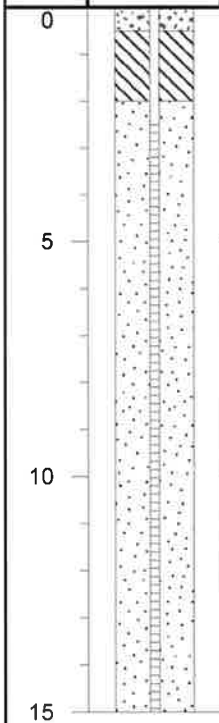
Exide Technologies

Log of Boring: VCP-MW-10

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	4/17/2013	Drilling Method:	HSA
Drilling Company:	Sunbelt Environmental	Borehole Diameter (in.):	8.25
Driller:	Joe Garcia	Total Depth (ft):	15
Driller's License:	58783	Northing:	7103274.8564
Logged By:	Carolyn Sexton	Easting:	2481265.9907
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	667.108585
Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	669.744622



Depth (ft)	Recovery (ft/ft)	USCS	PID (ppm)	Lithologic Description
0	5.0/5.0	CL	0	(0 - 0.4) Silty CLAY, dark brown, with roots and 5-10% fine gravel and calcareous nodules.
			0	(0.4 - 1.2) Sandy CLAY, light gray, interlayered soft clay and iron oxide stained sand, slightly moist, low to medium plasticity.
			0	(1.2 - 5.6) Silty CLAY, dark brown-gray, moist, low to medium plasticity, carbonate coarse sand to fine gravel within clay matrix throughout, coarse gravel from 1.6-2.8'.
			0	
5			0	
			0	
	5.0/5.0		0	(5.6 - 12.4) Silty CLAY, light to medium gray, moist, soft, friable and fissile, massive below 7.7', limonite and orange iron oxide staining throughout.
			0	
			0	
10			0	
			0	
	5.0/5.0		0	(12.4 - 15) SHALE, dark gray, slightly moist, low plasticity, slightly weathered.
		SH	0	
15			0	

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Notes:

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Annular Materials
(0.0 - 0.5) Concrete
(0.5 - 2.0) Bentonite Hole Plug
(2.0 - 15.0) Industrial Quartz Sand

Well Materials
(+2.64 - 2.5) Casing, 2" Sch 40 PVC
(2.5 - 15.0) Screen, 2" Sch 40 PVC, 0.010 slot

Exide Technologies

Log of Boring: VCP-MW-11

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	4/17/2013	Drilling Method:	HSA
Drilling Company:	Sunbelt Environmental	Borehole Diameter (in.):	8.25
Driller:	Joe Garcia	Total Depth (ft):	15
Driller's License:	58784	Northing:	7103365.2704
Logged By:	Carolyn Sexton	Easting:	2481418.2146
Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	670.152153
Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	672.734085

Depth (ft)	Well Materials	Recovery (ft/ft)	USCS	PID (ppm)	Lithologic Description
0				0	(0 - 0.8) Silty CLAY, deep brown, slightly moist, low plasticity, soft to firm, contains roots.
				0	(0.8 - 5) Slightly silty CLAY, yellow-gray, slightly dry, firm to hard, low plasticity, 10-30% coarse sand to fine gravel dispersed within clay matrix, roots to 3.2', calcareous laminae and iron oxide staining throughout.
		3.6/5.0		0	
				0	
				0	
5			CL	0	(5 - 10) Weathered SHALE, gray, slightly dry, firm to hard, low plasticity, iron oxide staining and carbonate filled laminae throughout.
				0	
		3.4/5.0		0	
				0	
				0	
10				0	(10 - 12.8) SHALE, dark gray, friable, iron oxide staining, weathered.
				0	
		5.0/5.0	SH	0	
				0	(12.8 - 15) SHALE, dark gray, dry, very hard, fissile, unweathered.
				0	
15					

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Notes:

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Annular Materials
(0.0 - 0.5) Concrete
(0.5 - 2.0) Bentonite Hole Plug
(2.0 - 15.0) Industrial Quartz Sand

Well Materials
(+2.58 - 2.5) Casing, 2" Sch 40 PVC
(2.5 - 15.0) Screen, 2" Sch 40 PVC, 0.010 slot

Exide Technologies

Log of Boring: 2013-WMU6-1

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	5/7/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101955.0582
Logged By:	Roberta Russell	Easting:	2479994.3068
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	5/5		CON	(0 - 0.9) CONCRETE SLAB
1		0.9 - 2	FILL	(0.9 - 2.7) FILL, clayey silt/silty clay, dark brown with orange and black staining, moist, soft to firm, low plasticity.
2				
3		2 - 4	CL	(2.7 - 5.0) Silty CLAY, dark brown, trace calcareous precipitates, moist, firm, low to medium plasticity.
4		4 - 5		
5				

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Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-WMU14-1

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	5/7/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101992.1222
Logged By:	Roberta Russell	Easting:	2479881.2748
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	4.1/5		CON	(0 - 0.9) CONCRETE SLAB
1		0.9 - 2	FILL	(0.9 - 5.0) FILL, silty clay/clayey silt, dark reddish brown with trace orange and black staining, trace battery chips and slag fragments (<0.5" diameter) from 0.9-3.0', moist, soft to firm, low plasticity.
2				
3		2 - 4		
4		4 - 5		
5				

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Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-WMU14-2

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	5/7/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101826.2342
Logged By:	Roberta Russell	Easting:	2480109.0334
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	PID (ppm)	Sample Interval	USCS	Lithologic Description
0	4.1/5			CON	(0 - 0.9) CONCRETE SLAB
1		1.1	0.9 - 2	FILL	(0.9 - 1.5) FILL, sandy clay, moist, firm, low plasticity.
2					(1.5 - 5.0) FILL, silty clay/clayey silt, dark brown, moist, soft to firm, low plasticity, trace hydrocarbon odor.
3		0.8	2 - 4		
4		11.8	4 - 5		
5					

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Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-WMU14-3

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	5/7/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7102020.6551
Logged By:	Roberta Russell	Easting:	2480630.7817
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	4.1/5		CON	(0 - 0.9) CONCRETE SLAB
1		0.9 - 2	FILL	(0.9 - 4.6) FILL, silty clay/clayey silt, grayish brown with orange Fe staining, moist, firm, low plasticity.
2				
3		2 - 4		
4		4 - 5		
5			GC	(4.6 - 5.0) Clayey GRAVEL, ~50-60% corase sand and fine -medium gravel in silty clay matrix, grayish brown with orange Fe staining, moist.

PBW
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Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

This boring log should not be used seperately from the report to which it is attached.

Exide Technologies

Log of Boring: 2013-WMU16-1

Frisco Recycling Center
Frisco, TX

PBW Project No. 1755

Completion Date:	5/7/2013	Drilling Method:	DPT
Driller:	Margarito Estrada	Borehole Diameter (in.):	2
Driller's License:	58164	Total Depth (ft):	5
Field Supervisor:	Tim Jennings, P.G.	Northing:	7101886.1348
Logged By:	Roberta Russell	Easting:	2480414.841
Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	--

Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	Lithologic Description
0	4.1/5		CON	(0 - 0.9) CONCRETE SLAB
1		0.9 - 2	FILL	(0.9 - 1.5) FILL, gravel (coarse pebbles), dry, unconsolidated.
2			CL	(1.5 - 5.0) Silty CLAY, dark brown, moist, firm, low plasticity.
3		2 - 4		
4		4 - 5		
5				

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Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

This boring log should not be used seperately from the report to which it is attached.

GEOTECHNICAL ENGINEERING REPORT (RONE, 2011)

Project No. 11-16996	Boring No. B 1-10	Exide Technologies Frisco, Texas	Rone Engineering
Location		Water Observations: Groundwater seepage was not observed while drilling, and the borehole appeared dry at completion.	
Completion Depth 10.0'	Completion Date 8-23-11		
Surface Elevation	Type CFA		

Depth, Ft.	Symbol	Samples	Stratum Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pcf	Unconfined Compression psf
			FAT CLAY (CH) - very hard to hard, dark brown, with limestone fragments and calcareous nodules and sand		4.5+		86	64	22	42	17		
					4.5+						19		
5			- brown and gray, with calcareous nodules		4.5+						15		
					4.5+		88	53	19	34	16		
					4.5+/2.5						18		
10			Boring Terminated at 10 Feet										

LOG OF BORING NO. B 1-10 Plate A.2

RONE ENGINEERING LOGS 11-16996 GPJ RONE.GDT 9/26/11

Project No. 11-16996	Boring No. B 1-25	Exide Technologies Frisco, Texas	Rone Engineering
Location		Water Observations: Groundwater seepage was observed at a depth of about 18' while drilling.	
Completion Depth 25.0'	Completion Date 8-23-11		
Surface Elevation	Type CFA		

Depth, Ft.	Symbol	Samples	Stratum Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pcf	Unconfined Compression psf
			FILL: FAT CLAY (CH) - very hard, dark brown and gray, with limestone fragments, calcareous nodules, roots and trash (pieces of glass, nails, plastic)		4.5+						14		
					4.5+		87	65	22	43	20	106	24230
5			SANDY CLAY (CL) - very hard to hard, light yellowish brown, with calcareous nodules		4.5+						16		
					2.5		64	49	17	32	17		
					3.75						21		
10			- layer of calcareous material										
			- dark brown, with sand seams		4.5+						17		
15			FAT CLAY (CH) - dark gray										
			▽		NR								
20			SHALEY CLAY - gray										
25			Boring Terminated at 25 Feet										

RONE ENGINEERING LOGS 11-16996.GPJ RONE.GDT 9/26/11

LOG OF BORING NO. **B 1-25**

Plate A.3

Project No. 11-16996	Boring No. B 1-35	Exide Technologies Frisco, Texas	Rone Engineering
Location		Water Observations: Groundwater seepage was observed at a depth of about 18' while drilling.	
Completion Depth 39.0'	Completion Date 8-23-11		
Surface Elevation	Type CFA		

Depth, Ft.	Symbol	Samples	Stratum Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pcf	Unconfined Compression psf
			FAT CLAY (CH) - dark brown and gray, with limestone fragments, possible fill								9		
5													
			FAT CLAY (CH) - very hard to hard, light yellowish brown and gray, with calcareous nodules		4.5+						8		
					3.25		99	70	25	45	28		
10													
			SHALEY CLAY (CH) - very hard, gray		4.5+						23		
15			▽		4.5+						20		
20					4.5+		99	67	23	44	19	109	16280
25													
			CLAYEY SAND (SC) - gray		3.5						17		
30													

RONE ENGINEERING LOGS 11-16996.GPJ RONE.GDT 9/26/11

LOG OF BORING NO. **B 1-35** *Continued Next Page* **Plate A.4a**

Project No.	Boring No.	
11-16996	B 1-35	Exide Technologies Frisco, Texas

Rone Engineering

Location

Water Observations
Groundwater seepage was observed at a depth of about 18' while drilling.

Completion Depth 39.0' | Completion Date 8-23-11

Surface Elevation | Type CFA

Depth, Ft.	Symbol	Samples	Stratum Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pcf	Unconfined Compression psf
			SHALEY CLAY (CH) - very hard, gray		4.5+		99	56	20	36	16		
35			SHALE - gray										
						100/3.5"							
			Boring Terminated at 39 Feet										

RONE ENGINEERING LOGS 11-16996.GPJ RONE.GDT 9/26/11

LOG OF BORING NO. **B 1-35**

Plate A.4b

Project No.	Boring No.	Exide Technologies Frisco, Texas	Rone Engineering
11-16996	B 2-10		
Location		Water Observations: Groundwater seepage was not observed while drilling, and the borehole appeared dry at completion.	
Completion Depth 10.0'	Completion Date 8-23-11		
Surface Elevation	Type CFA		

Depth, Ft.	Symbol	Samples	Stratum Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pcf	Unconfined Compression psf
			FILL: SANDY FAT CLAY - very hard, dark brown, with limestone fragments and calcareous nodules		4.5+		69	55	19	36	21		
			- pieces of trash at 2'		4.5+						21	103	10520
5			SANDY CLAY (CL) - hard, light yellowish brown, with gravel, calcareous		4.5+						14		
					3.5						20		
			- light gray and yellowish brown, with sand seams		4.5+						22		
10			Boring Terminated at 10 Feet										

RONE ENGINEERING LOGS 11-16996.GPJ RONE.GDT 9/26/11

LOG OF BORING NO. **B 2-10**

Plate A.5

Project No. 11-16996	Boring No. B 2-25	Exide Technologies Frisco, Texas	Rone Engineering [redacted]
Location		Water Observations: Groundwater seepage was observed at a depth of about 11' while drilling.	
Completion Depth 25.0'	Completion Date 8-23-11		
Surface Elevation	Type CFA		

Depth, Ft.	Symbol	Samples	Stratum Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pcf	Unconfined Compression psf
			FAT CLAY (CH) - dark brown to brown and gray, with calcareous nodules		4.5+						19		
					4.5+						18		
5			**SANDY LEAN CLAY (CL)** - light yellowish brown and gray, calcareous		4.5+		65	38	14	24	16		
					4.5						15		
					3.5						29		
10			- with limestone layers 10'-12' ▽										
			SHALEY CLAY (CH) - very hard, dark gray		4.5+						22		
15													
			- slickensided		4.5+		99	63	23	40	19	109	17170
20													
			- slickensided		4.5+						20	107	9250
25			Boring Terminated at 25 Feet										

RONE ENGINEERING LOGS 11-16996.GPJ RONE.GDT 9/25/11

LOG OF BORING NO. **B 2-25**

Plate A.6

Project No. 11-16996	Boring No. B 2-35	Exide Technologies Frisco, Texas	Rone Engineering
Location		Water Observations: Groundwater seepage was observed at a depth of about 25' while drilling.	
Completion Depth 35.0'	Completion Date 8-25-11		
Surface Elevation	Type CFA		

Depth, Ft.	Symbol	Samples	Stratum Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pcf	Unconfined Compression psf
			FAT CLAY (CH) - hard, dark brown, with calcareous nodules and limestone fragments, possible fill								16		
					2.5		89	60	22	38	26	97	4820
5			- dark brown and gray		2.5/4.5						29		
			- dark gray and olive, with calcareous nodules		2.25						28		
					2.25		89	69	24	45	27		
10			**FAT CLAY (CH)** - dark gray										
			- with gravel size calcareous nodules 14'-15'		1.75		57	54	18	36	19		
			SHALEY CLAY (CH) - hard to very hard, light gray and yellowish brown										
					3.0						30	91	4720
20			- slickensided										
					4.5+		99	62	22	40	21	107	15310
25			- dark gray, slickensided ▽										
					4.5+						15		
30													

RONE ENGINEERING LOGS 11-16996.GPJ RONE.GDT 9/26/11

LOG OF BORING NO. **B 2-35** *Continued Next Page* **Plate A.7a**

Project No.	Boring No.	
11-16996	B 2-35	Exide Technologies Frisco, Texas

Rone Engineering

Location

Water Observations
Groundwater seepage was observed at a depth of about 25' while drilling.

Completion Depth	Completion Date
35.0'	8-25-11

Surface Elevation

Type: CFA

Depth, Ft.	Symbol	Samples	Stratum Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pcf	Unconfined Compression psf
			- slickensided		4.5+						16	118	23710
35			SHALE -gray										
						100/3.0"							
			Boring Terminated at 38 Feet										

RONE ENGINEERING LOGS 11-16996.GPJ RONE.GDT 9/26/11

LOG OF BORING NO. **B 2-35**

Plate A.7b

Project No.	Boring No.	Exide Technologies Frisco, Texas
11-16996	B 3-10	
Location		Water Observations: Groundwater seepage was not observed while drilling, and the borehole appeared dry at completion.
Completion Depth 10.0'	Completion Date 8-26-11	
Surface Elevation	Type CFA	

Rone Engineering

Depth, Ft.	Symbol	Samples	Stratum Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pcf	Unconfined Compression psf
			FILL: FAT CLAY - dark brown to brown, with limestone fragments, calcareous nodules, plastic, organics and paper, sandy		4.5+						11		
							69	60	20	40	11		
5											18		
			- dark gray, with calcareous nodules, paper, trash				80	63	22	41	30		
											22		
10			Boring Terminated at 10 Feet										

RONE ENGINEERING LOGS 11-16996.GPJ RONE.GDT 9/26/11

LOG OF BORING NO. **B 3-10**

Plate A.8

Project No.	Boring No.		Rone Engineering
11-16996	B 3-25	Exide Technologies Frisco, Texas	
Location		Water Observations Groundwater seepage was not observed while drilling, and the borehole appeared dry at completion.	
Completion Depth 21.0'	Completion Date 8-26-11		
Surface Elevation	Type HSA/CFA		

Depth, Ft.	Symbol	Samples	Stratum Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pcf	Unconfined Compression psf
			FILL: CLAY - dark grayish brown, limestone fragments and roots, with plastic, slag, gravel and paper								12		
							54	58	20	38	9		
5											26		
											43		
			FILL: FAT CLAY - firm, dark gray and yellowish brown		1.25		73	60	20	40	32		
10			FILL: FAT CLAY - very soft, gray, with calcareous nodules and wood, wet										
					0.25						24		
15			- calcareous nodules 14' to 14.5'										
			SHALEY CLAY (CH) - gray, with iron oxides stains		3.0		99	80	28	52	27		
20						46/12"							
			Boring Terminated at 21 Feet										

RONE ENGINEERING LOGS 11-16996.GPJ RONE.GDT 9/25/11

LOG OF BORING NO. **B 3-25**

Plate A.9

Project No. 11-16996	Boring No. B 3-35	Exide Technologies Frisco, Texas	Rone Engineering
Location		Water Observations: Groundwater seepage was observed at a depth of about 18' while drilling.	
Completion Depth 35.0'	Completion Date 8-29-11		
Surface Elevation	Type HSA/CFA		

Depth, Ft.	Symbol	Samples	Stratum Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pcf	Unconfined Compression psf
			FILL: CLAY - brown, with gravel, wood, and slag				69	50	19	31	8		
			FILL: SLAG - gray, slag, rock fragments, gravel size										
5													
			CLAY (CH) - dark brown, with slag, gravel and rock fragments, possible fill			N=50/5.0"					23		
10													
			FAT CLAY (CH) - soft to firm, dark grayish brown and yellowish brown, with weathered limestone		1.0		96	65	24	41	36		
15													
			▽		0.5			68	23	45	35		
20													
			- dark grayish brown and yellowish brown, with weathered limestone		1.25						36		
25													
			SHALEY CLAY (CH) - gray			N=64		55	18	37	19		
30													

RONE ENGINEERING LOGS 11-16996.GPJ RONE.GDT 9/26/11

LOG OF BORING NO. **B 3-35** *Continued Next Page* **Plate A.10a**

Project No. 11-16996	Boring No. B 3-35	Exide Technologies Frisco, Texas	Rone Engineering [redacted]
Location		Water Observations: Groundwater seepage was observed at a depth of about 18' while drilling.	
Completion Depth 35.0'	Completion Date 8-29-11		
Surface Elevation		Type HSA/CFA	

Depth, Ft.	Symbol	Samples	Stratum Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pcf	Unconfined Compression psf
35			Boring Terminated at 35 Feet			N=94/11.5"					18		

RONE ENGINEERING LOGS 11-16996.GPJ RONE.GDT 9/26/11

LOG OF BORING NO. B 3-35

Plate A.10b

Project No.	Boring No.	
11-16996	B 4-10	Exide Technologies Frisco, Texas

Rone Engineering

Location

Water Observations
Groundwater seepage was observed at a depth of about 8' while drilling.

Completion Depth **10.0'** | Completion Date **8-26-11**

Surface Elevation | Type **CFA**

Depth, Ft	Symbol	Samples	Stratum Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/inch	Passing No. 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pcf	Unconfined Compression psf
			FILL: FAT CLAY - very hard, dark brown, brown and gray, with limestone fragments and calcareous nodules		4.5+		86	56	20	36	12		
					4.5+						11		
5											23		
											18		
			- becomes sandy at 8'		4.5+		64	56	20	36	17		
10			Boring Terminated at 10 Feet										

LOG OF BORING NO. **B 4-10**

Plate A.11

RONE ENGINEERING LOGS 11-16996.GPJ RONE.GDT 9/26/11

Project No. 11-16996	Boring No. B 4-35	Exide Technologies Frisco, Texas	Rone Engineering [redacted]
Location		Water Observations: Groundwater seepage was observed at a depth of about 13' while drilling.	
Completion Depth 38.0'	Completion Date 8-25-11		
Surface Elevation	Type CFA		

Depth, Ft.	Symbol	Samples	Stratum Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/inch	Passing No. 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pcf	Unconfined Compression psf
			FILL: CLAYEY SAND - loose, brown, with limestone fragments and calcareous nodules								10		
			- light gray and yellowish brown		0.5		34	58	20	38	19		
5			FILL: SANDY FAT CLAY - firm, dark brown		2.25						35		
					1.25						47		
					1.25		69	62	23	39	36		
10													
			FAT CLAY (CH) - hard, brown, with sand		3.75						20		
15													
			- light yellowish brown and light gray		2.25						26		
20													
			SHALEY CLAY (CH) - dark gray, slickensided		4.5+		98	56	21	35	17	115	9500
25													
					4.5+						18	113	13770
30													

RONE ENGINEERING LOGS 11-16996.GPJ RONE.GDT 9/26/11

LOG OF BORING NO. B 4-35 *Continued Next Page*

Plate A.12a

Project No. 11-16996	Boring No. B 4-35	Exide Technologies Frisco, Texas	Rone Engineering
Location		Water Observations: Groundwater seepage was observed at a depth of about 13' while drilling.	
Completion Depth 38.0'	Completion Date 8-25-11		
Surface Elevation	Type CFA		

Depth, Ft.	Symbol	Samples	Stratum Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pcf	Unconfined Compression psf
					4.5+						21		
35			SHALE - dark gray			100/4.0"							
			Boring Terminated at 38 Feet										

RONE ENGINEERING LOGS 11-16996.GPJ RONE.GDT 9/26/11

LOG OF BORING NO. **B 4-35** **Plate A.12b**

Project No. 11-16996	Boring No. B 5-10	Exide Technologies Frisco, Texas	Rone Engineering
Location		Water Observations: Groundwater seepage was not observed while drilling, and the borehole appeared dry at completion.	
Completion Depth 10.0'	Completion Date 8-22-11		
Surface Elevation	Type HSA/CFA		

Depth, Ft.	Symbol	Samples	Stratum Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pcf	Unconfined Compression psf
			FILL: FAT CLAY - very hard, dark brown, with limestone gravel		4.5+		60	59	19	40	14		
			- with plastic										
5											7		
					4.5+						14		
			FAT CLAY (CH) - hard, dark brown, with limestone fragments		3.25		96	68	24	44	32		
10			Boring Terminated at 10 Feet										

RONE ENGINEERING LOGS 11-16996.GPJ RONE.GDT 9/26/11

LOG OF BORING NO. B 5-10

Plate A.13

Project No.	Boring No.		Rone Engineering
11-16996	B 5-25	Exide Technologies Frisco, Texas	
Location		Water Observations Groundwater seepage was observed at a depth of about 18' while drilling.	
Completion Depth 28.0'	Completion Date 8-26-11		
Surface Elevation	Type CFA		

Depth, Ft	Symbol	Samples	Stratum Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pcf	Unconfined Compression psf
			FILL: LIMESTONE BASE - light brown								2		
											7		
5			FILL: FAT CLAY - very hard, dark brown, with limestone fragments		4.5+			67	23	44	29		
											6		
					2.25			71	24	47	33		
10			FAT CLAY (CH) - light gray and yellowish brown, with sand seams										
					4.5+						20		
15													
			▽										
			SHALEY CLAY (CH) - very hard, gray, with ferrous stains		4.5+		97	65	23	42	25		
20													
			- slickensided								20	111	
25			SHALE - dark gray										
						100/4.0"							
			Boring Terminated at 28 Feet										

RONE ENGINEERING LOGS 11-16996.GPJ RONE.GDT 9/26/11

LOG OF BORING NO. **B 5-25**

Plate A.14

Project No. 11-16996	Boring No. B 6-10	Exide Technologies Frisco, Texas	Rone Engineering [redacted]
Location		Water Observations: **Groundwater seepage was not observed while drilling, and the borehole appeared dry at completion.**	
Completion Depth 10.0'	Completion Date 8-22-11		
Surface Elevation	Type CFA		

Depth, Ft.	Symbol	Samples	Stratum Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pcf	Unconfined Compression psf
			FILL: CLAY - dark brown, with gravel, limestone fragments, slag fragments and plastic fragments		4.5+						13		
			- with concrete fragments and plastic								12		
5													
			FILL: SANDY FAT CLAY - soft, brown		0.75		64	59	22	37	30		
10			Boring Terminated at 10 Feet										

LOG OF BORING NO. **B 6-10**

Plate A.15

RONE ENGINEERING LOGS 11-16996.GPJ RONE.GDT 9/26/11

Project No. 11-16996	Boring No. B 6-25	Exide Technologies Frisco, Texas	Rone Engineering
Location		Water Observations: Groundwater seepage was not observed while drilling, and the borehole appeared dry at completion.	
Completion Depth 28.0'	Completion Date 8-26-11		
Surface Elevation	Type CFA		

Depth, Ft.	Symbol	Samples	Stratum Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pcf	Unconfined Compression psf
			FILL: SANDY FAT CLAY - brown to dark brown, with limestone fragments			100/5.25"							
											12		
			FILL: CLAY - light gray, with ground concrete, concrete fragments, fine to medium				70	58	21	37	11		
								40	23	17	7		
						24/12"					11		
5			FILL: FAT CLAY - dark brown, with plastic, glass, slag, wood fragments, concrete fragments					61	30	31	25		
					2.0						35		
											34		
						12/12"							
10			FAT CLAY (CH) - hard, dark brown										
					2.25		85	64	22	42	29		
15													
			SHALEY CLAY (CH) - hard to very hard, light brown and gray, with iron stains		4.5						28		
20													
					3.0		66	46	15	31	16	119	20310
			- slickensided										
25			SHALE - gray										
						100/2.75"							
			Boring Terminated at 28 Feet										

RONE ENGINEERING LOGS 11-16996.GPJ RONE.GDT 9/26/11

LOG OF BORING NO. **B 6-25**

Plate A.16

Project No. 11-16996	Boring No. B 7-10	Exide Technologies Frisco, Texas	Rone Engineering
Location		Water Observations: Groundwater seepage was not observed while drilling, and the borehole appeared dry at completion.	
Completion Depth 10.0'	Completion Date 8-22-11		
Surface Elevation	Type HSA/CFA		

Depth, Ft.	Symbol	Samples	Stratum Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pcf	Unconfined Compression psf
			FILL: FAT CLAY - very hard, brown, with limestone fragments		4.5+		80	59	20	39	19		
			FILL: SLAG GRAVEL - brown, with slag broken fragments										
5													
											6		
10			Boring Terminated at 10 Feet										

RONE ENGINEERING LOGS 11-16996.GPJ RONE.GDT 9/26/11

LOG OF BORING NO. B 7-10

Plate A.17

Project No.	Boring No.		
11-16996	B 7-25	Exide Technologies Frisco, Texas	Rone Engineering
Location		Water Observations Groundwater seepage was observed at a depth of about 13' while drilling.	
Completion Depth 29.0'	Completion Date 8-29-11		
Surface Elevation	Type HSA/CFA		

Depth, Ft.	Symbol	Samples	Stratum Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pcf	Unconfined Compression psf
			FILL: FAT CLAY - dark brown and dark gray, with gravel sized slag fragments								11		
						3/12"							
			FILL: SLAG - gray, slag fragments, gravel size								7		
						7/12"							
5			- slag and plastic				34	50	19	31	14		
						5/12"							
			- slag fragments, plastic, piece of shoe, cloth and wood								27		
10													
			FAT CLAY (CH) - firm, dark gray and brown		1.0						37		
15													
			- with sand seams		2.0		82	66	24	42	18	107	3850
20													
			SHALEY CLAY (CH) - very hard, dark gray, with iron staining		4.5+						27		
25													
			SHALE - dark gray			100/4.75"							
			Boring Terminated at 29 Feet										

RONE ENGINEERING LOGS 11-16996.GPJ RONE.GDT 9/26/11

LOG OF BORING NO. **B 7-25**

Plate A.18

Project No.	Boring No.		
11-16996	B 8-10	Exide Technologies Frisco, Texas	Rone Engineering [redacted]
Location		Water Observations Groundwater seepage was not observed while drilling, and the borehole appeared dry at completion.	
Completion Depth 8.0'	Completion Date 8-22-11		
Surface Elevation	Type CFA		

Depth, Ft.	Symbol	Samples	Stratum Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pcf	Unconfined Compression psf
			FILL: SLAG GRAVEL - broken slag, concrete fragments, rubber, plastic fragments, with brown clay					46	16	30			
5													
			Boring Terminated at 8 Feet										

RONE ENGINEERING LOGS 11-16996.GPJ RONE.GDT 9/26/11

LOG OF BORING NO. **B 8-10**

Plate A.19

Project No.	Boring No.		Rone Engineering
11-16996	B 8-25	Exide Technologies Frisco, Texas	
Location		Water Observations Groundwater seepage was not observed while drilling, and the borehole appeared dry at completion.	
Completion Depth 25.0'	Completion Date 8-24-11		
Surface Elevation		Type CFA	

Depth, Ft.	Symbol	Samples	Stratum Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pcf	Unconfined Compression psf
			FILL: GRAVEL - railroad ballast, broken rock								6		
			SANDY FAT CLAY (CH) - very hard, dark brown and olive, with limestone fragments		4.5+		52	55	18	37	9		
5					4.5+						10		
					4.5+						12		
			FAT CLAY (CH) - firm, dark gray and brown, with calcareous nodules		1.5		87	66	22	44	29		
10													
			- with sand		1.75						33		
15													
			- with gravel at 18'-20'								15		
20													
			SHALEY CLAY (CH) - very hard, gray		4.5+		90	79	27	52	26		
25			Boring Terminated at 25 Feet										

RONE ENGINEERING LOGS 11-16996.GPJ RONE.GDT 9/26/11

LOG OF BORING NO. **B 8-25**

Plate A.20

Project No. 11-16996	Boring No. B 9-10	Exide Technologies Frisco, Texas	Rone Engineering
Location		Water Observations: Groundwater seepage was not observed while drilling, and the borehole appeared dry at completion.	
Completion Depth 10.0'	Completion Date 8-24-11		
Surface Elevation	Type CFA		

Depth, Ft.	Symbol	Samples	Stratum Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pcf	Unconfined Compression psf
			FILL: GRAVEL - railroad ballast, broken roack, with layer of clay								16		
			FAT CLAY (CH) - firm to very hard, dark gray and olive, with limestone fragments and gravel, possible fill		1.75		54	59	21	38	17		
5					4.5+						18		
			FAT CLAY (CH) - hard to firm, dark brown and gray, possible fill, with gravel layer 8'-10'		3.0						33		
					1.25						31		
10			Boring Terminated at 10 Feet										

RONE ENGINEERING LOGS 11-16996.GPJ RONE.GDT 9/27/11

LOG OF BORING NO. **B 9-10**

Plate A.21

Project No. 11-16996	Boring No. B 9-25	Exide Technologies Frisco, Texas	Rone Engineering
Location		Water Observations: Groundwater seepage was not observed while drilling, and the borehole appeared dry at completion.	
Completion Depth 25.0'	Completion Date 8-24-11		
Surface Elevation	Type CFA		

Depth, Ft.	Symbol	Samples	Stratum Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pcf	Unconfined Compression psf
			FILL: GRAVEL - railroad ballast, broken rock								5		
			SANDY FAT CLAY (CH) - firm, dark brown to brown, with gravel		2.0						25		
5					2.0		61	59	20	39	19		
					3.0						29		
			- brown and gray		1.5						34		
10													
			FAT CLAY (CH) - hard, dark gray and brown, with sand		2.5		82	63	23	40	25		
15													
			FAT CLAY (CH) - firm, brown, with sand, wet		1.25						30	96	3070
20													
					1.25						24	101	2760
25			Boring Terminated at 25 Feet										

LOG OF BORING NO. **B 9-25** **Plate A.22**

RONE ENGINEERING LOGS 11-16996.GPJ RONE.GDT 9/26/11

Project No.	Boring No.	
11-16996	B10-25	Exide Technologies Frisco, Texas

Rone Engineering [redacted]

Location	Water Observations
	Groundwater seepage was observed at a depth of about 13' while drilling.
Completion Depth 25.0'	Completion Date 8-24-11
Surface Elevation	Type CFA

Depth, Ft.	Symbol	Samples	Stratum Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pcf	Unconfined Compression psf
			FILL: GRAVEL - gray, railroad ballast								8		
			SANDY FAT CLAY (CH) - very hard to firm, dark brown and gray, with limestone fragments		4.5+		64	54	18	36	18		
5					2.0						24		
					1.5						27		
					2.75						33		
10													
			FAT CLAY (CH) - firm to very soft, dark gray and brown, wet ▽		2.0						35		
15													
					<0.25						42		
20													
			CLAYEY SAND (SC) - light brown, with gravel				23	42	17	25	18		
25			Boring Terminated at 25 Feet										

RONE ENGINEERING LOGS 11-16996.GPJ RONE.GDT 9/26/11

LOG OF BORING NO. **B10-25**

Plate A.23

Project No.	Boring No.		Rone Engineering
11-16996	B11-25	Exide Technologies Frisco, Texas	
Location		Water Observations Groundwater seepage was observed at a depth of about 18' while drilling.	
Completion Depth 25.0'	Completion Date 8-29-11		
Surface Elevation	Type CFA		

Depth, Ft.	Symbol	Samples	Stratum Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pcf	Unconfined Compression psf
			FILL: - gravel fragments, concrete, dark brown clay and slag								13		
			FILL: - gravel slag, plastic, concrete and brown clay				36	36	17	19	12		
5			FILL: - slag and concrete fragments										
10													
15			FAT CLAY (CH) - soft to firm, dark brown and gray, with trace gravel, wet										
			▽		0.5						32		
20													
			- dark gray and yellowish brown, with calcareous nodules		1.5						25	101	3640
25			Boring Terminated at 25 Feet										

RONE ENGINEERING LOGS 11-16996.GPJ RONE.GDT 9/26/11

LOG OF BORING NO. **B11-25**

Plate A.24

Project No.	Boring No.		Rone Engineering
11-16996	B12-25	Exide Technologies Frisco, Texas	
Location		Water Observations Groundwater seepage was not observed at a depth of about 12' while drilling.	
Completion Depth 25.0'	Completion Date 8-24-11		
Surface Elevation	Type CFA		

Depth, Ft.	Symbol	Samples	Stratum Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pcf	Unconfined Compression psf
			FILL: GRAVEL - railroad ballast and limestone gravel										
			FILL: FAT CLAY - very hard to hard, dark gray and brown		4.5+						18	108	15620
5					4.5+						30		
					2.75		88	62	23	39	24		
			- firm, gray, dark brown and olive		1.25						30		
10													
			- organics and wood fragments at 13'-15'								247		
15													
			FAT CLAY (CH) - firm to hard, dark gray and brown, with sand		1.0		77	58	21	37	30	94	3060
20													
					3.0						26		
25			Boring Terminated at 25 Feet										

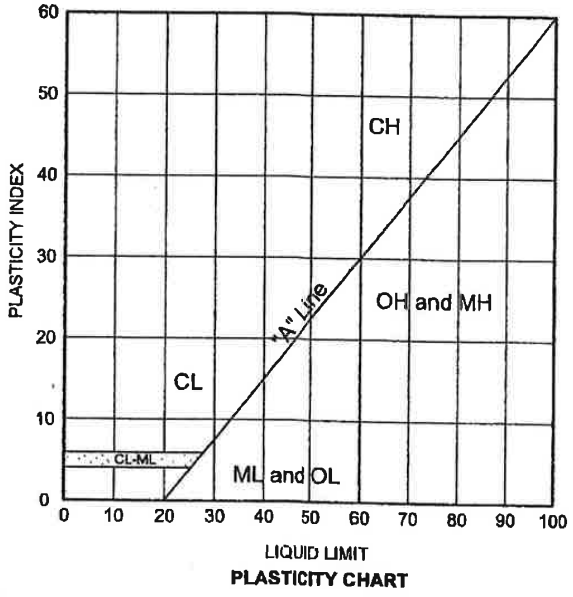
RONE ENGINEERING LOGS 11-16996.GPJ RONE.GDT 9/26/11

LOG OF BORING NO. **B12-25**

Plate A.25

Rone Engineering [redacted]

Major Divisions			Grp. Sym.	Typical Names	Laboratory Classification Criteria	
Coarse - Grained Soils (more than half of the material is larger than No. 200 Sieve size)	Gravels (more than half of coarse fraction is larger than No. 4 Sieve size)	Clean gravels (Little or no fines)	GW	Well graded gravels, gravel-sand mixtures, little or no fines	Determine percentages of sand and gravel form grain size curve. Depending on percentage of fines (fraction smaller than No. 200 sieve size), coarse-grained soils are classified as follows: Less than 5 percent.....GW,GP,SW,SP; More than 12 percent.....GM,GC,SM,SC; 5 to 12 percent.....Borderline cases requiring dual symbols	$C_U = \frac{D_{60}}{D_{10}}$ greater than 4: $C_C = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ between 1 and 3
			GP	Poorly graded gravels, gravel-sand mixtures, little or no fines		Not meeting all gradation requirements for GW
		Gravels with fines (Appreciable amount of fines)	GM	Silty gravels, gravel - sand - silt mixtures	Liquid and Plastic limits below "A" line or P.I. greater than 4	Liquid and plastic limits plotting in hatched zone between 4 and 7 are borderline cases requiring use of dual symbols
			GC	Clayey gravels, gravel - sand - clay mixtures	Liquid and Plastic limits above "A" line with P.I. greater than 7	
	Sands (more than half of coarse fraction is smaller than No. 4 Sieve size)	Clean sands (Little or no fines)	SW	Well graded sands, gravelly sands, little or no fines	$C_U = \frac{D_{60}}{D_{10}}$ greater than 6: $C_C = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ between 1 and 3	
			SP	Poorly graded sands, gravelly sands, little or no fines		Not meeting all gradation requirements for SW
		Sands with fines (Appreciable amount of fines)	SM	Silty sands, sand silt mixtures	Liquid and Plastic limits below "A" line or P.I. less than 4	Liquid and plastic limits plotting between 4 and 7 are borderline cases requiring use of dual symbols
			SC	Clayey sands, sand clay mixtures	Liquid and Plastic limits above "A" line with P.I. greater than 7	
Fine - Grained Soils (more than half of the material is smaller than No. 200 Sieve)	Silts and Clays (Liquid limit less than 50)		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands, or clayey silts with slight plasticity		
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, and lean clays		
			OL	Organic silts and organic silty clays of low plasticity		
	Silts and Clays (Liquid limit greater than 50)		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts		
			CH	Inorganic clays of high plasticity, fat clays		
			OH	Organic clays of medium to high plasticity, organic silts		
	Highly Organic soils		Pt	Peat and other highly organic soils		



PLASTICITY CHART

UNIFIED SOIL CLASSIFICATION SYSTEM

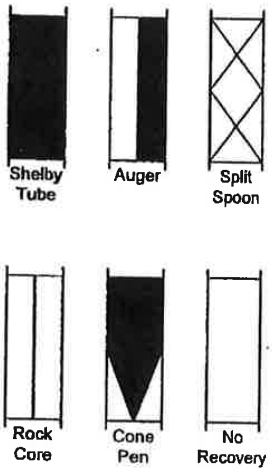
PLATE A.26

SOIL OR ROCK TYPES

CLAY	SAND-*WELL GRADED*
FAT CLAY	LIMESTONE-WEATHERED
LEAN CLAY	CONCRETE
SANDY CLAY	FILL
LIMESTONE	GRAVEL
CLAYEY SAND	CLAYEY GRAVEL
SHALE	MARL
SAND-*POORLY GRADED*	SILT

Rone Engineering

[redacted]



TERMS DESCRIBING CONSISTENCY, CONDITION, AND STRUCTURE OF SOIL

Fine Grained Soils (More than 50% Passing No. 200 Sieve)

Consistency	Penetrometer Reading, (tsf)	Unconfined Compression, (psf)
Very Soft	< 0.5	< 1000
Soft	0.5 to 1.0	1000 to 2000
Firm	1.0 to 2.0	2000 to 4000
Hard	2.0 to 4.0	4000 to 8000
Very Hard	> 4.0	> 8000

Coarse Grained Soils (More than 50% Retained on No. 200 Sieve)

Penetration Resistance (Blows / Foot)	Descriptive Item	Relative Density
0 to 4	Very Loose	0 to 20%
4 to 10	Loose	20 to 40%
10 to 30	Medium Dense	40 to 70%
30 to 50	Dense	70 to 90%
Over 50	Very Dense	90 to 100%

Soil Structure

Calcareous	Contains appreciable deposits of calcium carbonate; generally nodular
Slickensided	Having inclined planes of weakness that ate slick and glossy in appearance
Laminated	Composed of thin layers of varying color or texture
Fissured	Containing cracks, sometimes filled with fine sand or silt
Interbedded	Composed of alternated layers of different soil types, usually in approximately equal proportions

TERMS DESCRIBING PHYSICAL PROPERTIES OF ROCK

Hardness and Degree of Cementation

Very Soft or Plastic	Can be remolded in hand; corresponds in consistency up to hard in soils
Soft	Can be scratched with fingernail
Moderately Hard	Can be scratched easily with knife; cannot be scratched with fingernail
Hard	Difficult to scratch with knife
Very Hard	Cannot be scratched with knife
Poorly Cemented or Friable	Easily crumbled
Cemented	Bound together by chemically precipitated material; Quartz, calcite, dolomite, siderite, and iron oxide are common cementing materials.

Degree of Weathering

Unweathered	Rock in its natural state before being exposed to atmospheric agents
Slightly Weathered	Noted predominantly by color change with no disintegrated zones
Weathered	Complete color change with zones of slightly decomposed rock
Extremely Weathered	Complete color change with consistency, texture, and general appearance approaching soil

KEY TO CLASSIFICATION AND SYMBOLS **PLATE A.27**

PHASE II RCRA FACILITY INVESTIGATION (JDC, 1998A)

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Austin, Texas 78746

LOG OF BORING

Boring No.: RRS#1

Client: CNB Technologies
Site: Frisco, Texas -- Phase I RFI
Geologist: J. Greg Dennis
Drilling Method: Geoprobe
Sampling Method: Continuous Shelby Tube w/acatate liner & Discrete Soil Sample per intervals
Coordinates: --

Job No.: 027-01
Start Date: 6/18/98
Driller: ESDI / M. McNitt
Drill Bit: --
Total Depth: 4.0 ft.
Elev., GL (ft. msl): --

Sheet 1 of 1
Finish Date: 6/18/98
Ground Water:
Elev., TOC (ft. msl): --

Depth (ft.)	Sampling Method	Sampling OVM (ppm)	USCS Class	Sample Description	Depth (ft.)	Boring Completion	Remarks
0	NR			NR -- no recovery			
1	B			CLAY -- some gravel (10%), damp, firm--grades into a silty gravel	1		
	C C (dup)			GRAVELY SILT -- gravel & silt (75%), well graded 25% clay matrix, loose, damp			
2	D			GRAVEL -- angular, well graded, loose, damp less than 10% matrix, clean gravel	2		
				CLAY -- with some well rounded calcareous gravel, less than 20% pebbles & granule, soft, moist			
3	E				3		
	E (dup)						
4				TOTAL DEPTH = 4' BGL	4		
5					5		
6					6		
7					7		

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LOG OF BORING

Boring No.: RRS#2

Client: GNB Technologies
Site: Frisco, Texas – Phase I RFI
Geologist: J. Greg Dennis
Drilling Method: Geoprobe
Sampling Method: Continuous Shelby Tube w/acatate liner & Discrete Soil Sample per intervals
Coordinates: –

Job No.: 027-01
Start Date: 6/18/98
Driller: ESDI / M. McNitt
Drill Bit: –
Total Depth: 4.0 ft.
Elev., GL (ft. msl): –

Sheet 1 of 1
Finish Date: 6/18/98
Ground Water:
Elev., TOC (ft. msl): –

Depth (ft.)	Sampling: Method	Sampling: OVM (ppm)	USCS Class	Sample Description	Depth (ft.)	Boring Completion	Remarks
0	A			RAILROAD BALLAST GRAVEL – grading into clay	0		
1	B				1		
	C						
	D			CLAY – soft, moist with alternating bands of brownish yellow to gray color (6" bands) with calcareous gravel (20%)			
2					2		
3					3		
	E			CLAY – soft, moist, black			
4				TOTAL DEPTH = 4' BGL	4		
5					5		
6					6		
7					7		

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LOG OF BORING

Boring No.: RRS#3
Sheet 1 of 1

Client: GNB Technologies
Site: Frisco, Texas – Phase I RFI
Geologist: J. Greg Dennis
Drilling Method: Geoprobe
Sampling Method: Continuous Shelby Tube w/acatate liner & Discrete Soil Sample per intervals
Coordinates: –

Job No.: 027-01
Start Date: 6/18/98
Driller: ESDI / M. McNitt
Drill Bit: –
Total Depth: 4.0 ft.
Elev., GL (ft. msl): –

Finish Date: 6/18/98
Ground Water: –
Elev., TOC (ft. msl): –

Depth (ft.)	Sampling Method	Sampling OVM (ppm)	USCS Class	Sample Description	Depth (ft.)	Boring Completion	Remarks
0	NR			NR – no recovery			
1	B			GRAVELY CLAY – firm, dry, gray	1		
	C			SANDY GRAVEL – well graded, angular pebble and granules with less than 10% silty sand matrix, loose, damp			
2	D			GRAVELY CLAY – with 10% to 30% well rounded pebbles (limey calcareous pebbles), soft, moist, brownish yellow	2		
3	E			CLAY – with decreasing gravel (less than 10%) soft, moist, grayish black @ TD	3		
4				TOTAL DEPTH = 4' BGL	4		
5					5		
6					6		
7					7		

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LOG OF BORING

Boring No.: RRS#4

Client: GNB Technologies
Site: Frisco, Texas – Phase I RFI
Geologist: J. Greg Dennis
Drilling Method: Geoprobe
Sampling Method: Continuous Shelby Tube w/acatate liner & Discrete Soil Sample per intervals
Coordinates: –

Job No.: 027-01
Start Date: 6/18/98
Driller: ESDI / M. McNitt
Drill Bit: –
Total Depth: 4.0 ft.
Elev., GL (ft. msl): –

Sheet 1 of 1
Finish Date: 6/18/98
Ground Water: –
Elev., TOC (ft. msl): –

Depth (ft.)	Sampling Method	Sampling OVM (ppm)	USCS Class	Sample Description	Depth (ft.)	Boring Completion	Remarks
0				NR – no recovery (railroad ballast @ surface)			
1	C			GRAVELY CLAY – firm , damp, gray	1		
				GRAVEL – clean, less than 10% silty sand matrix, greater than 90% gravel, angular to sub angular, well graded granules & pebbles, loose, moist			
2	D			CLAY – soft, with moderate plasticity, with 20% gravel, well rounded pebbles, moist, brownish yellow	2		
3	E				3		
4	F			CLAY – soft, with moderate plasticity, moist, black	4		
				TOTAL DEPTH = 4' BGL			
5					5		
6					6		
7					7		

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LOG OF BORING

Boring No.: NTSB#1
Sheet 1 of 1

Client: GNB Technologies
Site: Frisco, Texas – Phase I RFI
Geologist: J. Greg Dennis
Drilling Method: Geoprobe
Sampling Method: Continuous Shelby Tube w/acetate liner & Discrete Soil Sample per intervals
Coordinates: –

Job No.: 027-01
Start Date: 6/18/98
Driller: ESDI / M. McNitt
Drill Bit: –
Total Depth: 4.0 ft.
Elev., GL (ft. msl): –

Finish Date: 6/18/98
Ground Water:
Elev., TOC (ft. msl): –

Depth (ft.)	Sampling: Method	Sampling: OVM (ppm)	USCS Class	Sample Description	Depth (ft.)	Boring Completion	Remarks
0	NR			NR – no recovery			
				GRAVELY FILL – white, silt (not sampled)			
1				FILL – dark, clay (not sampled)	1		
2	E			GRAVELY CLAY – with 20% – 30% calcareous gravel, well rounded pebbles & granules, stiff, light brown	2		
3	F				3		
	G						
	G (dup)						
4				TOTAL DEPTH = 4' BGL	4		
5					5		
6					6		
7					7		

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LOG OF BORING

Boring No.: SDA#1

Client: CNB Technologies | Job No.: 027-01 | Sheet 1 of 1
Site: Frisco, Texas – Phase I RFI | Start Date: 6/18/98 | Finish Date: 6/18/98
Geologist: J. Greg Dennis | Driller: ESDI / M. McNitt
Drilling Method: Geoprobe | Drill Bit: – | Ground Water: –
Sampling Method: Continuous Shelby Tube w/acetate liner & Discrete Soil Sample per intervals | Total Depth: 4.0 ft.
Coordinates: – | Elev., GL (ft. msl): – | Elev., TOC (ft. msl): –

Depth (ft.)	Sampling: Method	Sampling: OVM (ppm)	USCS Class	Sample Description	Depth (ft.)	Boring Completion	Remarks
0	A			CLAY – stiff, dry, black	0		
1	B			CLAYEY SILT – stiff, dry, orange & gray mottled	1		
2	C				2		
3	D			CLAY – moist, soft, greenish, gray with orange mottling	3		
4	E			TOTAL DEPTH = 4' BGL	4		
5					5		
6					6		
7					7		

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LOG OF BORING

Boring No.: SDA#2
Sheet 1 of 1

Client: GNB Technologies
Site: Frisco, Texas – Phase I RFI
Geologist: J. Greg Dennis
Drilling Method: Geoprobe
Sampling Method: Continuous Shelby Tube w/acatate liner & Discrete Soil Sample per intervals
Coordinates: –

Job No.: 027-01
Start Date: 6/18/98
Finish Date: 6/18/98
Driller: ESDI / M. McNitt
Drill Bit: –
Ground Water:
Total Depth: 4.0 ft.
Elev., GL (ft. msl): –
Elev., TOC (ft. msl): –

Depth (ft.)	Sampling: Method	Sampling: OVM (ppm)	USCS Class	Sample Description	Depth (ft.)	Boring Completion	Remarks
0	A			CLAY – some gravel (less than 20%), stiff, dry, grayish black (upper soil layer)			
	B			SILTY CLAY – loose, dry, white to brown			
1	C			CLAY – with well rounded calcareous gravel, dry, stiff, gray	1		
	D			CLAY – with fine grained gravel, (less than 20% granules), stiff, dry, grayish green			
2					2		
3					3		
	E						
4				TOTAL DEPTH = 4' BGL	4		
5					5		
6					6		
7					7		

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LOG OF BORING

Boring No.: SDA#3
Client: GNB Technologies | Job No.: 027-01 | Sheet 1 of 1
Site: Frisco, Texas – Phase I RFI | Start Date: 6/18/98 | Finish Date: 6/18/98
Geologist: J. Greg Dennis | Driller: ESDI / M. McNitt
Drilling Method: Geoprobe | Drill Bit: – | Ground Water: –
Sampling Method: Continuous Shelby Tube w/acatate liner & Discrete Soil Sample per intervals | Total Depth: 4.0 ft.
Coordinates: – | Elev., GL (ft. msl): – | Elev., TOC (ft. msl): –

Depth (ft.)	Sampling Method	Sampling OVM (ppm)	USCS Class	Sample Description	Depth (ft.)	Boring Completion	Remarks
0				ROOTS & GRASS – soil root zone			
	A			GRAVELY CLAY – stiff, dry, light brown, grades into grayish brown clay with 20% gravel, well rounded pebbles & granules. Gravel decrease & less pebbles with depth, stiff, dry			
1	B				1		
	C						
	D						
2					2		
3					3		
	E						
	E (dup)						
4				TOTAL DEPTH = 4' BGL	4		
5					5		
6					6		
7					7		

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LOG OF BORING

Boring No.: SDA#4
Sheet 1 of 1

Client: GNB Technologies
Site: Frisco, Texas – Phase I RFI
Geologist: J. Greg Dennis
Drilling Method: Geoprobe
Sampling Method: Continuous Shelby Tube w/acetate liner & Discrete Soil Sample per intervals
Coordinates: –

Job No.: 027-01
Start Date: 6/18/98
Finish Date: 6/18/98
Driller: ESDI / M. McNitt
Drill Bit: –
Ground Water:
Total Depth: 4.0 ft.
Elev., GL (ft. msl): –
Elev., TOC (ft. msl): –

Depth (ft.)	Sampling: Method	Sampling: OVM (ppm)	USCS Class	Sample Description	Depth (ft.)	Boring Completion	Remarks
0	A			CLAY – very loose, dry with 15% gravel (pebbles & cobbles)			
1	B			CLAY – loose to compact at depth, less than 20% gravel, decrease with depth (poorly graded mostly rounded granules, 5% gravel, very moist, black @ TD	1		
2	C				2		
3	D				3		
4	E E (dup)			TOTAL DEPTH = 4' BGL	4		
5					5		
6					6		
7					7		

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LOG OF BORING

Boring No.: SDA#5

Client: GNB Technologies | Job No.: 027-01 | Sheet 1 of 1
Site: Frisco, Texas - Phase I RFI | Start Date: 6/18/98 | Finish Date: 6/18/98
Geologist: J. Greg Dennis | Driller: ESDI / M. McNitt
Drilling Method: Geoprobe | Drill Bit: - | Ground Water: -
Sampling Method: Continuous Shelby Tube w/acatate liner & Discrete Soil Sample per intervals | Total Depth: 4.0 ft.
Coordinates: - | Elev., GL (ft. msl): - | Elev., TOC (ft. msl): -

Depth (ft.)	Sampling Method	Sampling OVM (ppm)	USCS Class	Sample Description	Depth (ft.)	Boring Completion	Remarks
0	A			CLAY - roots, loose, damp, black	0		
	B			CLAY - with less than 20% well rounded well graded gravel, compact, highly plastic, very moist greenish gray to olive			
1	C				1		
	C (dup)						
	D						
2					2		
3					3		
	E						
4				TOTAL DEPTH = 4' BGL	4		
5					5		
6					6		
7					7		

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LOG OF BORING

Boring No.: SDA#6
Client: GNB Technologies
Job No.: 027-01
Sheet 1 of 1
Site: Frisco, Texas – Phase I RFI
Start Date: 6/18/98
Finish Date: 6/18/98
Geologist: J. Greg Dennis
Driller: ESDI / M. McNitt
Drilling Method: Geoprobe
Drill Bit: –
Ground Water: –
Sampling Method: Continuous Shelby Tube w/acatate liner & Discrete Soil Sample per Intervals
Total Depth: 4.0 ft.
Coordinates: –
Elev., GL (ft. msl): –
Elev., TOC (ft. msl): –

Depth (ft.)	Sampling Method	Sampling OVM (ppm)	USCS Class	Sample Description	Depth (ft.)	Boring Completion	Remarks
0	A			CLAY – root zone, loose, dry, black			
1	B			CLAY – with 10%–30% calcareous well rounded & graded gravel (pebbles & granules) compact to dense, damp, greenish gray to olive with orange mottling	1		
2	C				2		
3	D				3		
4	E			TOTAL DEPTH = 4' BGL	4		
5					5		
6					6		
7					7		

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LOG OF BORING

Boring No.: SDA#7
Sheet 1 of 1

Client: CNB Technologies
Site: Frisco, Texas – Phase I RFI
Geologist: J. Greg Dennis
Drilling Method: Geoprobe
Sampling Method: Continuous Shelby Tube w/acatate liner & Discrete Soil Sample per intervals
Coordinates: –

Job No.: 027-01
Start Date: 6/18/98
Driller: ESDI / M. McNitt
Drill Bit: –
Total Depth: 4.0 ft.
Elev., GL (ft. msl): –

Finish Date: 6/18/98
Ground Water:
Elev., TOC (ft. msl): –

Depth (ft.)	Sampling: Method	Sampling: OVM (ppm)	USCS Class	Sample Description	Depth (ft.)	Boring Completion	Remarks
0	A			CLAY – (upper soil root zone) loose, dry, black			
	B						
1	C			CLAY – compact, dry, gray to grayish green	1		
	D						
2					2		
3					3		
	E						
	E (dup)						
4				TOTAL DEPTH = 4' BGL	4		
5					5		
6					6		
7					7		

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LOG OF BORING

Boring No.: SDA#8

Client: GNB Technologies
Site: Frisco, Texas – Phase I RFI
Geologist: J. Greg Dennis
Drilling Method: Geoprobe
Sampling Method: Continuous Shelby Tube w/acatate liner & Discrete Soil Sample per intervals
Coordinates: –

Job No.: 027-01
Start Date: 6/18/98
Driller: ESDI / M. McNitt
Drill Bit: –
Total Depth: 4.0 ft.
Elev., GL (ft. msl): –

Sheet 1 of 1
Finish Date: 6/18/98
Ground Water:
Elev., TOC (ft. msl): –

Depth (ft.)	Sampling Method	Sampling OVM (ppm)	USCS Class	Sample Description	Depth (ft.)	Boring Completion	Remarks
0	NR			NR / FILL– interval from 0 – 24" contains 12" of recovered fill, not sampled	0		
	NR						
1	NS				1		
2	F			SILT – calcareous material, laminated rock fragments to loose material recovered, individual layers are cohesive & very stiff, dry, tan, loose material is calcareous silt	2		
3	G				3		
	H						
4	I			TOTAL DEPTH = 4' BGL	4		
5					5		
6					6		
7					7		

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LOG OF BORING

Boring No.: SDA#9-1

Client: GNB Technologies
Site: Frisco, Texas – Phase I RFI
Geologist: J. Greg Dennis
Drilling Method: Geoprobe
Sampling Method: Continuous Shelby Tube w/acatate liner & Discrete Soil Sample per intervals
Coordinates: –

Job No.: 027-01
Start Date: 6/18/98
Driller: ESDI / M. McNitt
Drill Bit: –
Total Depth: 4.0 ft.
Elev., GL (ft. msl): –

Sheet 1 of 1
Finish Date: 6/18/98
Ground Water:
Elev., TOC (ft. msl): –

Depth (ft.)	Sampling Method	Sampling OVM (ppm)	USCS Class	Sample Description	Depth (ft.)	Boring Completion	Remarks
0	A			CLAY – soil layer, dry, stiff, black			
	B			GRAVELLY CLAY – mixed with angular limestone pebbles, loose, dry, whitish brown			
1	C			LIMESTONE – layered, loose, layers are hard but brittle, dry, white	1		
				TOTAL DEPTH = 18" BGL			
2					2		
3					3		
4					4		
5					5		
6					6		
7					7		

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LOG OF BORING

Boring No.: SDA#9-2
Client: CNB Technologies — Job No.: 027-01 — Sheet 1 of 1
Site: Frisco, Texas – Phase I RFI — Start Date: 6/18/98 — Finish Date: 6/18/98
Geologist: J. Greg Dennis — Driller: ESDI / M. McNitt
Drilling Method: Geoprobe — Drill Bit: – — Ground Water: —
Sampling Method: Continuous Shelby Tube w/acetate liner & Discrete Soil Sample per intervals — Total Depth: 4.0 ft.
Coordinates: – — Elev., GL (ft. msl): – — Elev., TOC (ft. msl): –

Depth (ft.)	Sampling Method	Sampling OVM (ppm)	USCS Class	Sample Description	Depth (ft.)	Boring Completion	Remarks
0	A			CLAY – roots, dry, loose, black			
	B			SILTY CLAY – stiff, dry, gray			
1	C			SILTY CLAY – very stiff, loose, dry, orange to tan (calcareous material)	1		
	D						
2				SILTY CLAY – Same as above, grades into compact dry, grayish clay	2		
3					3		
	E						
4				TOTAL DEPTH = 4' BGL	4		
5					5		
6					6		
7					7		

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LOG OF BORING

Boring No.: SDA#10

Client: GNB Technologies | Job No.: 027-01 | Sheet 1 of 1
Site: Frisco, Texas – Phase I RFI | Start Date: 6/18/98 | Finish Date: 6/18/98
Geologist: J. Greg Dennis | Driller: ESDI / M. McNitt
Drilling Method: Geoprobe | Drill Bit: – | Ground Water: –
Sampling Method: Continuous Shelby Tube w/acetate liner & Discrete Soil Sample per intervals | Total Depth: 4.0 ft.
Coordinates: – | Elev., GL (ft. msl): – | Elev., TOC (ft. msl): –

Depth (ft.)	Sampling: Method	Sampling: OVM (ppm)	USCS Class	Sample Description	Depth (ft.)	Boring Completion	Remarks
0	A			CLAY – upper soil layer, soft, dry, black			
	B			CLAY – compact to loose, dry, brownish gray with orange mottling			
1	C				1		
	D						
2					2		
3				SHALEY CLAY – laminated, thin bedded, stiff, damp soft, moist, grayish black @ TD	3		
	E						
	E (dup.)						
4				TOTAL DEPTH = 4' BGL	4		
5					5		
6					6		
7					7		

NOTIFICATION OF AN ON-SITE CLASS II INDUSTRIAL WASTE LANDFILL (RMT/JN, 1995)

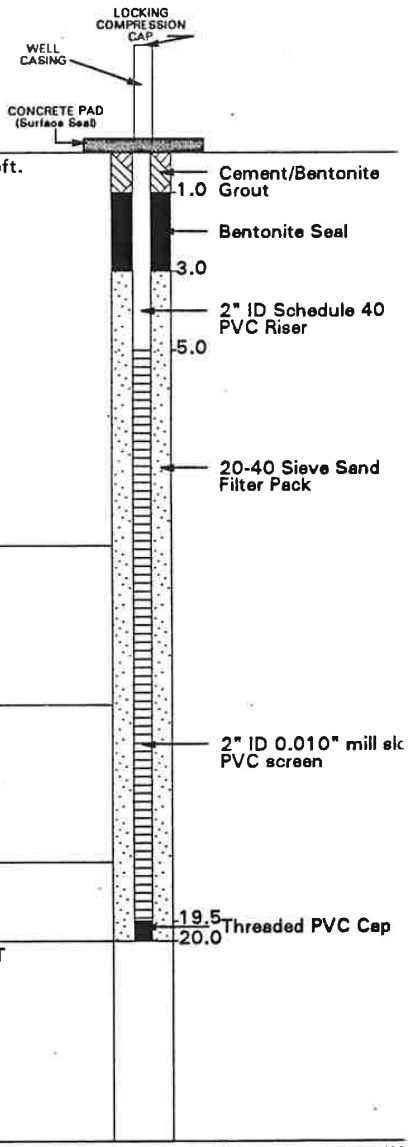
LOG OF TEST BORING

RMT JONES & NEUSE

BORING NO. B1/LMW-1

Client: GNB TECHNOLOGIES		Start Date: 2-3-95	End Date: 2-3-95	Page 1 of 1
Site: FRISCO, TEXAS		Drilling Method: HOLLOW STEM AUGER		Project Number: 50-01584.13
Geologist: BLAKE GILLESPIE	Driller: E.D.S.I./R. BROTHERS	Drill Rig Type: CME-750		Borehole Diameter: 6 inches
Site Coordinates: N: 1130.5500 E: 3406.1100	Total Depth: 20.00	Surface Elevation (ft.): 635.90	TOC Elevation (ft.): 638.74	PAD Elevation (ft.): 635.90
Datum Description: Site Datum - Elevations ref. from MSL	Datum Elevation: NA	Water Level Depth (ft.): 6.10	Date: 7/26/95	Time: 0832

Sample Type	Recovery (Inches)	Saturation	OVM (ppm)	Depth (feet)	Stratigraphy	LITHOLOGIC DESCRIPTION
	60			1–10		CLAY (CH) - dark brown, organic material, moist, soft.
	60	▼		5–10		CLAY (CH) - light brown to gray clay, firm.
				6–10		tan, plastic, moist with 10% angular chalk clasts.
	60			10–14		CLAYEY GRAVEL (GC) - tan clay, moist.
	60			14–18		CLAY (CH) - tan to gray, chalk clasts, saturated.
				18–20		SHALE - gray, massive, hard. (Eagle Ford Shale)
				20		BORING TERMINATED AT 20 FEET



WELL 1584E 8/23/95

F-204B Austin (8-95)

REV 8/95

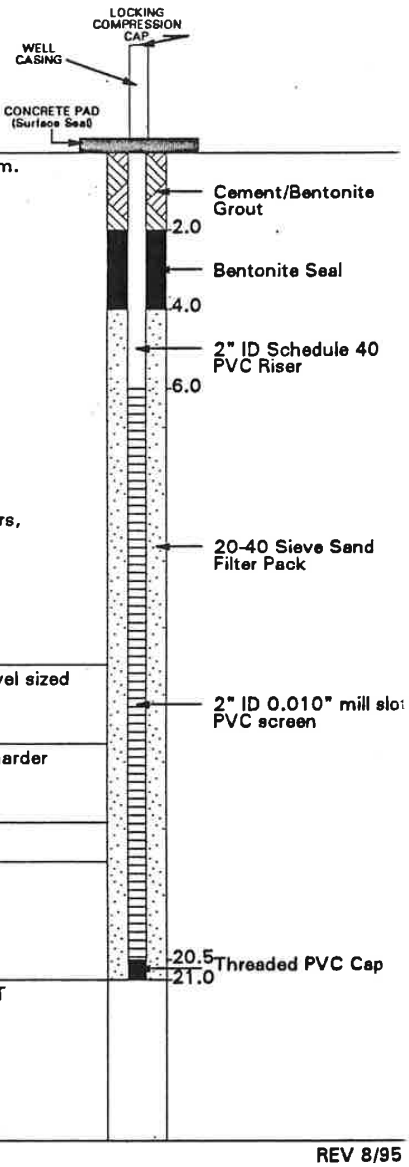
LOG OF TEST BORING

RMT, INC. JONES & NEUSE

BORING NO. B2/LMW-2

Client: GNB TECHNOLOGIES		Start Date: 2-3-95	End Date: 2-3-95	Page 1 of 1
Site: FRISCO, TEXAS		Drilling Method: HOLLOW STEM AUGER		Project Number: 50-01584.13
Geologist: BLAKE GELLISPIE	Driller: RMT-JN/R.BROTHERS	Drill Rig Type: CME-750		Borehole Diameter: 6 Inches
Site Coordinates: N: 6183.6400 E: 3546.9700	Total Depth: 30.00	Surface Elevation (ft.): 638.72	TOC Elevation (ft.): 641.01	PAD Elevation (ft.): 638.72
Datum Description: Site Datum - Elevations ref. from MSL	Datum Elevation: NA	Water Level Depth (ft.): 6.18	Date: 7/26/95	Time: 1045

Sample Type	Recovery (Inches)	Saturation	OVM (ppm)	Depth (feet)	Stratigraphy	LITHOLOGIC DESCRIPTION
	60			1–5		CLAY (CH) - dark brown, organic material, moist, firm.
	60	▼		5–9		light brown and gray. plastic
	60			9–13		CLAY (CH) - light brown and gray, chalk pebble layers, saturated.
	60			13–15		CLAYEY GRAVEL (GC) -saturated, 20% angular gravel sized clasts.
	60			15–17		CLAY (CH) - tan with chalk clasts, grades down to harder gray clay.
				17–18		SAND (SP) - red, medium grained, saturated.
	12			18–21		SHALE - gray, massive, hard. (Eagle Ford Shale)
				21–24		BORING TERMINATED AT 21 FEET



WELL 1584E 8/23/95

F-204B Austin (8-95) REV 8/95

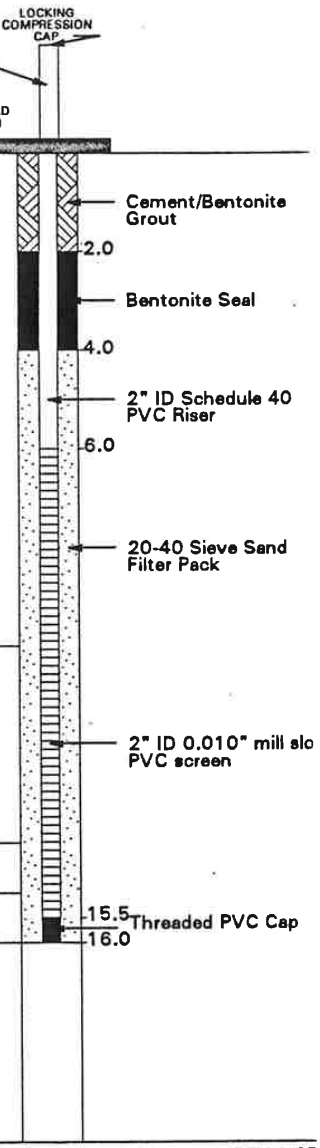
LOG OF TEST BORING

RMT, JONES & NEUSE

BORING NO. B3/LMW-3

Client: GNB TECHNOLOGIES		Start Date: 2-3-95	End Date: 2-3-95	Page 1 of 1
Site: FRISCO, TEXAS		Drilling Method: HOLLOW STEM AUGERS		Project Number: 50-01584.13
Geologist: BLAKE GILLESPIE	Driller: RMT-JN/R.BROTHERS	Drill Rig Type: CME-750		Borehole Diameter: 6 Inches
Site Coordinates: N: 5364.7800 E: 3928.4200	Total Depth: 16.00	Surface Elevation (ft.): 637.76	TOC Elevation (ft.): 639.78	PAD Elevation (ft.): 637.76
Datum Description: Site Datum - Elevations ref. from MSL	Datum Elevation: NA	Water Level Depth (ft.): 6.18	Date: 7/26/95	Time: 0828

Sample Type	Recovery (Inches)	Saturation	OVM (ppm)	Depth (feet)	Stratigraphy	LITHOLOGIC DESCRIPTION
	60			1–5		CLAY (CH) -dark brown, organic, moist, soft.
	60	▼		5–10		CLAY (CH) - tan, plastic, hard, with 10% chalk pebbles in a clay matrix.
				9		gravelly clay, tan, plastic, moist.
	60			10–14		CLAYEY GRAVEL (GC) - saturated, suspended gravel in a tan clay matrix.
				14		CLAY (CH) - gray, iron stained.
	12			15		SHALE - gray, massive, hard. (Eagle Ford Shale)
				16		BORING TERMINATED AT 16 FEET



WELL 1584E 8/23/95

F-204B Austin (8-95)

REV 8/95

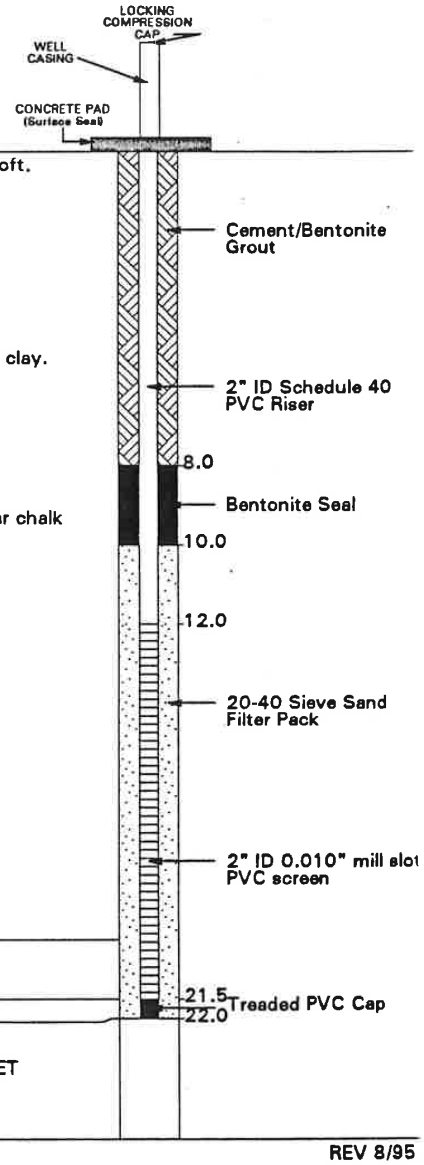
LOG OF TEST BORING

RMT, INC. JONES & NEUSE

BORING NO. B4/LMW-4

Client: GNB TECHNOLOGIES		Start Date: 2-3-95	End Date: 2-3-95	Page 1 of 1
Site: FRISCO, TEXAS		Drilling Method: HOLLOW STEM AUGER		Project Number: 50-01584.13
Geologist: BLAKE GILLESPIE	Driller: RMT-JN/R.BROTHERS	Drill Rig Type: CME-750		Borehole Diameter: 6 Inches
Site Coordinates: N: 5735.6900 E: 3757.2000	Total Depth: 22.00	Surface Elevation (ft.): 639.15	TOC Elevation (ft.): 641.42	PAD Elevation (ft.): 638.15
Datum Description: Site Datum - Elevations ref. from MSL	Datum Elevation: NA	Water Level Depth (ft.): 6.76	Date: 7/26/95	Time: 1030hrs.

Sample Type	Recovery (Inches)	Depth (feet)	LITHOLOGIC DESCRIPTION
	60	1–5	CLAY (CH) - dark brown, organic material, moist, soft.
	60	5–9	light brown to gray, grades into a laminated brown clay.
	60	9–13	CLAY (CH) - tan, moderate plasticity, moist, angular chalk clasts.
	60	13–15	chalk clasts, saturated.
	60	15–20	tan, plastic, moist.
	24	20–21	SAND (SP) - 1.5 feet thick, red, soft, moist.
		21–22	SHALE - gray, massive, hard. (Eagle Ford Shale)
		22–24	BORING TERMINATED AT 22 FEET



WELL 1584E 8/23/95

F-204B Austin (8-95) REV 8/95

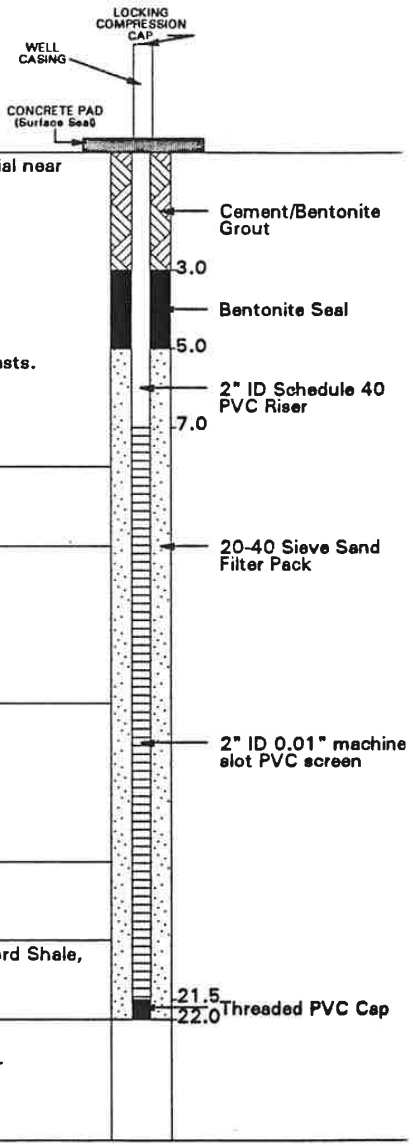
LOG OF TEST BORING

RMT, INC. JONES & NEUSE

BORING NO. B5/LMW-5

Client: GNB TECHNOLOGIES		Start Date: 2-3-95	End Date: 2-3-95	Page 1 of 1
Site: FRISCO, TEXAS		Drilling Method: HOLLOW STEM AUGER		Project Number: 50-01584.13
Geologist: BLAKE GILLESPIE	Driller: RMT-JN/R. BROTHERS	Drill Rig Type: CME-750		Borehole Diameter: 6 Inches
Site Coordinates: N: 5706.3200 E: 4174.7100	Total Depth: 22.00	Surface Elevation (ft.): 643.27	TOC Elevation (ft.): 646.61	PAD Elevation (ft.): 643.27
Datum Description: Site Datum - Elevations ref. from MSL	Datum Elevation: NA	Water Level Depth (ft.): 10.25	Date: 7/25/95	Time: 0647hrs.

Sample Type	Recovery (Inches)	Depth (feet)	LITHOLOGIC DESCRIPTION
	60	1–5	CLAY (CH) - dark brown, moist, soft, organic material near surface.
	48	5–8	CLAY (CH) - dark tan to brown, hard, 10% chalk clasts.
	24	8–9	GRAVELLY CLAY (CL) - tan, moist.
	48	9–14	CLAY (CH) - tan, hard.
	24	14–18	CLAYEY GRAVEL (GC) - tan.
	24	18–20	CLAY (CH) - tan, massive soft.
	24	20–22	SHALE - gray, hard, iron stained fractures. (Eagle Ford Shale, weathered)
		22–24	SHALE - gray, massive, hard. (Eagle Ford Shale) BORING TERMINATED AT 22 FEET



WELL 1584E 8/23/95

F-204B Austin (8-95) REV 8/95

LOG OF TEST BORING

RMT, JONES & NEUSE

BORING NO. SB-6

Client: GNB TECHNOLOGIES		Start Date: 2-4-95	End Date: 2-4-95	Page 1 of 1
Site: FRISCO, TEXAS		Drilling Method: HOLLOW STEM AUGER		Project Number: 50-01584.13
Geologist: BLAKE GILLESPIE	Driller: RMT-JN/R. BROTHERS	Drill Rig Type: CME-750		Borehole Diameter: 6 Inches
Site Coordinates: N: 6171.1200 E: 4239.9600	Total Depth: 21.00	Surface Elevation (ft.): 652.79	TOC Elevation (ft.): NA	PAD Elevation (ft.): NA
Datum Description: Site Datum - Elevations ref. from MSL	Datum Elevation: NA	Water Level Depth (ft.): NA	Date: NA	Time: NA

Sample Type	Recovery (Inches)	Saturation	OVM (ppm)	Depth (feet)	Stratigraphy	LITHOLOGIC DESCRIPTION
	24			1		CLAY (CH) - brown , moderately organic, moist, firm.
	24			2		
				3		
	24			4		
				5		light brown and gray.
	24			6		
				7		tan to brown, very firm, massive.
	24			8		
				9		CLAY (CH) - tan, firm with horizontal jointing, 1-3" width, jointing coated with red and yellow staining.
	48			10		
				11		
				12		
				13		
				14		
	24			15		
				16		
	48			17		
				18		SILTY SAND (SM) - red, medium grained, friable, clay coating on graines.
				19		
	12			20		SHALE - gray, massive, hard. (Eagle Ford Shale)
				21		BORING TERMINATED AT 21 FEET
				22		
				23		
				24		

SOIL 1584E 8/23/95

F-204B Austin (8-95) REV 8/95

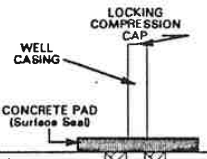
LOG OF TEST BORING

RMT, INC. JONES & NEUSE

BORING NO. B7/LMW-7

Client: GNB TECHNOLOGIES		Start Date: 2-2-95	End Date: 2-3-95	Page 1 of 1
Site: FRISCO, TEXAS		Drilling Method: HOLLOW STEM AUGER		Project Number: 50-01584.13
Geologist: BLAKE GILLESPIE	Driller: RMT-JN/R. BROTHERS	Drill Rig Type: CME-750		Borehole Diameter: 6 Inches
Site Coordinates: N: 6574.6800 E: 4322.6900	Total Depth: 20.00	Surface Elevation (ft.): 657.45	TOC Elevation (ft.): 659.07	PAD Elevation (ft.): 657.45
Datum Description: Site Datum - Elevations ref. from MSL	Datum Elevation: NA	Water Level Depth (ft.): 8.06	Date: 7/26/95	Time: 1050hrs.

Sample Type	Recovery (Inches)	Saturation	OVM (ppm)	Depth (feet)	Stratigraphy	LITHOLOGIC DESCRIPTION
	60			1–10		CLAY (CH) - dark brown, soft, moist, organic material near surface.
	60			5–10		light brown to gray, grades to laminated brown clay.
				9–10		tan, moist with 10% angular chalk clasts.
	48			10–12		CLAYEY GRAVEL (GC) - tan, decreasing grain size with depth, saturated.
				12–20		CLAY (CH) - tan to gray, <5% chalk pebbles.
	36			15–16		
	36			17–18		weathered shale, fissile with horizontal jointing, iron staining.
				20		SHALE - gray, massive, hard. (Eagle Ford Shale) BORING TERMINATED AT 20 FEET



WELL 1584E 8/23/95

F-204B Austin (8-95)

REV 8/95

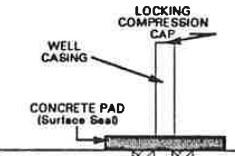
LOG OF TEST BORING

RMT, INC. JONES & NEUSE

BORING NO. B8/LMW-8

Client: GNB TECHNOLOGIES		Start Date: 2-4-95	End Date: 2-4-95	Page 1 of 1
Site: FRISCO, TEXAS		Drilling Method: HOLLOW STEM AUGER		Project Number: 50-01584.13
Geologist: BLAKE GILLESPIE	Driller: RMT-JN/R. BROTHERS	Drill Rig Type: CME-750		Borehole Diameter: 6 Inches
Site Coordinates: N: 5539.0400 E: 4812.0100	Total Depth: 22.00	Surface Elevation (ft.): 645.57	TOC Elevation (ft.): 648.68	PAD Elevation (ft.): 645.57
Datum Description: Site Datum - Elevations ref. from MSL	Datum Elevation: NA	Water Level Depth (ft.): 11.13	Date: 7/26/95	Time: 0630hrs.

Sample Type	Recovery (Inches)	Saturation	OVM (ppm)	Depth (feet)	Stratigraphy	LITHOLOGIC DESCRIPTION
	24			1–7		CLAY (CH) - dark brown, organic material, moist, firm.
	24					
	60					
	12	▼		7–12		SANDY CLAY (CL) - tan, firm, 10-20% course sand and pebbles size chalk clasts.
	48			12–14		CLAYEY GRAVEL (GC) - saturated.
	24			14–19		CLAY (CH) - brown, massive, very hard.
	24			18		no recovery
	24			19–20		SAND (SP) - gray and red, medium grained, moist.
				20–22		SHALE - gray, hard, massive. (Eagle Ford Shale)
				22–24		BORING TERMINATED AT 22 FEET



Cement/Bentonite Grout — 3.0
Bentonite Seal — 5.0
2" ID Schedule 40 PVC Riser — 7.0
20-40 Sieve Sand Filter Pack
2" ID 0.01 inch machine slot PVC screen
21.5
Threaded PVC Cap — 22.0

WELL 1584E 8/23/95

F-204B Austin (8-95) REV 8/95

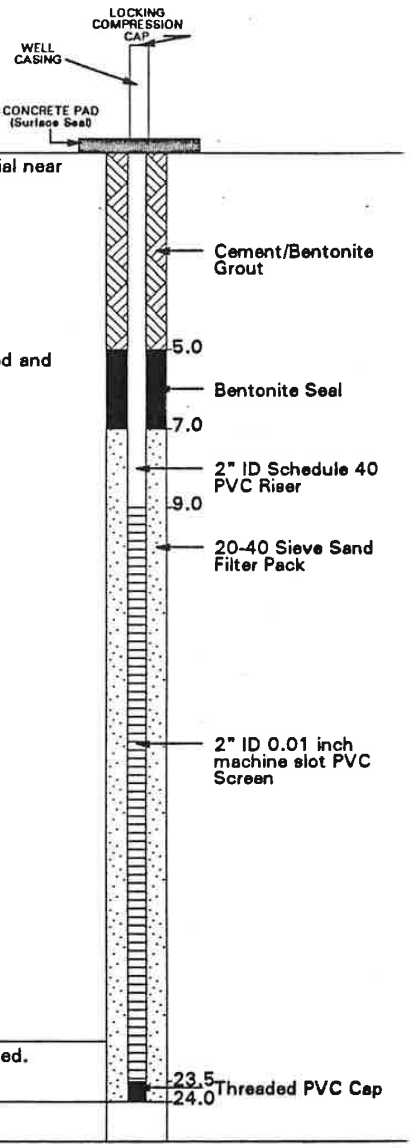
LOG OF TEST BORING

RMT, INC. JONES & NEUSE

BORING NO. B9/LMW-9

Client: GNB TECHNOLOGIES		Start Date: 2-4-95	End Date: 2-4-95	Page 1 of 1
Site: FRISCO, TEXAS		Drilling Method: HOLLOW STEM AUGER		Project Number: 50-01584.13
Geologist: BLAKE GILLESPIE	Driller: RMT-JN/R. BROTHERS	Drill Rig Type: CME-750		Borehole Diameter: 6 Inches
Site Coordinates: N: 5888.8400 E: 4833.3600	Total Depth: 24.00	Surface Elevation (ft.): 660.48	TOC Elevation (ft.): 663.72	PAD Elevation (ft.): 660.48
Datum Description: Site Datum - Elevations ref. from MSL	Datum Elevation: NA	Water Level Depth (ft.): 18.74ft.	Date: 4/24/95	Time:

Sample Type	Recovery (Inches)	Saturation	OVM (ppm)	Depth (feet)	Stratigraphy	LITHOLOGIC DESCRIPTION
				1		CLAY (CH) - dark brown, soft, friable, organic material near surface, moist, moderately soft.
	12			2		
	12			3		
	24			4		
				5		gray, massive, hard, grading into jointed clay with red and yellow staining.
				6		
				7		
	24			8		
				9		
	24			10		
				11		
				12		
	24			13		
				14		tan to brown, jointed.
	24			15		
				16		
				17		gray, massive, jointed, dry.
	24			18		
				19		
				20		
	24			21		
				22		
	24			23		SHALE - gray, massive, hard. waxy texture, weathered. (Eagle Ford Shale)
				24		BORING TERMINATED AT 24 FEET



WELL 1584E 8/23/95

F-204B Austin (8-95)

REV 8/95

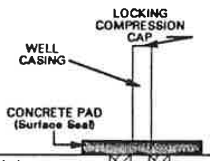
LOG OF TEST BORING

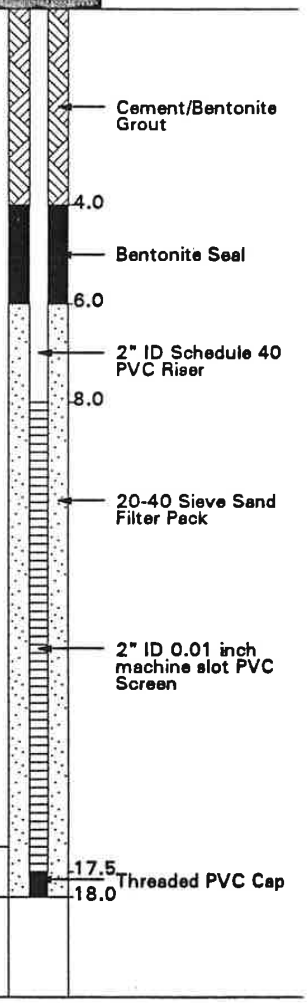
RMT, INC. JONES & NEUSE

BORING NO. LMW-10

Client: GNB TECHNOLOGIES		Start Date: 2-4-95	End Date: 2-4-95	Page 1 of 1
Site: FRISCO, TEXAS		Drilling Method: HOLLOW STEM AUGER		Project Number: 50-01584.13
Geologist: BLAKE GILLESPIE	Driller: RMT-JN/ R.BROTHERS	Drill Rig Type: CME-750		Borehole Diameter: 6 Inches
Site Coordinates: N: 6390.7500 E: 4954.0700	Total Depth: 18.00	Surface Elevation (ft.): 681.03	TOC Elevation (ft.): 683.05	PAD Elevation (ft.): 681.03
Datum Description: Site Datum - Elevations ref. from MSL	Datum Elevation: NA	Water Level Depth (ft.): 11.26	Date: 7/26/95	Time: 1053hrs.

Sample Type	Recovery (Inches)	Saturation	OVM (ppm)	Depth (feet)	Stratigraphy	LITHOLOGIC DESCRIPTION
	12			1		CLAY (CH) - dark brown, soft, friable, organic material near surface.
	12			2		
	24			3		
				4		
	24			5		tan, firm, massive clay, moist.
				6		
	36			7		fractures 1-3" width, moist, yellow and red staining in fractures
				8		
				9		
	24	▼		10		gray, two 2" fractures observed filled with sand, iron stained.
				11		
	36			12		
				13		
				14		
	24			15		
				16		
	12			17		SHALE - massive, very hard. (Eagle Ford Shale)
				18		BORING TERMINATED AT 18 FEET
				19		





WELL 1584E 8/23/95

F-204B Austin (8-95) REV 8/95

LOG OF TEST BORING

RMT, INC. JONES & NEUSE

BORING NO. SB-11

Client: GNB TECHNOLOGIES		Start Date: 7-19-95	End Date: 7-19-95	Page 1 of 1
Site: FRISCO, TEXAS		Drilling Method: HOLLOW STEM AUGER		Project Number: 50-01584.13
Geologist: DAVID McQUADE	Driller: E.D.S.I./MIKE McNITT	Drill Rig Type: CME 750		Borehole Diameter: 6 Inches
Site Coordinates: N: 6380.1701 E: 4279.5396	Total Depth: 23.00	Surface Elevation (ft.): 655.15	TOC Elevation (ft.): NA	PAD Elevation (ft.): NA
Datum Description: Site Datum - Elevations ref. from MSL	Datum Elevation: NA	Water Level Depth (ft.): NA	Date: NA	Time: NA

Sample Type	Recovery (Inches)	Saturation	OVM (ppm)	Depth (feet)	Stratigraphy	LITHOLOGIC DESCRIPTION
	60			1–4		CLAY (CH) - silty; stiff; plastic; olive with gray mottling; moist; color change from 1 ft to 3 ft to dark brown; some sand, fine grained, poorly graded, chalk matrix.
	60			5–9		CLAY (CH) - silty; very stiff; slightly plastic; olive with gray, rust, and yellow mottling; changing to gray with rust and yellow mottling; slightly moist, laminated.
	60			10–14		
	60			15–19		trace weathered shale silty sand seam, very fine grained; some laminated layers of soft, very plastic clay; tan.
	36			20–22		CLAY (CH) - sandy, very fine grained; plastic; stiff; yellowish brown with rust mottling; moist; some seams of weathered shale, gray, dense, hard.
				23		SHALE - gray; dense; hard. (Eagle Ford Shale)
				24		BORING TERMINATED AT 23 FEET

SOIL 1584E 8/23/95

F-204B Austin (8-95) REV 8/95

LOG OF TEST BORING

RMT, INC. JONES & NEUSE

BORING NO. SB-12

Client: GNB TECHNOLOGIES		Start Date: 7-19-95	End Date: 7-19-95	Page 1 of 1
Site: FRISCO, TEXAS		Drilling Method: HOLLOW STEM AUGER		Project Number: 50-01584.13
Geologist: DAVID McQUADE	Driller: E.D.S.I./MIKE McNITT	Drill Rig Type: CME 750		Borehole Diameter: 6 Inches
Site Coordinates: N: 6472.1875 E: 4300.0402	Total Depth: 25.00	Surface Elevation (ft.): 656.40	TOC Elevation (ft.): NA	PAD Elevation (ft.): NA
Datum Description: Site Datum - Elevations ref. from MSL	Datum Elevation: NA	Water Level Depth (ft.): NA	Date: NA	Time: NA

Sample Type	Recovery (Inches)	Saturation	OVM (ppm)	Depth (feet)	Stratigraphy	LITHOLOGIC DESCRIPTION
	60			1–22		CLAY (CH) - some sand, fine to medium grained, subrounded, poorly graded, sand is chalk matrix; slightly plastic; hard; dark brown change to brown at 3 ft.; moist.
	60					
	60					CLAY (CH) - silty; stiff; plastic; gray with rust and yellow mottling; laminated; moist.
	60					some weathered shale lenses.
	60			23–24		SHALE - grey; dense; hard. (Eagle Ford Shale)
				25–29		BORING TERMINATED AT 25 FEET

SOIL 1584E 8/23/95

F-204B Austin (8-95) REV 8/95

LOG OF TEST BORING

RMT JONES & NEUSE

BORING NO. SB-13

Client: GNB TECHNOLOGIES		Start Date: 7-19-95	End Date: 7-19-95	Page 1 of 1
Site: FRISCO, TEXAS		Drilling Method: HOLLOW STEM AUGER		Project Number: 50-01584.13
Geologist: DAVID McQUADE	Driller: E.D.S.I./MIKE McNITT	Drill Rig Type: CME-750		Borehole Diameter: 6 Inches
Site Coordinates: N: 6459.5969 E: 4644.7713	Total Depth: 20.00	Surface Elevation (ft.): 669.41	TOC Elevation (ft.): NA	PAD Elevation (ft.): NA
Datum Description: Site Datum - Elevations ref. from MSL	Datum Elevation: NA	Water Level Depth (ft.): NA	Date: NA	Time: NA

Sample Type	Recovery (Inches)	Saturation	OVM (ppm)	Depth (feet)	Stratigraphy	LITHOLOGIC DESCRIPTION
	60			1–15		CLAY (CH) - sandy, fine grained, poorly graded, subangular, sand is chalk matrix; silty; plastic; stiff; dark brown; moist.
	60			1–15		CLAY (CH) - silty; plastic; stiff; gray with rust and yellow mottling; laminated; slightly moist.
				1–15		very fine grained sand seam.
	60			1–15		some weathered shale, becoming more dense.
	60			15–19		SHALE - gray; dense; hard. (Eagle Ford Shale)
				20–24		BORING TERMINATED AT 20 FEET

SOIL 1584E 8/23/95

F-204B Austin (8-95) REV 8/95

LOG OF TEST BORING

RMT, INC. JONES & NEUSE

BORING NO. SB-14

Client: GNB TECHNOLOGIES		Start Date: 7-19-95	End Date: 7-19-95	Page 1 of 1
Site: FRISCO, TEXAS		Drilling Method: HOLLOW STEM AUGER		Project Number: 50-01584.13
Geologist: DAVID McQUADE	Driller: E.D.S.I./MIKE McNITT	Drill Rig Type: CME-750		Borehole Diameter: 6 Inches
Site Coordinates: N: 6414.7340 E: 4474.3169	Total Depth: 14.00	Surface Elevation (ft.): 656.75	TOC Elevation (ft.): NA	PAD Elevation (ft.): NA
Datum Description: Site Datum - Elevations ref. from MSL	Datum Elevation: NA	Water Level Depth (ft.): NA	Date: NA	Time: NA

Sample Type	Recovery (Inches)	Saturation	OVM (ppm)	Depth (feet)	Stratigraphy	LITHOLOGIC DESCRIPTION
	60			1–10		CLAY (CH) - silty; slightly plastic; stiff; gray with rust and yellow mottling; laminated; slightly moist.
	60					
	48			11–13		SHALE - gray; dense; hard. (Eagle Ford Shale)
				14		BORING TERMINATED AT 14 FEET
				15–19		

SOIL 1584E 8/23/95

F-204B Austin (8-95)

REV 8/95

LOG OF TEST BORING

RMT, INC. JONES & NEUSE

BORING NO. SB-15

Client: GNB TECHNOLOGIES		Start Date: 7-21-95	End Date: 7-21-95	Page 1 of 1
Site: FRISCO, TEXAS		Drilling Method: HOLLOW STEM AUGER		Project Number: 50-01584.13
Geologist: DAVID McQUADE	Driller: E.D.S.I./MIKE McNITT	Drill Rig Type: CME-750		Borehole Diameter: 6 Inches
Site Coordinates: N: 5712.6367 E: 4852.8441	Total Depth: 26.00	Surface Elevation (ft.): 650.92	TOC Elevation (ft.): NA	PAD Elevation (ft.): NA
Datum Description: Site Datum - Elevations ref. from MSL	Datum Elevation: NA	Water Level Depth (ft.): NA	Date: NA	Time: NA

Sample Type	Recovery (Inches)	Saturation	OVM (ppm)	Depth (feet)	Stratigraphy	LITHOLOGIC DESCRIPTION
	24			1–6		CLAY (CH) - sandy, fine to medium grained, poorly graded, sand is chalk matrix; slightly plastic; stiff; brown; moist.
	24			7–23		CLAY (CH) - trace silt; some chalk fragments, subangular; plastic; hard; brown with yellowish brown mottling; moist at 7.5 feet; change color to gray with rust and yellow mottling; laminated.
	24					
	36					
	24					
	36					
	24					
	36					CLAY (CH) - silty; some sand seams, very fine grained; plastic; stiff; brown with gray mottling; increase sand content with depth.
	24					
	36					CLAY (CH) - silty; plastic; stiff; some weathered shale; brown with dark gray mottling; moist; laminated.
	24			24–26		SHALE - dark gray; dense; hard. (Eagle Ford Shale)
				26–29		BORING TERMINATED AT 26 FEET

SOIL 1584E 8/23/95

F-204B Austin (8-95) REV 8/95

LOG OF TEST BORING

RMT JONES & NEUSE

BORING NO. SB-16

Client: GNB TECHNOLOGIES		Start Date: 7-21-95	End Date: 7-21-95	Page 1 of 1
Site: FRISCO, TEXAS		Drilling Method: HOLLOW STEM AUGER		Project Number: 50-01584.13
Geologist: DAVID McQUADE	Driller: E.D.S.I./MIKE McNITT	Drill Rig Type: CME-750		Borehole Diameter: 6 Inches
Site Coordinates: N: 5625.1147 E: 4828.9834	Total Depth: 24.00	Surface Elevation (ft.): 647.94	TOC Elevation (ft.): NA	PAD Elevation (ft.): NA
Datum Description: Site Datum - Elevations ref. from MSL	Datum Elevation: NA	Water Level Depth (ft.): NA	Date: NA	Time: NA

Sample Type	Recovery (Inches)	Saturation	OVM (ppm)	Depth (feet)	Stratigraphy	LITHOLOGIC DESCRIPTION
	48			1–4		CLAY (CH) - silty; some sand, medium grained, subangular, poorly graded, sand is chalk matrix; plastic; hard; dark brown; moist; roots.
						CLAY (CH) - sandy, medium grained, subangular; slightly plastic; stiff; light brown; moist.
	60			4–9		CLAY (CH) - sandy, medium to coarse grained, poorly graded, sand is chalk matrix; trace gravel size grains; plastic; stiff; light brown; moist.
	60			9–14		CLAY (CH) - silty; trace sand, fine grained; very plastic; stiff; light brown with rust and gray mottling; moist; increase fine grained sand content with depth.
	60			14		SANDY CLAY with gravel (CH) - fine to medium grained, subrounded, poorly graded; plastic; stiff; tan with rust mottling; wet.
				15–18		CLAY (CH) - silty; some very fine grained sand; plastic; stiff; brown with rust and gray mottling; laminated; moist.
	60			18–21		CLAY (CH) - trace silt, laminated; slightly plastic; hard; gray with rust and yellow mottling; very fine grained sand seam at 19 feet, gray, wet.
						fine grained sand seam from 20.5 to 20.7 ft., wet.
				22–24		SHALE - dark; dense; hard.
						BORING TERMINATED AT 24 FEET

SOIL 1584E 8/23/95

F-204B Austin (8-95)

REV 8/95

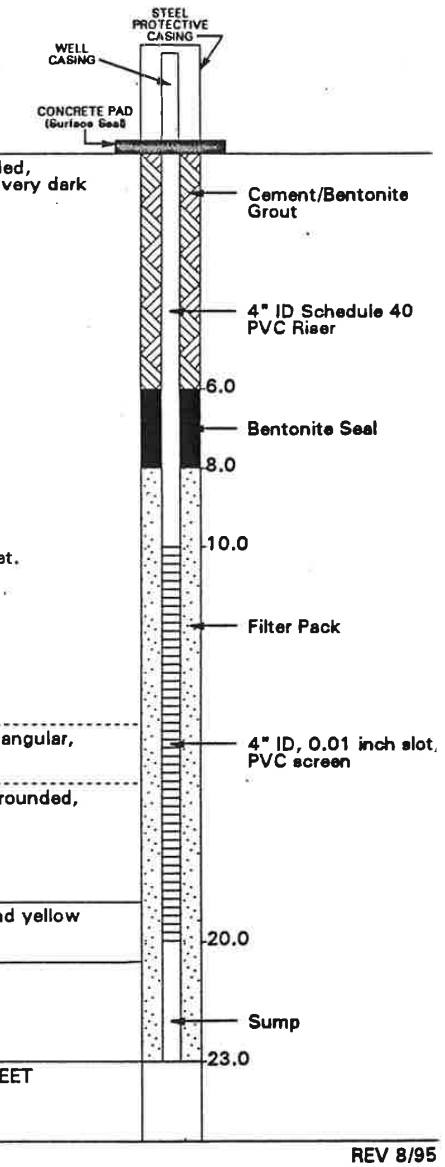
LOG OF TEST BORING

RMT, INC. JONES & NEUSE

BORING NO. LMW-17

Client: GNB TECHNOLOGIES		Start Date: 7-21-95	End Date: 7-24-95	Page 1 of 1
Site: FRISCO, TEXAS		Drilling Method: HOLLOW STEM AUGER		Project Number: 50-01584.13
Geologist: DAVID McQUADE	Driller: E.D.S.I./MIKE McNITT	Drill Rig Type: CME-750		Borehole Diameter: 8 Inches
Site Coordinates: N: 5626.1663 E: 4507.0130	Total Depth: 23.00	Surface Elevation (ft.): 646.34	TOC Elevation (ft.): 648.84	PAD Elevation (ft.): 646.34
Datum Description: Site Datum - Elevations ref. from MSL	Datum Elevation: NA	Water Level Depth (ft.): 13.52	Date: 7/26/95	Time: 0643hrs.

Sample Type	Recovery (Inches)	Saturation	OVM (ppm)	Depth (feet)	Stratigraphy	LITHOLOGIC DESCRIPTION
	24			1		CLAY (CH) - trace sand, fine grained, poorly graded, subangular, sand is chalk matrix; plastic; hard; very dark brown; moist.
	24			2		
	24			3		
	36			4		
				5		
				6		
	60			7		
				8		
				9		
				10		increase sand content, fine to coarse grained; wet.
				11		
				12		
				13		
	24			14		silty sand seam. fine grained
				15		CLAYEY SAND (SC) - fine to coarse grained, subangular, poorly graded; no plasticity; loose; tan; wet.
	36			16		CLAYEY GRAVEL with sand (GC) - fine grained, rounded, poorly graded; loose; tan; wet.
				17		
				18		
				19		
	24			20		CLAY (CH) - silty; hard; plastic; gray with rust and yellow mottling; moist. sand seam, very fine grained.
	24			21		SHALE - gray; dense; hard. (Eagle Ford Shale)
				22		
				23		BORING TERMINATED AT 23 FEET
				24		



WELL 1584E 8/23/95

F-204B Austin (8-95)

REV 8/95

LOG OF TEST BORING

RMT JONES & NEUSE

BORING NO. SB-18

Client: GNB TECHNOLOGIES		Start Date: 7-25-95	End Date: 7-25-95	Page 1 of 1
Site: FRISCO, TEXAS		Drilling Method: HOLLOW STEM AUGER		Project Number: 50-01584.13
Geologist: DAVID McQUADE	Driller: E.D.S.I./MIKE McNITT	Drill Rig Type: CME-750		Borehole Diameter: 6 Inches
Site Coordinates: N: 5721.6077 E: 4494.9856	Total Depth: 24.00	Surface Elevation (ft.): 647.30	TOC Elevation (ft.): NA	PAD Elevation (ft.): NA
Datum Description: Site Datum - Elevations ref. from MSL	Datum Elevation: NA	Water Level Depth (ft.): NA	Date: NA	Time: NA

Sample Type	Recovery (Inches)	Saturation	OVM (ppm)	Depth (feet)	Stratigraphy	LITHOLOGIC DESCRIPTION
	48			1–5		CLAY (CH) - silty; plastic; stiff; dark brown; some sand at depth, fine grained, poorly graded, sand is chalk matrix; trace roots from 0-2 feet.
	60			6–9		CLAY (CH) - trace silt; trace sand, fine grained, subangular, poorly graded, sand is chalk matrix; plastic; stiff; brown; moist; increase sand content with depth, grain size fine to medium; tan.
	60			10–13		CLAY (CH) - silty; sandy, very fine grained; plastic; soft; tan; wet.
	60			14		CLAYEY GRAVEL with sand (GC) - fine grained; poorly graded; rounded; loose; tan; wet.
	60			15–20		CLAY (CH) - silty; plastic; stiff; brown with gray and yellow mottling; laminated; increase silt with depth changing to gray with rust and yellow mottling.
				21–23		SHALE - gray; dense; hard. (Eagle Ford Shale)
				24		BORING TERMINATED AT 24 FEET

SOIL 1584E 8/23/95

F-204B Austin (8-95) REV 8/95

PHASE I RCRA FACILITY INVESTIGATION (LAKE, 1991; LAKE, 1993)

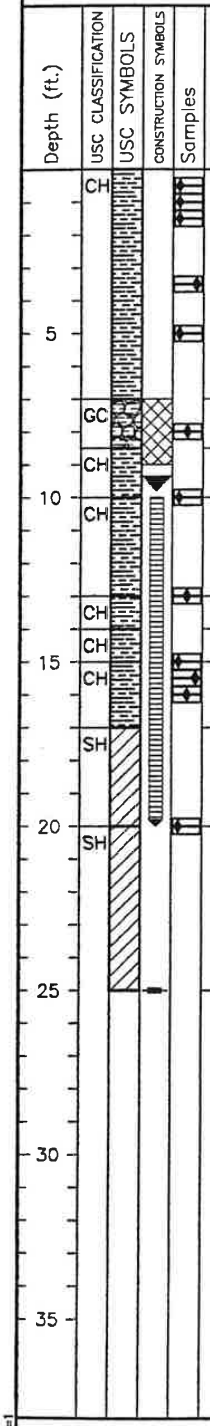
LAKE ENGINEERING, INC. Project Remedial Investigation GNB, Incorporated – Frisco, Texas Boring no. P-1

Project no. 495.4.5 Sheet 1 of 1

Sampling methods: 4.5" Split Spoon Completion date: 5/8/90 Boring depth: 25.0

Drilling methods: 8.0" Hollow Stem Auger Drill rig: CME-55 Well depth: 20.0

Groundwater elevation: 636.14 (msl) Date: 7/16/90 Surface elevation: 645.95 (msl)



	STRATUM DESCRIPTION	Recovery	% Passing No. 200 Sieve
CH	CLAY, dark brown, stiff, with calcerous pebbles, root zone to 5'		
GC	GRAVEL, clayey, calcerous, wet		
CH	CLAY, silty, tan		
CH	CLAY, silty, tan, with calcerous pebbles, moist		
CH	CLAY, silty, calcareous, with gravel		
CH	CLAY, tan, very stiff, with pebbles		
CH	SHALEY CLAY, gray, orange staining on parting surfaces		
SH	SHALE, dark gray, fissile, brittle, yellow staining on parting surfaces, moist, pyrite nodule at 18.5'		
SH	SHALE, dark gray, fissile, brittle		

Log of Boring No. P-1

= CHEMICAL ANALYSIS
= SIEVE ANALYSIS
= PERMEABILITY SAMPLE

PLATE

495 P-1 PS:1=1

LAKE ENGINEERING, INC.

Project Remedial Investigation
GNB, Incorporated – Frisco, Texas

Boring no. P-2

Project no. 495.4.5

Sheet 1 of 1

Sampling methods: 4.5" Split Spoon | Completion date: 5/9/90 | Boring depth: 22.0

Drilling methods: 8.0" Hollow Stem Auger | Drill rig: CME-55 | Well depth: 20.0

Groundwater elevation: 633.35 (msl) | Date: 7/16/90 | Surface elevation: 642.82 (msl)

Depth (ft.)	USC CLASSIFICATION	USC SYMBOLS	CONSTRUCTION SYMBOLS	Samples	STRATUM DESCRIPTION	Recovery	% Passing No. 200 Sieve
0	CH				CLAY, dark brown, highly plastic, with small calcareous pebbles		
5	CH				CLAY, brown mottled orange, with calcareous pebbles		
10	CH				CLAY, silty, brownish gray, with calcareous pebbles		
15	CH				SHALEY CLAY, plastic, moderately fissile, less weathered at depth, selenite crystals found on parting surfaces		
20	SH				SHALE, dark gray, fissile, very brittle		
22	SH				LIMESTONE, layer, refusal at 22'		
25							
30							
35							

495 P-2 PS:1=1

Log of Boring No. P-2

= CHEMICAL ANALYSIS
= SIEVE ANALYSIS
= PERMEABILITY SAMPLE

PLATE

LAKE ENGINEERING, INC.

Project no. 495.4.5

Project Remedial Investigation
GNB, Incorporated – Frisco, Texas

Boring no. B-1N

Sheet 1 of 2

Sampling methods: 4.5" Split Spoon Completion date: 6/22/90 Boring depth: 62.0

Drilling methods: 8.0" Hollow Stem Auger Drill rig: CME-55 Well depth: 59.5

Groundwater elevation: 622.01 (msl) Date: 7/16/90 Surface elevation: 679.40 (msl)

Depth (ft.)	USC CLASSIFICATION	USC SYMBOLS	CONSTRUCTION SYMBOLS	Samples	STRATUM DESCRIPTION	Recovery	% Passing No. 200 Sieve
	LS				LIMESTONE, (Austin Chalk Group), light brown		
	CH				CLAY, light brown, moderately dry		
5	CH				SHALEY CLAY, light brown, calcareous, fissile		
	CH				SHALEY CLAY, dark gray, calcareous, fissile		
	SH				SHALE, dark gray, sand lense at 10.0'		
10	SH				SHALE, dark gray, hard, fissile, (refusal at 16', needed drilling method change from auger to mud rotary)		
15	SH				SHALE, dark gray		
20					<<< RIG CHANGE TO MOBILE B-53 >>>		
25	SH				SHALE, dark gray		
30							
	SH				SHALE, dark gray		
35							

Log of Boring No. B-1N

= CHEMICAL ANALYSIS
= SIEVE ANALYSIS
= PERMEABILITY SAMPLE

PLATE

495.B-1N PS:1=1

LAKE ENGINEERING, INC.

Project no. 495.4.5

Project Remedial Investigation
GNB, Incorporated – Frisco, Texas

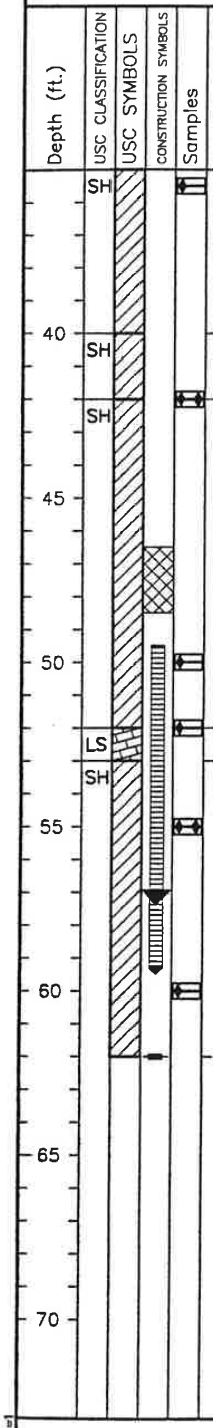
Boring no. B1-N

Sheet 2 of 2

Sampling methods: 4.5" Split Spoon | Completion date: 6/22/90 | Boring depth: 62.0

Drilling methods: 8.0" Hollow Stem Auger | Drill rig: MOBILE-53 | Well depth: 59.5

Groundwater elevation: 622.01 (msl) | Date: 7/16/90 | Surface elevation: 679.40 (msl)



STRATUM DESCRIPTION

Depth (ft.)	Stratum Description	Recovery	% Passing No. 200 Sieve
	SHALE, dark gray		
40	SHALE, dark gray		
	SHALE, dark gray		
45			
50			
	LIMESTONE, partially fractured, crystal growth		
	SHALE, dark gray, pyrite nodules at 55', sand layer at 56', shell fragments at 57–58', silt layer at 59'		
55			
60			
65			
70			

Log of Boring No. B1-N

= CHEMICAL ANALYSIS
= SIEVE ANALYSIS
= PERMEABILITY SAMPLE

PLATE

495-B1-N PS.1of1

LAKE ENGINEERING, INC.

Project: Remedial Investigation
GNB, Incorporated – Frisco, Texas

Boring no.: B-1R

Project no.: 495.4.5

Sheet: 1 of 3

Sampling methods: 4.5" Split Spoon	Completion date: 4/24/91	Boring depth:	94.0
Drilling methods: 8.5" Hollow Stem Auger	Drill rig: CME-55	Well depth:	63.8
Groundwater elevation: 619.8 (msl)	Date: 4/24/91	Surface elevation:	682.8 (msl)

Depth (ft.)	USC CLASSIFICATION	USC SYMBOLS	CONSTRUCTION SYMBOLS	Samples	STRATUM DESCRIPTION	Recovery	% Passing No. 200 Sieve
0	LS				LIMESTONE, (Austin Chalk Group), Light Brown		
	CH				CLAY, Light brown, weathered		
5	SH				SHALE, Dark gray w/ "/-" hard limestone lense @ 13.5'		
10							
15	SH				SHALE, Dark gray, Fossile, Calcareous		
20							
25							
30							
	SH				SHALE, Dark gray, Fossile, Calcareous w/ fine limestone weathered erses		
35							

Log of Boring No. B-1R

= CHEMICAL ANALYSIS
= SIEVE ANALYSIS

LAKE ENGINEERING, INC. Project: Remedial Investigation — Boring no. B-1R
GNB, Incorporated — Frisco, Texas
Project no. 495.4.5 Sheet 2 of 3

Sampling methods: 4.5" Split Spoon — Completion date: 4/24/91 — Boring depth: 94.0
Drilling methods: 8.5" Hollow Stem Auger — Drill rig: CME-55 — Well depth: 63.8
Groundwater elevation: 619.8 (msl) — Date: 4/24/91 — Surface elevation: 682.8 (msl)

Depth (ft.)	USC Classification	USC Symbols	Construction Symbols	Samples	STRATUM DESCRIPTION	Recovery	% Passing No. 200 Sieve
40	SH				SHALE, Dark Gray, Fossile, Calcareous w/ (1/8"–1/4") intermittent lenses of limestone		
45	SH				SHALE, Dark gray, Calcareous w/ 1/4" pyrite nodules		
	SH				SHALE, Dark gray, Fossile, Calcareous w/ 6" weathered limestone lense @ 47.0'		
50	SH				SHALE, Dark gray, Fossile, Calcareous w/ [illegible]" weathered limestone lenses @ 53.5' and 57.0'		
55							
60	SH				SHALE, Dark gray, Fossile, Calcareous w/ weathered shale @ 62.0' – 63.0'		
65	SH				SHALE, Dark gray, Fossile, Calcareous w/ 1/4" weathered limestone erse @ 66.0'		
70							

sandstone w/ Ang

Log of Boring No. B-1R

= CHEMICAL ANALYSIS
= SIEVE ANALYSIS
= PERMEABILITY SAMPLE

PLATE

LAKE ENGINEERING, INC

Project: Remedial Investigation
GNB, Incorporated – Frisco, Texas

Boring no. **B-1R**

Project no. 495.4.5

Sheet 3 of 3

Sampling methods: 4.5" Split Spoon | Completion date: 4/24/91 | Boring depth: 94.0

Drilling methods: 8.5" Hollow Stem Auger | Drilling rig: CME-55 | Well depth: 63.8

Groundwater elevation: 619.8 (msl) | Date: 4/24/91 | Surface elevation: 682.8 (msl)

Depth (ft.)	USC CLASSIFICATION	USC SYMBOLS	CONSTRUCTION SYMBOLS	Samples	STRATUM DESCRIPTION	Recovery	% Passing No. 200 Sieve
	SH				SHALE, Dark gray, Fossile, Calcareous w/ 6" weathered limestone lense @ 74.5' – 75.0'		
75	SH				SHALE, Dark gray, Fossile, Calcareous w/ fine intermittent limestone lenses from 75.0' – 76.0'		
80	SH				SHALE, Dark gray, Fossile, Calcareous		
85	SH				SHALE, Dark gray, Fossile, Calcareous w/ fossils from 86.0' – 87.0'		
90							
95							
100							
105							

Log of Boring No. **B-1R**

= CHEMICAL ANALYSIS
= SIEVE ANALYSIS
= PERMEABILITY SAMPLE

PLATE

LAKE ENGINEERING, INC.

Project no. 495.4.5

Project Remedial Investigation
GNB, Incorporated – Frisco, Texas

Boring no. B-2R

Sheet 1 of 1

Sampling methods: 4.5" Split Spoon | Completion date: 7/11/90 | Boring depth: 19.0

Drilling methods: 8.0" Hollow Stem Auger | Drill rig: CME-55 | Well depth: 17.0

Groundwater elevation: 633.76 (msl) | Date: 7/16/90 | Surface elevation: 642.79 (msl)

Depth (ft.)	USC CLASSIFICATION	USC SYMBOLS	CONSTRUCTION SYMBOLS	Samples	STRATUM DESCRIPTION	Recovery	% Passing No. 200 Sieve
	CL				CLAY, dry, calcareous pebbles		
5	CL				CLAY, shaley		
10							
15							
	SH				SHALE		
20							
25							
30							
35							

Log of Boring No. B-2R

= CHEMICAL ANALYSIS
= SIEVE ANALYSIS
= PERMEABILITY SAMPLE

PLATE

495 B-2R PS:1=1

LAKE ENGINEERING, INC. Project Remedial Investigation GNB, Incorporated – Frisco, Texas Boring no. B-3R

Project no. 495.4.5 Sheet 1 of 1

Sampling methods: 4.5" Split Spoon Completion date: 7/21/90 Boring depth: 14.0

Drilling methods: 8.0" Hollow Stem Auger Drill rig: CME-55 Well depth: 14.0

Groundwater elevation: 638.51 (msl) Date: 7/16/90 Surface elevation: 649.23 (msl)

Depth (ft.)	USC CLASSIFICATION	USC SYMBOLS	CONSTRUCTION SYMBOLS	Samples	STRATUM DESCRIPTION	Recovery	% Passing No. 200 Sieve
	CH				CLAY, gray		
	CH				CLAY, gray		
5	CH				CLAY, gray, sandstone layers		
10	CH				SHALEY CLAY		
15							
20							
25							
30							
35							

Log of Boring No. B-3R

= CHEMICAL ANALYSIS
= SIEVE ANALYSIS
= PERMEABILITY SAMPLE

PLATE

495.B-3R PS:1=1

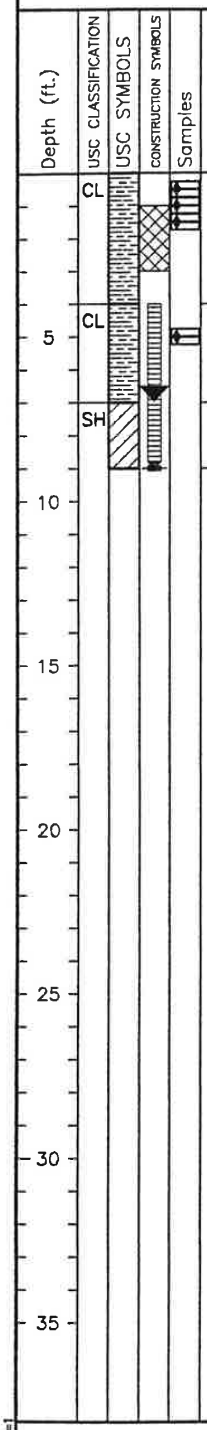
LAKE ENGINEERING, INC. Project Remedial Investigation GNB, Incorporated – Frisco, Texas Boring no. B-4R

Project no. 495.4.5 Sheet 1 of 1

Sampling methods: 4.5" Split Spoon Completion date: 7/11/90 Boring depth: 9.0

Drilling methods: 8.0" Hollow Stem Auger Drill rig: CME-55 Well depth: 9.0

Groundwater elevation: 654.44 (msl) Date: 7/16/90 Surface elevation: 661.40 (msl)



STRATUM DESCRIPTION

CLAY, dry

SHALEY CLAY

SHALE, dark gray

Recovery

% Passing No. 200 Sieve

Log of Boring No. B-4R

= CHEMICAL ANALYSIS
= SIEVE ANALYSIS
= PERMEABILITY SAMPLE

PLATE

495 B-4R PS: 1=1

LAKE ENGINEERING, INC.

Project no. 495.4.5

Project Remedial Investigation
GNB, Incorporated – Frisco, Texas

Boring no. B-5N

Sheet 1 of 1

Sampling methods: 4.5" Split Spoon | Completion date: 6/7/90 | Boring depth: 19.5

Drilling methods: 8.0" Hollow Stem Auger | Drill rig: CME-55 | Well depth: 16.5

Groundwater elevation: 621.05 (msl) | Date: 7/16/90 | Surface elevation: 629.97 (msl)

Depth (ft.)	USC CLASSIFICATION	USC SYMBOLS	CONSTRUCTION SYMBOLS	Samples	STRATUM DESCRIPTION	Recovery	% Passing No. 200 Sieve
0	CH				CLAY, silty, dark brown, calcareous, with sand size calcareous particles		
5							
	CH				CLAY, silty, very soft, moist, blocky		
10	MH				SILT, clayey, sand size calcareous particles		
	GC				GRAVEL, dense clay interfill, calcareous, wood fiber and sand size calcareous particles at 12.0–13.0'		
15	CH				SHALEY CLAY, yellow staining on parting surfaces, 3" seam of clayey gravel at 19.0'		
20	CH				SHALE, dark gray, fissile, brittle 19.25–19.50'		
25							
30							
35							

Log of Boring No. B-5N

= CHEMICAL ANALYSIS
= SIEVE ANALYSIS
= PERMEABILITY SAMPLE

PLATE

495-B-5N PS:1=1

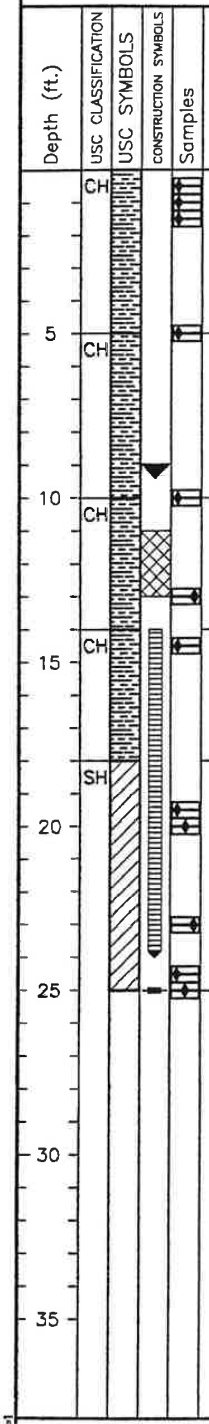
LAKE ENGINEERING, INC. Project Remedial Investigation GNB, Incorporated – Frisco, Texas Boring no. B-7N

Project no. 495.4.5 Sheet 1 of 1

Sampling methods: 4.5" Split Spoon Completion date: 5/10/90 Boring depth: 25.0

Drilling methods: 8.0" Hollow Stem Auger Drill rig: CME-55 Well depth: 24.0

Groundwater elevation: 634.66 (msl) Date: 7/16/90 Surface elevation: 644.08 (msl)



STRATUM DESCRIPTION

Recovery	% Passing No. 200 Sieve

CLAY, dark brown to brown, calcareous, increase in amount and size of calcareous particles at depth

CLAY, gray mottled tan, slightly moist, blocky, with calcareous pebbles

CLAY, gray mottled tan, calcareous, fewer and smaller calcareous particles pebbles than above

SHALEY CLAY, gray, yellow and tan weathering, selenite crystals on parting surfaces

SHALE, dark gray, clayey, moist, very brittle,less brittle and more fissile at depth, shell fragments 23–25'

Log of Boring No. B-7N

= CHEMICAL ANALYSIS
= SIEVE ANALYSIS
= PERMEABILITY SAMPLE

PLATE

495.B-7N PS.1=1

LAKE ENGINEERING, INC.

Project no. 495.4.5

Project Remedial Investigation
GNB, Incorporated – Frisco, Texas

Boring no. B-8N

Sheet 1 of 1

Sampling methods: 4.5" Split Spoon | Completion date: 5/15/90 | Boring depth: 20.0

Drilling methods: 8.0" Hollow Stem Auger | Drill rig: CME-55 | Well depth: 14.0

Groundwater elevation: 618.89 (msl) | Date: 7/16/90 | Surface elevation: 626.93 (msl)

Depth (ft.)	USC CLASSIFICATION	USC SYMBOLS	CONSTRUCTION SYMBOLS	Samples	STRATUM DESCRIPTION	Recovery	% Passing No. 200 Sieve
	CH				CLAY, dark brown, highly plastic, calcareous, shell fragment at 3'		
5	CH				CLAY, dark brown, highly plastic, with calcareous pebbles		
	CH				SHALEY CLAY, gray, highly plastic, calcareous, light yellow and orange weathering on parting surfaces		
10	CH				SHALEY CLAY, gray, yellow weathering on parting surfaces		
	CH				SHALEY CLAY, dark gray, light yellow staining on parting surfaces		
	SH				SHALE, dark gray, fissile, thin sand lenses		
15	SH				SHALE, dark gray, brittle, fissile, very dry		
	SH				SHALE, dark gray, moderately fissile		
20							
25							
30							
35							

Log of Boring No. B-8N

= CHEMICAL ANALYSIS
= SIEVE ANALYSIS
= PERMEABILITY SAMPLE

PLATE

495-B-8N PS.1=1

LAKE ENGINEERING, INC.

Project no. 495.4.5

Project Remedial Investigation
GNB, Incorporated – Frisco, Texas

Boring no. B-9N

Sheet 1 of 1

Sampling methods: 4.5" Split Spoon | Completion date: 6/12/90 | Boring depth: 18.0

Drilling methods: 8.0" Hollow Stem Auger | Drill rig: CME-55 | Well depth: 17.0

Groundwater elevation: 628.45 (msl) | Date: 7/16/90 | Surface elevation: 637.02 (msl)

Depth (ft.)	USC CLASSIFICATION	USC SYMBOLS	CONSTRUCTION SYMBOLS	Samples	STRATUM DESCRIPTION	Recovery	% Passing No. 200 Sieve
0	CH				CLAY, dark to medium brown, calcareous, sand to gravel size calcareous pebbles		
5	GC				SAND, silty, clayey, calcareous, with gravel size pebbles		
10	CH				SHALEY CLAY, gray, orange staining on parting surfaces		
15	SH				SHALE, dark gray, fissile, very brittle, interbedded with sand layers 17.5–18.0'		
20							
25							
30							
35							

Log of Boring No. B-9N

= CHEMICAL ANALYSIS
= SIEVE ANALYSIS
= PERMEABILITY SAMPLE

PLATE

495 B-9N FS1=1

LAKE ENGINEERING, INC.

Project no. 495.4.5

Project Remedial Investigation
GNB, Incorporated – Frisco, Texas

Boring no. MW10

Sheet 1 of 1

Sampling methods: 4.5" Split Spoon | Completion date: 6/13/90 | Boring depth: 19.0

Drilling methods: 8.0" Hollow Stem Auger | Drill rig: CME-55 | Well depth: 17.0

Groundwater elevation: 637.95 (msl) | Date: 7/16/90 | Surface elevation: 645.12 (msl)

Depth (ft.)	USC CLASSIFICATION	USC SYMBOLS	CONSTRUCTION SYMBOLS	Samples	STRATUM DESCRIPTION	Recovery	% Passing No. 200 Sieve
0	CH				CLAY, dark to medium brown, with calcareous pebbles		
5	CH				CLAY, sandy, brown to brown mottled orange, with calcareous pebbles		
10	CH				CLAY, gray mottled orange–brown, dense, highly plastic		
15	CH				SHALEY CLAY, gray, moist, yellow and orange staining on parting surfaces		
	SH				SHALE, dark gray, fissile, brittle, selenite crystals on parting surfaces		
20							
25							
30							
35							

Log of Boring No. MW10

= CHEMICAL ANALYSIS
= SIEVE ANALYSIS
= PERMEABILITY SAMPLE

PLATE

495 MW10 PS:1=1

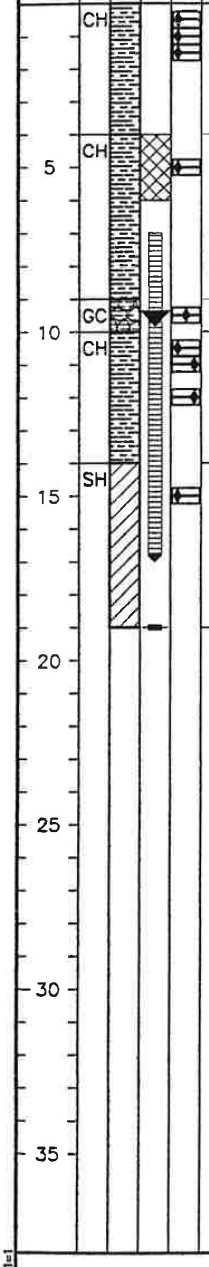
LAKE ENGINEERING, INC. Project Remedial Investigation GNB, Incorporated – Frisco, Texas Boring no. MW11

Project no. 495.4.5 Sheet 1 of 1

Sampling methods: 4.5" Split Spoon Completion date: 6/11/90 Boring depth: 19.0

Drilling methods: 8.0" Hollow Stem Auger Drill rig: CME-55 Well depth: 17.0

Groundwater elevation: 615.76 (msl) Date: 7/16/90 Surface elevation: 625.58 (msl)



STRATUM DESCRIPTION	Recovery	% Passing No. 200 Sieve
CLAY, dark brown, dense, highly plastic, calcareous, blocky with calcareous pebbles, shell fragment at 18.0"		
CLAY, dark to medium brown, highly plastic, calcareous, moist, larger calcareous pebbles at depth		
GRAVEL, sandy, clayey, calcareous		
CLAY, light brown to gray, moist, highly plastic		
SHALE, dark gray, brittle, fissile		

Log of Boring No. MW11

= CHEMICAL ANALYSIS
= SIEVE ANALYSIS
= PERMEABILITY SAMPLE

PLATE

495.MW11 PS:1=1

LAKE ENGINEERING, INC.

Project no. 495.4.5

Project Remedial Investigation
GNB, Incorporated – Frisco, Texas

Boring no. MW12

Sheet 1 of 1

Sampling methods: 4.5" Split Spoon | Completion date: 6/19/90 | Boring depth: 18.5

Drilling methods: 8.0" Hollow Stem Auger | Drill rig: CME-55 | Well depth: 18.5

Groundwater elevation: 624.43 (msl) | Date: 7/16/90 | Surface elevation: 633.94 (msl)

Depth (ft.)	USC CLASSIFICATION	USC SYMBOLS	CONSTRUCTION SYMBOLS	Samples	STRATUM DESCRIPTION	Recovery	% Passing No. 200 Sieve
	CH				CLAY, medium brown, firm, calcareous pebbles		
5	CH				CLAY, medium brown, firm, calcareous pebbles		
10	CH				CLAY, medium brown, firm, calcareous pebbles		
	CH				SHALEY CLAY, brown to gray, yellow and orange weathering on parting surfaces LIMESTONE, very hard, 1" layer–12'		
15	SH				SHALE, dark gray, fissile		
	SH				COMPOSITE LOG, 0–12.0' 1st, 12.0–18.5' 2nd, 6' offset NW		
20							
25							
30							
35							

495 MW12 PS:1=1

Log of Boring No. MW12

= CHEMICAL ANALYSIS
= SIEVE ANALYSIS
= PERMEABILITY SAMPLE

PLATE

LAKE ENGINEERING, INC. Project Remedial Investigation GNB, Incorporated – Frisco, Texas Boring no. MW13

Project no. 495.4.5 Sheet 1 of 1

Sampling methods: 4.5" Split Spoon Completion date: 6/18/90 Boring depth: 25.0

Drilling methods: 8.0" Hollow Stem Auger Drill rig: CME-55 Well depth: 22.0

Groundwater elevation: 620.94 (msl) Date: 7/16/90 Surface elevation: 636.17 (msl)

Depth (ft.)	USC CLASSIFICATION	USC SYMBOLS	CONSTRUCTION SYMBOLS	Samples	STRATUM DESCRIPTION	Recovery	% Passing No. 200 Sieve
	CH				CLAY, dark brown, fill		
5	CH				CLAY, dark brown, dense, stiff		
	CL				CLAY, moist, loose, blocky		
	CH				CLAY, dark brown, dense, stiff		
	CL				CLAY, silty, dark brown, loose, moist, sand layers 8.0' and 9.0', shell fragments 11.0' and 12.0'		
10							
	CH				CLAY, dark brown, calcareous, stiff, no recovery 13.5–15.0'		
15	CL				CLAY, silty, dark brown, calcareous		
	SC				SILT, clayey, brown, calcareous		
20	GM				GRAVEL, silty, sandy, wet		
	CH				SHALEY CLAY, gray, yellow staining on parting surfaces		
	SH				SHALE, dark gray		
25							
30							
35							

495 MW13 PS:1=1

Log of Boring No. MW13

= CHEMICAL ANALYSIS
= SIEVE ANALYSIS
= PERMEABILITY SAMPLE

PLATE

LAKE ENGINEERING, INC.

Project no. 495.4.5

Project Remedial Investigation
GNB, Incorporated – Frisco, Texas

Boring no. MW14

Sheet 1 of 1

Sampling methods: 4.5" Split Spoon Completion date: 6/18/90 Boring depth: 20.0

Drilling methods: 8.0" Hollow Stem Auger Drill rig: CME-55 Well depth: 17.0

Groundwater elevation: 622.77 (msl) Date: 7/16/90 Surface elevation: 629.89 (msl)

Depth (ft.)	USC CLASSIFICATION	USC SYMBOLS	CONSTRUCTION SYMBOLS	Samples	STRATUM DESCRIPTION	Recovery	% Passing No. 200 Sieve
	CH				CLAY, dark brown, blocky, calcareous, with calcareous pebbles		
5	CL				CLAY, sandy, gravelly, brown, slightly moist, dense, stiff		
10	CH				CLAY, slightly silty, light brown mottled gray, calca-reous pebbles, weathered limestone layers 13' and 13.5'		
	CH				CLAY, gray mottled brown		
15	MH				SILT, clayey, moist		
	CH				SHALEY CLAY, dark gray, dry, brittle, yellow staining on parting surfaces		
	SH				SHALE, dark gray, brittle, fissile		
20							
25							
30							
35							

Log of Boring No. MW14

= CHEMICAL ANALYSIS
= SIEVE ANALYSIS
= PERMEABILITY SAMPLE

PLATE

495 MW14 PS:1=1

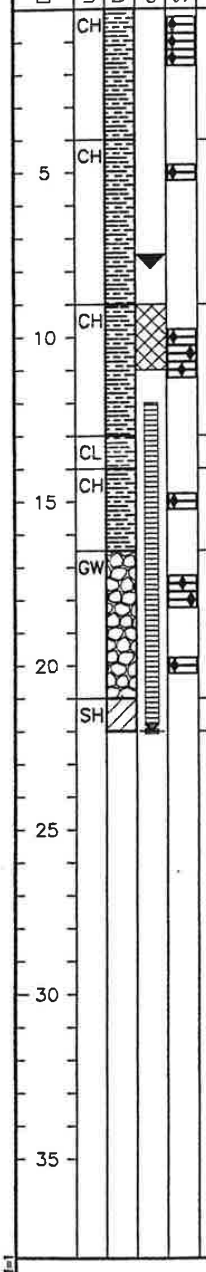
LAKE ENGINEERING, INC. Project Remedial Investigation GNB, Incorporated – Frisco, Texas Boring no. MW15

Project no. 495.4.5 Sheet 1 of 1

Sampling methods: 4.5" Split Spoon Completion date: 6/11/90 Boring depth: 22.0

Drilling methods: 8.0" Hollow Stem Auger Drill rig: CME-55 Well depth: 22.0

Groundwater elevation: 617.05 (msl) Date: 7/16/90 Surface elevation: 624.99 (msl)



STRATUM DESCRIPTION

Recovery	% Passing No. 200 Sieve

CLAY, dark brown, moist, calcareous, blocky

CLAY, dark brown, blocky, moist, highly plastic, loose, shell fragments

CLAY, silty, sandy, dark gray, loose, very moist

CLAY, stiff, sand size calcareous pebbles

CLAY, silty, dark brown mottled gray, calcareous, calcareous pebbles

GRAVEL, sandy, well graded, well rounded, calcareous, wet, clayey at 17.5–18.5'

SHALE, dark gray, weathered

Log of Boring No. MW15

= CHEMICAL ANALYSIS
= SIEVE ANALYSIS
= PERMEABILITY SAMPLE

PLATE

495 MW15 PS:1=1

LAKE ENGINEERING, INC. Project Remedial Investigation GNB, Incorporated – Frisco, Texas Boring no. MW16

Project no. 495.4.5 Sheet 1 of 8

Sampling methods: 4.5" Split Spoon Completion date: 5/23/90 Boring depth: 269.0

Drilling methods: 8.0" Hollow Stem Auger Drill rig: CME–55 Well depth: 77.5

Groundwater elevation: 562.54 (msl) Date: 7/16/90 Surface elevation: 627.93 (msl)

Depth (ft.)	USC CLASSIFICATION	USC SYMBOLS	CONSTRUCTION SYMBOLS	Samples	STRATUM DESCRIPTION	Recovery	% Passing No. 200 Sieve
	CH				CLAY, dark brown, blocky, calcareous, calcareous pebbles		
5	CH				CLAY, dark brown, moist, blocky		
10	CH				CLAY, brown, blocky, calcareous pebbles		
15	CH				CLAY, sandy, silty, gravelly, wet		
	CH				SHALEY CLAY, gray with yellow and orange staining on parting surface		
20	SH				SHALE, dark gray, brittle, fissle, grading to less brittle, yellow weathering on parting surface		
25	SH				SHALE, dark gray, shell fragments at 28.0' ((Rig change to Mobile B–53 for rock coring))		
30							
35							

495 MW16 PS:1=1

Log of Boring No. MW16

= CHEMICAL ANALYSIS
= SIEVE ANALYSIS
= PERMEABILITY SAMPLE

PLATE

LAKE ENGINEERING, INC.

Project no. 495.4.5

Project Remedial Investigation
GNB, Incorporated – Frisco, Texas

Boring no. MW16

Sheet 2 of 8

Sampling methods: 4.5" Split Spoon | Completion date: 5/23/90 | Boring depth: 269.0

Drilling methods: 8.0" Hollow Stem Auger | Drill rig: CME-55 | Well depth: 77.5

Groundwater elevation: 562.54 (msl) | Date: 7/16/90 | Surface elevation: 627.93 (msl)

Depth (ft.)	USC CLASSIFICATION	USC SYMBOLS	CONSTRUCTION SYMBOLS	Samples	STRATUM DESCRIPTION	Recovery	% Passing No. 200 Sieve
	SH				SHALE, dark gray, 1/4" clay layer at 36.0' and 37.0'		
40	SH				SHALE, dark gray, calcareous particles on parting surface from 42.0' to 136.0'		
45	SH				SHALE, dark gray, pyrite found at 48.5', 4" limestone layer at 53.0'		
50							
55	SH				SHALE, dark gray, sandstone layers at 59.5' and 61.5' clay lense at 62.0', sandstone layers at 64.0' and 64.5'		
60							
65	SH				SHALE, dark gray, limestone layers at 66.0', 66.5', and 68.0'		
70							

Log of Boring No. MW16

= CHEMICAL ANALYSIS
= SIEVE ANALYSIS
= PERMEABILITY SAMPLE

PLATE

495 MW16 PS-1=1

LAKE ENGINEERING, INC. Project Remedial Investigation GNB, Incorporated – Frisco, Texas Boring no. MW16

Project no. 495.4.5 Sheet 3 of 8

Sampling methods: 4.5" Split Spoon Completion date: 5/23/90 Boring depth: 269.0

Drilling methods: 8.0" Hollow Stem Auger Drill rig: CME-55 Well depth: 77.5

Groundwater elevation: 562.54 (msl) Date: 7/16/90 Surface elevation: 627.93 (msl)

Depth (ft.)	USC CLASSIFICATION	USC SYMBOLS	CONSTRUCTION SYMBOLS	Samples	STRATUM DESCRIPTION	Recovery	% Passing No. 200 Sieve
	SH				SHALE, dark gray, limestone layers at 73.0' and 73.5'		
75	SH				SHALE, dark gray, limestone layers at 76.5', 79.0', and 84.5', sand layers at 82.0' and 84.0'		
80							
85	SH				SHALE, dark gray, limestone layer at 86.0'		
90							
95	SH				SHALE, dark gray, limestone layers at 96.0', 97.0', 103.0', and 104.0'		
100							
105							

Log of Boring No. MW16

= CHEMICAL ANALYSIS
= SIEVE ANALYSIS
= PERMEABILITY SAMPLE

PLATE

495 MW16 PS:1=1

LAKE ENGINEERING, INC. Project Remedial Investigation GNB, Incorporated – Frisco, Texas Boring no. MW16

Project no. 495.4.5 Sheet 4 of 8

Sampling methods: 4.5" Split Spoon Completion date: 5/23/90 Boring depth: 269.0

Drilling methods: 8.0" Hollow Stem Auger Drill rig: CME-55 Well depth: 77.5

Groundwater elevation: 562.54 (msl) Date: 7/16/90 Surface elevation: 627.93 (msl)

Depth (ft.)	USC CLASSIFICATION	USC SYMBOLS	CONSTRUCTION SYMBOLS	Samples	STRATUM DESCRIPTION	Recovery	% Passing No. 200 Sieve
	SH				SHALE, dark gray, limestone layer at 107.0' and 108.0' sandstone layer at 108.75' and 110.0'		
110	SH				SHALE, dark gray, limestone layer		
115	SH				SHALE, dark gray, limestone layers		
120	SH				SHALE, dark gray, thin limestone layers throughout fossil fragments found in limestone layers		
125							
130	SH				SHALE, dark gray, limestone layers, fractures at 60 at 136.0' and 136.5'		
135	SH				SHALE, dark gray, hard, dense, non-calcareous		
	SH				SHALE, dark gray, non-calcareous particles		
140							

495 MW16 PS.1a1

Log of Boring No. MW16

= CHEMICAL ANALYSIS
= SIEVE ANALYSIS
= PERMEABILITY SAMPLE

PLATE

LAKE ENGINEERING, INC.
Project no. 495.4.5

Project Remedial Investigation
GNB, Incorporated – Frisco, Texas

Boring no. MW16
Sheet 5 of 8

Sampling methods: 4.5" Split Spoon | Completion date: 5/23/90 | Boring depth: 269.0

Drilling methods: 8.0" Hollow Stem Auger | Drill rig: CME-55 | Well depth: 77.5

Groundwater elevation: 562.54 (msl) | Date: 7/16/90 | Surface elevation: 627.93 (msl)

Depth (ft.)	USC CLASSIFICATION	USC SYMBOLS	CONSTRUCTION SYMBOLS	Samples	STRATUM DESCRIPTION	Recovery	% Passing No. 200 Sieve
145	SH				SHALE, dark gray, non-calcareous particles		
150	SH				SHALE, dark gray, solid, non-calcareous		
155	SH				SHALE, dark gray, non-calcareous		
160							
165							
170	SH				SHALE, dark gray, 1.5" limestone layer at 173.0'		
175							

Log of Boring No. MW16

= CHEMICAL ANALYSIS
= SIEVE ANALYSIS
= PERMEABILITY SAMPLE

PLATE

495.MW16.PS.1=1

LAKE ENGINEERING, INC.

Project no. 495.4.5

Project Remedial Investigation
GNB, Incorporated – Frisco, Texas

Boring no. MW16

Sheet 6 of 8

Sampling methods: 4.5" Split Spoon | Completion date: 5/23/90 | Boring depth: 269.0

Drilling methods: 8.0" Hollow Stem Auger | Drill rig: CME-55 | Well depth: 77.5

Groundwater elevation: 562.54 (msl) | Date: 7/16/90 | Surface elevation: 627.93 (msl)

Depth (ft.)	USC CLASSIFICATION	USC SYMBOLS	CONSTRUCTION SYMBOLS	Samples	STRATUM DESCRIPTION	Recovery	% Passing No. 200 Sieve
	SH				SHALE, dark gray, 1" limestone layer at 175.5'		
	SH				SHALE, dark gray, 1.5" limestone layer at 182.5'		
180							
185							
	SH				SHALE, dark gray		
190							
	SH				SHALE, dark gray, limestone layer at 201.0' ((Core not recovered at 193.0' to 198.0'))		
195							
200							
	SH				SHALE, dark gray, 6" limestone layer at 204.0', 1" limestone layer at 206.5', 1/4" limestone layer 207.5'		
205							
210							

Log of Boring No. MW16

= CHEMICAL ANALYSIS
= SIEVE ANALYSIS
= PERMEABILITY SAMPLE

PLATE

495 MW16 PS:1=1

LAKE ENGINEERING, INC.

Project no. 495.4.5

Project: Remedial Investigation
GNB, Incorporated – Frisco, Texas

Boring no. MW16

Sheet 7 of 8

Sampling methods: 4.5" Split Spoon | Completion date: 5/23/90 | Boring depth: 269.0

Drilling methods: 8.0" Hollow Stem Auger | Drill rig: CME-55 | Well depth: 77.5

Groundwater elevation: 562.54 (msl) | Date: 7/16/90 | Surface elevation: 627.93 (msl)

Depth (ft.)	USC CLASSIFICATION	USC SYMBOLS	CONSTRUCTION SYMBOLS	Samples	STRATUM DESCRIPTION	Recovery	% Passing No. 200 Sieve
215	SH				SHALE, dark gray, limestone layer at 214.0'		
220	SH				SHALE, dark gray, 1/2" limestone layer at 227.5' and 228.0'		
225							
230	SH				1/4" limestone layer at 237.0'		
235							
240	SH				SHALE, dark gray, 1/2" siltstone layer at 239.0', several siltstone layers at 240.0' and 241.0'		
245							

Log of Boring No. MW16

= CHEMICAL ANALYSIS
= SIEVE ANALYSIS
= PERMEABILITY SAMPLE

PLATE

495 MW16 PS:1=1

LAKE ENGINEERING, INC.

Project Remedial Investigation
GNB, Incorporated – Frisco, Texas

Boring no. MW16

Project no. 495.4.5

Sheet 8 of 8

Sampling methods: 4.5" Split Spoon | Completion date: 5/23/90 | Boring depth: 269.0

Drilling methods: 8.0" Hollow Stem Auger | Drill rig: CME-55 | Well depth: 77.5

Groundwater elevation: 562.54 (msl) | Date: 7/16/90 | Surface elevation: 627.93 (msl)

Depth (ft.)	USC CLASSIFICATION	USC SYMBOLS	CONSTRUCTION SYMBOLS	Samples	STRATUM DESCRIPTION	Recovery	% Passing No. 200 Sieve
	SH				SHALE, dark gray		
	SH				SHALE, dark gray, siltstone layers at 250.0' and 251.0'		
250	SH				SHALE, dark gray ((Core not recovered from 256.0' to 259.0'))		
255	SH				SHALE, dark gray, siltstone layers at 260.0' and 264.0' limestone layers at 264.0' and 268.0', EOB at 269.0'		
260							
265							
270							
275							
280							

Log of Boring No. MW16

= CHEMICAL ANALYSIS
= SIEVE ANALYSIS
= PERMEABILITY SAMPLE

PLATE

495 MW16 PS 1=1

LAKE ENGINEERING, INC.

Project no. 495.4.5

Project Remedial Investigation
GNB, Incorporated – Frisco, Texas

Boring no. MW16S

Sheet 1 of 1

Sampling methods: 4.5" Split Spoon | Completion date: 6/6/90 | Boring depth: 19.0

Drilling methods: 8.0" Hollow Stem Auger | Drill rig: CME-55 | Well depth: 17.0

Groundwater elevation: 620.31 (msl) | Date: 7/16/90 | Surface elevation: 627.51 (msl)

Depth (ft.)	USC CLASSIFICATION	USC SYMBOLS	CONSTRUCTION SYMBOLS	Samples	STRATUM DESCRIPTION	Recovery	% Passing No. 200 Sieve
	CH				CLAY, dark brown, blocky, highly plastic, clacareous		
5	CH				CLAY, silty, dark brown, blocky, highly plastic, calcareous		
10	CH				CLAY, dark brown, blocky, calcareous pebbles at 11.5' and 12.5'		
15	GC				GRAVEL, clayey, sandy, well rounded, calcareous		
	CH				SHALEY CLAY		
	SH				SHALE, dark gray, weathered, fissile		
20							
25							
30							
35							

Log of Boring No. MW16S

= CHEMICAL ANALYSIS
= SIEVE ANALYSIS
= PERMEABILITY SAMPLE

PLATE

495 MW16S PS-1=1

LAKE ENGINEERING, INC.

Project no. 495.4.5

Project Remedial Investigation
GNB, Incorporated – Frisco, Texas

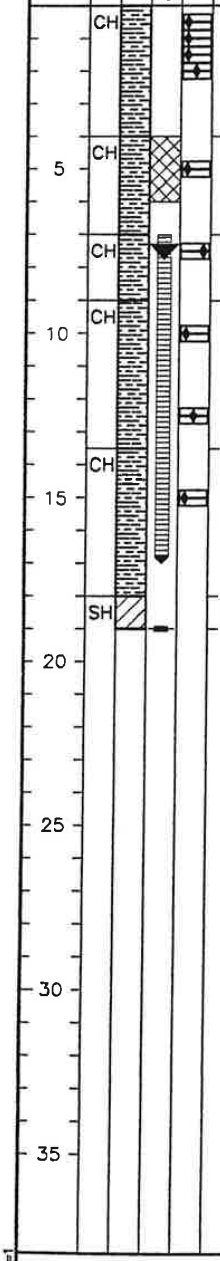
Boring no. MW17

Sheet 1 of 1

Sampling methods: 4.5" Split Spoon Completion date: 6/7/90 Boring depth: 19.0

Drilling methods: 8.0" Hollow Stem Auger Drill rig: CME-55 Well depth: 17.0

Groundwater elevation: 620.83 (msl) Date: 7/16/90 Surface elevation: 628.58 (msl)



STRATUM DESCRIPTION

Recovery	% Passing No. 200 Sieve

CLAY, silty, dark brown, blocky

CLAY, dark brown to brown, sand size calcareous pebbles

CLAY, very soft, blocky, moist

CLAY, brown mottled gray, with zones of calcareous pebbles varying in grain size from sand to gravel

SHALEY CLAY, dark gray, light yellow staining on parting surfaces

SHALE, dark gray

Log of Boring No. MW17

= CHEMICAL ANALYSIS
= SIEVE ANALYSIS
= PERMEABILITY SAMPLE

PLATE

495 MW17 PS:1=1

LAKE ENGINEERING, INC.

Project no. 495.4.5

Project Remedial Investigation
GNB, Incorporated – Frisco, Texas

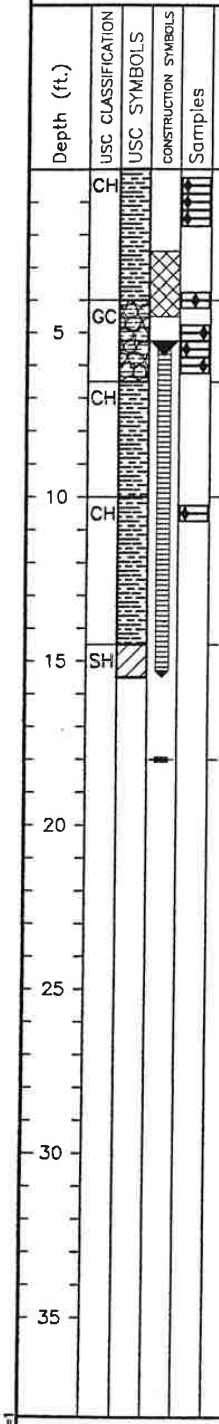
Boring no. MW18

Sheet 1 of 1

Sampling methods: 4.5" Split Spoon | Completion date: 6/12/90 | Boring depth: 18.0

Drilling methods: 8.0" Hollow Stem Auger | Drill rig: CME-55 | Well depth: 15.5

Groundwater elevation: 626.17 (msl) | Date: 7/16/90 | Surface elevation: 631.84 (msl)



STRATUM DESCRIPTION

Recovery	% Passing No. 200 Sieve

CLAY, dark to light brown, with calcareous pebbles

GRAVEL, clayey, sandy, dense, calcareous

CLAY, gray mottled orange, moist, very plastic, interbedded with light yellow slit laminae

SHALEY CLAY, gray mottled orange–brown, some interbedded light yellow silt and iron stained laminae

SHALE, dark gray, wet

Log of Boring No. MW18

= CHEMICAL ANALYSIS
= SIEVE ANALYSIS
= PERMEABILITY SAMPLE

PLATE

495 MW18 PS-1-1

PHASE I RCRA FACILITY INVESTIGATION ADDENDUM DISPOSAL AREA BORING DESCRIPTIONS (LAKE, 1993)

TABLE 12-1a
Delineation Boring Descriptions
North Landfill

Boring Number	Total Depth	Description
NB-1	12'	0-2' clay; 2-4' trash; 4-12' clay; 12' water
NB-2	13'	0-12' trash; 7' water; 13' slag
NB-3	7'	0-2' clay; 2-3' organics; 3-7' clay; 6' water
NB-4	12'	0-12' clay; 12' water
NB-5	12.5'	0-3' clay; 3-12.5' trash; 12.5' slag; 12' water
NB-6	14'	0-2' clay; 2-5' trash; 5-14' clay; 14' slag; 7' water
NB-7	10'	0-2' clay; 2-3' trash; 3-10' clay; 10' water
NB-8	14'	0-3' clay; 3-6' trash; 6-14' clay; 14' slag; 12' water
NB-9	10'	0-2' clay; 2-3' trash; 3-10' clay; 10' water
NB-10	7'	0-7' clay; 7' water
NB-11	10'	0-2' clay; 2-8' trash; 8-10' clay; 10' water
NB-12	8'	0-2' clay; 2-3' trash; 3-8' clay; 8' water
NB-13	5'	0-1' clay; 1-5' trash; 2-3' slag; 5' water
NB-14	8'	0-2' clay; 2-3' organics; 3-8' clay; 8' water
NB-15	4'	0-3' clay; 3-4' trash/organics; 4' water
NB-16	14'	0-3' clay; 3-4' trash; 4-14' clay; 14' slag; 4-5' water
NB-17	14.5'	0-3' clay; 3-14.5' trash; 14.5' slag; 4' water
NB-18	5'	0-2' clay; 2-5' trash/organics; 5' water
NB-19	15'	0-3' clay; 3-15' slag/organics; 15' slag; 7' water
NB-20	14'	0-3' clay; 3-14' trash; 14' slag; 7' water
NB-21	20'	0-3' clay; 3-20' trash; 20' clay; 4' water
NB-22	8'	0-2' clay; 2-8' trash; 8' water
NB-23	20'	0-3' clay; 3-9' trash/organics; 9-20' clay; 14' water
NB-24	9'	0-0.5' clay; 0.5-2.5' rubber; 9' carpet; 5' water
NB-25	13'	0-3' clay; 3-12' trash/organics; 13' slag; 8' water
NB-26	20'	0-2' clay; 2-3' trash; 3-20' clay; 14' water
NB-27	10'	0-0.5' clay; 0.5'-1' rubber; 1-10' clay; 10' water
NB-28	11'	0-1' clay; 1-5' slag; 5-10' trash; 11' slag

TABLE 12-1a (Continued)
Delineation Boring Descriptions
North Landfill

Boring Number	Total Depth	Description
NB-29	6'	0-4' clay; 4-6' trash; 6' water
NB-30	10'	0-4' clay; 4-10' wire
NB-31	7'	0 7' clay; 7' water
NB-32	8'	0-2' clay; 2-8' trash; 8' water
NB-33	12'	0-4' clay; 4-12' trash; 10' water
NB-34	9'	0-3' clay; 3-8' trash; 9' water
NB-35	12'	0-3' clay; 3-12' trash
NB-36	6'	0-6' clay; 6' water
NB-37	6'	0-2' clay; 2-3' trash; 3-6' clay; 6' water
NB-38	10'	0-4' clay; 4-6' trash; 10' water
NB-39	12'	0-4' clay; 4-12' trash/organics
NB-40	4'	0-4' clay; 4' trash/rubber
NB-41	10'	0-3' clay; 3-4' organics; 4-10' clay; 10' water
NB-42	10'	0-2' clay; 2-3' trash; 3-10' clay; 10' water
NB-43	12'	0-1' clay; 1-2' trash; 2-10' clay; 10-12' sand; 10' water
NB-44	6'	0-6' clay
NB-45	2'	0-2' clay; 2' trash
NB-46	5'	0-5' clay; 5' trash
NB-47	2'	0-1' clay; 1-2' slag
NB-48	2'	0-1' clay; 1-2' slag
NB-49	3'	0-2' clay; 2-3' slag
NB-50	1'	0-0.5' clay; 0.5-1' slag
NB-51	3'	0-2' clay; 2-3' slag/rubber
NB-52	3'	0-2' clay; 2-3' slag
NB-53	3'	0-2.5' clay; 2.5-3' slag/rubber
NB-54	7'	0-7' clay; 7-8' trash

TABLE 12-3a
Delineation Boring Descriptions
South Landfill

Boring Number	Total Depth	Description
SB-1	8'	0-2' clay; 2-8' slag/rubber; 8' shale
SB-2	6'	0-6' clay
SB-3	2'	0-1' clay; 1-2' slag
SB-4	6'	0-6' clay
SB-5	4'	0-3' clay; 3-4' slag
SB-6	10'	0-10' clay
SB-7	3'	0-2' clay; 2-3' slag
SB-8	10'	0-10' clay
SB-9	10'	0-10' clay
SB-10	10'	0-10' clay
SB-11	4'	0-3' clay; 3-4' slag
SB-12	10'	0-10' clay
SB-13	10'	0-10' clay
SB-14	10'	0-10' clay
SB-15	4'	0-3' clay; 3-4' slag
SB-16	6'	0-6' clay
SB-17	6'	0-6' clay
SB-18	3'	0-3' clay
SB-19	4'	0-3' clay; 3-4' slag
SB-20	10'	0-10' clay
SB-21	10'	0-10' clay
SB-22	10'	0-10' clay
SB-23	4'	0-3' clay; 3-4' slag
SB-24	4'	0-3' clay; 3-4' slag
SB-25	10'	0-10' clay
SB-26	3'	0-2' clay; 2-3' slag
SB-27	4'	0-3' clay; 3-4' slag

w95-93\TABLE12 3A

APPENDIX 3
MONITORING WELL DEVELOPMENT AND PURGING DATA

APPENDIX 3.1
GROUNDWATER SAMPLING FORMS

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name:	Exide Frisco	Date:	1/16/14 (1620)
Project Number:	1397086	Sampler:	JX
Well Identification:	BAR	Weather:	60s, Sunny
Length of Sand Pack	6'	Boring Diameter:	8"
Well Casing Diameter:	4"		

Condition of Well

Cap	Y	Bailer/Rope	NA
Lock	Y	Protective Casing	Y

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	12.07'
B.	Water Level (ft.)	10.69'
C.	Column of Water in Well (A-B)	1.38'
D.	Gallons per Linear Foot of Casing:	0.22
	4-inch well = 0.6528 gallons/ft.	
	2-inch well = 0.163 gallons/ft.	
E.	Three Well Volumes (C ×D×3)	0.67

Low flow

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)	
1635		~10'	0.1	-	17.34	228.9	0.945	6.96	217	4.91	Brown, milky	11.03
	1640			0.5	17.01	225.3	0.858	6.91	160	4.61	Brown, dandy	11.19
	1645			1.0	16.70	214.0	0.854	6.82	115	4.35	"	11.35
	1650			1.5	16.59	192.0	0.860	6.49	72.7	4.18	"	11.45
	1655			2.0	16.66	154.0	0.873	6.36	66.1	3.93	"	11.62
	1700			2.5	16.74	94.0	0.879	6.25	34.4	3.78	"	DRY
←					DRY							→
TOTAL VOLUME PURGED (Liters)												

X – Testing performed during sampling process

Samples and Preservatives

Sampled 1/17/14 0855 total & dissolved metals (10 µm & 0.45 µm filters, respectively).

Comments

1/16/14 Purged Dry – Return next day & sample.

NA – Not available

Signed/Sampler: _____ Date: 1/16/14

Signed/Reviewer: _____ Date: 05/14/14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name: Exide Frisco
Project Number: 1302086
Well Identification: MW-11
Length of Sand Pack: 13 feet
Well Casing Diameter: 4 inch

Date: 03-28-14
Sampler: CMT
Weather: Rain, 60°
Boring Diameter: 8 inch

Condition of Well

Cap: Y
Lock: Y

Bailer/Rope: N/A
Protective Casing: Y

Purge Data

A. Total Length of Casing (depth to bottom in ft.) —
B. Water Level (ft.) 9.44 (1535)
C. Column of Water in Well (A-B) —
D. Gallons per Linear Foot of Casing: —
   4-inch well = 0.6528 gallons/ft.
   2-inch well = 0.163 gallons/ft.
E. Three Well Volumes (C ×D×3) —

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged (L)	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)	Water Level (ft.)
1536												
1539		~1 FT	0.2	0.6	18.82	131.9	1.073	6.77	4.71	3.53	Clear	9.71
1544		↓	↓	1.6	18.69	132.4	1.052	6.74	6.17	2.61	Clear	9.87
1549				2.6	18.73	130.0	1.047	6.73	4.79	2.46	Clear	10.02
1554				3.6	18.68	129.3	1.041	6.73	3.55	2.42	Clear	10.23
1559				4.6	18.65	128.4	1.038	6.73	3.56	2.40	Clear	10.45
1602			↓	5.2	18.64	128.2	1.037	6.73	3.36	2.37	Clear	10.57
	1608											
TOTAL VOLUME PURGED (Liters)												

X – Testing performed during sampling process

Samples and Preservatives

Sampled at 1606 - Dissolved Metals (C2) 0.45 um field Altered
6020 - Savannah, GA

Comments

Signed/Sampler: CMT Date: 03-28-14

Signed/Reviewer: Lonnie Monroe Date: 05-14-14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name: Exide Frisco
Project Number: 130-2086
Well Identification: MW-14
Length of Sand Pack: 18 feet
Well Casing Diameter: 4 inches

Date: 2-17-14
Sampler: RMS/CMT
Weather: 64F pt cloudy
Boring Diameter: 8 inch

Condition of Well

Cap: yes
Lock: yes

Bailer/Rope: N/A
Protective Casing: yes

Purge Data

A. Total Length of Casing (depth to bottom in ft.): 18.53
B. Water Level (ft.): 6.39 @ 1048
C. Column of Water in Well (A-B): 12.14
D. Gallons per Linear Foot of Casing: 1.98
   4-inch well = 0.6528 gallons/ft.
   2-inch well = 0.163 gallons/ft.
E. Three Well Volumes (C ×D×3): 5.9

Low flow

Field Analyses

Sample Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged (L)	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)	water level (ft)
Start 1050												
1053		mid screen	0.2		17.92	174.3	4.306	6.64	24.1	3.77	clear	6.77
1058		"	"		17.97	181.6	4.248	6.59	19.0	2.37	clear	7.19
1103		"	"		17.99	186.2	4.230	6.59	18.7	2.38	clear	7.61
1108		"	"		18.01	187.1	4.227	6.58	18.1	2.39	clear	7.98
	1110	↓	↓	4.0	—	—	—	—	—	—	—	—
TOTAL VOLUME PURGED (Liters)				4.0								

X – Testing performed during sampling process

Samples and Preservatives

1110 - Total Metals - 6020 - 250 mL plastic w/Nitric (field filtered 10µm)
1110 - Dissolved Metals - 6020 - 250 mL plastic w/Nitric (field filtered 0.45µm)

Comments

Signed/Sampler: [signature] Date: 2-17-14

Signed/Reviewer: [signature] Date: 05-14-14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name: Exide Frisco
Project Number: 130-2081.
Well Identification: MW-16
Length of Sand Pack —
Well Casing Diameter: 4" (double cased)

Date: 2-14-14
Sampler: RMS/CMT
Weather: 50F clear
Boring Diameter: — 8 inch

Condition of Well

Cap: yes
Lock: yes

Bailer/Rope: N/a
Protective Casing: yes

Purge Data

A. Total Length of Casing (depth to bottom in ft.): 82.31 @ 1100
B. Water Level (ft.): 11.98
C. Column of Water in Well (A-B): ~~70.33~~ 11.46
D. Gallons per Linear Foot of Casing:
4-inch well = 0.6528 gallons/ft.
2-inch well = 0.163 gallons/ft.
E. Three Well Volumes (C ×D×3): 34.39

Field Analyses

Start Time	Stop Time	Pump Depth (from bottom)	Pump Rate (0.1-0.5 L/min)	Volume Purged (L)	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)	water level (ft.)
1103												
1104		~52	0.2		20.11	215.8	1.6069	7.03	8.65	3.58	clear	12.43
1109		~52	0.2		20.23	214.0	1.707	7.01	4.75	2.62	clear	12.82
1114		~52	0.2		20.40	210.1	1.709	7.00	5.14	2.72	clear	13.09
1119		~52	0.2		20.32	213.2	1.705	6.98	4.89	2.73	clear	13.67
	1125	~52	0.2	4.6	—	—	—	—	—	—	—	—
TOTAL VOLUME PURGED (Liters)				4.6								

X – Testing performed during sampling process

Samples and Preservatives

1125 - Total Metals - 6020 - 250mL plastic w/ Nitric
1125 Dissolved Metals - 6020 - 250mL plastic w/ Nitric - Field filtered (0.45µm)
Also collected MS/MSD and DUP-2 at MW-16

Comments

MW-16 is most well & deep well; was difficult to determine one map which was MW-16 & MW-16S.

Signed/Sampler: [signature] Date: 2-14-14
Signed/Reviewer: [signature] Date: 05-14-14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name: Exide Frisco
Project Number: 130-2086
Well Identification: MW-116S
Length of Sand Pack: 12 feet
Well Casing Diameter: 4" (double cased)

Date: 2-14-14
Sampler: RMS / CMT
Weather: 55°F clear
Boring Diameter: 8 inch

Condition of Well

Cap: yes
Lock: yes

Bailer/Rope: n/a
Protective Casing: yes

Purge Data

A. Total Length of Casing (depth to bottom in ft.): 18.79 @ 1136
B. Water Level (ft.): 9.36
C. Column of Water in Well (A-B): 9.43
D. Gallons per Linear Foot of Casing: 1.54
   4-inch well = 0.6528 gallons/ft.
   2-inch well = 0.163 gallons/ft.
E. Three Well Volumes (C ×D×3): 4.61

Field Analyses

Start Time	Stop Time	Pump Depth (From bottom)	Pump Rate (0.1-0.5 L/min)	Volume Purged (L)	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)	water level
1137												
1141		~1'	0.2		20.27	61.4	8.335	5.99	46.9	1.34	cloudy	9.49
1146		~1'	0.2		20.03	75.6	8.463	5.99	4.30	1.74	clear	9.57
1151		~1'	0.2		20.25	75.7	8.495	6.00	2.12	1.71	clear	9.59
1156		~1'	0.2		20.31	75.9	8.511	6.00	2.01	1.70	clear	9.62
1159		~1'	0.2		20.51	80.1	8.521	6.00	2.03	1.69	clear	9.63
	1205	~1'	0.2	5.4	—	—	—	—	—	—	—	
TOTAL VOLUME PURGED (Liters)				5.4								

X – Testing performed during sampling process

Samples and Preservatives

1205 – Total Metals – 6020 – 250mL w/ Nitric
1205 – Dissolved Metals – 6020 – 250mL w/ Nitric – field filtered (0.45µm)

Comments

Signed/Sampler: [signature] Date: 2-14-14
Signed/Reviewer: [signature] Date: 02/04/14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name: Exide Frisco
Project Number: 130-2086
Well Identification: MW-17
Length of Sand Pack: 12 feet
Well Casing Diameter: 4 inch

Date: 2-17-14
Sampler: RMS/CMT
Weather: 70F sunny
Boring Diameter: 8 inch

Condition of Well

Cap: Yes
Lock: yes

Bailer/Rope: N/A
Protective Casing: yes *

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	18.85
B.	Water Level (ft.)	8.61 @ 1434
C.	Column of Water in Well (A-B)	10.24
D.	Gallons per Linear Foot of Casing: 4-inch well = 0.6528 gallons/ft. 2-inch well = 0.163 gallons/ft.	1.67
E.	Three Well Volumes (C ×D×3)	5

Field Analyses

Start 1436

Sample ~~Start~~ Time	Stop Time	Pump Depth (From bottom)	Pump Rate (0.1-0.5 L/min)	Volume Purged (L)	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)	Water Level (Ft)
1442		~1'	0.15		20.62	21.8	4.512	5.94	15.5	1.39	clear	8.70
1447		~1'	0.15		20.66	21.1	4.478	5.97	14.1	1.04	clear	8.71
1452		~1'	0.15		20.79	-14.4	4.137	6.35	12.7	0.75	clear	8.71
1457		~1'	0.15		20.70	-13.9	4.067	6.36	12.3	0.76	clear	8.71
1502		~1'	0.15		20.58	-14.1	4.017	6.42	11.8	0.77	clear	8.71
	1505	~1'	0.15	4.4	—	—	—	—	—	—	—	—
TOTAL VOLUME PURGED (Liters)				4.4								

X – Testing performed during sampling process

Samples and Preservatives

1505 - Total Metals - 6020 - 250 mL plastic w/ Nitric (field filtered 10µm)
1505 - Dissolved Metals - 6020 - 250 mL plastic w/ Nitric (field filtered 0.45µm)

Comments

* lid of protective casing is broken at the hinge

Signed/Sampler: [signature] Date: 2-17-14
Signed/Reviewer: [signature] Date: 05-14-14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name: Exide Frisco
Project Number: 130-20816
Well Identification: MW-26
Length of Sand Pack: 11 feet
Well Casing Diameter: 2 inches

Date: 2-17-14
Sampler: RMS / CMT
Weather: 70F sunny
Boring Diameter: 7.75 inch

Condition of Well

Cap: yes
Lock: yes

Bailer/Rope: N/A
Protective Casing: yes

Purge Data

A. Total Length of Casing (depth to bottom in ft.): 17.55
B. Water Level (ft.): 6.08 @ 1344
C. Column of Water in Well (A-B): ~~11.47~~
D. Gallons per Linear Foot of Casing: ~~1.87~~
   4-inch well = 0.6528 gallons/ft.
   2-inch well = 0.163 gallons/ft.
E. Three Well Volumes (C ×D×3): ~~5.61~~

Low flow

Field Analyses

Sample Start Time	Stop Time	Pump Depth (from bottom)	Pump Rate (0.1-0.5 L/min)	Volume Purged (L)	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)	water level (ft)
Start 1345												
1350		~1'	0.15		19.79	58.6	6.800	6.17	88.0	0.63	cloudy	7.15
1355		~1'	0.15		19.76	57.5	6.784	6.17	88.9	0.50	cloudy	7.95
1400		~1'	0.15		19.43	57.8	6.693	6.17	84.5	0.66	cloudy	8.27
1405		~1'	0.15		19.50	60.1	6.717	6.17	79.9	0.69	cloudy	8.52
1410		~1'	0.15		19.43	60.8	6.731	6.17	78.0	0.67	cloudy	8.89
	1415	~1'	0.15	4.5	—	—	—	—	—	—	—	—
TOTAL VOLUME PURGED (Liters)				4.5								

X – Testing performed during sampling process

Samples and Preservatives

1415 - Total Metals - 6020 - 250 mL plastic w/ Nitric (field filtered 10um)
1415 - Dissolved Metals - 6020 - 250 mL plastic w/ Nitric (field filtered 0.45um)

Comments

Placed lock + into protective casing

Signed/Sampler: _____ Date: 2-17-14
Signed/Reviewer: _____ Date: 05/14/14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name: Exide Frisco
Project Number: 130-2086
Well Identification: MW-27
Length of Sand Pack — 11 feet
Well Casing Diameter: 2"

Date: 2-17-14
Sampler: RMS/CMT
Weather: 68F Sunny
Boring Diameter: — "7.75 inch

Condition of Well

Cap: yes
Lock: yes

Bailer/Rope: N/A
Protective Casing: yes

Purge Data

A. Total Length of Casing (depth to bottom in ft.) 17.15
B. Water Level (ft.) 5.00 @ 1225
C. Column of Water in Well (A-B) 12.15
D. Gallons per Linear Foot of Casing: 1.98
   4-inch well = 0.6528 gallons/ft.
   2-inch well = 0.163 gallons/ft.
E. Three Well Volumes (C ×D×3) 5.94

Low Flow

Field Analyses

Sample Start Time	Stop Time	Pump Depth (from bottom)	Pump Rate (0.1-0.5 L/min)	Volume Purged (L)	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)	water level (Ft)
Start 1227												
1235		-1'	0.2		18.00	83.1	2.477	6.34	200	1.11	cloudy	6.39
1240		↓	↓		18.68	92.5	2.517	6.34	190	0.99	cloudy	7.44
1245		↓	↓		18.39	91.9	2.507	6.33	180	1.00	cloudy	7.88
1250		↓	↓		18.45	92.7	2.499	6.34	177	1.07	cloudy	8.19
	1255	↓	↓	5.6	—	—	—	—	—	—	—	—
TOTAL VOLUME PURGED (Liters)				5.6								

X – Testing performed during sampling process

Samples and Preservatives

1255 - Total Metals - 6020 - 250mL plastic w/ Nitric (Field Filtered 10um)
1255 - Dissolved Metals - 6020 - 250mL plastic w/ Nitric (Field Filtered 0.45um)

Comments

Signed/Sampler: [signature] Date: 2-17-14
Signed/Reviewer: [signature] Date: 05-14-14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name: Exide Frisco
Project Number: 130-2086
Well Identification: MW-29
Length of Sand Pack — 10.5 feet
Well Casing Diameter: 2 inches

Date: 2-17-14
Sampler: RMS/CMT
Weather: 70F sunny
Boring Diameter: — 7.75 inch

Condition of Well

Cap: yes
Lock: yes

Bailer/Rope: N/A
Protective Casing: yes

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	17.28
B.	Water Level (ft.)	7.50 @ 1309
C.	Column of Water in Well (A-B)	9.78
D.	Gallons per Linear Foot of Casing:	1.59
	4-inch well = 0.6528 gallons/ft.	
	2-inch well = 0.163 gallons/ft.	
E.	Three Well Volumes (C ×D×3)	4.78

Low flow

Field Analyses

Sample ~~Start~~ Time	Stop Time	Pump Depth (From bottom)	Pump Rate (0.1-0.5 L/min)	Volume Purged (L)	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)	Water Level (ft)
Start 1311												
1316		~1'	0.2		20.89	160.1	10.28	6.05	138	0.68	cloudy	8.27
1321		↓	↓		20.64	162.2	10.25	6.05	111	0.69	cloudy	8.80
1326		↓	↓		20.57	161.1	10.23	6.06	110	0.71	cloudy	9.19
1331		↓	↓		20.53	161.7	10.25	6.07	107	0.71	cloudy	9.64
	1335	↓	↓	4.8	—	—	—	—	—	—	—	—
TOTAL VOLUME PURGED (Liters)				4.8								

X – Testing performed during sampling process

Samples and Preservatives

1335 - Total Metals - 6020 - 250 mL plastic w/ Nitric (field filtered 10um)
1335 - Dissolved Metals - 6020 - 250 mL plastic w/ Nitric (field filtered 0.45um)

Comments

Signed/Sampler: [signature] Date: 2-17-14

Signed/Reviewer: [signature] Date: 02/24/14

Golder Associates

GROUNDWATER WELL SAMPLING FORM
Low-Flow

Project Name: Exide Frisco
Project Number: 130-2086
Well Identification: MW-32
Length of Sand Pack: 3.5 feet
Well Casing Diameter: 2"

Date: 1-22-14
Sampler: RMS
Weather: 45°F Sunny
Boring Diameter: 8.25 inch

Condition of Well
Cap: Y
Lock: N Lock ADDED AFTER SAMPLING

Bailer/Rope: N/A
Protective Casing: N (flush mount)

Purge Data

					Time	DTW
	INITIAL	15:58			1035	4.14
A. Total Length of Casing (depth to bottom in ft.)	4.83	4.83			1036	4.50
B. Water Level (ft.)	4.14	4.58			1036	4.70
C. Column of Water in Well (A-B)	0.69	0.25	4.6		1036	4.83
D. Gallons per Linear Foot of Casing:	0.172	0.04				
4-inch well = 0.6528 gallons/ft.						
2-inch well = 0.163 gallons/ft.						
E. Three Well Volumes (C ×D×3)	0.34	0.12				

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)
1035		bottom	—	—							
	1036										purged
TOTAL VOLUME PURGED (Liters)											

X – Testing performed during sampling process

Samples and Preservatives
1625 Sampled MW-32 for Total & Dissolved Metals (approx 125mL plastic 250mL w/ HNO_3 (0.45µm field filter)

Comments
Purged dry at 1036; will allow for recharge and return to sample

1558: DTW - 4.58 TD - 4.83

Signed/Sampler: [signature] Date: 1/22/14

Signed/Reviewer: [signature] Date: 05-16-14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name: Exide Frisco
Project Number: 130-2086
Well Identification: MW-32
Length of Sand Pack 3.5'
Well Casing Diameter: 2"

Date: 02/13/14 1329
Sampler: CMT / PMS
Weather: Sunny
Boring Diameter: 8 1/4"

Condition of Well

Cap Y
Lock Y

Bailer/Rope —
Protective Casing —

Purge Data

A. Total Length of Casing (depth to bottom in ft.) 4.84 @1620 1626 4.82
B. Water Level (ft.) 4.53 1627 4.84
C. Column of Water in Well (A-B) 0.31'
D. Gallons per Linear Foot of Casing: 0.05
4-inch well = 0.6528 gallons/ft.
2-inch well = 0.163 gallons/ft.
E. Three Well Volumes (C ×D×3) 0.15

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)	Water level
1625												
1627		bottom			14.72	154.8	2.418	8.37	N/A	9.01	cloudy	4.82
	1629	bottom										4.84
TOTAL VOLUME PURGED (Liters)												

X – Testing performed during sampling process

Samples and Preservatives

SAMPLE NOT COLLECTED. ALLOWED TO RECHARGE

Comments

not enough water to fill cuvtine flow cell before purged dry at 1629

Signed/Sampler: CMT Date: 02/13/14
Signed/Reviewer: Date: 05-14-14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name: Exide Frisco
Project Number: 130-2086
Well Identification: MW-32
Length of Sand Pack 3.5
Well Casing Diameter: 2"

Date: 2-14-14
Sampler: RMS / CMT
Weather: 55 F, clear
Boring Diameter: 8.25"

Condition of Well

Cap: yes
Lock: yes

Bailer/Rope: N/A
Protective Casing: N/A

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	4.84 @ 1651
B.	Water Level (ft.)	4.69
C.	Column of Water in Well (A-B)	0.15
D.	Gallons per Linear Foot of Casing:	0.03
	4-inch well = 0.6528 gallons/ft.	
	2-inch well = 0.163 gallons/ft.	
E.	Three Well Volumes (C ×D×3)	0.08

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)
1659											
	1700	6oft	—	—	—	—	—	—	—	—	—
TOTAL VOLUME PURGED (Liters)											

X – Testing performed during sampling process

Samples and Preservatives

1700 - Dissolved Metals - 6020 - 250mL w/ Nitric - Field Filtered (0.45µm.)

Comments

SAMPLE WITHOUT PURGE DUE TO LOW RECHARGE

Signed/Sampler: [signature] Date: 2-14-14

Signed/Reviewer: [signature] Date: 05-14-14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name: Exide Frisco
Project Number: 130-2086
Well Identification: MW-32
Length of Sand Pack: 3.5 Ft
Well Casing Diameter: 2 inch

Date: 2-17-14
Sampler: RMS / CMT
Weather: 61 F pt. cloudy
Boring Diameter: 8.25 inch

Condition of Well

Cap: yes
Lock: yes

Bailer/Rope: N/A
Protective Casing: N/A

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	4.84	4.84
B.	Water Level (ft.)	4.78 @ 0845	4.81 @ 1520
C.	Column of Water in Well (A-B)	0.06	0.03
D.	Gallons per Linear Foot of Casing: 4-inch well = 0.6528 gallons/ft. 2-inch well = 0.163 gallons/ft.	0.01	
E.	Three Well Volumes (C ×D×3)	0.03	

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)
0847											
	0848										
TOTAL VOLUME PURGED (Liters)											

X – Testing performed during sampling process

Samples and Preservatives

SAMPLE NOT COLLECTED. DRY

Comments

Purged dry at 0848

Signed/Sampler: [signature] Date: 2-17-14

Signed/Reviewer: [signature] Date: 05-14-14

Golder Associates

GROUNDWATER WELL SAMPLING FORM
LOW-FLOW

Project Name:	Exide Frisco	Date:	1-22-14
Project Number:	130-2086	Sampler:	RMS
Well Identification:	MW-33	Weather:	36°F Sunny
Length of Sand Pack	3.5 feet	Boring Diameter:	8.25 inch
Well Casing Diameter:	2"		

Condition of Well

Cap	Y	Bailer/Rope	N/A
Lock	N LOCK ADDED AFTER SAMPLING	Protective Casing	N (Flush mount)

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	4.66
B.	Water Level (ft.)	0.77
C.	Column of Water in Well (A-B)	3.89
D.	Gallons per Linear Foot of Casing:	0.63
	4-inch well = 0.6528 gallons/ft.	
	2-inch well = 0.163 gallons/ft.	
E.	Three Well Volumes (C ×D×3)	1.9

TIME	DTW
0920	0.77
0922	1.50
0924	2.00
0928	2.50
0935	3.00
0937	3.50
0940	3.96

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged (L)	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)	Water Level (Ft)
0920		bottom	0.1		11.43	-						0.77
0925		1			11.43	231.5	4.540	6.87	8.43	7.77	clear	2.16
0928					11.79	220.2	4.580	6.97	8.49	8.32	clear	2.50
0931					12.11	214.0	4.656	6.95	8.89	7.43	clear	2.85
0934					12.07	210.9	4.659	6.98	7.43	7.12	clear	2.99
0937					12.31	206.2	4.831	6.85	7.20	6.87	clear	3.50
0940	0945			1.15	12.57	202.7	4.927	6.83	7.09	6.56	clear	3.96
TOTAL VOLUME PURGED (Liters)												

X – Testing performed during sampling process

Samples and Preservatives

Sampled Total & Dissolved Metals 0945 (0.45µm field filter)

Comments

Signed/Sampler: _____ Date: 1/22/14

Signed/Reviewer: _____ Date: 01-24-14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name: Exide Frisco
Project Number: 130-2081a
Well Identification: MW-33
Length of Sand Pack: 3.5 ft
Well Casing Diameter: 2 inches

Date: 2-17-14
Sampler: RMS/CMT
Weather: 62 F pt cloudy
Boring Diameter: 8.25 inches

Condition of Well

Cap: yes
Lock: yes

Bailer/Rope: N/A
Protective Casing: N/A

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	4.66
B.	Water Level (ft.)	2.08 @ 1000
C.	Column of Water in Well (A-B)	2.58
D.	Gallons per Linear Foot of Casing:	0.42
	4-inch well = 0.6528 gallons/ft.	
	2-inch well = 0.163 gallons/ft.	
E.	Three Well Volumes (C ×D×3)	1.26

Low Flow

Field Analyses

Sample Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged (L)	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)	Water level (ft)
Start 1005												
1008		bottom	0.1		14.57	69.6	5.520	6.81	12.3	7.83	clear	2.31
1013		bottom	0.1		13.95	109.6	5.338	6.77	6.02	3.54	clear	2.67
1018		bottom	0.1		13.72	113.7	5.331	6.79	5.91	3.55	clear	2.83
1023		bottom	0.1		13.88	119.1	5.329	6.80	5.74	3.64	clear	3.03
	1025	bottom	0.1	2.0	—	—	—	—	—		—	—
TOTAL VOLUME PURGED (Liters)				2.0								

X – Testing performed during sampling process

Samples and Preservatives

1025 - Total Metals - 6010 - 250mL plastic w/ Nitric (No filter)
1025 - Dissolved Metals - 6010 - 250mL plastic w/ Nitric (field filtered 0.45um)

Comments

Signed/Sampler: [signature] Date: 2-17-14

Signed/Reviewer: [signature] Date: 05-14-14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name: Exide Frisco
Project Number: 130-2086
Well Identification: MW-34
Length of Sand Pack: 3.5'
Well Casing Diameter: 2"

Date: 02/13/14
Sampler: [illegible]
Weather: Sunny 50°
Boring Diameter: 8"

Condition of Well

Cap: ✓
Lock: ✓

Bailer/Rope: N/A
Protective Casing: N/A

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	4.73	Time / Depth
B.	Water Level (ft.)	4.09	1443 4.25
C.	Column of Water in Well (A-B)	0.64	1444 4.50
D.	Gallons per Linear Foot of Casing:	0.104	1445 4.73
	4-inch well = 0.6528 gallons/ft.		
	2-inch well = 0.163 gallons/ft.		
E.	Three Well Volumes (C ×D×3)	0.31	

Field Analyses

Start Time	Measurement Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)
1442											
1445					15.68	87.2	11.35	7.04	16.5	2.50	Clear
TOTAL VOLUME PURGED (Liters)											

Water Level

X – Testing performed during sampling process

Samples and Preservatives

NO SAMPLE COLLECTED - DRY

Comments

Purged Dry at 1445

Signed/Sampler: [signature] Date: 02/13/14

Signed/Reviewer: [signature] Date: 05/14/14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name: Exide Frisco
Project Number: 130-2085
Well Identification: MW-34
Length of Sand Pack: 3.5'
Well Casing Diameter: 2"

Date: 2-14-14
Sampler: PMS/CMT
Weather: 60F clear
Boring Diameter: 8.25"

Condition of Well

Cap: yes
Lock: yes

Bailer/Rope: N/A
Protective Casing: N/A

Purge Data

A. Total Length of Casing (depth to bottom in ft.): 4.73 @ 1635
B. Water Level (ft.): 4.43
C. Column of Water in Well (A-B): 0.30
D. Gallons per Linear Foot of Casing: 0.05
   4-inch well = 0.6528 gallons/ft.
   2-inch well = 0.163 gallons/ft.
E. Three Well Volumes (C ×D×3): 0.15

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)
1638											
	1639	bottom	—	—	—	—	—	—	—	—	—
TOTAL VOLUME PURGED (Liters)											

X – Testing performed during sampling process

Samples and Preservatives

1640 – Total Metals - 6010 - 250 mL w/ Nitric. (Field Filtered w/ 10µm)

Comments

SAMPLE WITHOUT PURGE DUE TO SLOW RECHARGE

Signed/Sampler: [signature] Date: 2-14-14

Signed/Reviewer: [signature] Date: 05-14-14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name:	Exide Frisco	Date:	2-17-14
Project Number:	130-2086	Sampler:	RMS/CMT
Well Identification:	MW-34	Weather:	65°F Clear
Length of Sand Pack	3.5'	Boring Diameter:	8.25"
Well Casing Diameter:	2"		

Condition of Well

Cap	Yes	Bailer/Rope	N/A
Lock	Yes	Protective Casing	N/A

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	4.73
B.	Water Level (ft.)	4.41 @ 1650
C.	Column of Water in Well (A-B)	0.32
D.	Gallons per Linear Foot of Casing:	0.05
	4-inch well = 0.6528 gallons/ft.	
	2-inch well = 0.163 gallons/ft.	
E.	Three Well Volumes (C ×D×3)	0.16

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)
1705											
	1709	bottom	—	—	—	—	—	—	—	—	—
TOTAL VOLUME PURGED (Liters)											

X – Testing performed during sampling process

Samples and Preservatives

1710 - Dissolved Metals - 6010 - 250mL w/Nitric (field filtered w/0.45um)

Comments

SAMPLE WITHOUT PURGE DUE TO LOW RECHARGE

Signed/Sampler: _____ Date: 2-17-14

Signed/Reviewer: _____ Date: 05-14-14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name: Exide Frisco
Project Number: 130-2086
Well Identification: MW-35
Length of Sand Pack: 3.5
Well Casing Diameter: 2"

Date: 02/13/14 1313
Sampler: CMT
Weather: Sunny 50°
Boring Diameter: 8 1/4"

Condition of Well

Cap: Y
Lock: Y

Bailer/Rope: N/A
Protective Casing: N/A

Purge Data

A. Total Length of Casing (depth to bottom in ft.): 4.81' @ 1313
B. Water Level (ft.): Dry
C. Column of Water in Well (A-B): -
D. Gallons per Linear Foot of Casing:
   4-inch well = 0.6528 gallons/ft.
   2-inch well = 0.163 gallons/ft.
E. Three Well Volumes (C ×D×3): -

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)
TOTAL VOLUME PURGED (Liters)											

X – Testing performed during sampling process

Samples and Preservatives

NO SAMPLE COLLECTED. DRY

Comments

Signed/Sampler: [signature] Date: 02/13/14

Signed/Reviewer: [signature] Date: 05-14-14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name: Exide Frisco
Project Number: 130-2086
Well Identification: MW-36
Length of Sand Pack: 3.5
Well Casing Diameter: 2"

Date: 02/13/14 - 1308
Sampler: CMT
Weather: Sunny 50°
Boring Diameter: 8¼"

Condition of Well

Cap: Y
Lock: Y

Bailer/Rope: — n/a
Protective Casing: — n/a

Purge Data

A. Total Length of Casing (depth to bottom in ft.): 4.78' @ 1308
B. Water Level (ft.): Dry
C. Column of Water in Well (A-B): —
D. Gallons per Linear Foot of Casing:
   4-inch well = 0.6528 gallons/ft.
   2-inch well = 0.163 gallons/ft.
E. Three Well Volumes (C ×D×3): —

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)
TOTAL VOLUME PURGED (Liters)											

X – Testing performed during sampling process

Samples and Preservatives

NO SAMPLE COLLECTED. DRY.

Comments

Signed/Sampler: [signature] Date: 02/13/14

Signed/Reviewer: [signature] Date: 05/14/14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name: Exide Frisco
Project Number: 130-2086
Well Identification: MW-37
Length of Sand Pack: 7'
Well Casing Diameter: 2.00"

Date: 2-13-14
Sampler: RMS/CMT
Weather: 60°F, clear
Boring Diameter: 8.25"

Condition of Well

Cap: yes
Lock: yes

Bailer/Rope: n/a
Protective Casing: no

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	9.66 @ 1415
B.	Water Level (ft.)	5.58
C.	Column of Water in Well (A-B)	4.08
D.	Gallons per Linear Foot of Casing:	0.167
	4-inch well = 0.6528 gallons/ft.	
	2-inch well = 0.163 gallons/ft.	
E.	Three Well Volumes (C ×D×3)	2.000 gallons

Field Analyses

Start Time	Stop Time	Pump Depth (From bottom)	Pump Rate (0.1-0.5 L/min)	Volume Purged (L)	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)	Water Level (ft)
1527												
1531		~1'	0.1		17.59	209.9	3.335	6.03	10.50	4.06	clear	6.18
1536		~1'	0.1		17.64	220.3	3.240	6.01	3.33	3.47	clear	6.29
1541		~1'	0.1		17.53	227.0	3.181	5.99	2.74	3.42	clear	6.61
1546		~1'	0.1		17.56	225.8	3.177	5.97	2.42	3.25	clear	6.82
	1550			2.3	—	—	—	—	—	—	—	
TOTAL VOLUME PURGED (Liters)				2.3								

X – Testing performed during sampling process

Samples and Preservatives

1550 - Total Metals - 6020 - 250mL w/ Nitric
1550 - Dissolved Metals (Field Filtered 0.45µm) - 6020 - 250mL w/ Nitric

Comments

Signed/Sampler: [signature] Date: 2-13-14

Signed/Reviewer: [signature] Date: 05-14-14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name: Exide Frisco
Project Number: 1202086
Well Identification: MW-37
Length of Sand Pack: 7 feet
Well Casing Diameter: 2 inch

Date: 03/28/14
Sampler: CMT
Weather: 60° - Cloudy
Boring Diameter: 8.25 inch

Condition of Well

Cap: Y
Lock: Y

Bailer/Rope: N/A
Protective Casing: N (flush mount)

Purge Data

A. Total Length of Casing (depth to bottom in ft.): 9.66
B. Water Level (ft.): 3.77 (1043)
C. Column of Water in Well (A-B): 5.89
D. Gallons per Linear Foot of Casing: 0.96
   4-inch well = 0.6528 gallons/ft.
   2-inch well = 0.163 gallons/ft.
E. Three Well Volumes (C ×D×3): 2.9

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged (L)	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)	water level
1051												
1054		~10ft	0.2	0.6	17.26	157.4	3.542	6.00	13.5	0.77	clear	4.43
1059		↓	↓	1.6	17.34	139.6	3.562	6.02	13.1	0.44	Clear	4.67
1104		↓	↓	2.6	17.10	129.2	3.553	6.04	10.3	0.39	Clear	4.98
1109		↓	↓	3.6	16.84	121.5	3.550	6.06	7.42	0.41	Clear	5.34
1114		↓	↓	4.6	16.88	117.6	3.560	6.07	7.14	0.37	Clear	5.56
1117		↓	↓	5.6	16.88	115.2	3.566	6.08	7.27	0.38	Clear	5.74
	1122	↓	↓									
TOTAL VOLUME PURGED (Liters)												

X – Testing performed during sampling process

Samples and Preservatives

Sampled 1120 - Dissolved metals (rd) - Filtered 0.45 µm filter
6020 - Savannah, GA

Comments

Signed/Sampler: [signature] Date: 3-28-14

Signed/Reviewer: Thomas A Mance Date: 05-14-14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name:	Exide Frisco	Date:	11/6/14 (1440)
Project Number:	1302086	Sampler:	JX
Well Identification:	MW-38	Weather:	60s. Sunny
Length of Sand Pack	12'	Boring Diameter:	8.25"
Well Casing Diameter:	2"		

Condition of Well

Cap	Y	Bailer/Rope	NA
Lock	Y	Protective Casing	Y

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	15	
B.	Water Level (ft.)	7.00'	
C.	Column of Water in Well (A-B)	8.00'	Low Flow
D.	Gallons per Linear Foot of Casing:	1.3	
	4-inch well = 0.6528 gallons/ft.		
	2-inch well = 0.163 gallons/ft.		
E.	Three Well Volumes (C ×D×3)	3.9	

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV) (Water Level)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)
1500		~1	0.1	-	20.13	7.21	3.290	6.13	121	-	Brown Cloudy
	1505	↓	↓	0.5	20.40	7.31	2.839	6.32	22.9	-	Clear
	1510			1.0	20.37	7.38	2.713	6.39	11.1	-	"
	1515			1.5	20.29	7.48	2.666	6.40	8.65	-	"
	1520	↓	↓	2.0	20.26	7.52	2.642	6.41	5.97	-	"
TOTAL VOLUME PURGED (Liters)				2.0							

X – Testing performed during sampling process

Samples and Preservatives

Sampled	Total & Dissolved Metals	1525	(0.45µm filter for dissolved, Acid)
	MS, MSD	1525	
	Dup-2	1528	

Comments

NA – Not available

Signed/Sampler: _____ Date: 11/6/14

Signed/Reviewer: _____ Date: 05/14/14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name:	Exide Frisco	Date:	1/17/14 (1585)
Project Number:	1302086	Sampler:	JX
Well Identification:	MW-39	Weather:	60s, Sunny
Length of Sand Pack	13ft	Boring Diameter:	8.25"
Well Casing Diameter:	2"		

Condition of Well

Cap	Y	Bailer/Rope	NA
Lock	Y	Protective Casing	Y

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	20	
B.	Water Level (ft.)	10.41'	
C.	Column of Water in Well (A-B)	9.59'	Low Flow
D.	Gallons per Linear Foot of Casing:	1.56	
	4-inch well = 0.6528 gallons/ft.		
	2-inch well = 0.163 gallons/ft.		
E.	Three Well Volumes (C ×D×3)	4.7	

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)	
1547		Bottom	0.1	-	18.94	156.3	8.810	6.64	25.7	7.00	Brown, milky	10.41'
	1552	↓		0.5	19.34	153.4	9.023	6.55	5.85	5.51	Clear	11.21'
	1557			1.0	19.39	156.1	9.028	6.53	5.38	5.21	"	11.31'
	1602			1.5	9.38	148.7	9.034	6.50	4.52	5.43	"	11.65'
	1607			2.0	19.41	137.5	7.044	6.52	4.20	5.10	"	11.92'
	1612	↓	↓	2.5	19.42	130.5	9.012	6.55	3.87	5.22	"	12.12'
TOTAL VOLUME PURGED (Liters)				2.5								

X – Testing performed during sampling process

Samples and Preservatives

Sampled 1615 Total Metals (No Filter) & Dissolved metals (0.45 µm Filter)

Comments

NA - Not available

Signed/Sampler: _____ Date: 1/17/14

Signed/Reviewer: Thomas N Mauser Date: 05/14/14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name:	Exide Frisco	Date:	1/17/14 (1445)
Project Number:	1302086	Sampler:	JX
Well Identification:	MW 40	Weather:	60s, Sunny
Length of Sand Pack	12 ft	Boring Diameter:	8.25"
Well Casing Diameter:	2"		

Condition of Well

Cap	Y	Bailer/Rope	NA
Lock	Y	Protective Casing	Y

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	15
B.	Water Level (ft.)	5.46'
C.	Column of Water in Well (A-B)	9.54'
D.	Gallons per Linear Foot of Casing:	1.56
	4-inch well = 0.6528 gallons/ft.	
	2-inch well = 0.163 gallons/ft.	
E.	Three Well Volumes (C ×D×3)	4.67

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)	
1455		Bottom	0.1	-	16.31	176.1	2.891	6.25	4.62	5.46	Clear	5.46'
	1500			0.5	17.32	173.3	2.980	6.24	3.82	4.18	"	6.29'
	1505			1.0	16.76	168.2	2.954	6.22	3.54	3.77	"	6.53'
	1510			1.5	16.54	170.4	2.939	6.21	2.97	3.64	"	6.75'
	1515			2.0	16.61	169.3	2.941	6.21	2.51	3.76	"	6.97'
	1520			2.5	16.51	169.6	2.939	6.21	2.34	3.57	"	7.14'
TOTAL VOLUME PURGED (Liters)				2.5								

X – Testing performed during sampling process

Samples and Preservatives

Sampled 1525 for total metals & dissolved metals
(no filter <10 NTU) (0.45 µm filter)

Comments

NA - Not available

Signed/Sampler: _____ Date: 1/17/14

Signed/Reviewer: Thomas R Mann Date: 05/14/14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name:	Exide Frisco	Date:	1/17/14 (1155)
Project Number:	1302086	Sampler:	JX
Well Identification:	MW-41	Weather:	30s, Sunny
Length of Sand Pack	13ft	Boring Diameter:	8.25"
Well Casing Diameter:	2"		

Condition of Well

Cap	Y	Bailer/Rope	NA
Lock	Y	Protective Casing	Y

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	20
B.	Water Level (ft.)	11.39'
C.	Column of Water in Well (A-B)	8.61
D.	Gallons per Linear Foot of Casing:	1.4
	4-inch well = 0.6528 gallons/ft.	
	2-inch well = 0.163 gallons/ft.	
E.	Three Well Volumes (C ×D×3)	4-2

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)	
1207		Bottom	0.1	-	15.96	110.7	0.709	7.10	19.3	1.71	clear	11.39'
	1212			0.5	16.09	96.2	0.702	6.98	11.1	0.74	clear	11.41'
	1217			1.0	16.59	79.7	0.709	6.97	7.60	0.65	"	11.41'
	1222			1.5	16.46	73.7	0.708	6.98	7.86	0.61	"	11.42
	1227	V	V	2.0	16.60	73.8	0.709	6.96	7.05	0.58	"	11.42
TOTAL VOLUME PURGED (Liters)				2.0								

X – Testing performed during sampling process

Samples and Preservatives

Sampled 1230 for total metals (no field filt., < 10 NTU)

Comments

NA - Not available

Signed/Sampler: _____ Date: 1/17/14

Signed/Reviewer: Thomas R Marcon Date: 05/14/14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name:	Exide Frisco	Date:	2-14-14
Project Number:	130-2056	Sampler:	PMS/CMT
Well Identification:	MW-41	Weather:	45F cloudy, rained
Length of Sand Pack	13'	Boring Diameter:	8.25"
Well Casing Diameter:	2"		

Condition of Well

Cap	yes	Bailer/Rope	n/a
Lock	yes	Protective Casing	yes

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	18.90* @ 0915
B.	Water Level (ft.)	11.32
C.	Column of Water in Well (A-B)	7.58
D.	Gallons per Linear Foot of Casing:	1.23
	4-inch well = 0.6528 gallons/ft.	
	2-inch well = 0.163 gallons/ft.	
E.	Three Well Volumes (C ×D×3)	3.7

Field Analyses

Start Time	Stop Time	Pump Depth (From bottom)	Pump Rate (0.1-0.5 L/min)	Volume Purged (L)	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)	Water Level (ft)
0918												
0919		~1'	0.1		15.34	209.1	0.904	7.02	137	2.58	cloudy	11.34
0924		~1'	0.1		15.04	205.0	0.833	6.96	109	1.93	cloudy	11.34
0929		~1'	0.1		14.85	202.8	0.818	6.94	43.8	1.59	cloudy	11.34
0934		~1'	0.1		14.76	198.8	0.796	6.95	32.7	1.41	cloudy	11.35
0937		~1'	0.1		14.82	198.9	0.792	6.95	28.2	1.31	cloudy	11.35
0940		~1'	0.1		14.86	198.8	0.790	6.95	27.8	1.30	cloudy	11.35
	0945	~1'	0.1	2.7	—	—	—	—	—	—	—	—
TOTAL VOLUME PURGED (Liters)				2.7								

X – Testing performed during sampling process

Samples and Preservatives

0945 - Total Metals - 6010 - 250mL w/ Nitric - field filtered
0945 - Dissolved Metals - 6010 - 250mL w/ Nitric - field filtered

Comments

* CONSTRUCTION LOG INDICATES 17 FEET PLUS STICK UP (3 FEET)

Signed/Sampler: _____ Date: 2-14-14

Signed/Reviewer: _____ Date: 05-14-14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name:	Exide Frisco	Date:	1/17/14 (1058)
Project Number:	1302086	Sampler:	JK
Well Identification:	MW-42	Weather:	50s Sunny
Length of Sand Pack	12'	Boring Diameter:	8.25"
Well Casing Diameter:	2"		

Condition of Well

Cap	Y	Bailer/Rope	NA
Lock	Y	Protective Casing	Y

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	18:53
B.	Water Level (ft.)	9.46'
C.	Column of Water in Well (A-B)	9.07
D.	Gallons per Linear Foot of Casing:	1.48
	4-inch well = 0.6528 gallons/ft.	
	2-inch well = 0.163 gallons/ft.	
E.	Three Well Volumes (C ×D×3)	4.43

Low flow

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)	
1108		Bottom	0.1	-	15.91	91.5	0.950	6.29	71.8	12.21	Brown, cloudy	9.46'
	1113			0.5	16.12	8.9	0.873	6.78	96.9	1.57	"	9.51'
	1118			1.0	16.19	22.0	0.856	6.82	118	0.84	"	9.51'
	1123			1.5	16.18	35.1	0.848	6.83	90.9	0.78	"	9.53'
	1128			2.0	16.21	37.9	0.847	6.83	87.8	0.71	"	9.53'
	1133			2.5	16.16	40.2	0.843	6.83	83.0	0.67	"	9.53'.
TOTAL VOLUME PURGED (Liters)				2.5								

X – Testing performed during sampling process

Samples and Preservatives

Sampled 1135 (total metals) (0.45 µm filter in field)

Comments

NA – Not available

Signed/Sampler: _____ Date: 1/17/14

Signed/Reviewer: T Lemas A Marcus Date: 05/19/14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name:	Exide Frisco	Date:	2-14-14
Project Number:	130-2086	Sampler:	RMS/CMT
Well Identification:	MW-42	Weather:	50F clear
Length of Sand Pack	12'	Boring Diameter:	8.25"
Well Casing Diameter:	2"		

Condition of Well

Cap	yes	Bailer/Rope	n/a
Lock	yes	Protective Casing	yes

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	17.98 @ 1005
B.	Water Level (ft.)	9.31
C.	Column of Water in Well (A-B)	8.67
D.	Gallons per Linear Foot of Casing:	1.41
	4-inch well = 0.6528 gallons/ft.	
	2-inch well = 0.163 gallons/ft.	
E.	Three Well Volumes (C ×D×3)	4.24

Field Analyses

Start Time	Stop Time	Pump Depth (From bottom)	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)	water level (Ft)
1009												
1012		~1'	0.1		16.21	209.8	0.718	7.04	56.0	1.45	cloudy	9.40
1017		~1'	0.1		15.94	208.4	0.708	7.03	47.0	1.27	cloudy	9.41
1022		~1'	0.1		16.34	205.6	0.711	7.03	33.2	1.18	cloudy	9.43
1027		~1'	0.1		16.54	201.7	0.714	7.01	33.0	1.20	cloudy	9.44
1030		~1'	0.1		16.59	200.9	0.711	7.02	32.3	1.19	cloudy	9.45
	1035	~1'	0.1	2.6	—	—	—	—	—	—	—	—
TOTAL VOLUME PURGED (Liters)				2.6								

X – Testing performed during sampling process

Samples and Preservatives

1035 – Dissolved Metals – 6010 – 250mL w/ Nitric – Field Filtered (0.45 micron)

Comments

Signed/Sampler: _____ Date: 2-14-14

Signed/Reviewer: _____ Date: 05-14-14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name:	Exide Frisco	Date:	1/17/14 (0900)
Project Number:	133086	Sampler:	JX
Well Identification:	MW43	Weather:	50s, Sunny
Length of Sand Pack	13'	Boring Diameter:	8.25"
Well Casing Diameter:	2"		

Condition of Well

Cap	Y	Bailer/Rope	NA
Lock	Y	Protective Casing	Y

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	20
B.	Water Level (ft.)	16.21'
C.	Column of Water in Well (A-B)	3.79
D.	Gallons per Linear Foot of Casing:	0.62
	4-inch well = 0.6528 gallons/ft.	
	2-inch well = 0.163 gallons/ft.	
E.	Three Well Volumes (C ×D×3)	1.85

Low Flow

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)	
0912		Bottom	0.1	-	15.86	127.0	2.834	4.85	10.7	8.01	Clear	16.21'
	0917	↓	↓	0.5	15.37	122.9	2.865	4.83	4.5	4.56	Clear	16.76'
	0922			1.0	16.93	113.8	2.886	4.85	9.43	4.00	Clear	17.09'
	0927			1.5	17.11	116.9	2.900	4.95	4.64	4.24	"	17.39'
	0932			2.0	17.43	112.0	2.907	4.87	4.39	4.21	"	17.91'
	0937	↓	↓	2.5	17.61	122.6	2.909	4.85	4.11	3.95	"	8.11
TOTAL VOLUME PURGED (Liters)				2.5								

X – Testing performed during sampling process

Samples and Preservatives

Sampled 0945 (VOCs, TPH, PFCs, SVOCs/PAHs)
Dup-1 collected 0945 (VOCs, TPH, PFCs
MS/MSD) Collected 0945 (VOCs, TPH, PFCs, SVOCs/PAHs)
Field Blank collected 0950 (VOCs, PFCs)

Comments

HDPE tubing utilized for Sampling.

NA - Not available

Signed/Sampler: _____ Date: 1/17/14

Signed/Reviewer: Tamara A Marcum Date: 05/14/14

Golder Associates

GROUNDWATER WELL SAMPLING FORM
LOW-FLOW

Project Name: Exide Frisco
Project Number: 130-20860
Well Identification: MW-44
Length of Sand Pack: 12 feet
Well Casing Diameter: 2"

Date: 1-22-14
Sampler: RMS
Weather: 48°F Sunny
Boring Diameter: 8.25 inch

Condition of Well

Cap: Y
Lock: Y

Bailer/Rope: N/A
Protective Casing: Y

Purge Data

A. Total Length of Casing (depth to bottom in ft.): 18.17
B. Water Level (ft.): 9.19 (18.15)
C. Column of Water in Well (A-B): 8.98
D. Gallons per Linear Foot of Casing: 1.46
   4-inch well = 0.6528 gallons/ft.
   2-inch well = 0.163 gallons/ft.
E. Three Well Volumes (C ×D×3): 4.39

Time	DTW
1306	9.50
1313	10.00
1322	10.50
1325	10.75

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged (L)	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)	Water Level (ft)
1305		~1'	0.15	—	—	—	—	—	—	—	clear	9.19
1310			0.15	0.75	19.37	71.6	2.716	6.53	2.75	5.56	clear	9.92
1315			0.10		18.85	171.0	2.466	6.56	1.86	5.07	clear	10.15
1320			0.10		18.88	327.3	2.383	6.57	1.85	4.88	clear	10.43
1323			0.10		18.63	372.2	2.627	6.49	1.73	4.80	clear	10.58
1326			0.10		18.77	371.2	2.661	6.47	3.09	4.79	clear	10.78
1329	1335	↓	0.10	3.25	18.96	379.4	2.711	6.46	3.19	4.61	clear	10.90
TOTAL VOLUME PURGED (Liters)												

X – Testing performed during sampling process

Samples and Preservatives

Samples Total & Dissolved Metals 1335 (0.45 µm field filtered)

Comments

Filter sand on tip of water level probe (measured total depth)

Signed/Sampler: [signature] Date: 1/22/14

Signed/Reviewer: [signature] Date: 05/14/14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name: Exide Frisco
Project Number: 130-2086
Well Identification: MW-44
Length of Sand Pack: 12 ft
Well Casing Diameter: 2 inches

Date: 2-17-14
Sampler: PMS/CMT
Weather: 64F pt. cloudy
Boring Diameter: 8.25 inches

Condition of Well

Cap: yes
Lock: yes

Bailer/Rope: N/A
Protective Casing: yes

Purge Data

A. Total Length of Casing (depth to bottom in ft.): 18.15
B. Water Level (ft.): 9.26 @ 1125
C. Column of Water in Well (A-B): ~~8.89~~
D. Gallons per Linear Foot of Casing: 1.45
   4-inch well = 0.6528 gallons/ft.
   2-inch well = 0.163 gallons/ft.
E. Three Well Volumes (C ×D×3): 4.35

Low-flow

Field Analyses

Sample Start Time	Stop Time	Pump Depth (from bottom)	Pump Rate (0.1-0.5 L/min)	Volume Purged (L)	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)	Water level (ft)
Start 1132												
1135		~1'	0.1		19.05	197.9	2.758	6.70	2.79	5.24	clear	9.58
1140					19.04	203.7	2.705	6.67	1.45	3.70	clear	9.58
1145					19.33	206.3	2.741	6.67	1.36	3.60	clear	10.08
1150					19.73	207.1	2.750	6.67	1.41	3.78	clear	10.13
	1155			2.3	—	—	—	—	—	—	—	—
TOTAL VOLUME PURGED (Liters)				2.3								

X – Testing performed during sampling process

Samples and Preservatives

1155 - Total Metals - 6020 - 250 mL plastic w/ Nitric (No filter)
1155 - Dissolved Metals - 6020 - 250 mL plastic w/ Nitric (Field filtered 0.45 µm)

Comments

Signed/Sampler: [signature] Date: 2-17-14
Signed/Reviewer: [signature] Date: 05-14-14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name:	Exide Frisco	Date:	1/17/14 (1240)
Project Number:	1302086	Sampler:	X
Well Identification:	MW-45	Weather:	50s, Sunny
Length of Sand Pack	15'	Boring Diameter:	8.25"
Well Casing Diameter:	2"		

Condition of Well

Cap	Y	Bailer/Rope	NA
Lock	Y	Protective Casing	Y

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	22.96
B.	Water Level (ft.)	13.20
C.	Column of Water in Well (A-B)	9.76
D.	Gallons per Linear Foot of Casing:	1.59
	4-inch well = 0.6528 gallons/ft.	
	2-inch well = 0.163 gallons/ft.	
E.	Three Well Volumes (C ×D×3)	4.77

Low flow

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)	
1255		Bottom	0.1	-	18.59	146.9	1.039	6.96	5.70	7.67	Clear	13.20
	1300			0.5	19.46	139.2	1.070	6.86	5.29	5.95	"	13.32
	1305			1.0	19.91	135.8	1.086	6.85	4.66	5.80	"	13.58
	1310			1.5	20.07	132.1	1.091	6.84	4.32	5.66	"	13.72
	1315	↓	↓	2.0	20.02	131.0	1.089	6.83	4.11	5.60	"	14.00
TOTAL VOLUME PURGED (Liters)				2.0								

X – Testing performed during sampling process

Samples and Preservatives

Sampled 1320 total metals (no filter < 10 NTU)

Comments

NA - Not Available

Signed/Sampler: _____ Date: 1/17/14

Signed/Reviewer: Thomas A. Mancuso Date: 05/19/14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name: Exide Frisco
Project Number: 1302086
Well Identification: MW-45
Length of Sand Pack: 13 feet
Well Casing Diameter: 2-inch

Date: 3/27/14 (1100)
Sampler: CMT
Weather: Cloudy/rainy - 50°
Boring Diameter: 8.25 inch

Condition of Well

Cap: N
Lock: Y

Bailer/Rope: N/A
Protective Casing: Y

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	22.96
B.	Water Level (ft.)	13.29' (1110)
C.	Column of Water in Well (A-B)	9.67
D.	Gallons per Linear Foot of Casing:	1.58
	4-inch well = 0.6528 gallons/ft.	
	2-inch well = 0.163 gallons/ft.	
E.	Three Well Volumes (C ×D×3)	4.73

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged (L)	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)	Water Level (ft)
1125		Mid Screen	0.2		—	—	—	—	—	—		
1130		↓	0.2	1.0	19.51	183.4	1.228	6.82	3.92	4.39	Clear	13.59
1135		↓	↓	2.0	19.52	184.3	1.235	6.81	4.23	4.13	Clear	13.69
1140		↓	↓	3.0	19.34	181.4	1.232	6.81	2.73	4.09	Clear	13.77
1143		↓	↓	3.6	19.41	178.7	1.236	6.81	2.62	4.01	Clear	13.80
1146		↓	↓	4.2	19.38	178.4	1.234	6.81	2.76	4.06	Clear	13.83
	1152	↓	↓									
TOTAL VOLUME PURGED (Liters)				4.2								

X – Testing performed during sampling process

Samples and Preservatives

Sampled 1150 - Dissolved Metals (Filtred 0.45 micron)
Method 6010 Pb, Cd, As, Se - (Houston Lab)

Comments

N/A - Not Applicable

Signed/Sampler: [signature] Date: 3-27-14

Signed/Reviewer: [signature] Date: 03/16/14

Golder Associates

GROUNDWATER WELL SAMPLING FORM
Low Flow

Project Name:	Exide Frisco	Date:	1-22-14
Project Number:	130-2086	Sampler:	RMS
Well Identification:	MW-46	Weather:	45°F Sunny
Length of Sand Pack	13 feet	Boring Diameter:	@ 25 inch ⌀
Well Casing Diameter:	2 inch		

Condition of Well

Cap	Y	Bailer/Rope	N/A
Lock	N Lock ADDED AFTER SAMPLING	Protective Casing	N (Flush mnt)

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	20 feet
B.	Water Level (ft.)	4.91 19.3(
C.	Column of Water in Well (A-B)	15.09
D.	Gallons per Linear Foot of Casing:	2.46
	4-inch well = 0.6528 gallons/ft.	
	2-inch well = 0.163 gallons/ft.	
E.	Three Well Volumes (C ×D×3)	7.38

Time	DTW
1059	4.91
1100	5.50
1103	6.00
1104	7.00
1110	8.00
	9.00

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged (L)	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)	Water Level (ft)
1059		~1ft	0.2		—	—	—	—	—	—	clear	
1103		~1ft	0.2	0.8	21.27	206.0	6.317	4.47	61.6	1.91	clear	6.00
1108		~1ft	0.1		20.43	241.9	6.118	4.38	45.1	1.22	clear	7.43
1113		~1ft	0.1		20.25	252.9	6.090	4.38	39.1	1.06	clear	8.17
1118		~1ft	0.1		20.05	260.5	6.048	4.38	28.6	0.96	clear	8.41
1123		~1ft	0.1		19.75	264.5	6.012	4.39	26.4	0.90	clear	8.65
1128	1135	~1ft	0.1	4.0	19.80	262.4	6.016	4.40	24.3	0.87	clear	8.80
TOTAL VOLUME PURGED (Liters)				4.0								

X – Testing performed during sampling process

Samples and Preservatives

Sampled Total & Dissolved Metals 1135 (0.45µm field filtered)

Comments

Signed/Sampler: _____ Date: 1/22/14

Signed/Reviewer: Lucas D Marcon Date: 05/14/14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name: Exide Frisco
Project Number: 130-2086
Well Identification: MW-46
Length of Sand Pack: 13'
Well Casing Diameter: 2.00"

Date: 2-13-14
Sampler: RMS / CMT
Weather: 64°F clear
Boring Diameter: 8.25"

Condition of Well

Cap: Yes
Lock: Yes

Bailer/Rope: N/A
Protective Casing: N/A

time	depth
1626	4.88
1609	4.88

Purge Data

A. Total Length of Casing (depth to bottom in ft.): ~~20~~
B. Water Level (ft.): 4.88 @ 1615
C. Column of Water in Well (A-B): 13.12
D. Gallons per Linear Foot of Casing: 2.46
   4-inch well = 0.6528 gallons/ft.
   2-inch well = 0.163 gallons/ft.
E. Three Well Volumes (C ×D×3): 7.39

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)
TOTAL VOLUME PURGED (Liters)											

X – Testing performed during sampling process

Samples and Preservatives

NO SAMPLE COLLECTED

Comments

Well under pressure when J plug was removed allows to stabilize 5.36

Signed/Sampler: [signature] Date: 2-14-14

Signed/Reviewer: [signature] Date: 05-14-14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name:	Exide Frisco	Date:	2-14-14
Project Number:	130-2086	Sampler:	RMS/CMT
Well Identification:	MW-46	Weather:	55°F clear
Length of Sand Pack	13	Boring Diameter:	8.25"
Well Casing Diameter:	2"		

Condition of Well

Cap	Yes	Bailer/Rope	— N/A
Lock	Yes	Protective Casing	N/A

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	20	
B.	Water Level (ft.)	5.04	@ 1655
C.	Column of Water in Well (A-B)	14.96	
D.	Gallons per Linear Foot of Casing:	2.44	
	4-inch well = 0.6528 gallons/ft.		
	2-inch well = 0.163 gallons/ft.		
E.	Three Well Volumes (C ×D×3)	7.32	

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)
TOTAL VOLUME PURGED (Liters)											

X – Testing performed during sampling process

Samples and Preservatives

No SAMPLE COLLECTED

Comments

MW-46 depth did not change during sampling of MW-32

Signed/Sampler: _____ Date: 2-14-14

Signed/Reviewer: _____ Date: 05-14-14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name: Exide Frisco
Project Number: 130-2086
Well Identification: MW-46
Length of Sand Pack: 13 Ft
Well Casing Diameter: 2 inches

Date: 2-17-14
Sampler: RMS/CMT
Weather: 61 Ft pt. cloudy
Boring Diameter: 8.25 inches

Condition of Well

Cap: yes
Lock: yes

Bailer/Rope: N/A
Protective Casing: N/A

Purge Data

A. Total Length of Casing (depth to bottom in ft.): 19.33
B. Water Level (ft.): 5.25 @0905
C. Column of Water in Well (A-B): ~~14.08~~
D. Gallons per Linear Foot of Casing: 2.75
   4-inch well = 0.6528 gallons/ft.
   2-inch well = 0.163 gallons/ft.
E. Three Well Volumes (C ×D×3): 6.76

Low Flow

Field Analyses

Sample Start Time	Stop Time	Pump Depth (from bottom)	Pump Rate (0.1-0.5 L/min)	Volume Purged (L)	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)	water level (ft)
Start 0909												
0914		~1'	0.1		19.18	96.5	5.889	5.66	69.0	1.60	cloudy	5.25
0919		~1'	0.1		18.70	99.7	5.848	5.61	62.5	1.55	cloudy	6.31
0924		~1'	0.1		18.47	100.3	5.801	5.64	61.9	1.51	cloudy	7.10
0929		~1'	0.1		18.78	100.8	5.831	5.63	62.3	1.53	cloudy	7.42
	0940	~1'	0.1	3.1	—	—	—	—	—	—	—	—
TOTAL VOLUME PURGED (Liters)				3.1								

X – Testing performed during sampling process

Samples and Preservatives

0940 - Total Metals - 6020 - 250 mL plastic w/ Nitric (field filtered 10 µm)
0940-Dissolved Metals - 6020 - 250 mL plastic w/ Nitric (field filtered 0.45 µm)

Comments

Signed/Sampler: [signature] Date: 2-17-14

Signed/Reviewer: [signature] Date: 05-14-14

Golder Associates

GROUNDWATER WELL SAMPLING FORM

Project Name: Exide Frisco
Project Number: 130 2086
Well Identification: MW-46
Length of Sand Pack: 13 feet
Well Casing Diameter: 2 inch

Date: 3-27-14
Sampler: CMT
Weather: Cloudy/rainy - 55°F 25mph wind
Boring Diameter: 8.25 inch

Condition of Well

Cap: Y
Lock: Y

Bailer/Rope: N/A
Protective Casing: N (Flush mount)

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	19.33
B.	Water Level (ft.)	4.64' (1220)
C.	Column of Water in Well (A-B)	14.69
D.	Gallons per Linear Foot of Casing:	2.4
	4-inch well = 0.6528 gallons/ft.	
	2-inch well = 0.163 gallons/ft.	
E.	Three Well Volumes (C ×D×3)	7.2

15

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged (L)	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)	water level (ft)
1245		~2FT	0.2		—	—	—	—	—	—	—	
1249			0.2	0.8	19.81	96.4	6.637	5.67	74.5	0.66	Cloudy	5.87
1254				1.8	19.86	92.6	6.667	5.68	56.8	0.61	Cloudy	6.45
1259				2.8	19.94	90.2	6.682	5.68	44.4	0.51	Cloudy	7.17
1304				3.8	20.20	90.3	6.674	5.66	40.4	0.34	Cloudy	7.47
1307				4.8	20.12	88.7	6.672	5.65	38.8	0.26	Cloudy	7.67
1310		↓		5.4	20.10	88.0	6.670	5.64	36.8	0.26	Cloudy	7.88
1313	TOTAL VOLUME PURGED (Liters)			5.4	20.11	88.3	6.666	5.64	35.9	0.25	Cloudy	8.08

X – Testing performed during sampling process

Samples and Preservatives

Sampled 1317 MW-46 Total and dissolved Pb and Cd - 6020 - Savannah
MW-46 MS/MSD - Total and dissolved Pb and Cd - 6020 Savannah
DUP-8

Total metals - filtered 10 Mm filter
Dissolved metals - filtered 0.45 Mm filter

Comments

well under pressure 5.14' DTW at 1035
Static at 4.64'
N/A - Not Applicable

Signed/Sampler: [signature] Date: 03/27/14
Signed/Reviewer: Thomas R Marcon Date: 05/14/14

GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1732 Project Name: Exide Frisco Recycling Center Date: 1-17-12

Sample Number: 2012-B4R	Starting Water Level (ft. BMP): 10.26
Sampling Location (well ID, etc.): B4R	Casing Stickup (ft.):
Sampled by: JTB	Starting Water Level (ft. BGL):
Measuring Point (MP) of Well: TOC/PVC	Total Depth (ft. ~~BGL~~): BMP 11.80
Screened Interval (ft. BGL):	Casing Diameter (In ID): 4.0
Filter Pack Interval (ft. BGL):	Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe): —

Cleaning Equipment: new equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Keck	Thermometer:	451556
pH Meter:	451556	Field Calibration:	7-4
Conductivity Meter:	451556	Field Calibration:	1413
Filter / Filter Size:	10 micron	Other:	

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (µmhos/cm)	Color	Turbidity & Sediment	DO	Remarks	ORP	WL
0811											
0821		.1	16.1	7.68	482	tan	silty	1.06		-160	10.53
0826			16.3	7.71	5116	"	"	0.76		-172	10.82
	well is going dry, will purge well dry and return to sample.										

Water Level (ft. BMP) at End of Purge: Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration	Preservation	Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	(type)	(quality control sample, other)
0950	250 ml	P	1	N	None	TDS, Sulfate
~~0950~~	500ml	P	1	N	HNO^3	Total Cd, Total Pb
~~0950~~	500ml	P	1	Y	HNO^3	Diss Cd, Diss Pb

11/18/12
WL-11.62 0950

Comments: TDS, SULFATE WAS COLLECTED. NOT ENOUGH WATER FOR METALS (DISS) ~~SAMPLED~~

Pastor, Behling & Wheeler, LLC
2201 Double Creek Dr., Suite 4004
Round Rock, Texas 78664
Phone: (512) 671-3434 Fax: (512) 671-3446

GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1732 Project Name: Exide Frisco Recycling Center Date: 1-17-12

Sample Number: 2012 - BSN	Starting Water Level (ft. BMP): 9.89
Sampling Location (well ID, etc.): BSN	Casing Stickup (ft.):
Sampled by: JTB	Starting Water Level (ft. BGL):
Measuring Point (MP) of Well: TOC/PVC	Total Depth (ft. ~~BGL~~): BMP 18.98
Screened Interval (ft. BGL):	Casing Diameter (In ID): 4.0
Filter Pack Interval (ft. BGL):	Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: new equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.):

Water Level:	Keck	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	10 micron	Other:	

SAMPLING MEASUREMENTS

1548 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (µmhos/cm)	Color	Turbidity & Sediment	DO	Remarks ORP	WL
1558		.1	18.4	7.36	2130	H. orange	26	1.36	-74	10.12
1603		1	18.7	7.39	2170	↓	27	1.31	-76	10.21
1608		↓	18.6	7.39	2180	↓	27	1.31	-76	10.20

Water Level (ft. BMP) at End of Purge: 10.20 Sample Intake Depth (ft. BMP): 1' off Bottom

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation (type)	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1620	250 ml	P	1	N	None	TDS, Sulfate
1620	500ml	P	1	N	HNO^3	Total Cd, Total Pb
1620	500ml	P	1	Y	HNO^3	Diss Cd, Diss Pb

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1732	Project Name: Exide Frisco Recycling Center	Date: 1-16-12	
Sample Number: 2012 MW-12		Starting Water Level (ft. BMP):	8.62
Sampling Location (well ID, etc.): MW-12		Casing Stickup (ft.):	1.05
Sampled by: JTB		Starting Water Level (ft. BGL):	
Measuring Point (MP) of Well: TOC/PVC		Total Depth (ft. ~~BGL~~): BMP	19.51
Screened Interval (ft. BGL):		Casing Diameter (In ID):	4.0
Filter Pack Interval (ft. BGL):		Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: new equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Keck	Thermometer:	451556
pH Meter:	451556	Field Calibration:	7-4
Conductivity Meter:	451556	Field Calibration:	1413
Filter / Filter Size:	10 micron	Other:	

SAMPLING MEASUREMENTS

1619 Time	Cum. Vol (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (µmhos/cm)	Color	Turbidity & Sediment	DO	Remarks	ORP	WL
1629		.1	21.5	7.12	3770	neutral	16	0.27		-88	8.79
1634		1	21.6	7.16	3040	"	13	0.25		-86	8.81
1639		↓	21.7	7.17	3040	"	14	0.25		-86	8.82

Water Level (ft. BMP) at End of Purge: 8.82

Sample Intake Depth (ft. BMP): 1' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation (type)	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1650	250 ml	P	1	N	None	TDS, Sulfate
1650	500ml	P	1	N	HNO^3	Total Cd, Total Pb
1650	500ml	P	1	Y	HNO^3	Diss Cd, Diss Pb

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1732	Project Name: Exide Frisco Recycling Center		Date: 1-16-12
Sample Number: 2012 MW-13		Starting Water Level (ft. BMP):	15.83
Sampling Location (well ID, etc.): MW-13		Casing Stickup (ft.):	1.15
Sampled by: JTB		Starting Water Level (ft. BGL):	14.68
Measuring Point (MP) of Well: TOC/PVC		Total Depth (ft. ~~BGL~~): BMP	24.57
Screened Interval (ft. BGL):		Casing Diameter (In ID):	4.0
Filter Pack Interval (ft. BGL):		Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: new equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Keck	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7.4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	10 micron	Other:	

SAMPLING MEASUREMENTS

1433 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (µmhos/cm)	Color	Turbidity & Sediment	DO	Remarks ORP	WL
1443		.1	21.7	7.14	3110	neutral	27	0.45	-162	15.87
1448		↓	21.6	7.13	3120	neutral		0.43	-163	15.89
1453		↓	21.6	7.13	3120	neutral		0.44	-162	15.90

Water Level (ft. BMP) at End of Purge: 15.90 Sample Intake Depth (ft. BMP): 1' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation (type)	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1510	250 ml	P	1	N	None	TDS, Sulfate
1510	500ml	P	1	N	HNO^3	Total Cd, Total Pb
1510	500ml	P	1	Y	HNO^3	Diss Cd, Diss Pb

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1732 Project Name: Exide Frisco Recycling Center Date: 1-16-12

Sample Number: 2012-MW-14	Starting Water Level (ft. BMP): 5.94
Sampling Location (well ID, etc.): MW-14	Casing Stickup (ft.): 1.10
Sampled by: JTB	Starting Water Level (ft. BGL): 4.84
Measuring Point (MP) of Well: TOC/PVC	Total Depth (ft. ~~BGL~~): BMP 18.53
Screened Interval (ft. BGL):	Casing Diameter (In ID): 4.0
Filter Pack Interval (ft. BGL):	Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: new equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Keck	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	10 micron	Other:	—

SAMPLING MEASUREMENTS

1527 Time	Cum. Vol (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (µmhos/cm)	Color	Turbidity & Sediment	DO Remarks	ORP	WL
1537		.1	19.7	7.33	4520	neutral	17	0.38	-97	6.19
1542		1	19.9	7.31	4540	1	12	0.33	-96	6.23
1547		↓	20.1	3.31	4550	↓	13	0.34	-96	6.24

Water Level (ft. BMP) at End of Purge: 6.24 Sample Intake Depth (ft. BMP): 1' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation (type)	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1600	250 ml	P	1	N	None	TDS, Sulfate
1600	500ml	P	1	N	HNO^3	Total Cd, Total Pb
1600	500ml	P	1	Y	HNO^3	Diss Cd, Diss Pb

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1755 Project Name: EXIDE-FRISCO Date: 4-10-13

Sample Number: MW-15

Sampling Location (well ID, etc.): MW-15

Sampled by: JTB

Measuring Point (MP) of Well: TOC/PVC

Screened Interval (ft. BGL): 12-22

Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 10.97

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 10.97

Total Depth (ft. BGL):

Casing Diameter (In ID): 4.0

Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: 10 micron & .45 micron Other: NRB

SAMPLING MEASUREMENTS

0932 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0832		.11	18.4	6.58	2130	0.31	109.9	8.1	11.32
0837		.11	18.6	6.54	2160	0.26	111.4	7.1	11.35
0842		.12	18.7	6.55	2170	0.25	112.4	6.7	11.36

Water Level (ft. BMP) at End of Purge: 11.36 Sample Intake Depth (ft. BMP): 5' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected: Time	Volume	Composition (G, P)	No.	Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
0855	250ML	P	1	N	HNO3	TOTAL METALS
0855	250ML	P	1	Y-.45	HNO3	DISSOLVED METALS
0855	250ML	P	1	—	—	SULFATE

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1732 Project Name: Exide Frisco Recycling Center Date: 1-17-12

Sample Number: 2012-MW-16
Sampling Location (well ID, etc.): MW-16
Sampled by: JTB
Measuring Point (MP) of Well: TOC/PVC
Screened Interval (ft. BGL):
Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 10.22
Casing Stickup (ft.):
Starting Water Level (ft. BGL):
Total Depth (ft. ~~BGL~~ BMP): 78.68
Casing Diameter (In ID): 4.0
Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: new equipment
Purging: peristaltic pump Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Keck Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 14/3
Filter / Filter Size: 10 micron Other:

SAMPLING MEASUREMENTS

1247 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (µmhos/cm)	Color	Turbidity & Sediment	DO	Remarks ORP	WL
1257		.1	19.2	7.74	1570	neutral	19	0.87	-90	10.39
1302		1	19.3	7.71	1590	1	26	0.85	-87	10.41
1307		↓	19.4	7.72	1580	↓	23	0.84	-88	10.41

Water Level (ft. BMP) at End of Purge: 10.41 Sample Intake Depth (ft. BMP): 1' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation (type)	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1320	250 ml	P	1	N	None	TDS, Sulfate
1320	500ml	P	1	N	HNO^3	Total Cd, Total Pb
1320	500ml	P	1	Y	HNO^3	Diss Cd, Diss Pb

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1732 Project Name: Exide Frisco Recycling Center Date: 1-17-12

Sample Number: 2012-MW-16S

Sampling Location (well ID, etc.): MW-16S

Sampled by: JTB

Measuring Point (MP) of Well: TOC/PVC

Screened Interval (ft. BGL):

Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 9.12

Casing Stickup (ft.):

Starting Water Level (ft. BGL):

Total Depth (ft. ~~BGL~~): BMP 18.77

Casing Diameter (In ID): 4.0

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: new equipment

Purging: peristaltic pump Sampling: Dame

Disposal of Discharged Water: 55-gallon

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Keck Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: 10 micron Other:

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (µmhos/cm)	Color	Turbidity & Sediment	DO	Remarks	ORP	WL
1354											
1404		1	19.9	7.52	7350	neutral	22	0.62		-70	9.56
1409		1	19.7	7.57	7370	↓	16	0.57		-72	9.58
1414		↓	19.6	7.58	7380	↓	17	0.58		-71	9.59

Water Level (ft. BMP) at End of Purge: 9.59

Sample Intake Depth (ft. BMP): 1' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation (type)	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1430	250 ml	P	1	N	None	TDS, Sulfate
1430	500ml	P	1	N	HNO^3	Total Cd, Total Pb
1430	500ml	P	1	Y	HNO^3	Diss Cd, Diss Pb

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1732 Project Name: Exide Frisco Recycling Center Date: 1-18-12

Sample Number: 2012-MW-17	Starting Water Level (ft. BMP): 8.67
Sampling Location (well ID, etc.): MW-17	Casing Stickup (ft.):
Sampled by: JTB	Starting Water Level (ft. BGL):
Measuring Point (MP) of Well: TOC/PVC	Total Depth (ft. ~~BGL~~ BMP): 18.80
Screened Interval (ft. BGL):	Casing Diameter (In ID): 4.0
Filter Pack Interval (ft. BGL):	Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: new equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Keck	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	10 micron	Other:	

SAMPLING MEASUREMENTS

Time (421)	Cum. Vol. (gal. or L)	Purge Rate (gal. or L / m)	Temp. (oC)	pH	Spec. Cond. (µmhos/cm)	Color	Turbidity & Sediment	DO	Remarks ORP	WL
1431		1	18.4	7.57	3720	neutral	17	0.96	-67	8.92
1436		1	18.6	7.61	3740	1	12	0.89	-68	8.93
1441		1	18.7	7.62	3750	1	13	0.88	-68	8.92
						some dark specs in water				

Water Level (ft. BMP) at End of Purge: 8.92 Sample Intake Depth (ft. BMP): 1' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation (type)	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1500	250 ml	P	1	N	None	TDS, Sulfate
1500	500ml	P	1	N	HNO^3	Total Cd, Total Pb
1500	500ml	P	1	Y	HNO^3	Diss Cd, Diss Pb

Comments: MS/MSD @ 4th well

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GROUNDWATER SAMPLING RECORD

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Project Number: 1732 Project Name: Exide Frisco Recycling Center Date: 1-17-12

Sample Number: 2012-MW-18
Sampling Location (well ID, etc.): MW-18
Sampled by: JTB
Measuring Point (MP) of Well: TOC/PVC
Screened Interval (ft. BGL):
Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 1.96
Casing Stickup (ft.):
Starting Water Level (ft. BGL):
Total Depth (ft. ~~BGL~~): BMP 17.02
Casing Diameter (In ID): 4.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: New equipment
Purging: peristaltic pump Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Keck Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: 10 micron Other:

SAMPLING MEASUREMENTS

1051 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (µmhos/cm)	Color	Turbidity & Sediment	DO	Remarks	ORP	WL
1101		.1	17.6	7.12	2120	neutral	8.7	0.86		-101	2.13
1106		1	17.7	7.13	2140	1	6.8	0.77		-102	2.14
1111		1	17.7	7.14	2150	1	9.1	0.76		-102	2.14

Water Level (ft. BMP) at End of Purge: 2.14 Sample Intake Depth (ft. BMP): 1' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration	Preservation	Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	(type)	(quality control sample, other)
1125	250 ml	P	1	N	None	TDS, Sulfate
1125	500ml	P	1	N	HNO^3	Total Cd, Total Pb
1125	500ml	P	1	Y	HNO^3	Diss Cd, Diss Pb

Comments: field duplicate @ this well.
2012-MW-FD

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GROUNDWATER SAMPLING RECORD

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Project Number: 1732 Project Name: Exide Frisco Recycling Center Date: 1-17-12

Sample Number: 2012-MW-19	Starting Water Level (ft. BMP): 18.59
Sampling Location (well ID, etc.): MW-19	Casing Stickup (ft.):
Sampled by: JTB	Starting Water Level (ft. BGL):
Measuring Point (MP) of Well: TOC/PVC	Total Depth (ft. ~~BGL~~): BMP 25.20
Screened Interval (ft. BGL):	Casing Diameter (In ID): 2.0
Filter Pack Interval (ft. BGL):	Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: new equipment

Purging: peristaltic pump Sampling: Dave

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Keck	Thermometer:	451 556
pH Meter:	451 556	Field Calibration:	7-4
Conductivity Meter:	451 556	Field Calibration:	1413
Filter / Filter Size:	10 micron	Other:	

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (µmhos/cm)	Color	Turbidity & Sediment	DO	Remarks	ORP	WL
0926											
0936		.1	17.8	7.37	2380	neutral	36	1.61		-77	18.73
0941			17.7	7.32	2410	"	16	1.52		-78	18.76
0946		↓	17.7	7.33	2400	"	18	1.51		-78	18.77

Water Level (ft. BMP) at End of Purge: 18.77 Sample Intake Depth (ft. BMP): 1' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation (type)	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1000	250 ml	P	1	N	None	TDS, Sulfate
1000	500ml	P	1	N	HNO^3	Total Cd, Total Pb
1000	500ml	P	1	Y	HNO^3	Diss Cd, Diss Pb

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1732 Project Name: Exide Frisco Recycling Center Date: 1-17-12

Sample Number: 2012 - MW-20	Starting Water Level (ft. BMP): 24.43
Sampling Location (well ID, etc.): MW-20	Casing Stickup (ft.):
Sampled by: JTB	Starting Water Level (ft. BGL):
Measuring Point (MP) of Well: TOC/PVC	Total Depth (ft. ~~BGL~~) BMP: 25.20
Screened Interval (ft. BGL):	Casing Diameter (In ID): 2.0
Filter Pack Interval (ft. BGL):	Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: new equipment

Purging: peristaltic pump Sampling: Same

Disposal of Discharged Water: 55- gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	Keck	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	10 micron	Other:	

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (µmhos/cm)	Color	Turbidity & Sediment	DO Remarks ORP	
0852									WL
0902		.1	16.6	7.38	5680	dk. brown	silty	1.05 -96	24.96
	well is going dry, will purge well dry and return to Dample.								

Water Level (ft. BMP) at End of Purge: Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected				Filtration	Preservation	Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	(type)	(quality control sample, other)
1015	250 ml	P	1	N	None	TDS, Sulfate
1015	500ml	P	1	N	HNO^3	Total Cd, Total Pb
	500ml	P	1	Y	HNO^3	Diss Cd, Diss Pb

11/18/02
WL - 24.36

Comments: TDS, SULFATE WAS COLLECTED, NOT ENOUGH WATER FOR METALS (DISS)

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GROUNDWATER SAMPLING RECORD

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Project Number: 1732 Project Name: Exide Frisco Recycling Center Date: 1-17-12

Sample Number: 2012 - LFNE
Sampling Location (well ID, etc.): LFNE
Sampled by: JTB
Measuring Point (MP) of Well: TOC/PVC
Screened Interval (ft. BGL):
Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 16.67
Casing Stickup (ft.):
Starting Water Level (ft. BGL):
Total Depth (ft. ~~BGL~~ BMP): 20.20
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: new equipment
Purging: peristaltic pump Sampling: none
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Keck
pH Meter: 451 556
Conductivity Meter: 451 556
Filter / Filter Size: 10 micron

Thermometer: 451 556
Field Calibration: 7.4
Field Calibration: 1413
Other:

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L / m)	Temp. (oC)	pH	Spec. Cond. (µmhos/cm)	Color	Turbidity & Sediment	DO	Remarks	ORP	WL
1029		1	18.6	7.42	3810	neutral	13	0.19		-75	17.06
1034			18.9	7.45	3830		17	0.16		-76	17.29
	well is going dry, will purge well dry, and return to sample										

Water Level (ft. BMP) at End of Purge:
Sample Intake Depth (ft. BMP):

SAMPLE INVENTORY

Bottles Collected: Time	Volume	Composition (G, P)	No.	Filtration (Y / N)	Preservation (type)	Remarks (quality control sample, other)
1040	250 ml	P	1	N	None	TDS, Sulfate
1040	500ml	P	1	N	HNO^3	Total Cd, Total Pb
1040	500ml	P	1	Y	HNO^3	Diss Cd, Diss Pb

1/18/12
WL-17.96

Comments:
LMW-19 (WKV)

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GROUNDWATER SAMPLING RECORD

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Project Number: 1755 Project Name: EXIDE-FRISCO-FOP Date: 3-18-13

Sample Number: B1R

Sampling Location (well ID, etc.): B1R

Sampled by: JTB

Measuring Point (MP) of Well: TOC | PVC

Screened Interval (ft. BGL): 49.5 - 59.5

Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 4.64

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 4.64

Total Depth (ft. BGL): 59.5

Casing Diameter (In ID): 4.0

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK Thermometer: YSI ~~556~~ PROPLUS

pH Meter: YSI ~~556~~ PRO PLUS Field Calibration: 7-4

Conductivity Meter: YSI ~~556~~ PRO PLUS Field Calibration: 1413

Filter / Filter Size: 10 micron & .45 micron Other: TVRB

SAMPLING MEASUREMENTS

Time (1644)	Cum. Vol. (gal. or (L))	Purge Rate (gal. or (L)/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1654		.13	18.9	6.81	616			2.8	5.20
1659		.13	18.7	6.79	598			1.9	5.74
1704		.12	18.7	6.80	597			2.2	6.11
1710		.11							6.55
1722		.12							7.54
	turned the pump off, will return tomorrow								
1006									7.18
1016		.11	16.7	7.25	234	5.51	97.6	6.1	8.57
1027		.11	16.9	7.29	232	5.43	96.1	2.4	8.92
1034		.12	16.9	7.29	231	5.42	96.7	2.7	9.36

Water Level (ft. BMP) at End of Purge: 9.36 Sample Intake Depth (ft. BMP): 5' OFF BOTTOM

3/22/13

SAMPLE INVENTORY

Bottles Collected				Filtration	Preservation	Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)		(quality control sample, other)
1035	250ML	P	1	N	HNO3	TOTAL METALS
1035	250ML	P	1	Y-.45	HNO3	DISSOLVED METALS
1035	250ML	P	1	N	—	SULFATE

Comments:

TCEQ - SPLIT TOTAL METALS - UNFILTERED - PRESERVED

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1755	Project Name: EXIDE-FRISCO-FOP	Date: 3-18-13	
Sample Number: B3R		Starting Water Level (ft. BMP):	15.22
Sampling Location (well ID, etc.): B3R		Casing Stickup (ft.):	—
Sampled by: JTB		Starting Water Level (ft. BGL):	15.22
Measuring Point (MP) of Well: TOC / PVC		Total Depth (ft. BGL):	IN 15.52
Screened Interval (ft. BGL): 4-14		Casing Diameter (In ID):	4.0
Filter Pack Interval (ft. BGL): —		Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	KECK	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	10 micron & .45 micron	Other:	TURB

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1107									
1109		.11	DRY						
3/19/13 0932		well is dry							

Water Level (ft. BMP) at End of Purge: DRY Sample Intake Depth (ft. BMP): Bottom

SAMPLE INVENTORY

Bottles Collected: Time	Volume	Composition (G, P)	No.	Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
NO SAMPLES COLLECTED, WELL IS DRY						

Comments:

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 155 Project Name: EXIDE-FRISCO-FOP Date: 3-18-13

Sample Number: B4R

Sampling Location (well ID, etc.): B4R

Sampled by: JTB

Measuring Point (MP) of Well: TOC | PVC

Screened Interval (ft. BGL): 4-9

Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 9.04 ~~7.66~~ JB

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 9.04 ~~7.66~~ JB

Total Depth (ft. BGL): 9 11.90

Casing Diameter (In ID): 4

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: 10 micron & .45 micron Other: TVRB

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0906									
0916		.19	15.4	6.98	883			10.7	9.67
0921		.12	15.4	6.99	877			7.3	10.12
0924 - turned pump to .39 LPM and the well went dry									
0936 - well is dry									
0834								191	11.56

3/19/13

TD 11.93

Water Level (ft. BMP) at End of Purge: DRY Sample Intake Depth (ft. BMP): 6" OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
0850	250mL	P	1	Y-10	HNO_3	TOTAL METALS
0850	250mL	P	1	Y-45	HNO_3	DISSOLVED METALS
0850	250mL (100mL)	P	1	N	—	SULFATE

Comments:

NOT ENOUGH WATER FOR THE TCEQ TO SPLIT SAMPLES, or take readings.

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1755 Project Name: EXIDE-FRISCO-FDP Date: 3-22-13

Sample Number: B-SN

Sampling Location (well ID, etc.): B-SN

Sampled by: JTB

Measuring Point (MP) of Well: TOC | PVC

Screened Interval (ft. BGL): 6.5-16.5

Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 10.13

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 10.13

Total Depth (ft. BGL): 16.5

Casing Diameter (In ID): 4.0

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK Thermometer: YSI ~~556~~ PRO PLUS

pH Meter: YSI ~~556~~ PRO PLUS Field Calibration: 7-4

Conductivity Meter: YSI ~~556~~ PRO PLUS Field Calibration: 1413

Filter / Filter Size: 10 MICRON & .45 MICRON Other: TUBES

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1108		.116	17.5	6.71	2910	0.48	40.8	196	10.17
1113		.116	17.2	6.73	2790	0.44	27.2	173	10.17
1118		.116	17.3	6.74	2760	0.43	27.1	176	10.17

Water Level (ft. BMP) at End of Purge: 10.17 Sample Intake Depth (ft. BMP): 3' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1125	250ML	P	1	Y-.10	HNO_3	TOTAL METALS
1125	250ML	P	1	Y-.45	HNO_3	DISSOLVED METALS
1125	250ML	P	1	N	—	SULFATE

Comments:

TCEQ - SPLIT TOTAL METALS

FILTERED - PRESERVED

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1755 Project Name: EXIDE-FRISCO-FOP Date: 3-18-13

Sample Number: B7N

Sampling Location (well ID, etc.): B7N

Sampled by: JTB

Measuring Point (MP) of Well: TOC | PVC

Screened Interval (ft. BGL): 14-24

Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 13.96

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 13.96

Total Depth (ft. BGL): 24 —

Casing Diameter (In ID): 4.0

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: bailer

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: 10 micron & .45 micron other: TVRB

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1423		.12	19.7	7.62	3270			34	14.32
1428		.12	19.6	7.55	3277			37	14.37
1433		.11	19.4	7.56	3274			31	14.41

Water Level (ft. BMP) at End of Purge: 14.41 Sample Intake Depth (ft. BMP): 5' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration	Preservation	Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)		(quality control sample, other)
1445	250 mL	P	1	Y-10	HNO3	TOTAL METALS
1445	250 mL	P	1	Y-.45	HNO3	DISSOLVED METALS
1445	250 mL	P	1	N	—	SULFATE

Comments:

SPLIT SAMPLES WITH TCEQ - FILTERED TOTAL METALS PRESERVED

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1755	Project Name: EXIDE-FRISCO	Date: 4-[redacted]-13	
Sample Number: B9N		Starting Water Level (ft. BMP):	10 8.[redacted]76
Sampling Location (well ID, etc.): B9N		Casing Stickup (ft.):	-.28
Sampled by: JTB		Starting Water Level (ft. BGL):	8.[redacted]76
Measuring Point (MP) of Well: TOC / PVC		Total Depth (ft. BGL):	
Screened Interval (ft. BGL): 7-17		Casing Diameter (In ID):	@ 4.0
Filter Pack Interval (ft. BGL):		Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	KECK	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413

Filter / Filter Size: 10 micron & .45 micron Other: TVRB

SAMPLING MEASUREMENTS

0914

Time [redacted]38	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0924		.12	16.7	5.57	2530	0.62	89.3		8.91
0929		.11	16.1	5.61	2560	0.59	87.4		8.94
0934		.11	16.2	5.62	2570	0.58	87.6		8.94

Water Level (ft. BMP) at End of Purge: 8.94 Sample Intake Depth (ft. BMP): 3' off Bottom

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1000	250mL	P	1	N	HNO3	TOTAL METALS
1000	250mL	P	1	Y-.45	HNO3	DISSOLVED METALS
1000	250mL	P	1	—	—	SULFATE
- duplicate @ this well			-		DUP-2	

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1755 Project Name: EXIDE-FRISCO -FOP Date: 3-18-13

Sample Number: MW-10

Sampling Location (well ID, etc.): MW-10

Sampled by: JTB

Measuring Point (MP) of Well: TOC/PVC

Screened Interval (ft. BGL): 7-17

Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 8.09

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 8.09

Total Depth (ft. BGL): 17

Casing Diameter (In ID): 4.0

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: 10 micron & .45 micron Other: TVRB

SAMPLING MEASUREMENTS

1326 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1336		.12	19.4	7.34	2001			5.8	8.39
1341		.11	19.6	7.36	1994			3.9	8.51
1346		.11	19.6	7.38	1994			3.2	8.54

Water Level (ft. BMP) at End of Purge: 8.54 Sample Intake Depth (ft. BMP): 4.5' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1400	250ML	P	1	N	HNO3	TOTAL METALS
1400	250ML	P	1	Y-.45	HNO3	DISSOLVED METALS
1400	250ML	P	1	N	—	SULFATE

Comments:

SPLIT SAMPLES WITH TCEQ - NON FILTERED TOTAL METALS PRESERVED

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1755 Project Name: EXIDE - FRISCO Date: 4-9-13

Sample Number: MW-11
Sampling Location (well ID, etc.): MW-11
Sampled by: JTB
Measuring Point (MP) of Well: TOC | PVC
Screened Interval (ft. BGL): 7-17
Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 7.64
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 7.64
Total Depth (ft. BGL):
Casing Diameter (In ID): 4.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated or new equipment
Purging: peristaltic pump Sampling: none
Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)
Water Level: KECK Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: 10 micron & .45 micron Other: NRB

SAMPLING MEASUREMENTS

1602 Time	Cum. Vol (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1612		.11	19.7	7.01	1060	2.16	87.1	6.7	7.76
1615		.12	19.8	7.03	1030	1.97	85.9	2.8	7.77
1622		.11	19.8	7.04	1040	1.99	86.4	3.4	7.77

Water Level (ft. BMP) at End of Purge: 7.77 Sample Intake Depth (ft. BMP): 4' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1635	250ML	P	1		HNO_3	TOTAL METALS
1635	250ML	P	1	Y-.45	HNO_3	DISSOLVED METALS
1635	250ML	P	1	—	—	SULFATE

Comments:

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GROUNDWATER SAMPLING RECORD

FDA PAGE 1 of 1

Project Number: 1755 Project Name: EXIDE-FRISCO-~~KANSAS CITY~~ Date: 3-13-13

Sample Number: MW-12		Starting Water Level (ft. BMP):	8.22
Sampling Location (well ID, etc.): MW-12		Casing Stickup (ft.):	—
Sampled by: JTB		Starting Water Level (ft. BGL):	8.22
Measuring Point (MP) of Well: TOC / PVC		Total Depth (ft. BGL):	18.5 —
Screened Interval (ft. BGL):	8-18.5	Casing Diameter (In ID):	4.0
Filter Pack Interval (ft. BGL):		Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: bailer

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: 10 micron & .45 micron Other: TVRB

SAMPLING MEASUREMENTS

Time	Cum. Vol (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1347									
1351		.12	20.0	6.75	3768			8.6	8.97
1401		.12	20.1	6.77	3781			10	8.99
1406		.11	20.2	6.78	3786			10	8.99

Water Level (ft. BMP) at End of Purge: 8.99 Sample Intake Depth (ft. BMP): 5' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1410	250mL	P	1	N	HNO_3	TOTAL METALS
1410	250mL	P	1	Y-.45	HNO_3	DISSOLVED METALS

Comments:

SPLIT SAMPLES WITH TCEQ - NONFILTERED TOTAL METALS PRESERVED

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1755	Project Name: EXIDE-FRISCO-FDP	Date: 3-13-13	
Sample Number: MW-13		Starting Water Level (ft. BMP):	15.42
Sampling Location (well ID, etc.): MW-13		Casing Stickup (ft.):	–
Sampled by: JTB		Starting Water Level (ft. BGL):	15.42
Measuring Point (MP) of Well: TOC / PVC		Total Depth (ft. BGL):	22 –
Screened Interval (ft. BGL): 12-22		Casing Diameter (In ID):	4.0
Filter Pack Interval (ft. BGL): –		Casing Volume (gal.):	–

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	KECK	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	10 micron & .45 micron	other:	TURB

SAMPLING MEASUREMENTS

Time (1220)	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1229		.10	21.2	7.42	3104			56	15.73
1234		.10	21.2	7.40	3109			41	15.73
1241		.10	21.2	7.41	3110			39	15.73

Water Level (ft. BMP) at End of Purge: 15.73 Sample Intake Depth (ft. BMP): 3' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1255	250mL	P	1	Y-.10	HNO3	TOTAL METALS
1255	250mL	P	1	Y-.45	HNO3	DISSOLVED METALS

Comments:

SPLIT SAMPLES WITH TCEQ - FILTERED / TOTAL METALS PRESERVED

TCEQ TOOK A MS / MSD

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GROUNDWATER SAMPLING RECORD

FOP PAGE 1 of 1

Project Number: 1755 Project Name: EXIDE-FRISCO-~~CARROLL~~ JB Date: 3-13-13

Sample Number: MW-14		Starting Water Level (ft. BMP):	5.81
Sampling Location (well ID, etc.): MW-14		Casing Stickup (ft.):	—
Sampled by: JTB		Starting Water Level (ft. BGL):	5.81
Measuring Point (MP) of Well: TOC PVC		Total Depth (ft. BGL):	17 —
Screened Interval (ft. BGL):	7-17	Casing Diameter (In ID):	4.0
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	KECK	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413

Filter / Filter Size: 10 micron & .45 micron Other: TVRB

SAMPLING MEASUREMENTS

1308 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1317		.10	17.9	7.07	4295			41	6.67
1321		.11	17.8	7.08	4296			24	6.69
1327		.10	17.8	7.08	4290			23	6.69

Water Level (ft. BMP) at End of Purge: 6.69 Sample Intake Depth (ft. BMP): 5.5' off Bottom

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1335	250 mL	P	1	Y-10	HNO3	TOTAL METALS
1335	250 mL	P	1	Y-.45	HNO3	DISSOLVED METALS

Comments:

SPLIT SAMPLES WITH TCEQ - FILTERED TOTAL METALS PRESERVED

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GROUNDWATER SAMPLING RECORD

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Project Number: 1755 Project Name: EXIDE-FRISCO Date: 4-9-13

Sample Number: MW-16

Sampling Location (well ID, etc.): MW-16

Sampled by: JTB

Measuring Point (MP) of Well: TOC/PVC

Screened Interval (ft. BGL):

Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 8.24

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 8.24

Total Depth (ft. BGL):

Casing Diameter (In ID): 4.0

Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: 10 micron & .45 micron Other: TVRB

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1419									
1429		.12	21.4	7.26	1670	2.62	86.2	5.05	8.36
1434		.12	21.5	7.24	1660	2.16	84.9	5.7	8.36
1439		.11	21.5	7.24	1660	2.18	84.7	6.2	8.36

Water Level (ft. BMP) at End of Purge: 8.36 Sample Intake Depth (ft. BMP): 4' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1450	250mL	P	1	N	HNO3	TOTAL METALS
1450	250mL	P	1	Y-.45	HNO3	DISSOLVED METALS
1450	250mL	P	1	—	—	SULFATE

Comments:

TCEQ-SPLIT SAMPLES. TOTALS ONLY

DUPLICATE AT THIS WELL.

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GROUNDWATER SAMPLING RECORD

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Project Number: 1755	Project Name: EXIDE-FRISCO	Date: 4-9-13	
Sample Number: MW-165		Starting Water Level (ft. BMP):	8.79
Sampling Location (well ID, etc.): MW-165		Casing Stickup (ft.):	—
Sampled by: JTB		Starting Water Level (ft. BGL):	8.79
Measuring Point (MP) of Well: TOC / PVC		Total Depth (ft. BGL):	
Screened Interval (ft. BGL):		Casing Diameter (In ID):	4.0
Filter Pack Interval (ft. BGL):		Casing Volume (gal.):	

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	KECK	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413

Filter / Filter Size: 10 micron & .45 micron Other: TVRB

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1314									
1324		.12	20.9	6.04	8530	0.45	56.2	6.8	8.86
1329		.12	21.0	6.05	8530	0.32	61.1	6.3	8.86
1334		.12	20.8	6.05	8510	0.29	61.4	7.9	8.86

Water Level (ft. BMP) at End of Purge: 8.86 Sample Intake Depth (ft. BMP): 3' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration		
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	Remarks (quality control sample, other)
1345	250ML	P	1	N	HNO3	TOTAL METALS
1345	250ML	P	1	Y-.45	HNO3	DISSOLVED METALS
1345	250ML	P	1	—	—	SULFATE

Comments:

TCEQ- SPLIT SAMPLES- TOTAL ONLY

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GROUNDWATER SAMPLING RECORD

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Project Number: 1755 Project Name: EXIDE-FRISCO-FDP Date: 3-22-13

Sample Number: MW-17

Sampling Location (well ID, etc.): MW-17

Sampled by: JTB

Measuring Point (MP) of Well: TOC | PVC

Screened Interval (ft. BGL): 7-17

Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 8.49

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 8.49

Total Depth (ft. BGL): 17

Casing Diameter (In ID): 4.0 JB

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: 10 micron & .45 micron Other: TVRB

SAMPLING MEASUREMENTS

1300 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1310		.13	18.8	6.74	4640	0.95	65.2	68	8.64
1316		.14	18.8	6.55	4050	0.91	29.3	30	8.64
1321		.14	18.8	6.57	4060	0.90	29.7	24	8.64

Water Level (ft. BMP) at End of Purge: 8.64

Sample Intake Depth (ft. BMP): 4' off Bottom

SAMPLE INVENTORY

Bottles Collected				Filtration	Preservation	Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)		(quality control sample, other)
1330	250mL	P	1	Y-10	HNO_3	TOTAL METALS
1330	250mL	P	1	Y-.45	HNO_3	DISSOLVED METALS
1330	250mL	P	1	N	—	SULFATE

Comments:

TCEQ-SPLIT SAMPLES FOR TOTAL METALS FILTERED, PRESERVED

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1755 Project Name: EXIDE-FRISCO-FOP Date: 3-18-13

Sample Number: MW-18		Starting Water Level (ft. BMP):	3.02
Sampling Location (well ID, etc.): MW-18		Casing Stickup (ft.):	—
Sampled by: JTB		Starting Water Level (ft. BGL):	3.02
Measuring Point (MP) of Well: TOC / PVC		Total Depth (ft. BGL):	15.5 —
Screened Interval (ft. BGL):	5.5-15.5	Casing Diameter (In ID):	4.0
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	KECK	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	10 micron & .45 micron	Other:	TVRB

SAMPLING MEASUREMENTS

1503 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1513		.11	16.9	7.33	1465			4.8	3.44
1518		.11	16.7	7.34	1458			3.7	3.51
1523		.11	16.7	7.35	1460			2.7	3.53

Water Level (ft. BMP) at End of Purge: 3.53 Sample Intake Depth (ft. BMP): 6' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration		
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	Remarks (quality control sample, other)
1540	250ML	P	1	N	HNO3	TOTAL METALS
1540	250ML	P	1	Y-.45	HNO3	DISSOLVED METALS
1540	250ML	P	1	N	—	SULFATE

Comments:

SPLIT SAMPLES WITH TCEQ - NON FILTERED TOTAL METALS PRESERVED

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GROUNDWATER SAMPLING RECORD

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Project Number: 1755 Project Name: EXIDE-FRISCO Date: 4-8-13

Sample Number: MW-21
Sampling Location (well ID, etc.): MW-21
Sampled by: JTB
Measuring Point (MP) of Well: TOC | PVC
Screened Interval (ft. BGL): 3-13
Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 3.17
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 3.17
Total Depth (ft. BGL): 15.35
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated or new equipment
Purging: peristaltic pump Sampling: None
Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: 10 micron & .45 micron Other: TVRB

SAMPLING MEASUREMENTS

1257 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1307		.11	18.1	6.41		1.06		113	5.96
1312		.11	18.2	6.43		0.81		47	6.43
1317		.12	18.1	6.44		0.82		44	6.91
1318			turn the pump up to evacuate the well						
1319		.70							
1325									8.21
1330		.70							9.69
1340									11.76
1350		.70							14.02
1358		DRY							
1030									5.61

4-9-13

Water Level (ft. BMP) at End of Purge: DRY Sample Intake Depth (ft. BMP): 5' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected Time	Volume	Composition (G, P)	No.	Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
1030	250mL	P	1	Y-.10	HNO3	TOTAL METALS
1030	250mL	P	1	Y-.45	HNO3	DISSOLVED METALS
1030	250mL	P	1	—	—	SULFATE

Comments:

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1755 Project Name: EXIDE-FRISCO Date: 4-8-13

Sample Number: MW-22

Sampling Location (well ID, etc.): MW-22

Sampled by: JTB

Measuring Point (MP) of Well: TOC | PVC

Screened Interval (ft. BGL): 3-13

Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 3.62

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 3.62

Total Depth (ft. BGL): 16.44

Casing Diameter (In ID): 2.0

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: 10 micron & .45 micron Other: TVRB

SAMPLING MEASUREMENTS

1120 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1130		.14	17.4	5.94	3920	1.74	146.2	179	6.23
1135		.13	17.7	6.13	3940	1.61	147.1	61	6.84
1140		.13	17.7	6.15	3940	1.59	147.7	57	6.97
1145			turn the pump up						7.44
1146		.70							[illegible]
1150									8.36
1157		.70							10.06
1204									11.71
1210		.70							13.45
1220									15.72
1224		DRY							
1050			19.9	6.12	3870	1.62	139.4	8.6	6.22

4-9-13

Water Level (ft. BMP) at End of Purge: DRY Sample Intake Depth (ft. BMP): 5' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration		
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	Remarks (quality control sample, other)
050	250mL	P	1		HNO3	TOTAL METALS
1050	250mL	P	1	Y-.45	HNO3	DISSOLVED METALS
1050	250mL	P	1	—	—	SULFATE

Comments:

TCEQ-SPLIT SAMPLES - TOTAL ONLY

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GROUNDWATER SAMPLING RECORD

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Project Number: 1755	Project Name: EXIDE-FRISCO-FOP	Date: 3-18-13	
Sample Number: MW-23		Starting Water Level (ft. BMP):	6.76
Sampling Location (well ID, etc.): MW-23		Casing Stickup (ft.):	—
Sampled by: JTB		Starting Water Level (ft. BGL):	6.76
Measuring Point (MP) of Well: TOC/PVC		Total Depth (ft. BGL):	19.5 —
Screened Interval (ft. BGL): 4.5-19.5		Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):		Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	KECK	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413

Filter / Filter Size: 10 micron & .45 micron Other: TURB

SAMPLING MEASUREMENTS

1173 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1133		.17	19.1	7.33	3339			49	7.67
1139		.10	18.8	7.30	3320			40	8.09
1143		.11	18.7	7.31	3323			31	8.41
1146	will turn the pump up and pump well dry								
	.42 gpm is the rate								
1224	well is dry							39	7.07

3/19/13

Water Level (ft. BMP) at End of Purge: DRY Sample Intake Depth (ft. BMP): 6' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
0945	250ML	P	1	Y-.10	HNO3	TOTAL METALS
0945	250ML	P	1	Y-.45	HNO3	DISSOLVED METALS
0945	250ML	P	1	N	—	SULFATE

Comments:

SPLIT SAMPLES WITH TCEQ - FILTERED TOTAL METALS PRESERVED

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1755 Project Name: EXIDE-FRISCO-FOP Date: 3-18-13

Sample Number: MW-24

Sampling Location (well ID, etc.): MW-24

Sampled by: JTB

Measuring Point (MP) of Well: TOC / PVC

Screened Interval (ft. BGL): 14-29

Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 22.07

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 22.07

Total Depth (ft. BGL): 29 —

Casing Diameter (In ID):

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: 10 micron & .45 micron Other: TVRB

SAMPLING MEASUREMENTS

1546 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1556		.12	21.0	7.80	4570			129	22.10
1601		.12	21.0	7.78	4588			89	22.11
1606		.12	21.1	7.77	4576			91	22.12

Water Level (ft. BMP) at End of Purge: 22.12 Sample Intake Depth (ft. BMP): 3.5' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1615	250ML	P	1	Y-.10	HNO3	TOTAL METALS
1615	250ML	P	1	Y-.45	HNO3	DISSOLVED METALS
1615	250ML	P	1	N	—	SULFATE

Comments:

SPLIT SAMPLES WITH TCEQ - FILTERED TOTAL METALS - PRESERVED

TCEQ IS DUPLICATING THIS WELL

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GROUNDWATER SAMPLING RECORD

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Project Number: 1755 Project Name: EXIDE-FRISCO-FOP Date: 3-18-13

Sample Number: MW-25
Sampling Location (well ID, etc.): MW-25
Sampled by: JTB
Measuring Point (MP) of Well: TOC | PVC
Screened Interval (ft. BGL): 7-22
Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 11.92
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 11.92
Total Depth (ft. BGL): 21.5 —
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated or new equipment
Purging: peristaltic pump Sampling: bailer
Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: 10 micron & .45 micron Other: TVRB

SAMPLING MEASUREMENTS

1007 Time	Cum. Vol (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1016		.11	19.2	7.61	4924			245	13.04
1021		.12	19.1	7.62	4943			189	13.36
1025-	will turn pump up to evacuate the well								
	pump is @ .4 LPM								
1049-	well is dry								
0906		.12	19.2	7.47	4872			87	12.68

3/19/13

Water Level (ft. BMP) at End of Purge: DRY Sample Intake Depth (ft. BMP): 5' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
0915	250ML	P	1	Y-.10	HNO3	TOTAL METALS
0915	250ML	P	1	Y-.45	HNO3	DISSOLVED METALS
0915	250ML	P	1	N	HNO3	SULFATE

Comments:
SPLIT SAMPLES WITH TCEQ - FILTERED
TOTAL METALS PRESERVED
SULFATE - NON FILTERED - NON PRESERVED

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GROUNDWATER SAMPLING RECORD

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Project Number: 1755	Project Name: EXIDE-FRISCO	Date: 4-8-13	
Sample Number: MW-26		Starting Water Level (ft. BMP):	9.52
Sampling Location (well ID, etc.): MW-26		Casing Stickup (ft.):	-
Sampled by: JTB		Starting Water Level (ft. BGL):	9.52
Measuring Point (MP) of Well: TOC / PVC		Total Depth (ft. BGL):	
Screened Interval (ft. BGL): 5-15		Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):		Casing Volume (gal.):	

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	KECK	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	10 micron & .45 micron	Other:	TURB

SAMPLING MEASUREMENTS

Time (1013)	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1023		.12	17.4	6.13	4210	1.36	121.6	147	11.07
1028		.12	17.6	6.14	4210	1.13	123.4	113	11.93
1033		.12	17.7	6.15	4220	1.12	124.1	116	12.37
1034			turn the pump up to evacuate the well						
1044		.70							15.16
1054		.70							17.09
1057		DRY							
4-9-13 1000			18.1	6.21	4100	0.96	117.4	72	10.39

Water Level (ft. BMP) at End of Purge: DRY Sample Intake Depth (ft. BMP): 3' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
4-9-13 1000	250mL	P	1	Y-10	HNO_3	TOTAL METALS
1000	250mL	P	1	Y-.45	HNO_3	DISSOLVED METALS
1000	250mL	P	1	-	-	SULFATE

Comments:

NO SAMPLES WERE COLLECTED BY TCEQ

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1755 Project Name: EXIDE-FRISCO Date: 4-8-13

Sample Number: MW-27

Sampling Location (well ID, etc.): MW-27

Sampled by: JTB

Measuring Point (MP) of Well: TOC | PVC

Screened Interval (ft. BGL): 5-15

Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 5.92

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 5.92

Total Depth (ft. BGL): 17.38

Casing Diameter (In ID): 2.0

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK Thermometer: YSI SSK PRO PLUS

pH Meter: YSI SSK PRO PLUS Field Calibration: 7-4

Conductivity Meter: YSI SSK PRO PLUS Field Calibration: 1413

Filter / Filter Size: 10 micron & .45 micron Other: TVRB

SAMPLING MEASUREMENTS

0756 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0806		.12	16.8	5.81	3390	1.04	145.1	211	7.79
0811		.12	16.9	5.81	3390	0.83	147.4	175	8.04
0816		.12	16.6	5.82	3390	0.84	146.8	140	8.55
0824		.2							8.97
0825		.50	turn the pump up to purge the well						
0839									10.96
0840		.70	turn the pump up						
0852									16.69
0854		DRY							
0845			17.4	5.89	3410	.086	137.6	36	5.44

4/9/13

Water Level (ft. BMP) at End of Purge: DRY Sample Intake Depth (ft. BMP): 4' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration		
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	Remarks (quality control sample, other)
0845	250mL	P	1	Y-10	HNO3	TOTAL METALS
0845	250mL	P	1	Y-.45	HNO3	DISSOLVED METALS
0845	250mL	P	1	N	—	SULFATE
0845	40mL	G	3	N	HCL	TPH
0845	1L	G	2	N	—	PAHS

4-8-13 JB

Comments:

NO SAMPLES WERE COLLECTED BY TCEQ

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1755 Project Name: EXIDE - FRISCO Date: 3-20-13

Sample Number: MW-28

Sampling Location (well ID, etc.): MW-28

Sampled by: JTB

Measuring Point (MP) of Well: TOC/PVC

Screened Interval (ft. BGL):

Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 14.58

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 14.58

Total Depth (ft. BGL): 19.5

Casing Diameter (In ID): 2.0

Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Keck Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: 10 micron & .45 micron Other: TURB

SAMPLING MEASUREMENTS

Time	Cum. Vol (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0828									
0838		.11	17.7	7.31	1171			7.4	15.23
0843		.11	17.4	7.33	1165			7.2	15.43
0848		.11	17.4	7.34	1161			6.8	15.44
0853		.11	17.7	7.34	1165			6.9	15.82
0858		.11	17.6	7.35	1163			8.9	15.91
0903			17.5	7.36	1162				16.07
0905 - 0935	turned the pump up to evacuate the well, pump @ .45 LPM	.45							18.75
0945	turned pump up all the way well is dry								
0815	—	—	18.2	7.45	950	5.21	276	7.8	14.55

3/21/13

Water Level (ft. BMP) at End of Purge: DRY Sample Intake Depth (ft. BMP): 3' off BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
0830	250mL	P	1	N	HNO_3	TOTAL METALS
0830	250mL	P	1	Y-.45	HNO_3	DISSOLVED METALS

Comments:

TCEQ - NO SAMPLES

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1755 Project Name: EXIDE-FRISCO Date: 4-11-13

Sample Number: MW-28
Sampling Location (well ID, etc.): MW-28
Sampled by: JTB
Measuring Point (MP) of Well: TOC/PVC
Screened Interval (ft. BGL):
Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 13.98
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 13.98
Total Depth (ft. BGL): 23.41
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: dedicated or new equipment
Purging: peristaltic pump Sampling: bailer
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: 10 micron & .45 micron Other: TVRB

SAMPLING MEASUREMENTS

Time (1956)	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1104		.5	18.9	7.07	930	2.62	87.6	8.4	16.06
1114		.7	18.4	7.04	960	2.51	87.1	7.2	18.46
1126		.7	18.6	7.03	960	2.50	87.1	7.3	21.79
1135	DRY								
4-12-13 0930	—	—	18.4	7.09	930	2.96	88.4	6.9	—

Water Level (ft. BMP) at End of Purge: DRY Sample Intake Depth (ft. BMP): 3' off Bottom

SAMPLE INVENTORY

Bottles Collected: Time	Volume	Composition (G, P)	No.	Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
0930	250mL	P	1	N	—	SULFATE

Comments:

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1755 Project Name: EXIDE-FRISCO Date: 4-8-13

Sample Number: MW-29

Sampling Location (well ID, etc.): MW-29

Sampled by: JTB

Measuring Point (MP) of Well: TOC | PVC

Screened Interval (ft. BGL): 4.5-14.5

Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 6.96

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 6.96

Total Depth (ft. BGL): 17.51

Casing Diameter (in ID): 2.0

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK

pH Meter: YSI ~~556~~ PRO PLUS

Conductivity Meter: YSI ~~556~~ PRO PLUS

Filter / Filter Size: 10 micron & .45 micron

Thermometer: YSI ~~556~~ PRO PLUS

Field Calibration: 7-4

Field Calibration: 1413

Other: TVRB

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0906									
0916		.13	17.0	5.89	7710	1.29	118.1	103	9.02
0922		.12	17.0	5.95	7830	1.03	108.2	137	9.81
0927		.12	17.1	6.01	7970	1.02	104.5	131	10.19
0928		.78	turn up the pump						
0938		.80							13.89
0948		.80							17.14
0951		DRY							
4-9-13 0930			17.4	6.03	7810	0.93	102.1	26	6.24

Water Level (ft. BMP) at End of Purge: DRY

Sample Intake Depth (ft. BMP): 5' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
4-9-13 0930	250ML	P	1	Y-10	HNO3	TOTAL METALS
0930	250ML	P	1	Y-.45	HNO3	DISSOLVED METALS
0930	250ML	P	1	N	—	SULFATE

Comments:

NO SAMPLES WERE COLLECTED BY TCEQ

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1755 Project Name: EXIDE - FRISCO Date: 4-10-13

Sample Number: MW-30

Sampling Location (well ID, etc.): MW-30

Sampled by: JTB

Measuring Point (MP) of Well: TOC | PVC

Screened Interval (ft. BGL):

Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 11.62

Casing Stickup (ft.): -

Starting Water Level (ft. BGL): 11.62

Total Depth (ft. BGL):

Casing Diameter (In ID): 2.0

Casing Volume (gal.): -

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: 10 micron & .45 micron Other: IVRB

SAMPLING MEASUREMENTS

Time 1014	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1024		.12	19.1	6.74	1860	0.45	-82.1	88.7	11.83
1029		.11	19.4	6.71	1840	0.41	-83.6	86.4	11.86
1034		.11	19.5	6.71	1840	0.40	-83.4	86.9	11.87

Water Level (ft. BMP) at End of Purge: 11.87 Sample Intake Depth (ft. BMP): 10' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1045	250mL	P	1	Y-10	HNO_3	TOTAL METALS
1045	250mL	P	1	Y-.45	HNO_3	DISSOLVED METALS
1045	250mL	P	1	—	—	SULFATE

Comments:

TCEQ - SPLIT SAMPLES - TOTALS ONLY

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GROUNDWATER SAMPLING RECORD

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Project Number 1755 Project Name EXIDE - FRISCO Date 5/13/13

Sample Number MW-31

Sampling Location (well ID, etc.) MW-31

Sampled by JTB

Measuring Point (MP) of Well TOC / PVC

Screened Interval (ft. BGL)

Filter Pack Interval (ft. BGL)

Starting Water Level (ft. BMP) 10.58

Casing Stickup (ft.) —

Starting Water Level (ft. BGL) 10.58

Total Depth (ft. BGL) —

Casing Diameter (in. ID) 2.0

Casing Volume (gal.) —

QUALITY ASSURANCE

METHODS (describe)

Cleaning Equipment dedicated or new equipment

Purging peristaltic pump Sampling Bailer

Disposal of Discharged Water 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level KELK Thermometer YSI 556

pH Meter YSI 556 Field Calibration 7-4

Conductivity Meter YSI 556 Field Calibration 1413

Filter / Filter Size 10 micron & .45 micron Other NRB

SAMPLING MEASUREMENTS

Time	Cum Vol (gal or L)	Purge Rate (gal or L/m)	Temp (oC)	pH	Spec Cond (mmhos/cm)	DO	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0824	—	.1	20.9	6.64	1060	0.76	-37	14	10.74
0829		.1	21.0	6.67	1110	0.54	-36	16	10.96
0834		↓	21.1	6.60	1124	0.55	-36	16	10.97

Water Level (ft. BMP) at End of Purge 10.97 Sample Intake Depth (ft. BMP) 6' off Bottom

SAMPLE INVENTORY

Bottles Collected: Time	Volume	Composition (G, P)	No	Filtration (Y - N)	Preservation	Remarks (quality control sample, other)
0845	250mL	P	1	Y - 10	HNO_3	TOTAL METALS
0845	250mL	P	1	Y - 45	HNO_3	DISSOLVED METALS
0845	250mL	P	1	N	—	SULFATE

Comments

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1755 Project Name: EXIDE-FRISCO Date: 4-8-13

Sample Number: P-1

Sampling Location (well ID, etc.): P-1

Sampled by: JTB

Measuring Point (MP) of Well: TOC | PVC

Screened Interval (ft. BGL): 10-20

Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 13.91

Casing Stickup (ft.): -

Starting Water Level (ft. BGL): 13.91

Total Depth (ft. BGL):

Casing Diameter (In ID): 2.0

Casing Volume (gal.): -

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: 10 micron & .45 micron Other: NRB

SAMPLING MEASUREMENTS

1434 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1444		.11	18.1	6.41	3620	1.76	161.7	76	15.61
1449		.12	18.2	6.47	3670	1.52	151.7	57	16.07
1454		.12	18.2	6.48	3680	1.51	152.4	59	16.62
1455			turn the pump up to evacuate the well						
1456		.70							
1505									17.96
1515									20.37
			DRY						
4-9-13 1125			18.3	6.41	3590	1.02	139.2	19.9	14.62

Water Level (ft. BMP) at End of Purge: DRY Sample Intake Depth (ft. BMP): 5' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1125	250mL	P	1	Y-.10	HNO3	TOTAL METALS
1125	250mL	P	1	Y-.45	HNO3	DISSOLVED METALS
1125	250mL	P	1	—	—	SULFATE

Comments:

SPLIT SAMPLES WITH TCEQ

TOTAL ONLY

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: 1755 Project Name: EXIDE-FRISCO-FOP Date: 3-18-13

Sample Number: P-2

Sampling Location (well ID, etc.): P-2

Sampled by: JTB

Measuring Point (MP) of Well: TOC/PVC

Screened Interval (ft. BGL): 10-20

Filter Pack Interval (ft. BGL): —

Starting Water Level (ft. BMP): 15.98 ~~16.34~~ JB

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 15.98 ~~16.34~~ JB

Total Depth (ft. BGL): 20 —

Casing Diameter (In ID): 2.0

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: 10 micron & .45 micron Other: TVRB

SAMPLING MEASUREMENTS

Time JB	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0831									
0899		.12	17.6	7.26	3227			421	17.46
0843		.12	17.4	7.24	3221			406	18.21
0854	well is dry, turned off		will return to		sample,			pumped wat	
0900	well is dry		to .37 LPM						
3/19/13 0803		.14	17.4	7.21	3206			364	16.38

Water Level (ft. BMP) at End of Purge: DRY Sample Intake Depth (ft. BMP): 21' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration		
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	Remarks (quality control sample, other)
0815	250mL	P	1	Y-.10	HNO3	TOTAL METALS
0815	250mL	P	1	Y-.45	HNO3	DISSOLVED METALS
0815	250mL	P	1	N	—	SULFATE

Comments:

SPLIT SAMPLES WITH TCEQ - FILTERED TOTAL METALS PRESERVED

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: ~~10227~~ 1856 Project Name: EXIDE-FRISCO-LANDFILL Date: 3/12/13

Sample Number: LMW-5		Starting Water Level (ft. BMP):	17.69
Sampling Location (well ID, etc.): LMW-5		Casing Stickup (ft.):	—
Sampled by: JTB		Starting Water Level (ft. BGL):	17.69
Measuring Point (MP) of Well: TOC / PVC		Total Depth (ft. BGL):	22 —
Screened Interval (ft. BGL):	7-21	Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):	—	Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: 10 MICRON & .45 MICRON Other: TVRB

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1204									
1213		.15	18.9	6.48	1271			22	18.32
1218		.14	18.8	6.52	1257			16	18.93
1220	TURNED UP THE PUMP TO EVACUATE THE WELL, WILL RETURN								
	TO SAMPLE								
1239	WELL IS DRY								
1040		.14	18.6	6.57	1281			64	17.66

3/13/13

Water Level (ft. BMP) at End of Purge: DRY Sample Intake Depth (ft. BMP): 21 OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1050	250mL	P	1	Y-.10	HNO_3	TOTAL METALS
1050	250mL	P	1	Y-.45	HNO_3	DISSOLVED METALS

Comments:

SPLIT SAMPLES WITH TCEQ- FILTERED TOTAL METALS PRESERVED

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GROUNDWATER SAMPLING RECORD

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Project Number: 1755	Project Name: EXIDE-FRISCO	Date: 4-11-13	
Sample Number: LMW-5		Starting Water Level (ft. BMP):	16.94
Sampling Location (well ID, etc.): LMW-5		Casing Stickup (ft.):	—
Sampled by: JTB		Starting Water Level (ft. BGL):	16.96
Measuring Point (MP) of Well: TOC / PVC		Total Depth (ft. BGL):	25.25
Screened Interval (ft. BGL): 7-21.5		Casing Diameter (In ID):	4.0
Filter Pack Interval (ft. BGL):		Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	KECK	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413

Filter / Filter Size: 10 micron & .45 micron Other: TURB

SAMPLING MEASUREMENTS

1018 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1027		.5	6.74	17.7	3460	1.74	134.7	16	19.61
1032		.8	6.72	17.8	3390	1.62	133.2	12	21.19
1039		.8	6.71	17.8	3380	1.61	133.6	11	23.74
1047	DRY		↓	↑					
4-12-13 0915	—		17.4	6.74	3360	1.61	128.7	12	—

Water Level (ft. BMP) at End of Purge: DRY Sample Intake Depth (ft. BMP): 3' off Bottom

SAMPLE INVENTORY

Bottles Collected: Time	Volume	Composition (G, P)	No.	Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
0915	250mL	P	1	N	—	SULFATE

Comments:

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GROUNDWATER SAMPLING RECORD

PAGE 1 of 1

Project Number: [redacted] 1BSL Project Name: EXIDE-FRISCO-LANDFILL Date: 3/12/13

Sample Number: LMW-8

Sampling Location (well ID, etc.): LMW-8

Sampled by: JTB

Measuring Point (MP) of Well: TOC / PVC

Screened Interval (ft. BGL): 7-21

Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 14.93

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 14.93

Total Depth (ft. BGL): 22 —

Casing Diameter (In ID): 2.0

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: 10 MICRON & .45 micron Other: TVRB

SAMPLING MEASUREMENTS

0916 Time	Cum. Vol (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0921		.15	16.2	6.85	912			37	15.31
0926		.15	16.7	6.67	857			26	15.63
0931		.15	16.7	6.61	806			27	16.08
0932 - WILL TURN THE PUMP UP AND FRACCLATE THE WELL. WILL RETURN									
	TO SAMPLE								
0940 - WELL IS DRY									
0927		.14	16.4	6.67	816			86	15.04

3/13/13

Water Level (ft. BMP) at End of Purge: DRY Sample Intake Depth (ft. BMP): 3.5' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
250mL	250mL	P	1	Y 10micron	HNO3	TOTAL METALS
250mL	250mL	P	1	Y .45micron	HNO3	DISSOLVED METALS

Comments:

SPLIT SAMPLES WITH TCEQ - FILTERED TOTAL METALS JB [redacted] PRESERVED

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GROUNDWATER SAMPLING RECORD

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Project Number: 1755	Project Name: EXIDE-FRISCO	Date: 4-11-13	
Sample Number: LMW-8		Starting Water Level (ft. BMP):	14.76
Sampling Location (well ID, etc.): LMW-8		Casing Stickup (ft.):	—
Sampled by: JTB		Starting Water Level (ft. BGL):	14.76
Measuring Point (MP) of Well: TOC PVC		Total Depth (ft. BGL):	22.10
Screened Interval (ft. BGL): 7-21.5		Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):		Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	KECK	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	10 micron & .45 micron	other:	TURB

SAMPLING MEASUREMENTS

0916 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0922		.50	16.9	7.06	710	2.61	42.1	26	17.28
0933		.80	16.8	7.01	700	2.46	43.9	29	21.90
0937		DRY							
0820			17.1	7.06	720	2.52	44.3	17	—

4-12-13

Water Level (ft. BMP) at End of Purge: DRY Sample Intake Depth (ft. BMP): 4' off Bottom

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
0820	250mL	P	1	Y-10	HNO3	TOTAL METALS
0820	250mL	P	1	Y-.45	HNO3	DISSOLVED METALS
0820	250mL	P	1	—		SULFATE

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1856 Project Name: EXIDE-FRISCO-LANDFILL Date: 3/12/13

Sample Number: LMW-9		Starting Water Level (ft. BMP):	16.24
Sampling Location (well ID, etc.): LMW-9		Casing Stickup (ft.):	—
Sampled by: JTB		Starting Water Level (ft. BGL):	16.24
Measuring Point (MP) of Well: TOC / PVC		Total Depth (ft. BGL):	24 —
Screened Interval (ft. BGL):	9-23	Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):		Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: bailer

Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	KECK	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	10 micron & .45 micron	Other:	TVRB

SAMPLING MEASUREMENTS

0807 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0817		.13	16.5	6.77	3289			3.9	16.59
0822		.14	16.6	6.74	3296			4.6	16.82
0827		.13	16.6	6.75	3299			4.4	17.04
0845		.13							17.81
	turn pump up to evacuate the well, will return to SAMPLE								
0912	well ready								
0830		.13	16.2	6.71	3276			6.9	20.54

3/13/13

Water Level (ft. BMP) at End of Purge: DRY Sample Intake Depth (ft. BMP): 4' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration	Preservation	Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)		(quality control sample, other)
0910	250ML	P	1	N	HNO3	TOTAL METALS
0910	250ML	P	1	Y .45micron	HNO3	DISSOLVED METALS

Comments:

SPLIT SAMPLES WITH TCEQ - NON FILTERED TOTAL METALS & PRESERVED

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GROUNDWATER SAMPLING RECORD

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Project Number: 1755 Project Name: EXIDE-FRISCO Date: 4-11-13

Sample Number:	LMW-9	Starting Water Level (ft. BMP):	20.17
Sampling Location (well ID, etc.):	LMW-9	Casing Stickup (ft.):	–
Sampled by:	JTB	Starting Water Level (ft. BGL):	20.17
Measuring Point (MP) of Well:	TOC/PVC	Total Depth (ft. BGL):	27.75
Screened Interval (ft. BGL):	9-23.5	Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):		Casing Volume (gal.):	–

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	KECK	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413
Filter / Filter Size:	10 micron & .45 micron	Other:	NRS

SAMPLING MEASUREMENTS

0827 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0845		.5	19.5	6.99	36.20	1.34	114.3	36	23.27
0853		.7	19.6	7.01	3630	1.27	114.7	29	25.47
0904-	DRY								
4-12-13 0755			19.2	7.04	3630	1.62	1024	28	–

Water Level (ft. BMP) at End of Purge: DRY Sample Intake Depth (ft. BMP): 5' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
0755	250mL	P	1	Y-.10	HNO3	TOTAL SELENIUM
0755	250mL	P	1	Y-.45	HNO3	DISSOLVED SELENIUM
0755	250mL	P	1	N	–	SULFATE

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: JB [redacted] 1856 Project Name: EXIDE-FRISCO-LANDFILL Date: 3/12/13

Sample Number: LMW-17

Sampling Location (well ID, etc.): LMW-17

Sampled by: JTB

Measuring Point (MP) of Well: TOC / PVC

Screened Interval (ft. BGL): 10-20

Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 18.52

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 18.52

Total Depth (ft. BGL): 23 —

Casing Diameter (In ID): 4.0

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: 10 micron & .45 micron Other: TVRB

SAMPLING MEASUREMENTS

1010 Time	Cum. Vol. (gal. or (L))	Purge Rate (gal. or (L/m))	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1020		.15	18.8	6.38	1092			9.8	18.55
1025		.14	19.0	6.35	1096			3.3	18.56
1030		.15	19.1	6.33	1091			2.8	18.56

Water Level (ft. BMP) at End of Purge: 18.56 Sample Intake Depth (ft. BMP): 2' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1040	250mL	P	1	N	HNO3	TOTAL
1046	250mL	P	1	Y [redacted]	HNO3	DISSOLVED .45 micron

Comments: SPLIT SAMPLES WITH TCEQ
TOTAL METALS - NON FILTERED
JB [redacted] PRESERVED

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GROUNDWATER SAMPLING RECORD

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Project Number: 1755 Project Name: EXIDE-FRISCO Date: 4-11-13

Sample Number: LMW-17

Sampling Location (well ID, etc.): LMW-17

Sampled by: JTB

Measuring Point (MP) of Well: TOC/PVC

Screened Interval (ft. BGL):

Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 18.34

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 18.34

Total Depth (ft. BGL): —

Casing Diameter (In ID): 2.0

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: 10 micron & .45 micron Other: TURB

SAMPLING MEASUREMENTS

1234 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1244		.11	17.6	7.07	960	2.12	100.9	6.7	18.42
1249		.12	17.7	7.08	950	2.06	101.6	7.4	18.43
1254		.12	17.7	7.08	950	2.05	101.6	7.7	18.43

Water Level (ft. BMP) at End of Purge: 18.43 Sample Intake Depth (ft. BMP): 3' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1300	250mL	P	1	N	—	SULFATE

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: [redacted]1856 Project Name: EXIDE-FRISCO-LANDFILL Date: 3/12/13

Sample Number: LMW-21		Starting Water Level (ft. BMP):	20.11
Sampling Location (well ID, etc.): LMW-21		Casing Stickup (ft.):	—
Sampled by: JTB		Starting Water Level (ft. BGL):	20.11
Measuring Point (MP) of Well: TOC PVC		Total Depth (ft. BGL):	25 —
Screened Interval (ft. BGL): 10-25		Casing Diameter (In ID):	2.0
Filter Pack Interval (ft. BGL):		Casing Volume (gal.):	—

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level:	KECK	Thermometer:	YSI 556
pH Meter:	YSI 556	Field Calibration:	7-4
Conductivity Meter:	YSI 556	Field Calibration:	1413

Filter / Filter Size: 10 micron & .45 micron Other: TVRB

SAMPLING MEASUREMENTS

1404 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1411		.12	20.5	6.49	1823			29	20.10
1421		.13	20.5	6.43	1822			20	20.12
1429		.13	20.6	6.47	1828			11	20.12
1433		.13	20.6	6.48	1826			9	20.12
1435		.12	20.7	6.47	1832			8.8	20.12

Water Level (ft. BMP) at End of Purge: 20.12 Sample Intake Depth (ft. BMP): 2.5' VAB bottom

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1445	250	P	1	N	HNO3	TOTAL [redacted] JB METALS
1445	250	P	1	Y .45	HNO3	DISSOLVED METALS

Comments: DUPLICATE @ this well DUP-1
SPLIT SAMPLES WITH TCEQ - NON FILTERED
TOTAL METALS JB [redacted] PRESERVED
TCEQ - TOOK A DUPLICATE

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GROUNDWATER SAMPLING RECORD

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Project Number: 1755 Project Name: EXIDE - FRISCO Date: 4-11-13

Sample Number: LMW-21

Sampling Location (well ID, etc.): LMW-21

Sampled by: JTB

Measuring Point (MP) of Well: TOC / PVC

Screened Interval (ft. BGL):

Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 19.29

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 19.29

Total Depth (ft. BGL): [illegible] —

Casing Diameter (In ID): 2.0

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: 10 micron & .45 micron Other: NRB

SAMPLING MEASUREMENTS

1413 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L/m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1423		.10	19.4	6.79	1540	1.41	146.5	3.7	19.41
1428		.11	19.6	6.74	1550	1.36	147.1	4.6	19.41
1433		.11	19.7	6.75	1550	1.35	147.2	4.6	19.41

Water Level (ft. BMP) at End of Purge: 19.41 Sample Intake Depth (ft. BMP): 4' off Bottom

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1445	250mL	P	1	~~Y~~ N	HNO_3	TOTAL METALS
1445	250mL	P	1	Y-145	HNO_3	DISSOLVED METALS
1445	250mL	P	1	—	—	SULFATE

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: JB [redacted] 1854 Project Name: EXIDE - FRISCO - LANDFILL Date: 3/12/13

Sample Number: LMW-22

Sampling Location (well ID, etc.): LMW-22

Sampled by: JTB

Measuring Point (MP) of Well: TOC / PVC

Screened Interval (ft. BGL): 5-20

Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 17.18

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 17.18

Total Depth (ft. BGL): 20 —

Casing Diameter (In ID): 2.0

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: same

Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: 10 micron & .45 micron Other: TVRB

SAMPLING MEASUREMENTS

Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /min)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1103		.15	17.9	6.45	1172			2.6	18.11
1118		.14	18.1	6.48	1184			3.9	18.56
1123		.14	18.2	6.48	1179			3.6	18.92
1126	TURNED PUMP RATE UP TO EVACUATE THE WELL, WILL RETURN TO SAMPLE								
1147	WELL IS DRY								
1002		.13	18.1	6.52	1131			16.2	20.49

3/13/13

Water Level (ft. BMP) at End of Purge: JB [redacted] DRY Sample Intake Depth (ft. BMP): 1.5' BMP = BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1010	250ML	P	1	Y-10	HNO_3	TOTAL METALS
1010	250ML	P	1	Y-.45	HNO_3	DISSOLVED METALS

Comments:

SPLIT SAMPLES WITH TCEQ - FILTERED TOTAL METALS JB [redacted] PRESERVED

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GROUNDWATER SAMPLING RECORD

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Project Number: 1755 Project Name: EXIDE-FRISCO Date: 4-11-13

Sample Number: LMW-22

Sampling Location (well ID, etc.): LMW-22

Sampled by: JTB

Measuring Point (MP) of Well: TOC/PVC

Screened Interval (ft. BGL):

Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 21.21

Casing Stickup (ft.): —

Starting Water Level (ft. BGL): 21.21

Total Depth (ft. BGL): 25.40

Casing Diameter (In ID): 4.0

Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment

Purging: peristaltic pump Sampling: none

Disposal of Discharged Water: 55 gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Filter / Filter Size: 10 micron & .45 micron Other: NRB

SAMPLING MEASUREMENTS

0943 Time	Cum. Vol. (gal. or L)	Purge Rate (gal. or L /m)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
0951		.50	17.6	6.71	2170	1.92	67.4	12	22.39
0959		.80	17.4	6.74	2120	1.74	66.4	9.6	23.67
1006		.80	17.4	6.75	2130	1.73	66.3	8.9	24.82
1012	DRY								
0845			17.6	6.76	2110	1.74	67.4	10	—

4-12-13

Water Level (ft. BMP) at End of Purge: DRY Sample Intake Depth (ft. BMP): 4' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
0845	250mL	P	1	N	—	SULFATE

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1755 Project Name: EXIDE-FRISCO Date: 4-11-13

Sample Number: PMW-20R
Sampling Location (well ID, etc.): PMW-20R
Sampled by: JTB
Measuring Point (MP) of Well: TOC | PVC
Screened Interval (ft. BGL):
Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 19.06
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 19.06
Total Depth (ft. BGL): —
Casing Diameter (In ID): 2.0
Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment
Purging: peristaltic pump Sampling: none
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: 10 micron & .45 micron Other: TVRB

SAMPLING MEASUREMENTS

1326 Time	Cum. Vol. (gal. or (L))	Purge Rate (gal. or (L/m))	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1334		.10	20.1	7.07	1190	0.87	156.4	7.4	19.31
1341		.11	20.3	7.11	1210	0.81	157.4	8.1	19.32
1346		.11	20.2	7.12	1220	0.82	157.5	8.4	19.32

Water Level (ft. BMP) at End of Purge: 19.32 Sample Intake Depth (ft. BMP): 4' off Bottom

SAMPLE INVENTORY

Bottles Collected				Filtration (Y / N)	Preservation	Remarks (quality control sample, other)
Time	Volume	Composition (G, P)	No.			
1355	250mL	P	1	~~N~~	HNO_3	TOTAL METALS
1355	250mL	P	1	Y-.45	HNO_3	DISSOLVED METALS
1355	250mL	P	1	—	—	SULFATE

Comments:

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GROUNDWATER SAMPLING RECORD

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Project Number: 1755 Project Name: EXIDE-FRISCO Date: 4-11-13

Sample Number: PMW-20R
Sampling Location (well ID, etc.): PMW-20R
Sampled by: JTB
Measuring Point (MP) of Well: TOC | PVC
Screened Interval (ft. BGL):
Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 19.06
Casing Stickup (ft.): —
Starting Water Level (ft. BGL): 19.06
Total Depth (ft. BGL): —
Casing Diameter (In ID): 2.0
Casing Volume (gal.): —

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: dedicated or new equipment
Purging: peristaltic pump Sampling: same
Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK Thermometer: YSI 556
pH Meter: YSI 556 Field Calibration: 7-4
Conductivity Meter: YSI 556 Field Calibration: 1413
Filter / Filter Size: 10 micron & .45 micron Other: TVRB

SAMPLING MEASUREMENTS

1326 Time	Cum. Vol. (gal. or (L))	Purge Rate (gal. or (L/m))	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	D.O.	Redox (mV)	Turbidity & Color	Water Depth (ft BMP)
1334		.10	20.1	7.07	1190	0.87	156.4	7.4	19.31
1341		.11	20.3	7.11	1210	0.81	157.4	8.1	19.32
1346		.11	20.2	7.12	1220	0.82	157.5	8.4	19.32

Water Level (ft. BMP) at End of Purge: 19.32 Sample Intake Depth (ft. BMP): 4' OFF BOTTOM

SAMPLE INVENTORY

Bottles Collected				Filtration		Remarks
Time	Volume	Composition (G, P)	No.	(Y / N)	Preservation	(quality control sample, other)
1355	250mL	P	1	Y-.10	HNO_3	TOTAL METALS
1355	250mL	P	1	Y-.45	HNO_3	DISSOLVED METALS
1355	250mL	P	1	—	—	SULFATE

Comments:

Pastor, Behling & Wheeler, LLC
2201 Double Creek Dr., Suite 4004
Round Rock, TX 78664
(512) 671-3434 Fax (512) 671-3446

APPENDIX 3.2
WELL DEVELOPMENT FORMS

Golder Associates

GROUNDWATER WELL ~~SAMPLING~~ DEVELOPMENT FORM

Project Name:	EXIDE - FRISCO	Date:	01/11/14 (1450)
Project Number:	1302086	Sampler:	JX / JDJ
Well Identification:	MW-32	Weather:	60°s, SUNNY
Length of Sand Pack	3.5 FT	Boring Diameter:	~~8.5 IN~~ 8.25"
Well Casing Diameter:	2.0 IN		

Condition of Well

Cap	YES	Bailer/Rope	NA
Lock	NA - LOCK ADDED AFTER DEVELOPMENT AND SAMPLING	Protective Casing	NA

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	5.01 BTOC
B.	Water Level (ft.)	0.17 BTOC
C.	Column of Water in Well (A-B)	4.84 FT
D.	Gallons per Linear Foot of Casing: 4-inch well = 0.6528 gallons/ft. 2-inch well = 0.163 gallons/ft.	0.79 gal
E.	Three Well Volumes (C ×D×3)	2.37 gal

Field Analyses

Start Time	~~Stop~~ INCREMENT Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV) WATER LEVEL (FT BTOC)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)
1500*	—	BOTTOM	4.0	0	—	0.17	—	—	—	—	GRAY, MICKY
	1500:30	Bottom	4.0	2L	11.48	—	2.031	7.58	>1000	—	GRAY, MILKY
	1515	—	—	—	—	2.91	—	—	—	—	—
TOTAL VOLUME PURGED (Liters)				2L							

X – Testing performed during sampling process

Samples and Preservatives

Comments

* PURGED DRY AFTER ~ 30 SEC
PURGED PRIOR TO START AND THROUGHOUT DEVELOPMENT W/ PUMP
NA - NOT AVAILABLE

Signed/Sampler: _____ Date: 1/11/14

Signed/Reviewer: J Lems D Mauser Date: 05/14/14

Golder Associates

GROUNDWATER WELL ~~SAMPLING~~ Development FORM

Project Name:	Exide - Frisco	Date:	1/15/14 (1420)	1/16/14
Project Number:	1302086	Sampler:	JX	JX
Well Identification:	MW-32	Weather:	50s, Sunny	50s, Sunny
Length of Sand Pack	3.5 ft	Boring Diameter:	8.25"	
Well Casing Diameter:	2"			

Condition of Well

Cap	Yes	Bailer/Rope	NA
Lock	NA - LOCK ADDED AFTER DEVELOPMENT AND SAMPLING	Protective Casing	NA

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	5.01
B.	Water Level (ft.)	2.86'
C.	Column of Water in Well (A-B)	2.15
D.	Gallons per Linear Foot of Casing:	0.350
	4-inch well = 0.6528 gallons/ft.	
	2-inch well = 0.163 gallons/ft.	
E.	Three Well Volumes (C ×D×3)	1.05

Field Analyses

W.L.

	Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)
1/16/14 2	1425*	-	bottom	-	~0.5L	12.54	2.86'	4.413	6.93	>1,000	-	Gray, milky
3	0905*	-	"	-	~1L	11.63	3.46'	4.345	6.85	>1,000	-	Gray, cloudy
4	1215	-	"	-	~1.5L	14.16	4.05	3.485	6.83	>1,000	-	"
	TOTAL VOLUME PURGED (Liters)				0.5 1/15 1.5 1/16							

X – Testing performed during sampling process

Samples and Preservatives

Comments

* Purged dry after ~5 seconds
Surged prior to start and throughout development
NA - not available

Signed/Sampler: _____ Date: 1/16/14

Signed/Reviewer: James N Mercer Date: 05/14/14

Golder Associates

GROUNDWATER WELL ~~SAMPLING~~ DEVELOPMENT FORM

Project Name:	EXIDE - FRISCO	Date:	01/11/14 (1035)
Project Number:	1302086	Sampler:	JX / JQ
Well Identification:	MW-73	Weather:	50s, SUNNY
Length of Sand Pack	3.5 FT	Boring Diameter:	~~8 IN~~ 8.25"
Well Casing Diameter:	2 IN		

Condition of Well

Cap	YES	Bailer/Rope	NA
Lock	NA LOCK ADDED AFTER DEVELOPMENT AND SAMPLING	Protective Casing	NA

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	4.88 BTOC
B.	Water Level (ft.)	3.09 BTOC
C.	Column of Water in Well (A-B)	1.79 FT
D.	Gallons per Linear Foot of Casing: 4-inch well = 0.6528 gallons/ft. 2-inch well = 0.163 gallons/ft.	0.29 gal
E.	Three Well Volumes (C ×D×3)	0.88 gal

Field Analyses

H_2O LEVEL (FT BTOC)

Start Time	~~Stop~~ MEASUREMENT Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged (L)	Temp.* (within 0.5 °C)	ORP* (within 10%, note + or - mV)	Spec* Cond (within 10%, S/m or mS/cm)	pH* (within 0.1 stnd pH units)	Turbidity* (<10% and less than 5 NTU)	DO* (within 10%, mg/L)	Observations (Color, Odor)
1042*	–	BOTTOM	NA	~0.5 L	–	3.09	–	–	>1000	–	LT GRAY, SL CLOUDY
1057*	–	BOTTOM	NA	~1.0 L	–	–	–	–	–	–	LT GRAY, SL CLOUDY
1111	–	–	–	–	–	3.34	–	–	–	–	–
1112*	–	BOTTOM	NA	~1.3 L	–	–	–	–	–	–	LT GRAY, SL CLOUDY
1126	–	–	–	–	–	3.45	–	–	–	–	–
1127*	–	BOTTOM	NA	~1.55 L	–	–	–	–	–	–	LT GRAY, SL CLOUDY
TOTAL VOLUME PURGED (Liters)				1.55 L							

X – Testing performed during sampling process

Samples and Preservatives

Comments

* PUMP RAN ± 5 SEC BEFORE WELL WENT DRY
SURGED PRIOR TO START AND THROUGHOUT DEVELOPMENT W/ PUMP
NA - NOT AVAILABLE * FLOW COULD NOT BE MAINTAINED TO TAKE READING

Signed/Sampler: _____ Date: 01/11/14

Signed/Reviewer: James R Manson Date: 05/14/14

Development

GROUNDWATER WELL SAMPLING FORM

Project Name:	Exide - Frisco	Date:	1/15/14 (1349)	1/16/14
Project Number:	1392086	Sampler:	JX	JX
Well Identification:	MW-33	Weather:	50s, Sunny	50s, Sunny
Length of Sand Pack	3.5 ft	Boring Diameter:	8.25"	
Well Casing Diameter:	2"			

Condition of Well

Cap	Yes	Bailer/Rope	NA
Lock	NA LOCK ADDED AFTER DEVELOPMENT AND SAMPLING	Protective Casing	NA

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	4.98
B.	Water Level (ft.)	3.31
C.	Column of Water in Well (A-B)	1.67
D.	Gallons per Linear Foot of Casing:	0.272
	4-inch well = 0.6528 gallons/ft.	
	2-inch well = 0.163 gallons/ft.	
E.	Three Well Volumes (C ×D×3)	0.82 gals

Field Analyses

	Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	W.L. ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)
2	1358*		Bottom	-	~0.5L	12.74	3.31'	2.651	6.90	502	-	Grey, milky
1/16/14 3	0850*		"	-	~0.5L	12.63	3.29'	2.909	6.77	309	-	"
4	1155*		"	-	~0.5L	13.49	3.59'	3.057	6.85	219	-	Grayish Cloudy
	TOTAL VOLUME PURGED (Liters)											

X – Testing performed during sampling process

Samples and Preservatives

Comments

* Pumped dry after ~ 5 seconds
Surged prior to start, and throughout development
NA - not available

Signed/Sampler: _____ Date: 1/17/14

Signed/Reviewer: Thomas A Mauser Date: 05/14/14

Golder Associates

GROUNDWATER WELL ~~SAMPLING~~ Development FORM

Project Name:	EXIDE - FRISCO	Date:	01/11/14 (1020)
Project Number:	1302086	Sampler:	JX / JDJ
Well Identification:	MW-34	Weather:	50's ; SUNNY
Length of Sand Pack	3.5 ~~FT~~	Boring Diameter:	~~8 INCH~~ 8.25"
Well Casing Diameter:	2.0 IN		

Condition of Well

Cap	YES	Bailer/Rope	NA
Lock	NA LOCK ADDED AFTER DEVELOPMENT AND SAMPLING	Protective Casing	NA

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	4.71 BTOC
B.	Water Level (ft.)	DRY
C.	Column of Water in Well (A-B)	—
D.	Gallons per Linear Foot of Casing:	—
	4-inch well = 0.6528 gallons/ft.	
	2-inch well = 0.163 gallons/ft.	
E.	Three Well Volumes (C ×D×3)	—

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)
TOTAL VOLUME PURGED (Liters)											

X – Testing performed during sampling process

Samples and Preservatives

Comments

NA - NOT APPLICABLE

Signed/Sampler: _____ Date: 01/11/14

Signed/Reviewer: _____ Date: 05/14/14

Golder Associates

GROUNDWATER WELL ~~SAMPLING~~ DEVELOPMENT FORM

Project Name:	EXIDE - FRISCO	Date:	01/11/14 (1023)
Project Number:	1302086	Sampler:	JX/JDJ
Well Identification:	MW-35	Weather:	50's, SUNNY
Length of Sand Pack	3.5 FT	Boring Diameter:	~~8.5 INCH~~ 8.25"
Well Casing Diameter:	2 INCH		

Condition of Well

Cap	YES	Bailer/Rope	NA
Lock	NA LOCK ADDED AFTER DEVELOPMENT AND SAMPLING	Protective Casing	NA

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	5.10 JN ~~4.80~~ BTOC
B.	Water Level (ft.)	DRY
C.	Column of Water in Well (A-B)	—
D.	Gallons per Linear Foot of Casing:	—
	4-inch well = 0.6528 gallons/ft.	
	2-inch well = 0.163 gallons/ft.	
E.	Three Well Volumes (C ×D×3)	—

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)
~~TOTAL VOLUME PURGED~~ (Liters)											

X – Testing performed during sampling process

Samples and Preservatives

Comments

Signed/Sampler: _____ Date: 01/11/14

Signed/Reviewer: Thomas N Mann Date: 02/14/14

Golder Associates

GROUNDWATER WELL ~~SAMPLING~~ DEVELOPMENT FORM

Project Name:	EXIDE-FRISCO	Date:	01/11/14 (1015)
Project Number:	1302066	Sampler:	JK / JDJ
Well Identification:	MW-36	Weather:	50's, SUNNY
Length of Sand Pack	3.5 FT	Boring Diameter:	~~6.5 INCH~~ 8.25"
Well Casing Diameter:	2 INCH		

Condition of Well

Cap	YES	Bailer/Rope	NA
Lock	NA - LOCK ADDED AFTER DEVELOPMENT AND SAMPLING	Protective Casing	NA

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	5.07 JDJ ~~4.79~~ BTOC
B.	Water Level (ft.)	DRY
C.	Column of Water in Well (A-B)	—
D.	Gallons per Linear Foot of Casing:	—
	4-inch well = 0.6528 gallons/ft.	
	2-inch well = 0.163 gallons/ft.	
E.	Three Well Volumes (C ×D×3)	—

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)
TOTAL VOLUME PURGED (Liters)											

X – Testing performed during sampling process

Samples and Preservatives

Comments

Signed/Sampler: _____ Date: 01/11/14

Signed/Reviewer: Thomas R. Mann Date: 03/14/14

Golder Associates

GROUNDWATER WELL ~~SAMPLING~~ DEVELOPMENT FORM

Project Name:	EXIDE-FRISCO	Date:	01/14/14 (1333)
Project Number:	13020556	Sampler:	JX/JDJ
Well Identification:	MW-37	Weather:	60°, SUNNY
Length of Sand Pack	7 FT	Boring Diameter:	~~8.5 IN~~ 8.25"
Well Casing Diameter:	2.0 IN		

Condition of Well

Cap	YES	Bailer/Rope	NA
Lock	NA LOCK ADDED AFTER DEVELOPMENT AND SAMPLING	Protective Casing	NA

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	9.94 BTOC
B.	Water Level (ft.)	DRY
C.	Column of Water in Well (A-B)	-
D.	Gallons per Linear Foot of Casing:	-
	4-inch well = 0.6528 gallons/ft.	
	2-inch well = 0.163 gallons/ft.	
E.	Three Well Volumes (C ×D×3)	-

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)
TOTAL VOLUME PURGED (Liters)											

X – Testing performed during sampling process

Samples and Preservatives

Comments

NA - NOT AVAILABLE

Signed/Sampler: _____ Date: 01/11/14

Signed/Reviewer: Lewis R Mann Date: 03/14/14

Golder Associates

DEVELOPMENT

GROUNDWATER WELL ~~SAMPLING~~ FORM

Project Name: Exide Frisco
Project Number: 130-2086
Well Identification: MW-37
Length of Sand Pack: 7'
Well Casing Diameter: 2"

Date: 1-22-14
Sampler: RMS
Weather: 49°F Sunny
Boring Diameter: 8.25"

Condition of Well

Cap: Y
Lock: N LOCK ADDED AFTER DEVELOPMENT AND SAMPLING

Bailer/Rope: N/A
Protective Casing: N/A

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	9.65
B.	Water Level (ft.)	8.00
C.	Column of Water in Well (A-B)	1.65
D.	Gallons per Linear Foot of Casing:	0.27
	4-inch well = 0.6528 gallons/ft.	
	2-inch well = 0.163 gallons/ft.	
E.	Three Well Volumes (C ×D×3)	0.81

Recovery

Time	DTW
1505	9.43
1510	9.37
1515	9.33
1520	9.31
1525	9.30
1530	9.28
1535	9.28

Field Analyses

Start Time	Stop Time (Measurement)	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged (L)	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)	
1453		bottom	0.5		—	—	—	—	—	—	—	
	1455		0.5		19.03	185.8	3.017	6.43	9.93	5.60	clear	8.55
	1458		0.5		18.98	221.5	3.134	6.19	3.72	4.84	clear	9.10
	1500		0.5		19.05	248.4	3.145	5.97	2.26	4.74	clear	9.63
	1502		0.5	4.5	— PURGED D			DRY				
TOTAL VOLUME PURGED (Liters)				4.5								

X – Testing performed during sampling process

Samples and Preservatives

N/A

Comments

Purged dry at 1502, will monitor recovery

Signed/Sampler: [signature] Date: 1/24/14

Signed/Reviewer: [signature] Date: 05/14/14

Golder Associates

GROUNDWATER WELL ~~SAMPLING~~ DEVELOPMENT FORM

Project Name:	EXIDE-FRISCO	Date:	01/11/14 (1336) / 1/15/14 (1030)
Project Number:	13020836	Sampler:	JX/JDJ / JX
Well Identification:	MW-38	Weather:	60; SUNNY / 60; Sunny
Length of Sand Pack	12 FT	Boring Diameter:	~~8.5 IN~~ 8.25"
Well Casing Diameter:	2 IN		

Condition of Well

Cap	YES	Bailer/Rope	NA
Lock	NA LOCK ADDED AFTER DEVELOPMENT AND SAMPLING	Protective Casing	NA

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	14.80 BTOC
B.	Water Level (ft.)	7.02 BTOC
C.	Column of Water in Well (A-B)	7.78 FT
D.	Gallons per Linear Foot of Casing:	1.27 gal
	4-inch well = 0.6528 gallons/ft.	
	2-inch well = 0.163 gallons/ft.	
E.	Three Well Volumes (C ×D×3)	3.80 gal

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)
1040	[illegible]	~15'	1.5	-	19.84	-	2753	6.39	>1,000	-	Brown, milky
	1046	↓	↓	9.0 L	20.03	-	2.712	6.38	>1,000	-	"
	1051			16.5 L	20.07	-	2.738	6.55	>1,000	-	"
	1100			30 L	20.31	-	2.709	6.35	>1,000	-	"
	1110			45 L	20.56	-	2,687	6.35	>1,000	-	"
	1120	↓	↓	60 L	20.55	-	2.697	6.34	>1,000	-	"
TOTAL VOLUME PURGED (Liters)				60L							

X – Testing performed during sampling process

Samples and Preservatives

Comments

Surged entire saturated portion prior to, and during, development
60 L ~ 15 gallons removed during development – ~10 well volumes
NA-NOT AVAILABLE

Signed/Sampler: _____ Date: 1/15/14

Signed/Reviewer: Thomas R Mann Date: 05/14/14

Golder Associates

DEVELOPMENT

GROUNDWATER WELL ~~SAMPLING~~ FORM

Project Name: EXIDE FRISCO
Project Number: 1302086
Well Identification: MW-39
Length of Sand Pack: 13 FT
Well Casing Diameter: 2.0 IN

Date: 01/11/14 (1354) 1/13/14 1630
Sampler: JX/JDJ RMS
Weather: 60; SUNNY 65°; sunny
Boring Diameter: ~~8.25~~ 8.25"

Condition of Well

Cap: YES
Lock: NA LOCK ADDED AFTER DEVELOPMENT AND SAMPLING
Bailer/Rope: NA
Protective Casing: NA

Purge Data

A. Total Length of Casing (depth to bottom in ft.) 22.38 BTOC
B. Water Level (ft.) 10.41 BTOC
C. Column of Water in Well (A-B) 11.97 FT
D. Gallons per Linear Foot of Casing: 1.95 gal
   4-inch well = 0.6528 gallons/ft.
   2-inch well = 0.163 gallons/ft.
E. Three Well Volumes (C ×D×3) 5.85 gal

1/11/14 (3) 1.5 L/min. Bottom
WL: 12.61'

wl	Time	Temp	Cond	pH	NTU
-	1312	20.21	9.515	6.53	478
9	1318	20.26	9.168	6.52	588
18	1324	20.39	9.502	6.54	333
27	1330	20.33	7.920	6.19	-
		PRY	gray, cloudy for all		

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged (2.5 L/min.)	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)
1/13/14 1635		bottom	2.5	0							
1638		bottom	2.5	7.5L	19.96		9.711	6.52	100		cloudy
1645		bottom	2.5	25.0L	20.49		9.578	6.42	922		milky
	1648	bottom									Purged dry
1/16/14 WL: 10.36' (2) 1020		bottom	1.5		19.67	-	8.964	6.46	153	-	gray, cloudy
1026				9	19.76	-	8.642	6.50	416	-	"
1032				18	19.76	-	8.688	6.49	350	-	"
TOTAL VOLUME PURGED (Liters) 1038				27	20.14	-	8.892	6.40	388	-	"
1044				36	20.31	-	8.812	6.44	472	-	"

X – Testing performed during sampling process

Samples and Preservatives

Surged entire screen length before development and during development
Purged dry @ 1648 // 1/16/14 Purged dry @ 1038 ; Purged dry @ 1330
Total: 79 L (~20 gals) removed, ~11 well volumes

Comments

NA – NOT AVAILABLE

Signed/Sampler: Date: 1/16/14

Signed/Reviewer: Thomas R Mann Date: 01/24/14

Golder Associates

DEVELOPMENT GROUNDWATER WELL ~~SAMPLING~~ FORM

Project Name:	EXIDE-FRISCO	Date:	01/11/14 (1350) | 1/14/14 (1045)
Project Number:	1302066	Sampler:	JX/JDJ | RMS
Well Identification:	MW-40	Weather:	60; SUNNY | 49, sunny
Length of Sand Pack	12 FT	Boring Diameter:	~~8.5~~ IN 8.25" | 8.25
Well Casing Diameter:	2.0 IN		

Condition of Well

Cap	YES	Bailer/Rope	NA
Lock	NA LOCK ADDED AFTER DEVELOPMENT AND SAMPLING	Protective Casing	NA

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	17.39 BTOC
B.	Water Level (ft.)	5.21 BTOC
C.	Column of Water in Well (A-B)	12.18 FT
D.	Gallons per Linear Foot of Casing: 4-inch well = 0.6528 gallons/ft. 2-inch well = 0.163 gallons/ft.	1.99 gal
E.	Three Well Volumes (C ×D×3)	6.0 gal

Field Analyses

Start Time	Measurement Step Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged (L)	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)	
1109		bottom	1.0	0								
	1114	bottom	1.0	5	16.32	—	3.682	6.40	69.9	—	cloudy	
	1122	bottom	1.0	13	17.37	—	3.944	6.33	20.7	—	clear	
	1129	bottom	1.0	20	18.78	—	3.506	6.51	177		cloudy	
	1131	bottom	1.0	22								purged dry
1141												
1144					18.84		3.651	6.56	220	—	cloudy	
TOTAL VOLUME PURGED (Liters)				22L								1145 purged dry

X – Testing performed during sampling process

Samples and Preservatives

Surged entire saturated portion of well prior to development; surged during development

Comments

NA – NOT AVAILABLE

Signed/Sampler: _____ Date: 1/14/14

Signed/Reviewer: _____ Date: 05/14/14

Development

GROUNDWATER WELL SAMPLING FORM

Golder Associates

Project Name:	Exide Frisco	Date:	1/15/14 (1625)
Project Number:	1302086	Sampler:	JK
Well Identification:	MW-40(2)	Weather:	60°. Sunny
Length of Sand Pack	12 ft	Boring Diameter:	8.25"
Well Casing Diameter:	2"		

Condition of Well

Cap	Yes	Bailer/Rope	NA
Lock	NA LOCK ADDED AFTER DEVELOPMENT AND SAMPLING	Protective Casing	NA

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	17.40'
B.	Water Level (ft.)	5.35'
C.	Column of Water in Well (A-B)	12.05
D.	Gallons per Linear Foot of Casing:	1.964
	4-inch well = 0.6528 gallons/ft.	
	2-inch well = 0.163 gallons/ft.	
E.	Three Well Volumes (C ×D×3)	5.89 gals. (24 L)

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)
1637		Bottom	1.5		17.35	-	2.968	6.23	66.4	-	Gray, cloudy
	1643	↓	↓	9	17.57	-	2.966	6.23	123	-	Gray, cloudy
	1649			18	18.26	-	3.021	6.25	175	-	"
	1655			27	18.50	-	3.135	6.26	168	-	"
	1701	↓	↓	45	18.58	-	3.288	6.27	429	-	"
TOTAL VOLUME PURGED (Liters)				67 L							

X – Testing performed during sampling process

Samples and Preservatives

Comments

Total 67 L (~ 15 gal) purged, ~ 8 well volumes.
Purged entire saturated portion prior to, and during, development.
NA = Not available

Signed/Sampler: _____ Date: 1/15/14

Signed/Reviewer: _____ Date: 05/14/14

Golder Associates

GROUNDWATER WELL ~~SAMPLING~~ DEVELOPMENT FORM

Project Name:	FRISCO-EXIDE	Date:	01/11/14 (1400) / 1/14/14 (1240)
Project Number:	1302086	Sampler:	JK/JDS / RMS
Well Identification:	MW-41	Weather:	60's SUNNY / 53, sunny
Length of Sand Pack	13 FT	Boring Diameter:	~~6.25~~ 8.25" / 8.25
Well Casing Diameter:	2.0 FT		

Condition of Well

Cap	YES	Bailer/Rope	N/A
Lock	N/A LOCK ADDED AFTER DEVELOPMENT AND SAMPLING	Protective Casing	stickup

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	19.18 BTOC
B.	Water Level (ft.)	11.33 BTOC (SILTY BOTTOM)
C.	Column of Water in Well (A-B)	7.85 FT
D.	Gallons per Linear Foot of Casing: 4-inch well = 0.6528 gallons/ft. 2-inch well = 0.163 gallons/ft.	8.01 gal
E.	Three Well Volumes (C ×D×3)	24.04 gal

Field Analyses

Start Time	Measurement Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged (L)	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)
1256		bottom	2.5	0	—	—	—	—	—	—	—
1301			2.5	12.5	17.89	—	0.829	7.07	+1000	—	brown, silty
1306			2.5		17.94	—	0.824	7.04	+1000	—	brown, silty
1311			2.5		17.98	—	0.824	7.02	+1000	—	brown, silty
1321			3.0		17.97	—	0.820	7.00	+1000	—	cloudy
1331			3.0		18.00	—	0.824	6.98	+1000	—	cloudy
1351		↓	5.0		17.96	—	0.827	6.97	+1000	—	cloudy
TOTAL VOLUME PURGED (Liters) (1358)					17.95	—	0.828	6.95	+1000	—	cloudy

X – Testing performed during sampling process

Samples and Preservatives

Surged entire saturated section before development, surged bottom during development

Comments

cleared quickly after surging during last 20 minutes

Signed/Sampler: _____ Date: 1/14/14

Signed/Reviewer: Thomas R Mann Date: 05/21/14

Golder Associates

GROUNDWATER WELL ~~SAMPLING~~ DEVELOPMENT FORM

Project Name:	ENDE-FRISCO	Date:	01/11/14 (1412) / 1/14/14 (1445)
Project Number:	1302086	Sampler:	JX (JDJ) / RAS
Well Identification:	MW-42	Weather:	60; sunny / 53, sunny
Length of Sand Pack	12 FT	Boring Diameter:	~~8.5~~ 8.25" / 8.25
Well Casing Diameter:	2.0 IN		

Condition of Well

Cap	YES	Bailer/Rope	NA
Lock	NA LOCK ADDED AFTER DEVELOPMENT AND SAMPLING	Protective Casing	stickup

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	17.01 BTOC
B.	Water Level (ft.)	9.44 BTOC
C.	Column of Water in Well (A-B)	7.57 FT
D.	Gallons per Linear Foot of Casing: 4-inch well = 0.6528 gallons/ft. 2-inch well = 0.163 gallons/ft.	1.23 gal
E.	Three Well Volumes (C ×D×3)	3.70 gal

Field Analyses

Start Time	Stop Time (Measurement)	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)
1458		bottom	4.5	-	—	—	—	—	—	—	brown silty
1504		bottom	2.0	12	17.78	—	1.468	6.49	+1000	—	brown silty
1511		bottom	1.5	22.5	17.77	—	1.246	6.53	+1000	—	brown silty
1519		bottom	1.5	34.5	17.89	—	1.021	6.75	+1000	—	brown silty
1529		bottom	1.5	49.5	17.92	—	0.908	6.81	+1000	—	brown silty
1545		bottom	5.0	73.5	18.12	—	0.800	6.85	+1000	—	brown silty
	1600	bottom	5.0	148.5	18.08	—	0.778	6.89	+1000	—	brown silty
TOTAL VOLUME PURGED (Liters)				148.5L							

X – Testing performed during sampling process

Samples and Preservatives

Surged entire saturated column before developing, surged bottom during development

Comments

initially very silty (milkshake)
cleared quickly after surging in last 15 minutes

Signed/Sampler: _____ Date: 1/14/14

Signed/Reviewer: T Lemas R Mercer Date: 05/18/14

Golder Associates

DEVELOPMENT

GROUNDWATER WELL SAMPLING FORM

Project Name:	EXIDE - FRUSTO	Date:	01/11/14 (1540) / 1/15/14 (0942)
Project Number:	1302056	Sampler:	JX (JDJ) / JX
Well Identification:	MW-43	Weather:	60; SUNNY / 55; Sunny
Length of Sand Pack	13 FT	Boring Diameter:	~~8.5~~ 8.25"
Well Casing Diameter:	2.0 FT		

Condition of Well

Cap	YES	Bailer/Rope	NA
Lock	NA LOCK ADDED AFTER DEVELOPMENT AND SAMPLING	Protective Casing	NA

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	19.80 BTOC
B.	Water Level (ft.)	14.75 BTOC
C.	Column of Water in Well (A-B)	5.05 FT
D.	Gallons per Linear Foot of Casing:	~~0.52~~ 0.82
	4-inch well = 0.6528 gallons/ft.	
	2-inch well = 0.163 gallons/ft.	
E.	Three Well Volumes (C ×D×3)	2.47 gal

Field Analyses

	Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)
(1)	0952		bottom	1.5	-	19.35	-	3.073	5.54	423	-	brown, cloudy
		0958	↓	↓	9.0	19.92	-	3.137	5.41	-	-	"
1/16/14 wl: 19.60						DRY						
(2)	1103		bottom	1.5	-	19.57	-	3.013	5.20	304	-	brown, cloudy
		1109			9.0	20.11	-	3.099	5.32	144	-	"
1/16/14 wl: 17.31 (3)	1345			1.5		20.25	-	3.065	5.25	134	-	gray, cloudy
		1348			4.5L	20.23	-	3.066	5.07	-	-	"
	TOTAL VOLUME PURGED (Liters)				22.5L							

X – Testing performed during sampling process

Samples and Preservatives

Comments

Surged entire saturated portion prior to, and during, development
Dry @ 0958 // 1/16/14 Dry @ 1109 ; Dry @ 1348
Total: 22.5L (~5 gal) removed; ~ 6 well vols
NA - not available

Signed/Sampler: [signature] Date: 1/16/14

Signed/Reviewer: Thomas A Mercer Date: 05/14/14

Golder Associates

DEVELOPMENT GROUNDWATER WELL SAMPLING FORM

Project Name:	EXIDE-FRISCO	Date:	01/11/14 (1437) 1/15/14 (0858)
Project Number:	1302086	Sampler:	JX/JDJ JX
Well Identification:	MW-44	Weather:	60; SUNNY 50; sunny
Length of Sand Pack	12 FT	Boring Diameter:	~~8.5 IN~~ 8.25"
Well Casing Diameter:	2.0 IN		

Condition of Well

Cap	YES	Bailer/Rope	NA
Lock	NA LOCK ADDED AFTER DEVELOPMENT AND SAMPLING	Protective Casing	NA

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	18.42 BTOC
B.	Water Level (ft.)	9.64 BTOC
C.	Column of Water in Well (A-B)	8.78 FT
D.	Gallons per Linear Foot of Casing: 4-inch well = 0.6528 gallons/ft. 2-inch well = 0.163 gallons/ft.	1.43 gal
E.	Three Well Volumes (C ×D×3)	4.29 gal

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)
0910	\	Bottom	2.5	-	18.07	-	2.431	6.46	71.9	-	white/gray, cloudy
"	0915	↓	↓	7.5 L	19.22	-	3.170	6.10	62.0	-	white/gray, cloudy
					DRY						
1126 (2) 1/16/14 WL: 9.33'		Bottom	1.5		18.27	-	2.085	6.50	42.5	-	gray, cloudy
	1132			9.0 L	18.94	-	2.176	6.55	16.1	-	clear
1401 (3) 1/16/14 WL=12.81'		Bottom	1.5		19.75	-	2.740	6.37	80.5	-	Gray, cloudy
	1407			9.0L	19.44		2.277	6.57	26.0	-	"
TOTAL VOLUME PURGED (Liters)				25.5L							

X – Testing performed during sampling process

Samples and Preservatives

Comments

Surged entire saturated portion prior to, and during, development
Dry @ 0915 // 1/16/14 Dry @ 1132 & Dry @ 1407
Total - 25.5 L (~6.7 gal) purged ~ 5 well vols.
NA - Not Available

Signed/Sampler: _____ Date: 1/16/14

Signed/Reviewer: Lauren Mancuso Date: 05/14/14

Golder Associates

GROUNDWATER WELL ~~SAMPLING~~ DEVELOPMENT FORM

Project Name:	ENDE-FRISCO	Date:	01/11/14
Project Number:	1302086	Sampler:	JK/JDV
Well Identification:	MW-45	Weather:	40's, SUNNY
Length of Sand Pack	13 FT	Boring Diameter:	~~8.5~~ 8.25"
Well Casing Diameter:	2 IN		

Condition of Well

Cap	YES	Bailer/Rope	NA
Lock	NA LOCK ADDED AFTER DEVELOPMENT AND SAMPLING	Protective Casing	NA

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	22.83 BTOC
B.	Water Level (ft.)	13.21 BTOC
C.	Column of Water in Well (A-B)	9.32 FT
D.	Gallons per Linear Foot of Casing:	1.52 gal
	4-inch well = 0.6528 gallons/ft.	
	2-inch well = 0.163 gallons/ft.	
E.	Three Well Volumes (C ×D×3)	4.56 gal

CASING

Field Analyses

Start Time	MEASUREMENT ~~Stop~~ Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged (L)	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)
0905	–	BOTTOM	1L	0	–	–	–	–	–	–	BRN, MUCKY
–	0910	↓	1L	5	19.28	–	1.051	7.68	>1000	–	BRN, CLOUDY
–	0918		1L	17	20.09	–	1.059	7.03	>1000	–	BRN, CLOUDY
–	0926		1L	29	21.00	–	1.068	7.08	>1000	–	BRN, CLOUDY
* –	0934		1L	41	20.34	–	1.053	7.08	>1000	–	BRN, CLOUDY
0945	–		6.5L	44	–	–	–	✓	–	–	RESTARTED PUMP
~~0948~~	0948	↓	6.5L	64	20.81	–	1.048	7.27	>1000	–	BRN, CLOUDY
TOTAL VOLUME PURGED (Liters)				64	✓	✓	✓	–	✓	✓	–

X – Testing performed during sampling process

Samples and Preservatives

Comments

* < 2 FT OF WATER IN CASING; STOPPED PUMP TO MONITOR RECHARGE
SURGED W/ PUMP PRIOR TO START AND IMPROVEMENT DEVELOPMENT
NA – NOT AVAILABLE

Signed/Sampler: _____ Date: 01/11/14

Signed/Reviewer: Thomas R Marron Date: 05/14/14

Development

GROUNDWATER WELL ~~SAMPLING~~ FORM

Golder Associates

Project Name:	Exide - Frisco	Date:	1/15/14 (1525)
Project Number:	13-2086	Sampler:	JX
Well Identification:	MW-45 (2)	Weather:	55; Sunny
Length of Sand Pack	13 ft	Boring Diameter:	8.25"
Well Casing Diameter:	2"		

Condition of Well

Cap	Yes	Bailer/Rope	NA
Lock	NA - LOCK ADDED AFTER DEVELOPMENT AND SAMPLING	Protective Casing	NA

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	22.82'
B.	Water Level (ft.)	13.20
C.	Column of Water in Well (A-B)	9.62
D.	Gallons per Linear Foot of Casing: 4-inch well = 0.6528 gallons/ft. 2-inch well = 0.163 gallons/ft.	1.57
E.	Three Well Volumes (C ×D×3)	4.70 gals. (~19L)

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)
1538		Bottom	1.5		20.80	-	1.107	6.83	>1,000	-	Brown, milky
	1544	↓	↓	9L	20.74	-	1.106	6.86	>1,000	-	"
	1550			18L	20.84	-	1.106	6.21	>1,000	-	"
	1556			27L	21.01	-	1.108	6.78	>1,000	-	"
	1602			36L	21.19	-	1.118	6.79	>1,000	-	"
	1608			45L	21.22	-	1.062	6.80	>1,000	-	"
TOTAL VOLUME PURGED (Liters)				45L							

X – Testing performed during sampling process

Samples and Preservatives

Comments

Purged total of ~45L (11.25 gals), ~9 well vols.
Surged w/ pump prior to start and throughout development.

Signed/Sampler: [signature] Date: 1/15/14

Signed/Reviewer: [signature] Date: 05/14/14

Golder Associates

GROUNDWATER WELL ~~SAMPLING~~ DEVELOPMENT FORM

Project Name:	EXIDE-FRISCO	Date:	01/11/14 (1250)
Project Number:	1302086	Sampler:	JX/JDJ
Well Identification:	MW-46	Weather:	60's, SUNNY
Length of Sand Pack	15 FT	Boring Diameter:	~~8.5 IN~~ 8.25"
Well Casing Diameter:	2 IN		

Condition of Well

Cap	YES	Bailer/Rope	NA
Lock	NA LOCK ADDED AFTER DEVELOPMENT AND SAMPLING	Protective Casing	NA

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	19.34 BTOC
B.	Water Level (ft.)	4.22 BTOC
C.	Column of Water in Well (A-B)	15.12 FT
D.	Gallons per Linear Foot of Casing: 4-inch well = 0.6528 gallons/ft. 2-inch well = 0.163 gallons/ft.	2.46 gal
E.	Three Well Volumes (C ×D×3)	7.39 gal

Field Analyses

Start Time	~~Stop~~ MEASUREMENT Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV) WATER LEVEL (FT BTOC)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)
1306	–	BOTTOM	1.5	0	–	4.22	–	–	–	–	BRN, MILKY
1310	1310	BOTTOM	1.5	6L	21.62	–	5.394	5.96	>1000	–	BRN, MILKY
–	1312	BOTTOM	3.5	9L	–	–	–	–	–	–	BRN, MILKY
–	1317	BOTTOM	3.5	26.5L	23.03	–	5.461	5.66	>1000	–	BRN, MILKY
–	1320*	BOTTOM	3.5	37	23.25	–	5.572	5.58	>1000	–	BRN, MILKY
–	1346	–	–	–	–	12.88	–	–	–	–	–
–	1443	–	–	–	–	10.11	–	–	–	–	–
TOTAL VOLUME PURGED (Liters)				37L							

X – Testing performed during sampling process

Samples and Preservatives

Comments

* PURGED DRY @ 1320

NA – NOT AVAILABLE

Signed/Sampler: _____ Date: 01/11/14

Signed/Reviewer: _____ Date: 01/14/14

Golder Associates

GROUNDWATER WELL ~~SAMPLING~~ Development FORM

Project Name:	Exide Frisco	Date:	1/15/14 (1440) // 1/16/14 (0920)
Project Number:	1302086	Sampler:	JX // JX
Well Identification:	MW-46 (2)	Weather:	60° Sunny // 50°, Sunny
Length of Sand Pack	13 ft	Boring Diameter:	8.25"
Well Casing Diameter:	2.0		

Condition of Well

Cap	Y	Bailer/Rope	NA
Lock	NA - LOCK ADDED AFTER DEVELOPMENT AND SAMPLING	Protective Casing	NA

Purge Data

A.	Total Length of Casing (depth to bottom in ft.)	19.61
B.	Water Level (ft.)	4.92
C.	Column of Water in Well (A-B)	14.69
D.	Gallons per Linear Foot of Casing:	2.394
	4-inch well = 0.6528 gallons/ft.	
	2-inch well = 0.163 gallons/ft.	
E.	Three Well Volumes (C ×D×3)	7.18

Field Analyses

Start Time	Stop Time	Pump Depth	Pump Rate (0.1-0.5 L/min)	Volume Purged	Temp. (within 0.5 °C)	ORP (within 10%, note + or - mV)	Spec Cond (within 10%, S/m or mS/cm)	pH (within 0.1 stnd pH units)	Turbidity (<10% and less than 5 NTU)	DO (within 10%, mg/L)	Observations (Color, Odor)
1448			2.0		21.70	-	5.610	5.17	346	-	Brown, cloudy
	1453			10 L	20.89	-	5.468	5.24	142	-	"
	1458			20L	21.81	-	5.627	5.41	279	-	"
	1505			34L	22.30	-	5.584	5.32	129	-	"
					DRY						
1/16/14 (3) 0930			1.5		21.61	-	5.543	4.88	>1,000	-	Brown, milky
WL: 5.05'	0936			9	20.90	-	5.448	4.87	402	-	Brown, cloudy
TOTAL VOLUME PURGED (Liters)				77							

X – Testing performed during sampling process

Samples and Preservatives

0942			18	21.50	-	5.562	5.13	130	-	Brown cloudy
0948			27	21.47	-	5.587	5.30	107	-	"
0954			36	22.63	-	5.679	4.65	58.9	-	clear
		TOTAL	36 L							

Comments

Dry @ 1505 ~ 34 L (8.5 gallons) purged // 1/16/14 Dry @ 0954 ~ 36 L purged
Surged prior to start and throughout development
NA - not available

Signed/Sampler: _____ Date: 1/16/14

Signed/Reviewer: Thomas N Marron Date: 01/16/14

WELL DEVELOPMENT RECORD

PAGE 1 of 1

Project Number: 1732 Project Name: EXIDE - FRISCO Date: 1-16-12

Well Location (well ID, etc.): B4R

Developed by: JTB

Measuring Point (MP) of Well: TOC/PVC

Screened Interval (ft. BGL):

Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 8.01

Casing Stickup (ft.):

Starting Water Level (ft. BGL):

Total Depth (ft. ~~BGL~~): BMP 11.80

Casing Diameter (In ID): 4.0

Casing Volume (gal.): 2.4

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: new equipment

Purging: Waterra Surge Equipment: same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Keck Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Other: -

DEVELOPMENT MEASUREMENTS

Time	Flow: Cum. Vol. (gal. / L)	Flow: Purge Rate (gal. / L pm)	Water Quality: Temp. (°C)	Water Quality: pH	Water Quality: Spec. Cond. (µmhos/cm)	Appearance: Color	Appearance: Turbidity & Sediment	Remarks
1026	3 (dry)	hand pump	18.1	7.23	579	dk. brown	cloudy	

1654
11.52

1-17-12
0806-
10.26

Total Discharge (gallons):

Observations/Comments:

Pastor, Behling & Wheeler, LLC
2201 Double Creek Dr., Suite 4004
Round Rock, Texas 78664
Phone: (512) 671-3434 Fax: (512) 671-3446

WELL DEVELOPMENT RECORD

PAGE 1 of 1

Project Number: 1732 Project Name: EXIDE - FRISCO Date: 1/16/12

Well Location (well ID, etc.): MW-19

Developed by: JTB

Measuring Point (MP) of Well: TOC/PVC

Screened Interval (ft. BGL):

Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 14.67

Casing Stickup (ft.):

Starting Water Level (ft. BGL):

Total Depth (ft. ~~BGL~~ BMP): 25.20

Casing Diameter (In ID): 2.0

Casing Volume (gal.): 1.6

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: new equipment

Purging: Waterra Surge Equipment: Dawe

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Kech Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Other:

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal./ L)	Purge Rate (gal./ L pm)	Temp. (°C)	pH	Spec. Cond. (mmhos/cm)	Color	Turbidity & Sediment	
0922	2	hand pump	20.9	6.72	3370	lt tan	cloudy	
0926	4		20.8	6.76	3360	lt tan	cloudy	
0932	6		20.7	6.78	3020	lt tan	slt. cloudy	
0935	7 (DRY)		20.8	6.79	3060	lt tan	slt. cloudy	
1047	8.5 (dry)		20.8	6.76	3070	lt tan	slt. cloudy	

1040-21.43

Total Discharge (gallons):

Observations/Comments:

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WELL DEVELOPMENT RECORD

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Project Number: 1732 Project Name: EXIDE - FRISCO Date: 1-16-12

Well Location (well ID, etc.): MW-20	Starting Water Level (ft. BMP): 24.02
Developed by: JTB	Casing Stickup (ft.):
Measuring Point (MP) of Well: TOC / PVC	Starting Water Level (ft. BGL):
Screened Interval (ft. BGL):	Total Depth (ft. ~~BGL~~): BMP 25.20
Filter Pack Interval (ft. BGL):	Casing Diameter (In ID): 2.0
	Casing Volume (gal.): 0.2

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: new equipment

Purging: Waterra Surge Equipment: Same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Keck Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Other:

DEVELOPMENT MEASUREMENTS

Time	Flow: Cum. Vol. (gal. / L)	Flow: Purge Rate (gal. / L pm)	Water Quality: Temp. (°C)	Water Quality: pH	Water Quality: Spec. Cond. (µmhos/cm)	Appearance: Color	Appearance: Turbidity & Sediment	Remarks
0954		hand pump	20.1	6.98	4390	tan	cloudy	
	well	went dry						

1657-24.71

1-17-12 0840 - 24.43 JB

Total Discharge (gallons):

Observations/Comments:

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WELL DEVELOPMENT RECORD

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Project Number: 1755 Project Name: EXIDE-FRISCO Date: 4-5-13

Well Location (well ID, etc.): MW-30

Developed by: JTB

Measuring Point (MP) of Well: TOC/PVC

Screened Interval (ft. BGL):

Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 11.52

Casing Stickup (ft.): AT GRADE

Starting Water Level (ft. BGL): 11.52

Total Depth (ft. BGL): 32.27 - SOFT

Casing Diameter (In ID): 2.0

Casing Volume (gal.): 3

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: new equipment used

Purging: Waterra pump Surge Equipment: none

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: Kerk Thermometer: YSI 556

pH Meter: YSI 556 Field Calibration: 7-4

Conductivity Meter: YSI 556 Field Calibration: 1413

Other: TURB

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (°C)	pH	Spec. Cond. (µmhos/cm)	Color	Turbidity & Sediment	
1227	5	hand pump	21.7	6.59	2620	brown	SAND4	
1236	10		21.9	6.54	2630	brown	SAND4	
1247	15		21.9	6.63	2620	lt.brn	SAND4	
1303	25		21.8	6.61	2690	lt.brn	461	
1319	35		22.3	6.64	2710	lt.brn	136	
1334	45		22.2	6.60	2720	neutral	31	
1347	55	↓	22.4	6.64	2720	neutral	24	

Total Discharge (gallons): 55

Observations/Comments:

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WELL DEVELOPMENT RECORD

PAGE 1 of 1

Project Number: 1755 Project Name: EXIDE - FRISCO, TX Date: 5-10-13

Well Location (well ID, etc.): MW-31

Developed by: JTB

Measuring Point (MP) of Well: TOC/PVC

Screened Interval (ft. BGL):

Filter Pack Interval (ft. BGL):

Starting Water Level (ft. BMP): 10.46

Casing Stickup (ft.): AT GRADE

Starting Water Level (ft. BGL): 10.46

Total Depth (ft. BGL): 23.45

Casing Diameter (In ID): 2.0

Casing Volume (gal.): 2.0

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: new equipment

Purging: Waterra Surge Equipment: Same

Disposal of Discharged Water: 55-gallon drum

INSTRUMENTS (Indicate make, model, I.d.)

Water Level: KECK Thermometer: YSI PRO PLUS

pH Meter: YSI PRO PLUS Field Calibration: 7-4

Conductivity Meter: YSI PRO PLUS Field Calibration: 1413

Other: —

DEVELOPMENT MEASUREMENTS

Time	Flow: Cum. Vol. (gal / L)	Flow: Purge Rate (gal / L pm)	Water Quality: Temp. (°C)	Water Quality: pH	Water Quality: Spec. Cond. (µmhos/cm)	Appearance: Color	Appearance: Turbidity & Sediment	Remarks
0940	0							
0947	5	Mod pump	20.6	6.56	1170	tan	silty	
0956	10		20.7	6.64	1190	tan	cloudy	
1006	15		20.6	6.61	1190	tan	cloudy	
1047	30		20.7	6.67	1230	lt tan	cloudy	
1104	40	↓	20.9	6.69	1250	lt tan	sl. cloudy	

Total Discharge (gallons): 40

Observations/Comments:

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WELL DEVELOPMENT RECORD

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Project Number:	1856	Project Name: Exide FRC Longpeak	Date: 3/5/13
Well Location (well ID, etc.):	PMW-20R	Starting Water Level (ft. BMP):	20.05
Developed by:	Kevin Dworsky	Casing Stickup (ft.):	~ 3.12
Measuring Point (MP) of Well:	TOC / PVC	Starting Water Level (ft. BGL):	16.93
Screened Interval (ft. BGL):	10.0' - 24.5'	Total Depth (ft. BGL):	28.25
Filter Pack Interval (ft. BGL):	9.0' - 25.0'	Casing Diameter (In ID):	2
		Casing Volume (gal.):	1.312 x 4

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Dedicated Equipment - DI Water & Liquid-Nox

Purging: Torpedo Type Pump Surge Equipment: Pump

Disposal of Discharged Water: 55 Gallon Drums

INSTRUMENTS (indicate make, model, I.D.)

Water Level: Keck

pH Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
Conductivity Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
Thermometer: Horiba U-52	
Turbidimeter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
ORP Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
DO Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal / L)	Purge Rate (gal / L pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	Color	Turbidity & Sediment	
821	—	1.22	—	—	—	Tan	—	Pump on
826	6		19.32	6.71	1240	Neutral	229	surged well
831	12		19.45	6.77	1280	Neutral	114	surged well
836	18		19.52	6.82	1290	Neutral	74	ORP: 176mV DO: 1.52mg/L
841	24		19.49	6.84	1290	Neutral	32	surged well ORP: 173mV DO: 1.44mg/L
846	30		19.49	6.84	1290	Neutral	90.2	ORP: 173mV DO: 1.36mg/L
851	37		19.54	6.85	1290	Neutral	20.4	ORP: 172mV DO: 1.32mg/L
~~856~~ 896	43		19.53	6.85	1290	Neutral	89.4	surged well
~~901~~ 901	49		19.52	6.85	1290	Neutral	20.6	ORP: 172mV DO: 1.20mg/L
906	55	↓	19.56	6.85	1290	Neutral	18.5	ORP: 173mV
								DO: 1.20 mg/L
								TDS: 0.829 g/L

Total Discharge (gallons): 55

Observations/Comments:

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WELL DEVELOPMENT RECORD

PAGE 1 of 1

Project Number:	1856	Project Name: EXIDE FRL LANDFILL	Date: 3/5/13
Well Location (well ID, etc.):	LMW-21	Starting Water Level (ft. BMP):	20.29
Developed by:	KEVIN DWORSKY	Casing Stickup (ft.):	~ 3.17
Measuring Point (MP) of Well:	TOC / PVC	Starting Water Level (ft. BGL):	17.12
Screened Interval (ft. BGL):	10.0' – 25.0'	Total Depth (ft. BGL):	28.06
Filter Pack Interval (ft. BGL):	8.0' – 25.0'	Casing Diameter (In ID):	2"
		Casing Volume (gal.):	1.243

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Dedicated Equipment ~ Di Water & Liquid-NOX

Purging: Mini-Typhoon Pump Surge Equipment: Pump

Disposal of Discharged Water: 55 Gallon Drums

INSTRUMENTS (indicate make, model, I.D.)

Water Level: Keck

pH Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
Conductivity Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
Thermometer: Horiba U-52	
Turbidimeter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
ORP Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
DO Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal / L)	Purge Rate (gal / L pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	Color	Turbidity & Sediment	
941	~	1.375	~	~	~	TAN	~	Pump On
946	7		19.50	6.75	1580	TAN	1000+	Surged Well
951	14		19.34	6.71	1590	TAN	1000+	Surged Well
956	21		19.51	6.69	1590	TAN	1000+	Surged Well
1001	28		19.59	6.67	1590	NEUTRAL	706	Surged well
1006	34		19.55	6.67	1590	NEUTRAL	215	Surged well
1011	41		19.60	6.67	1590	NEUTRAL	72.9	
1016	48		19.62	6.66	1590	NEUTRAL	42.3	Surged well
1021	55	↓	19.62	6.68	1590	NEUTRAL	101	ORP: 186 mV
								DO: 2.08 mg/L
								TDS: 1.02 g/L

Total Discharge (gallons): 55

Observations/Comments:

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WELL DEVELOPMENT RECORD

PAGE 1 of 1

Project Number: 1856	Project Name: EXIDE FRC LANDFILL	Date: 3/5/13	
Well Location (well ID, etc.): LMW-22		Starting Water Level (ft. BMP): 17.56	
Developed by: KEVIN DWORSKY		Casing Stickup (ft.): 3.40	
Measuring Point (MP) of Well: TOC / PVC		Starting Water Level (ft. BGL): 14.16	
Screened Interval (ft. BGL): 5.0' – 19.5'		Total Depth (ft. BGL): 23.12	
Filter Pack Interval (ft. BGL): 2.5' – 20.0'		Casing Diameter (In ID): 2	
		Casing Volume (gal.): 0.890	

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Dedicated Equipment – DI WATER & Liquid-Nox

Purging: Mini 9- Typhoon Pump Surge Equipment: Pump

Disposal of Discharged Water: 55 Gallon Drums

INSTRUMENTS (indicate make, model, I.D.)

Water Level: Keck	
pH Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
Conductivity Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
Thermometer: Horiba U-52	
Turbidimeter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
ORP Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
DO Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal./L)	Purge Rate (gal/pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	Color	Turbidity & Sediment	
1114	–	0.25	–	–	–	TAN	–	Pump On
1119	1	↓	16.35	7.11	946	TAN	874	Well surging by
1124	2	↓	15.41	7.10	940	TAN	461	pump turning on
1129	3	↓	15.33	7.09	928	NEUTRAL	275	and off.
1134	5	↓	15.05	7.08	919	NEUTRAL	186	Pump Off
1144	–	0.1	–	–	–	NEUTRAL	–	Pump On
1149	5	↓	13.59	7.21	927	NEUTRAL	185	
1154	6	↓	13.56	7.15	931	NEUTRAL	171	
1159	6	↓	13.36	7.13	931	NEUTRAL	143	
1204	7	↓	13.10	7.13	924	NEUTRAL	127	ORP: 222 mV
								DO: 6.32 mg/L
								TDS: 0.591 g/L

Total Discharge (gallons): _____

Observations/Comments:
Pump ~~running~~ turned on and off due to well running dry.

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WELL DEVELOPMENT RECORD

PAGE 1 of 1

Project Number:	1856	Project Name: Exide FRC LANDFILL	Date: 3/6/13
Well Location (well ID, etc.):	LMW-22	Starting Water Level (ft. BMP):	20.67
Developed by:	Kevin Dworsky	Casing Stickup (ft.):	~ 3.40
Measuring Point (MP) of Well:	TOC / PVC	Starting Water Level (ft. BGL):	
Screened Interval (ft. BGL):	5.0' - 19.5'	Total Depth (ft. BGL):	23.12
Filter Pack Interval (ft. BGL):	2.5' - 20.0'	Casing Diameter (In ID):	2
		Casing Volume (gal.):	

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Dedicated Equipment

Purging: Mini - Typhoon Pump Surge Equipment: Pump

Disposal of Discharged Water: 55 Gallon Drums

INSTRUMENTS (indicate make, model, I.D.)

Water Level: Keck

pH Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
Conductivity Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
Thermometer: Horiba U-52	
Turbidimeter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
ORP Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
DO Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	Color	Turbidity & Sediment	
803	—	0.1	—	—	—	TAN	—	Pump On
813	1	↓	9.55	6.92	925	TAN	1000+	Well Dry
								ORP: 214 mV
								DO: 8.98 mg/L
								TDS: 0.595 g/L

Total Discharge (gallons): 1

Observations/Comments:

Well pumped dry.
8 gallons removed over 2 days

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WELL DEVELOPMENT RECORD

PAGE 1 of 1

Project Number: 1856	Project Name: Exide FRC Landfill	Date: 3/5/13	
Well Location (well ID, etc.): MW-28		Starting Water Level (ft. BMP): 14.96	
Developed by: Kevin Dworsky		Casing Stickup (ft.): 3.31	
Measuring Point (MP) of Well: TOC / PVC		Starting Water Level (ft. BGL): 11.65	
Screened Interval (ft. BGL): ~~7.5' - 21.5'~~	5.0 - 19.5'	Total Depth (ft. BGL): 23.42	
Filter Pack Interval (ft. BGL): ~~4.0' - 22.0'~~	2.5 - 20.0	Casing Diameter (In ID): 2	
		Casing Volume (gal.): 1.354	

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Dedicated Equipment – DI WATER & Liquinox

Purging: Mini-Typhoon Pump Surge Equipment: Sami

Disposal of Discharged Water: 55 Gallon Drums

INSTRUMENTS (indicate make, model, I.D.)

Water Level: Keck	
pH Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
Conductivity Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
Thermometer: Horiba U-52	
Turbidimeter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
ORP Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
DO Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	Color	Turbidity & Sediment	
1431	–	0.25	–	–	–	Tan	–	Pump On
1436	1	↓	18.86	7.07	980	Neutral	59.2	Pump off
1441	–	0.20	–	–	–	Tan	–	Pump On. Surged Well
1446	2	↓	18.13	7.10	951	Tan	558	Pump off
1456	–	0.15	–	–	–	Tan	–	Pump On. Surged Well.
~~1500~~ 1501	2	↓	16.91	7.16	948	Neutral	276	
1506	3	↓	16.62	7.13	946	Neutral	178	Pump off.
1516	–	–	–	–	–	–	–	Pump On.
1521								Dry
~~1524~~								

Total Discharge (gallons): 3

Observations/Comments:

Well kept running dry

~~gallons~~

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WELL DEVELOPMENT RECORD

PAGE 1 of 1

Project Number: 1856 Project Name: Exide FRL Landfill Date: 3/6/13	
Well Location (well ID, etc.): MW-28	Starting Water Level (ft. BMP): 15.01
Developed by: Kevin Dwarsky	Casing Stickup (ft.): ~ 3.31
Measuring Point (MP) of Well: TOC / PVC	Starting Water Level (ft. BGL): 11.70
Screened Interval (ft. BGL): ~~20'-31.5'~~ 5.0'-19.5'	Total Depth (ft. BGL): 23.42
Filter Pack Interval (ft. BGL): ~~19'-32.0'~~ 2.5'-20.0'	Casing Diameter (In ID): 2
	Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Dedicated Equipment

Purging: ~~Peristaltic~~ Mini-Typhoon Pump Surge Equipment: Pump

Disposal of Discharged Water: 55 Gallon Drums

INSTRUMENTS (indicate make, model, I.D.)

Water Level: Keck	
pH Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
Conductivity Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
Thermometer: Horiba U-52	
Turbidimeter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
ORP Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
DO Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	Color	Turbidity & Sediment	
940	—	0.4	—	—	—	TAN	—	Pump On
950	4	↓	17.14	7.01	946	NEUTRAL	83.6	Pump was turning on and off during interval
								ORP: 143 mV
								DO: 6.81 mg/L
								TDS: 0.607 g/L

Total Discharge (gallons): 4

Observations/Comments:

Well pumped dry

7 gallons removed over 2 days

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WELL DEVELOPMENT RECORD

PAGE 1 of 1

Project Number: 1755	Project Name: Exide FRC Plant	Date: 3/5/13	
Well Location (well ID, etc.): MW-25		Starting Water Level (ft. BMP): 12.71	
Developed by: Kevin Dworsky		Casing Stickup (ft.): 2.76	
Measuring Point (MP) of Well: TOC / PVC		Starting Water Level (ft. BGL): 9.95	
Screened Interval (ft. BGL): 5.0' ~~19.5'~~	7.0 - 21.5	Total Depth (ft. BGL): 25.42	
Filter Pack Interval (ft. BGL): 2.5' ~~22.0'~~	4.0 -22.0	Casing Diameter (In ID): 2	
		Casing Volume (gal.): 2.034	

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Dedicated Equipment ~ DI WATER & Liquid NOX

Purging: Mini - Typhoon Pump Surge Equipment: Pump

Disposal of Discharged Water: 55 Gallon Drums

INSTRUMENTS (indicate make, model, I.D.)

Water Level: Keck

pH Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
Conductivity Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
Thermometer: Horiba U-52	
Turbidimeter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
ORP Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
DO Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	Color	Turbidity & Sediment	
1602	~	0.53	~	~	~	TAN	~	Pump On
1607	3	↓	20.32	5.86	5520	NEUTRAL	19.8	Surged well
1612	5	↓	20.19	4.91	5040	NEUTRAL	10.5	Well was starting to run dry
1617	7	↓	19.84	5.40	5050	NEUTRAL	5.5	Pump off. Dry
1627	~	0.2	~	~	~	NEUTRAL	~	Pump On. Surged well.
1632	8	↓	19.45	5.82	5210	NEUTRAL	18.0	Well was going dry.
1637	9	↓	19.34	5.84	5190	NEUTRAL	14.4	Pump off. Dry
1647	~	0.1	~	~	~	NEUTRAL	~	Pump ~~off~~ On. Surged well
1652	9	↓	18.48	5.95	5280	NEUTRAL	39.8	Well was going dry
1657	10	↓	17.94	5.94	5230	NEUTRAL	21.1	ORP: 74 mV
								DO: 2.34 mg/L
								TDS: 3.29 g/L

Total Discharge (gallons): 10

Observations/Comments:
Pump was turning on & off due to well running dry

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WELL DEVELOPMENT RECORD

PAGE 1 of 1

Project Number: 1755 Project Name: Exide FRC Plant Date: 3/6/13	
Well Location (well ID, etc.): MW-25	Starting Water Level (ft. BMP): 15.73
Developed by: Kevin Dworsky	Casing Stickup (ft.): ~2.76
Measuring Point (MP) of Well: TOC / PVC	Starting Water Level (ft. BGL): 12.97
Screened Interval (ft. BGL): ~~5.0'-19.5'~~ 7.0'-21.5'	Total Depth (ft. BGL): 25.42
Filter Pack Interval (ft. BGL): ~~2.5'-20.0'~~ 4.0'-22.5'	Casing Diameter (In ID): 2
	Casing Volume (gal.):

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Dedicated Equipment

Purging: Mini-Typhoon Pump Surge Equipment: Pump

Disposal of Discharged Water: 55 Gallon Drums

INSTRUMENTS (indicate make, model, I.D.)

Water Level: Keck

pH Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
Conductivity Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
Thermometer: Horiba U-52	
Turbidimeter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
ORP Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
DO Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	Color	Turbidity & Sediment	
1014	—	1.0	—	—	—	TAN	—	Pump On
1019	5	↓	19.59	5.25	5510	NEUTRAL	20.9	Well dry. Pump Off.
1024	—		—	—	—	NEUTRAL	—	Pump On.
1034			18.20	4.95	5230	NEUTRAL	6.2	Well dry. Pump Off
								ORP: 170 mV
								DO: 2.42 mg/L
								TDS: 3.29 g/L

Total Discharge (gallons): _____

Observations/Comments:

gallons removed over 2 days

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WELL DEVELOPMENT RECORD

PAGE 1 of 1

Project Number: 1755 Project Name: Exide FRC Plant Date: 3/6/13	
Well Location (well ID, etc.): MW-23	Starting Water Level (ft. BMP): 7.68
Developed by: Kevin Dwoesky	Casing Stickup (ft.): ~ 0.00 (AT GRADE)
Measuring Point (MP) of Well: TOC/PVC	Starting Water Level (ft. BGL): 7.68
Screened Interval (ft. BGL): 4.5' – 19.5'	Total Depth (ft. BGL): 19.35
Filter Pack Interval (ft. BGL): 3.5' – 19.5'	Casing Diameter (In ID): 2
	Casing Volume (gal.): 1.867

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Dedicated Equipment DI WATER & Liquinox

Purging: Mini - Typhoon Pump Surge Equipment: Pump

Disposal of Discharged Water: 55 Gallon Drums

INSTRUMENTS (indicate make, model, I.D.)

Water Level: Keck

pH Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
Conductivity Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
Thermometer: Horiba U-52	
Turbidimeter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
ORP Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
DO Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	Color	Turbidity & Sediment	
1134	–	1.0	–	–	–	TAN	–	Pump On. Well surged
1139	5	↓	20.52	6.21	3520	TAN	1000+	Well Dry. Pump Off
1149	–	0.2	–	–	–	TAN	–	Pump On. Well surged
1154	7	↓	20.81	6.25	3470	TAN	1000+	Well dry. Pump Off.
1204	–	0.2	–	–	–	TAN	–	Pump On. Well surged
1209	8	↓	20.67	6.27	3390	NEUTRAL	489	Well turning on & off.
1214	9	↓	20.39	6.32	3430	NEUTRAL	395	Well turning on & off.
1219	10	↓	20.88	6.30	3430	NEUTRAL	204	Well turning on & off.
1224	11	↓	20.92	6.32	3440	NEUTRAL	146	Pump Off, Well dry.
								ORP: 20 mV
								DO: 2.20 mg/L
								TDS 2.20 g/L

Total Discharge (gallons): 11

Observations/Comments:

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WELL DEVELOPMENT RECORD

PAGE 1 of 1

Project Number: 1755 Project Name: EXIDE FRC PLANT Date: 3/6/13	
Well Location (well ID, etc.): MW-21	Starting Water Level (ft. BMP): 4.03
Developed by: Kevin Dwoerser	Casing Stickup (ft.): ~ 2.21
Measuring Point (MP) of Well: TOC / PVC	Starting Water Level (ft. BGL): 1.82
Screened Interval (ft. BGL): 3.0' - 13.0'	Total Depth (ft. BGL): 15.33
Filter Pack Interval (ft. BGL): 2.5' - 16.0'	Casing Diameter (In ID): 2
	Casing Volume (gal.): 1.808

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Dedicated Equipment - DI WATER ; LiquidNox

Purging: Mini - Typhoon Pump Surge Equipment: Pump

Disposal of Discharged Water: 55 Gallon Drums

INSTRUMENTS (indicate make, model, I.D.)

Water Level: Keck

pH Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
Conductivity Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
Thermometer: Horiba U-52	
Turbidimeter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
ORP Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
DO Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	Color	Turbidity & Sediment	
1357	—	1.2	—	—	—	TAN	—	Pump On. Surged Well.
1402	6	↓	17.89	6.65	3470	NEUTRAL	81.2	Well dry. Pump Off
1407	—	0.4	—	—	—	TAN	—	Pump On. Surged Well
1412	~~8~~	↓	~~15.07~~	~~6.516~~	~~3460~~	NEUTRAL	20.16	Pump Off. Well dry
1417	—	0.2	—	—	—	NEUTRAL	—	Pump On. Surged Well
1422	9	↓	18.02	6.54	3450	NEUTRAL	120	Well dry. Pump Off
1432	—	0.2	—	—	—	NEUTRAL	—	Pump On.
1437	10	↓	18.38	6.58	3400	NEUTRAL	16.3	Pump Off. Well dry
1442	—	0.4	—	—	—	NEUTRAL	—	Pump On
1447	12	↓	18.06	6.56	3380	NEUTRAL	11.7	Pump Off. Well dry
								ORP:
								DO:
								TDS:

Total Discharge (gallons): 12

Observations/Comments:

Pump turning on and off during intervals.

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WELL DEVELOPMENT RECORD

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Project Number: 1755 Project Name: Exide FRC Plant Date: 3/6/13	
Well Location (well ID, etc.): MW-22	Starting Water Level (ft. BMP): 11.93
Developed by: Kevin Dworsky	Casing Stickup (ft.): ~3.54
Measuring Point (MP) of Well: TOC/PVC	Starting Water Level (ft. BGL): 8.39
Screened Interval (ft. BGL): 3.0' - 13.0'	Total Depth (ft. BGL): 16.46
Filter Pack Interval (ft. BGL): 2.5' - 15.0'	Casing Diameter (In ID): 2
	Casing Volume (gal.): 0.725

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Dedicated Equipment – DI WATER & Liquid NOX

Purging: Mini Typhoon Pump Surge Equipment: Pump

Disposal of Discharged Water: 55 Gallon Drums

INSTRUMENTS (indicate make, model, I.D.)

Water Level: Keck	
pH Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
Conductivity Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
Thermometer: Horiba U-52	
Turbidimeter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
ORP Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
DO Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	Color	Turbidity & Sediment	
1526	–	0.3	–	–	–	TAN	–	Pump On. Surged Well
1531	2	↓	18.97	5.58	3980	NEUTRAL	115	Well Keeps going dry
1536	3	↓	19.18	5.43	4020	NEUTRAL	246	Well dry. Pump Off
1546	–	0.1	–	–	–	NEUTRAL	–	Pump On. Surged Well.
1551	3	↓	19.04	5.80	4100	NEUTRAL	477	Well Keeps going dry
1556	4	↓	18.46	5.82	4130	TAN	1060	Well dry. Pump off
1606	–	0.1	–	–	–	NEUTRAL	–	Pump On.
1616	5	↓	17.79	6.13	4110	NEUTRAL	395	Well dry. Pump off
								ORP: 97 mV
								DO: 5.53 mg/L
								TDS: 2.63 g/L

Total Discharge (gallons): _____

Observations/Comments:
Pump turned on and off during intervals due to well going dry.

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WELL DEVELOPMENT RECORD

PAGE_____of_____

Project Number: 1755 Project Name: Exide FRC Plant Date: 3/6/13	
Well Location (well ID, etc.): MW-24	Starting Water Level (ft. BMP): 22.45
Developed by: Kevin Dworsky	Casing Stickup (ft.): ~3.55
Measuring Point (MP) of Well: TOC/PVC	Starting Water Level (ft. BGL): 18.90
Screened Interval (ft. BGL): 14.0' - 29.0'	Total Depth (ft. BGL): 32.87
Filter Pack Interval (ft. BGL): 12.0' - 29.0'	Casing Diameter (In ID): 2
	Casing Volume (gal.): 1.667

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Dedicated Equipment - DI water ; Liquinox

Purging: Mini-Typhoon Pump Surge Equipment: Pump

Disposal of Discharged Water: 55 Gallon Drums

INSTRUMENTS (indicate make, model, I.D.)

Water Level: Keck	
pH Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
Conductivity Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
Thermometer: Horiba U-52	
Turbidimeter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
ORP Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
DO Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	Color	Turbidity & Sediment	
1638	—	1.1	~	-	—	TAN	—	Pump On. Well Surged
1643	4	↓	20.11	6.52	4030	TAN	1000+	
1648	10	↓	20.15	6.52	3950	TAN	1000+	Surged Well
1653	17	↓	20.19	6.52	3930	TAN	1000+	
1658	23	↓	20.14	6.52	3920	TAN	444	Pump Off
1711	—	1.4	~	—	—	TAN	—	Pump ON. Surged Well
1716	28	↓	20.11	6.55	3920	TAN	442	
1721	34	↓	20.08	6.52	3920	NEUTRAL	151	
1726	40	↓	20.05	6.55	3910	NEUTRAL	183	
1731	49	↓	20.02	6.52	3910	NEUTRAL	48.3	Pump Off
								ORP: 52 mV
								DO: 0.28 mg/L
								TDS: 2.50 g/L

Total Discharge (gallons): _____

Observations/Comments:

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WELL DEVELOPMENT RECORD

PAGE 1 of 1

Project Number: 1755 Project Name: Exide FRL Plant Date: 3/8/13

Well Location (well ID, etc.): MW-27	Starting Water Level (ft. BMP): 11.29
Developed by: Kevin Dwoesky	Casing Stickup (ft.): ~3.13
Measuring Point (MP) of Well: TOC/PVC	Starting Water Level (ft. BGL): 8.16
Screened Interval (ft. BGL): 5.0' - 15.0'	Total Depth (ft. BGL): 17.38
Filter Pack Interval (ft. BGL): 4.0' - 15.0'	Casing Diameter (In ID): 2
	Casing Volume (gal.): 0.974

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Dedicated Equipment ~ Di Water & Liquidnox

Purging: ~~Disposable bailer~~ / mini-typhoon Surge Equipment: ~~bailer~~ / pump

Disposal of Discharged Water: 55 Gallon Drums

INSTRUMENTS (indicate make, model, I.D.)

Water Level: Keck

pH Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
Conductivity Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
Thermometer: Horiba U-52	
Turbidimeter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
ORP Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
DO Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	Color	Turbidity & Sediment	
1220	—	0.6	—	—	—	TAN	—	Surged Well. Pump On.
1225	3	↓	19.12	5.56	3440	TAN	1000+	Pump turned on & off due to well running dry. Pump off. Well dry
1230	—	0.2	—	—	—	TAN	—	Surged Well. Pump On.
1235	4	↓	19.44	5.53	3420	TAN	1000+	Well dry. Pump Off.
1240	—	0.1	—	—	—	TAN	—	Surged well. Pump On
1245	4.5	↓	19.06	5.60	3460	TAN	1000+	Well dry. Pump Off
1300	—	0.06	—	—	—	TAN	—	Pump On.
1305	4.8	↓	18.41	5.73	3620	TAN	1000+	Well Dry. Pump Off.
1331	—	0.05	—	—	—	TAN		Pump On.
1341	5.3	↓	18.04	5.68	3630	TAN	1000+	Well dry. Pump Off
1357	—	0.03	—	—	—	TAN	—	Pump On
1407	5.6	↓	16.45	6.02	3830	TAN	1000+	Well dry. Pump Off

otal Discharge (gallons): _____

Observations/Comments:

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WELL DEVELOPMENT RECORD

PAGE 1 of 1

Project Number: 1755 Project Name: Exide FRC Plant Date: 3/8/13	
Well Location (well ID, etc.): MW-29	Starting Water Level (ft. BMP): 16.79
Developed by: Kevin Dworsky	Casing Stickup (ft.): ~2.50
Measuring Point (MP) of Well: TOC/PVC	Starting Water Level (ft. BGL): 14.29
Screened Interval (ft. BGL): 4.5' - 14.5'	Total Depth (ft. BGL): 17.50
Filter Pack Interval (ft. BGL): 4.0' - 14.5'	Casing Diameter (In ID): 2
	Casing Volume (gal.): 0.114

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Dedicated Equipment

Purging: disposable bailer Surge Equipment: bailer

Disposal of Discharged Water: 55 Gallon Drums

INSTRUMENTS (indicate make, model, I.D.)

Water Level: Keck

pH Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
Conductivity Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
Thermometer: Horiba U-52	
Turbidimeter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
ORP Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution
DO Meter: Horiba U-52	Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	Color	Turbidity & Sediment	
1200	0.1	—						Surged and bailed dry
1250	0.1	—	15.85	6.38	6070	TAN	1000+	Surged and bailed dry
1445	0.1	—				NEUTRAL	—	NOT ENOUGH WATER TO ~~go~~ get measurement from.

Total Discharge (gallons): _____

Observations/Comments: WELL WAS initially Surged For 15 min w/ a bailer by Tim J.

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/ELOPMENT RECORD

PAGE 1 of 1

er: 1755 Project Name: Exide PRC Date: 3/8/13

ion (well ID, etc.): MW-26 Starting Water Level (ft. BMP): 14.39

ped by: Kevin Dworsky Casing Stickup (ft.): ~ 2.78

suring Point (MP) of Well: TOC/PVC Starting Water Level (ft. BGL): 11.61

reened Interval (ft. BGL): 5.0' - 15.0' Total Depth (ft. BGL): 17.78

Filter Pack Interval (ft. BGL): 4.0' - 15.0' Casing Diameter (In ID): 2

Casing Volume (gal.): 0.5 & 2

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Dedicated Equipment

Purging: Bailer Surge Equipment: Bailer

Disposal of Discharged Water: 55 Gallon Drums

INSTRUMENTS (indicate make, model, I.D.)

Water Level: Keck

pH Meter: Horiba U-52 Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution

Conductivity Meter: Horiba U-52 Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution

Thermometer: Horiba U-52

Turbidimeter: Horiba U-52 Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution

ORP Meter: Horiba U-52 Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution

DO Meter: Horiba U-52 Field Calibration: Auto Calibration - 100-4 Horiba Calibration Solution

DEVELOPMENT MEASUREMENTS

Time	Flow		Water Quality			Appearance		Remarks
	Cum. Vol. (gal. / L)	Purge Rate (gal. / L pm)	Temp. (oC)	pH	Spec. Cond. (mmhos/cm)	Color	Turbidity & Sediment	
1145	2	—				—	—	Surged & bailed dry
1315	2.5	—	18.38	6.31	6470	TAN	10004	Surged & bailed dry
1355	2.7	—	17.84	6.33	6460	TAN	10004	bailed dry

Total Discharge (gallons): _____

Observations/Comments:

Initially surged for 15 min by Tim J. w/ bailer.

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APPENDIX 4
REGISTRATION AND INSTITUTIONAL CONTROLS

***** TEXAS COMMISSION ON ENVIRONMENTAL QUALITY *****
Notice of Registration
Industrial and Hazardous Waste

30516 EXIDE FRISCO BATTERY RECYCLING PLANT

Solid Waste Registration Number: 30516 **EPA Id:** TXD006451090

Company Name: GNB TECHNOLOGIES INC
Site Name: EXIDE FRISCO BATTERY RECYCLING PLANT
Site Location: 7471 S 5th St, Frisco, TX
Primary Contact: HARDY, EDWARD
Mailing Address: PO BOX 250
FRISCO, TX 75034-0005

Region: 4
County: 043 COLLIN
Land Type: Private
Title: ENVIRONMENTAL MANAGER
Site Street Address: 7471 5TH ST
FRISCO, TX 75034

Initial Registration Date: 04/20/1976
Last Amendment Date: 06/13/2013
Last Date NOR Computer update: 06/13/2013
Phone: 214-578-0686

Registration Status: Active
Registration Type: Generator Receiver Transporter
Generator Type: Industrial
Receiver Type: Commercial
Transporter Type: TRANSPORT OWN WASTE
Transport Wst Class: H

Reporting Method: STEERS
Hazardous Waste Generation Status: Large Quantity Generator

This registration has the following merged registrations: 50206 83335

Universal Waste Activity:
Large Quantity Handler of Universal Waste (you accumulate 5,000 kg or more):
Type(s) Managed:
Destination Facility for Universal Waste:

Business Description: Non-Ferrous Metal Secondary Smelting Lead acid battery recycling. Note: Filed for bankruptcy under Chapter 11 on 4/15/02.
NAICS Code: 331492 Secondary Smelting, Refining, and Alloying of Non
Tax Identification #: 13631828715
Handler Status:

Operator Information

Name: GNB TECHNOLOGIES INC
Phone: 972-335-2121
Address: PO BOX 250
FRISCO, TX 75034-0005

Owner Information:

Name: GNB TECHNOLOGIES INC
Phone: 972-335-2121
Address: PO BOX 250
FRISCO, TX 75034-0005

Billing Contact: **Title:** **Phone:**
Billing Address:
PO BOX 250
FRISCO, TX 75034-0005

Other Contact: Manager, Environmental **Role:** IHW: Owner Contact **Phone:** 972-335-2121
Mailing Address: PO BOX 250
FRISCO, TX 75034-0005

Other Contact: HARDY, EDWARD **Role:** IHW: Steers Contact **Phone:** 972-335-2121
Mailing Address: PO BOX 250
FRISCO, TX 75034-0005

As of 06/13/2013 - The next unassigned sequence number for WASTES is 0507 and
The next unassigned sequence number for UNITS is 018

***** TEXAS COMMISSION ON ENVIRONMENTAL QUALITY *****
Notice of Registration
Industrial and Hazardous Waste

30516 EXIDE FRISCO BATTERY RECYCLING PLANT

****** WASTE INFORMATION ******

Texas Waste Code	Waste Class	Status	Date of Status	Managed Onsite/ Offsite	Radio-active	TCEQ Audit Complete

******** Active Wastes ********

0001103H H Active 06/13/2013 On-site No No

Description from Generator: Spent sulfuric acid from battery breaking operations.
Texas Form Code: 103 Spent acid with metals
EPA Form Code: W103 Spent concentrated acid
Origin Code: 5 Residual from on-site treatment, disposal or recycling of hazardous waste
Source Code: G08 Removal of spent process liquids or catalysts
NAICS Code: 331423 Secondary Smelting, Refining, and Alloying of Cop
Company's Internal Code(s): Acid
EPA Hazardous Waste Numbers: D002 D008
Current Management Units: Waste water treatment plant 009

00043042 2 Active 06/13/2013 On-site No No

Description from Generator: Blast Furnace Slag (Treated)
Texas Form Code: 304 Other "dry" ash, slag or thermal residue
Origin Code: 1 Generated on-site from a product process or service activity
Current Management Units: Landfill 012
Miscellaneous storage containers 014

0005304H H Active 06/13/2013 Off-site No No

Description from Generator: Dust, Flue recycled back to furnace closed loop. recycling notification 7/7/99
Texas Form Code: 304 Other "dry" ash, slag or thermal residue
EPA Form Code: W304 Slags, drosses, and other solid thermal residues
Origin Code: 1 Generated on-site from a product process or service activity
Source Code: G21 Air pollution control devices (baghouse dust, etc.)
NAICS Code: 331423 Secondary Smelting, Refining, and Alloying of Cop
EPA Hazardous Waste Numbers: K069
Current Management Units: None

0006304H H Active 06/13/2013 On-site No No

Description from Generator: Blast Furnace Slag (untreated)
Texas Form Code: 304 Other "dry" ash, slag or thermal residue
EPA Form Code: W304 Slags, drosses, and other solid thermal residues
Origin Code: 1 Generated on-site from a product process or service activity
Source Code: G21 Air pollution control devices (baghouse dust, etc.)
NAICS Code: 331423 Secondary Smelting, Refining, and Alloying of Cop
EPA Hazardous Waste Numbers: D008
Current Management Units: Miscellaneous storage containers 014
Tank 008

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30516 EXIDE FRISCO BATTERY RECYCLING PLANT

Texas Waste Code	Waste Class	Status	Date of Status	Managed Onsite/ Offsite	Radio-active	TCEQ Audit Complete

******** Active Wastes ********

0008304H H Active 06/13/2013 Off-site No No

Description from Generator: Refractory brick from furnace rebuilds.
Texas Form Code: 304 Other "dry" ash, slag or thermal residue
EPA Form Code: W304 Slags, drosses, and other solid thermal residues
Origin Code: 1 Generated on-site from a product process or service activity
Source Code: G19 Other one-time or intermittent processes
NAICS Code: 331423 Secondary Smelting, Refining, and Alloying of Cop
EPA Hazardous Waste Numbers: D006 D008
Current Management Units: Tank 008

0009319H H Active 06/13/2013 Off-site No No

Description from Generator: Scrap PVC / pipe and parts
Texas Form Code: 319 Other waste inorganic solids
EPA Form Code: W319 Other inorganic solids
Origin Code: 2 Result of spill clean-up, equipment decommissioning or emergency removal
Source Code: G15 Process equipment change-out or discontinuation of equipment use
NAICS Code: 331423 Secondary Smelting, Refining, and Alloying of Cop
Company's Internal Code(s): Scrap PVC
EPA Hazardous Waste Numbers: D004 D006 D008
Current Management Units: Miscellaneous storage containers 014

00121162 2 Active 06/13/2013 On-site No No

Description from Generator: Leachate, Landfill, Recycling notification 7/7/99
Texas Form Code: 116 Leachate
Origin Code: 3 Derived from on-site management of a nonhazardous waste
Company's Internal Code(s): Landfill leachate
Current Management Units: Landfill 012
Waste water treatment plant 009

00133192 2 Active 06/13/2013 On-site No No

Description from Generator: Sodium Sulfate, from crystallization process. Excess product (not sold) sent off site for disposal.
Texas Form Code: 319 Other waste inorganic solids
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): Sodium Sulfate
Current Management Units: None

00141132 2 Active 06/13/2013 Off-site No No

Description from Generator: Purge water from the production of Sodium Sulfate. Dreived from Boil outs and purging.
Texas Form Code: 113 Other aqueous waste with high dissolved solids
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): PURGE WATER NA2SO4
Current Management Units: None

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Texas Waste Code	Waste Class	Status	Date of Status	Managed Onsite/ Offsite	Radio-active	TCEQ Audit Complete

******** Active Wastes ********

00183022 2 Active 06/13/2013 On & Off No No

Description from Generator: Misc soil and debris from pavement repair and equipment clean up.
Texas Form Code: 302 Soil contaminated with inorganics only
Origin Code: 2 Result of spill clean-up, equipment decommissioning or emergency removal
Company's Internal Code(s): MISC SOIL AND DEBRIS
Current Management Units: Miscellaneous storage containers 014

00193022 2 Active 06/13/2013 On & Off No No

Description from Generator: sediments from solar evaporation pond.
Texas Form Code: 302 Soil contaminated with inorganics only
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): SOLAR POND SEDIMENTS
Current Management Units: Tank 008

0020406H H Active 06/13/2013 Off-site No No

Description from Generator: Scrubber packing material, plastic. Wet scrubbing of off gases from furnaces. Packing changed as structure degrades.
Texas Form Code: 406 Empty fiber or plastic containers
EPA Form Code: W403 Solid resins, plastics or polymerized organics
Origin Code: 3 Derived from on-site management of a nonhazardous waste
Source Code: G21 Air pollution control devices (baghouse dust, etc.)
NAICS Code: 331492 Secondary Smelting, Refining, and Alloying of Non
Company's Internal Code(s): SCRUBBER PACKING
EPA Hazardous Waste Numbers: D006 D008 D009
Current Management Units: Miscellaneous storage containers 014

00229992 2 Active 06/13/2013 On & Off No No

Description from Generator: Shrink wrap and cardboard generated during receipt of batteries.
Texas Form Code: 999 Class 2 plant trash
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): Packaging Material
Current Management Units: Miscellaneous storage containers 014

00233021 1 Active 06/13/2013 On & Off No No

Description from Generator: Misc soil and debris generated from rebuild activities
Texas Form Code: 302 Soil contaminated with inorganics only
Origin Code: 2 Result of spill clean-up, equipment decommissioning or emergency removal
Current Management Units: Miscellaneous storage containers 014

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Texas Waste Code	Waste Class	Status	Date of Status	Managed Onsite/ Offsite	Radio-active	TCEQ Audit Complete

******** Active Wastes ********

0024199H H Active 06/13/2013 On & Off No No

Description from Generator: Purge water from the crystallization process producing sodium sulfate derived from boil outs and purging that is routinely needed to maintain operational level in vapor body and determined based on solids content and chloride levels.
Texas Form Code: 199 Brine solution that could also bear the form code 113
EPA Form Code: W113 Other aqueous waste or wastewaters
Origin Code: 1 Generated on-site from a product process or service activity
Source Code: G07 Product and by-product processing
NAICS Code: 331492 Secondary Smelting, Refining, and Alloying of Non
Company's Internal Code(s): PURGE WATER
EPA Hazardous Waste Numbers: D006 D010
Current Management Units: Tank 015

00253902 2 Active 06/13/2013 Off-site No No

Description from Generator: Concrete debris
Texas Form Code: 390 Nonhazardous concrete/cement/construction debris
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CONCRETE DEBRIS
Current Management Units: None

00263192 2 Active 06/13/2013 Off-site No No

Description from Generator: Raw soda ash from soda ash silo failure
Texas Form Code: 319 Other waste inorganic solids
Origin Code: 2 Result of spill clean-up, equipment decommissioning or emergency removal
Company's Internal Code(s): RAW SODA ASH
Current Management Units: None

00273022 2 Active 06/13/2013 Off-site No No

Description from Generator: Soil from pavement and drain installation/repair
Texas Form Code: 302 Soil contaminated with inorganics only
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): SOIL
Current Management Units: None

0028302H H Active 06/13/2013 Off-site No No

Description from Generator: Soil from pavement and drain installation/repair
Texas Form Code: 302 Soil contaminated with inorganics only
EPA Form Code: W301 Contaminated Soil
Origin Code: 1 Generated on-site from a product process or service activity
Source Code: G19 Other one-time or intermittent processes
NAICS Code: 331492 Secondary Smelting, Refining, and Alloying of Non
Company's Internal Code(s): SOIL
EPA Hazardous Waste Numbers: D008
Current Management Units: None

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Texas Waste Code	Waste Class	Status	Date of Status	Managed Onsite/ Offsite	Radio-active	TCEQ Audit Complete

******** Active Wastes ********

0029304H H Active 06/13/2013 On & Off No No

Description from Generator: Baghouse emission control dust
Texas Form Code: 304 Other "dry" ash, slag or thermal residue
EPA Form Code: W304 Slags, drosses, and other solid thermal residues
Origin Code: 1 Generated on-site from a product process or service activity
Source Code: G21 Air pollution control devices (baghouse dust, etc.)
NAICS Code: 331492 Secondary Smelting, Refining, and Alloying of Non
Company's Internal Code(s): EMISSION CONTROL DUS
EPA Hazardous Waste Numbers: K069
Current Management Units: Miscellaneous storage containers 014 016

0030488H H Active 06/13/2013 On & Off No No

Description from Generator: Wood and metal debris generated during facility decon and demo
Texas Form Code: 488 Wood debris
EPA Form Code: W002 Contaminated debris: paper, clothing, rags, wood, empty fiber or plastic containers, glass, piping, other solids
Origin Code: 2 Result of spill clean-up, equipment decommissioning or emergency removal
Source Code: G49 Other remediation
NAICS Code: 331492 Secondary Smelting, Refining, and Alloying of Non
Company's Internal Code(s): DEBRIS
EPA Hazardous Waste Numbers: D008
Current Management Units: Waste pile 017

00313021 1 Active 06/13/2013 On & Off No No

Description from Generator: Investigation derived soil
Texas Form Code: 302 Soil contaminated with inorganics only
Origin Code: 7 From a corrective action or closure
Company's Internal Code(s): INVESTIGATION SOIL
Current Management Units: Miscellaneous storage containers 016

00323022 2 Active 06/13/2013 On & Off No No

Description from Generator: Investigation derived soils from north side of recycling facility
Texas Form Code: 302 Soil contaminated with inorganics only
Origin Code: 7 From a corrective action or closure
Company's Internal Code(s): INVESTIGATION SOIL
Current Management Units: Miscellaneous storage containers 016

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Texas Waste Code	Waste Class	Status	Date of Status	Managed Onsite/ Offsite	Radio-active	TCEQ Audit Complete

******** Active Wastes ********

00331192 2 Active 06/13/2013 On & Off No No

Description from Generator: Investigation derived water from north side of the recycling facility
Texas Form Code: 119 Other inorganic liquids
Origin Code: 7 From a corrective action or closure
Company's Internal Code(s): INVESTIGATION WATER
Current Management Units: Miscellaneous storage containers 016

0034304H H Active 06/13/2013 On & Off Yes No

Description from Generator: Treated blast slag
Texas Form Code: 304 Other "dry" ash, slag or thermal residue
EPA Form Code: W304 Slags, drosses, and other solid thermal residues
Origin Code: 1 Generated on-site from a product process or service activity
Source Code: G23 Wastewater treatment (sludge, filter cake, etc.)
NAICS Code: 331492 Secondary Smelting, Refining, and Alloying of Non
Company's Internal Code(s): TREATED SLAG
EPA Hazardous Waste Numbers: D006 D008
Current Management Units:

Container storage area	010 011
Containment building	005
Landfill	012 004 007 003
Miscellaneous storage containers	006 014
Surface impoundment	013
Tank	008
Waste pile	001 017
Waste water treatment plant	009

00353901 1 Active 06/13/2013 On & Off No No

Description from Generator: Demo debris
Texas Form Code: 390 Nonhazardous concrete/cement/construction debris
Origin Code: 2 Result of spill clean-up, equipment decommissioning or emergency removal
Company's Internal Code(s): DEMO DEBRIS
Current Management Units: Miscellaneous storage containers 014

0036001H H Active 06/13/2013 Off-site No No

Description from Generator: Maintenance and production chemicals no longer needed.
Texas Form Code: 001 Lab packs of old chemicals only
EPA Form Code: W001 Lab packs with no acute hazardous waste
Origin Code: 7 From a corrective action or closure
Source Code: G19 Other one-time or intermittent processes
NAICS Code: 331492 Secondary Smelting, Refining, and Alloying of Non
Company's Internal Code(s): LAB PACK HAZARDOUS
EPA Hazardous Waste Numbers: D001 D002 D003 D009 F003 F005 P106 U134 U159 U211 U228
Current Management Units: None

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Texas Waste Code	Waste Class	Status	Date of Status	Managed Onsite/ Offsite	Radio-active	TCEQ Audit Complete
****** Active Wastes ******						
00370031	1	Active	06/13/2013	Off-site	No	No

Description from Generator: Production and maintenance chemicals no longer needed due to facility closure
Texas Form Code: 003 Mixed lab packs
Origin Code: 7 From a corrective action or closure
Company's Internal Code(s): LAB PACK NONHAZ
Current Management Units: None

00382191	1	Active	06/13/2013	Off-site	No	No

Description from Generator: Off spec products (organic liquids) no longer needed due to plant closure
Texas Form Code: 219 Other organic liquids
Origin Code: 7 From a corrective action or closure
Company's Internal Code(s): OFF SPEC PRODUCTS
Current Management Units: None

0039701H	H	Active	06/13/2013	Off-site	No	No

Description from Generator: Gas cylinders no longer needed due to plant closure.
Texas Form Code: 701 Inorganic gases
EPA Form Code: W801 Compressed gases
Origin Code: 7 From a corrective action or closure
Source Code: G19 Other one-time or intermittent processes
NAICS Code: 331492 Secondary Smelting, Refining, and Alloying of Non
Company's Internal Code(s): HAZ INORGANIC CYL
EPA Hazardous Waste Numbers: D001
Current Management Units: None

0040801H	H	Active	06/13/2013	Off-site	No	No

Description from Generator: compressed gas cylinders (organic / hazardous) no longer needed due to plant closure
Texas Form Code: 801 Organic gases
EPA Form Code: W801 Compressed gases
Origin Code: 7 From a corrective action or closure
Source Code: G19 Other one-time or intermittent processes
NAICS Code: 331492 Secondary Smelting, Refining, and Alloying of Non
Company's Internal Code(s): HAZ ORGANIC CYL
EPA Hazardous Waste Numbers: D001 D039
Current Management Units: None

00417011	1	Active	06/13/2013	Off-site	No	No

Description from Generator: Compressed gas cylinder, non hazardous, inorganic no longer needed due to plant closure.
Texas Form Code: 701 Inorganic gases
Origin Code: 7 From a corrective action or closure
Company's Internal Code(s): NHAZ INORGANIC CYL
Current Management Units: None

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Texas Waste Code	Waste Class	Status	Date of Status	Managed Onsite/ Offsite	Radio-active	TCEQ Audit Complete
****** Active Wastes ******						
00428011	1	Active	06/13/2013	Off-site	No	No

Description from Generator: Compressed Gas Cylinder (Non Hazardous, organic) no longer needed due to plant closure.
Texas Form Code: 801 Organic gases
Origin Code: 7 From a corrective action or closure
Company's Internal Code(s): NHAZ ORGANIC CYL
Current Management Units: None

0043219H	H	Active	06/13/2013	Off-site	No	No

Description from Generator: Various maintenance chemicals no longer needed due to plant closure.
Texas Form Code: 219 Other organic liquids
EPA Form Code: W219 Other organic liquid
Origin Code: 7 From a corrective action or closure
Source Code: G19 Other one-time or intermittent processes
NAICS Code: 331492 Secondary Smelting, Refining, and Alloying of Non
Company's Internal Code(s): FLAMMABLE AEROSOLS
EPA Hazardous Waste Numbers: D001
Current Management Units: None

0044119H	H	Active	06/13/2013	Off-site	No	No

Description from Generator: Corrosive Liquid (off spec product, sulfuric acid) no longer needed due to plant closure.
Texas Form Code: 119 Other inorganic liquids
EPA Form Code: W119 Other inorganic liquid
Origin Code: 7 From a corrective action or closure
Source Code: G19 Other one-time or intermittent processes
NAICS Code: 331492 Secondary Smelting, Refining, and Alloying of Non
Company's Internal Code(s): INORGANIC CORROSIVES
EPA Hazardous Waste Numbers: D002
Current Management Units: None

00452191	1	Active	06/13/2013	Off-site	No	No

Description from Generator: non hazardous commodity pack containing lube, gear oil, non hazardous resins, non hazardous paints.
Texas Form Code: 219 Other organic liquids
Origin Code: 7 From a corrective action or closure
Company's Internal Code(s): N HAZ COMMODITY PACK
Current Management Units: None

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Texas Waste Code	Waste Class	Status	Date of Status	Managed Onsite/ Offsite	Radio-active	TCEQ Audit Complete

******** Active Wastes ********

0046219H H Active 06/13/2013 Off-site No No

Description from Generator: Corrosion Inhibitor (sodium hydroxide) Formula 2010-Z no longer needed due to plant closure.
Texas Form Code: 219 Other organic liquids
EPA Form Code: W219 Other organic liquid
Origin Code: 7 From a corrective action or closure
Source Code: G19 Other one-time or intermittent processes
NAICS Code: 331492 Secondary Smelting, Refining, and Alloying of Non
Company's Internal Code(s): ORG CORROSIVE LIQUID
EPA Hazardous Waste Numbers: D002
Current Management Units: None

0051203H H Active 06/13/2013 Off-site No No

Description from Generator: Off spec products (organic liquids) no longer needed due to plant closure
Texas Form Code: 203 Non-halogenated solvent
EPA Form Code: W203 Concentrated non-halogenated (e.g., non-chlorinated) solvent
Origin Code: 7 From a corrective action or closure
Source Code: G11 Discarding off-specification or out-of-date chemicals or products
NAICS Code: 331492 Secondary Smelting, Refining, and Alloying of Non
Company's Internal Code(s): OFF SPEC PRODUCTS
EPA Hazardous Waste Numbers: D001
Current Management Units: None

0052302H H Active 06/13/2013 Off-site No No

Description from Generator: Lead contaminated soil generated during the removal of soil berms from a former shooting range
Texas Form Code: 302 Soil contaminated with inorganics only
EPA Form Code: W301 Contaminated Soil
Origin Code: 7 From a corrective action or closure
Source Code: G44 State program or voluntary cleanup
NAICS Code: 331492 Secondary Smelting, Refining, and Alloying of Non
Company's Internal Code(s): LEAD IMPACTED SOIL
EPA Hazardous Waste Numbers: D006 D008
Current Management Units: None

05033112 2 Active 06/13/2013 Off-site No No

Description from Generator: Asbestos roofing and floor tile, Non-friable. One time shipment code.
Texas Form Code: 311 Asbestos solids and debris
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): Asbestos Roofing
Current Management Units: None

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Texas Waste Code	Waste Class	Status	Date of Status	Managed Onsite/ Offsite	Radio-active	TCEQ Audit Complete
****** Active Wastes ******						
05043192	2	Active	06/13/2013	Off-site	No	No

Description from Generator: Spent Manganese Dioxide.
Texas Form Code: 319 Other waste inorganic solids
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): Manganese Dioxide
Current Management Units: Tank 008

05053192	2	Active	06/13/2013	Off-site	No	No

Description from Generator: Magnesium Oxide, spent, mixed with debris and tank cleaning sludge.
Texas Form Code: 319 Other waste inorganic solids
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): Magnesium Oxide
Current Management Units: Tank 008

As of 06/13/2013, The next unassigned sequence number for WASTES is 0507

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Texas Waste Code	Waste Class	Status	Date of Status	Managed Onsite/ Offsite	Radio-active	TCEQ Audit Complete

**** No Longer Generated Wastes ****

0002403H H Inactive 06/13/2013 Off-site No No

Description from Generator: Rubber case chips containing lead. Produced from crushing and separating lead-acid batteries. This waste is no longer generated.
Texas Form Code: 403 Solids resins or polymerized organics
EPA Form Code: W403 Solid resins, plastics or polymerized organics
Origin Code: 1 Generated on-site from a product process or service activity
Source Code: G07 Product and by-product processing
NAICS Code: 331423 Secondary Smelting, Refining, and Alloying of Cop
Company's Internal Code(s): Rubber Chips
EPA Hazardous Waste Numbers: D008
Current Management Units: None

0003206H H Inactive 06/13/2013 On & Off No No

Description from Generator: Waste engine oil. Lead = 18.5 mg/l.OIl used as a reductant in reverbatory furnace instead of coke fines. recycling notification 7/7/99
Texas Form Code: 206 Waste oil
EPA Form Code: W206 Waste oil
Origin Code: 5 Residual from on-site treatment, disposal or recycling of hazardous waste
Source Code: G16 Oil changes and filter or battery replacement
NAICS Code: 331423 Secondary Smelting, Refining, and Alloying of Cop
EPA Hazardous Waste Numbers: D001 D008
Current Management Units: None

00079022 2 Inactive 06/13/2013 On & Off No No

Description from Generator: Housekeeping materials contaminated with lead from Lead Oxide Manufacturing operation.
Texas Form Code: 902 Class 2 supplemental plant production refuse
Origin Code: 1 Generated on-site from a product process or service activity
Current Management Units: Container storage area 010

0010319H H Inactive 06/13/2013 Off-site No No

Description from Generator: Strech Film From packaging of spent lead acid batteries.; A new hazardous waste determination has been performed on this waste.
Texas Form Code: 319 Other waste inorganic solids
EPA Form Code: W319 Other inorganic solids
Origin Code: 1 Generated on-site from a product process or service activity
Source Code: G09 Other production or service-related processes
NAICS Code: 331423 Secondary Smelting, Refining, and Alloying of Cop
Company's Internal Code(s): strech film
EPA Hazardous Waste Numbers: D008
Current Management Units: None

00119992 2 Inactive 06/13/2013 Off-site No No

Description from Generator: Office and Lunch Room trash.
Texas Form Code: 999 Class 2 plant trash
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): Trash, Office, Lunch
Current Management Units: None

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Texas Waste Code	Waste Class	Status	Date of Status	Managed Onsite/ Offsite	Radio-active	TCEQ Audit Complete

**** No Longer Generated Wastes ****

00153192 2 Inactive 06/13/2013 Off-site No No

Description from Generator: stretch wrap and cardboard from the packaging of spent lead acid batteries. Treated on-site with stabilization agents.; A new hazardous waste determination has been performed on this waste.
Texas Form Code: 319 Other waste inorganic solids
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): STRETCH WRAP AND CAR
Current Management Units: None

00163042 2 Inactive 06/13/2013 On-site No No

Description from Generator: Refractory brick from furnace rebuild, treated prior to disposal. Status isactive 2010
Texas Form Code: 304 Other "dry" ash, slag or thermal residue
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): REFRACTORY BRICK
Current Management Units: Landfill 012
Tank 008

0017113H H Inactive 06/13/2013 Off-site No No

Description from Generator: Hazardous purge water from boil outs and purging of the crystalization process.; One time shipment.
Texas Form Code: 113 Other aqueous waste with high dissolved solids
EPA Form Code: W113 Other aqueous waste or wastewaters
Origin Code: 3 Derived from on-site management of a nonhazardous waste
Source Code: G19 Other one-time or intermittent processes
NAICS Code: 331492 Secondary Smelting, Refining, and Alloying of Non
Company's Internal Code(s): HAZ PURGE WATER
EPA Hazardous Waste Numbers: D004 D006 D010
Current Management Units: None

00213162 2 Inactive 06/13/2013 On & Off No No

Description from Generator: solidified purge water from the crystallizer. Purge needed to maintain operational level in vapor body.; One time shipment.
Texas Form Code: 316 Other metal salts/chemicals
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): SOLIDIFIED PURGE H2O
Current Management Units: None

0501203H H Inactive 06/13/2013 Off-site No No

Description from Generator: Spent solvent from parts cleaning. recycling notification 7/7/1999
Texas Form Code: 203 Non-halogenated solvent
EPA Form Code: W203 Concentrated non-halogenated (e.g., non-chlorinated) solvent
Origin Code: 1 Generated on-site from a product process or service activity
Source Code: G09 Other production or service-related processes
NAICS Code: 325188 All Other Basic Inorganic Chemical Manufacturing
EPA Hazardous Waste Numbers: D001 D018 D039
Current Management Units: None

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Texas Waste Code	Waste Class	Status	Date of Status	Managed Onsite/ Offsite	Radio-active	TCEQ Audit Complete

**** No Longer Generated Wastes ****

05023072 2 Inactive 06/13/2013 Off-site No No

Description from Generator: Scrap metal / Debris, fiberglass, non-contact cooling tower demo. One timeshipment code.; One time shipment.
Texas Form Code: 307 Metal scale, filings or scrap
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): Cooling Tower Demo
Current Management Units: None

05063902 2 Inactive 06/13/2013 Off-site No No

Description from Generator: Non-hazardous Class 2, Concrete and debris from paving and building repair and maintence. Tested each time generated. Intermittent events. Ongoing code use, dropping the use of one time codes.
Texas Form Code: 390 Nonhazardous concrete/cement/construction debris
Origin Code: 1 Generated on-site from a product process or service activity
Company's Internal Code(s): CONCRETE AND DEBRIS
Current Management Units: None

As of 06/13/2013, The next unassigned sequence number for WASTES is 0507

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****** UNITS AT THIS SITE MANAGING WASTE ******

Unit Number	Unit Type	Unit Status	Date of Status	Classes of Waste Managed in Unit Onsite / Offsite	Unit Permit Number	Unit # on Permit	Regulatory Status	Deed Recording Needed/Date
001	Waste pile	INACTIVE	11/20/1993	2H / NA	NA	NA	06	YES /

Description from Company:
System Types: 010 Metals recovery including retorting, smelting, chemical, etc.
Wastes Currently Managed at Unit: 0034304H Treated blast slag

003	Landfill	CLOSED	02/01/1974	2H / NA	NA	NA	10 RCRA Permit exempt - Other	YES /

Description from Company: North disposal area, pre RCRA
System Types: 132 Landfill or surface impoundment that will be closed as landfill (to include on-site treatment and/or stabilization)
Wastes Currently Managed at Unit: 0034304H Treated blast slag

004	Landfill	CLOSED		2H / NA	NA	NA	10 RCRA Permit exempt - Other	YES /

Description from Company: South Disposal Area, pre RCRA
System Types: 132 Landfill or surface impoundment that will be closed as landfill (to include on-site treatment and/or stabilization)
Wastes Currently Managed at Unit: 0034304H Treated blast slag

005	Containment building	ACTIVE		H / NA	001	NA	01 RCRA permitted unit	YES /

Description from Company: Raw material storage building. (capacity 4150 tons)
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 0034304H Treated blast slag

006	Miscellaneous storage containers	INACTIVE	11/20/1993	H / NA	NA	NA	13 RCRA Pmt Exempt - Accumulation Time	YES /

Description from Company: 3-yard dump hoppers for storage of rubber chips. Unit is inactive.
System Types: 010 Metals recovery including retorting, smelting, chemical, etc.
Wastes Currently Managed at Unit: 0034304H Treated blast slag

007	Landfill	INACTIVE	04/14/1997	2H / NA	NA	NA	10 RCRA Permit exempt - Other	YES /

Description from Company: North Landfill, treated blast slag, inactive 1996, Non-Haz, class II, monof ill
System Types: 132 Landfill or surface impoundment that will be closed as landfill (to include on-site treatment and/or stabilization)
Wastes Currently Managed at Unit: 0034304H Treated blast slag

008	Tank	ACTIVE	07/15/1993	2 / NA	NA	NA	13 RCRA Pmt Exempt - Accumulation Time	YES /

Description from Company: Treatment tank for blast furnace slag located south of breaker building.
System Types: 111 Stabilization or chemical fixation prior to disposal at another site
Wastes Currently Managed at Unit: 0006304H Blast Furnace Slag 0008304H Refractory brick from 05043192 Spent Manganese Dioxide. 00193022 sediments from solar 05053192 Magnesium Oxide, spent, 0034304H Treated blast slag

***** TEXAS COMMISSION ON ENVIRONMENTAL QUALITY *****
Notice of Registration
Industrial and Hazardous Waste

30516 EXIDE FRISCO BATTERY RECYCLING PLANT

Unit Number	Unit Type	Unit Status	Date of Status	Classes of Waste Managed in Unit Onsite / Offsite	Unit Permit Number	Unit # on Permit	Regulatory Status	Deed Recording Needed/Date
009	Waste water treatment plant	ACTIVE	11/20/1993	2 / NA	NA	NA	08 RCRA Permit exempt-waste water treatment unit	YES /

Description from Company: Wastewater / Grey Treatment facility.
System Types: 077 Other chemical precipitation with or without pre-treatment
Wastes Currently Managed at Unit: 0001103H Spent sulfuric acid from 0034304H Treated blast slag 00121162 Leachate, Landfill,
Wastes Previously Managed at Unit: 00213162 solidified purge water from

Unit Number	Unit Type	Unit Status	Date of Status	Classes of Waste Managed in Unit Onsite / Offsite	Unit Permit Number	Unit # on Permit	Regulatory Status	Deed Recording Needed/Date
010	Container storage area	INACTIVE	01/24/1996	2H / NA	NA	NA	13 RCRA Pmt Exempt - Accumulation Time	YES /

Description from Company: Accumulation area for Storage prior to shipment.
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 0034304H Treated blast slag

Unit Number	Unit Type	Unit Status	Date of Status	Classes of Waste Managed in Unit Onsite / Offsite	Unit Permit Number	Unit # on Permit	Regulatory Status	Deed Recording Needed/Date
011	Container storage area	ACTIVE	04/10/1995	H / NA	002	NA	01 RCRA permitted unit	YES /

Description from Company: Battery Receiving / Storage building. Storage of batteries prior to processing.
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 0034304H Treated blast slag

Unit Number	Unit Type	Unit Status	Date of Status	Classes of Waste Managed in Unit Onsite / Offsite	Unit Permit Number	Unit # on Permit	Regulatory Status	Deed Recording Needed/Date
012	Landfill	ACTIVE	09/01/1996	2 / NA	NA	NA	10 RCRA Permit exempt - Other	YES /

Description from Company: Landfill, North Property, 1996
System Types: 132 Landfill or surface impoundment that will be closed as landfill (to include on-site treatment and/or stabilization)
Wastes Currently Managed at Unit: 0034304H Treated blast slag 00043042 Blast Furnace Slag 00121162 Leachate, Landfill,

Unit Number	Unit Type	Unit Status	Date of Status	Classes of Waste Managed in Unit Onsite / Offsite	Unit Permit Number	Unit # on Permit	Regulatory Status	Deed Recording Needed/Date
013	Surface impoundment	CLOSED	07/26/2002	H / NA	NA	NA	05 Non-Hazardous Regulated	YES /

Description from Company: Stewart creek dredged sediments pile. 4/89 Closed 8/89. Waste code 149620.
System Types: 132 Landfill or surface impoundment that will be closed as landfill (to include on-site treatment and/or stabilization)
Wastes Currently Managed at Unit: 0034304H Treated blast slag

Unit Number	Unit Type	Unit Status	Date of Status	Classes of Waste Managed in Unit Onsite / Offsite	Unit Permit Number	Unit # on Permit	Regulatory Status	Deed Recording Needed/Date
014	Miscellaneous storage containers	ACTIVE	01/30/2009	1 / NA	NA	NA	13 RCRA Pmt Exempt - Accumulation Time	YES /

Description from Company: roll off container/box
System Types: 111 Stabilization or chemical fixation prior to disposal at another site 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 0029304H Baghouse emission control 0009319H Scrap PVC / pipe and parts 00353901 Demo debris 0006304H Blast Furnace Slag
00043042 Blast Furnace Slag 00183022 Misc soil and debris from 0034304H Treated blast slag 00229992 Shrink wrap and cardboard
0020406H Scrubber packing material, 00233021 Misc soil and debris
Wastes Previously Managed at Unit: 0010319H Strech Film From 00213162 solidified purge water from

Unit Number	Unit Type	Unit Status	Date of Status	Classes of Waste Managed in Unit Onsite / Offsite	Unit Permit Number	Unit # on Permit	Regulatory Status	Deed Recording Needed/Date
015	Tank	INACTIVE	09/10/2012	NA / H12	NA	NA	03 RCRA Permit Exempt<90 Day Storage	YES /

Description from Company: Frac tank used to store purge water
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 0024199H Purge water from the

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Notice of Registration
Industrial and Hazardous Waste

30516 EXIDE FRISCO BATTERY RECYCLING PLANT

Unit Number	Unit Type	Unit Status	Date of Status	Classes of Waste Managed in Unit Onsite / Offsite	Unit Permit Number	Unit # on Permit	Regulatory Status	Deed Recording Needed/Date
016	Miscellaneous storage containers	ACTIVE		12 / NA	NA	NA	03 RCRA Permit Exempt<90 Day Storage	YES /

Description from Company: Drums containing solid materials
System Types: 010 Metals recovery including retorting, smelting, chemical, etc.
Wastes Currently Managed at Unit: 00323022 Investigation derived soils; 0029304H Baghouse emission control; 00313021 Investigation derived soil; 00331192 Investigation derived water

Unit Number	Unit Type	Unit Status	Date of Status	Classes of Waste Managed in Unit Onsite / Offsite	Unit Permit Number	Unit # on Permit	Regulatory Status	Deed Recording Needed/Date
017	Waste pile	ACTIVE		H / NA	NA	NA	03 RCRA Permit Exempt<90 Day Storage	YES /

Description from Company: Lined and covered stockpile in boneyard
System Types: 141 Storage, bulking, and/or transfer off site - no treatment/recovery, fuel blending or disposal at this site.
Wastes Currently Managed at Unit: 0030488H Wood and metal debris; 0034304H Treated blast slag

As of 06/13/2013, The next unassigned sequence number for UNITS is 018

List Waste Management Units

Facility SWR #: 30516 Today's date is: 05/22/2014

Work Area

There are no records in your work area.

Add New Unit

TCEQ Records

Mgt Unit	Description	Status
005	Raw material storage building. (capacity 4150 tons)	Active
008	Treatment tank for blast furnace slag located south of breaker building.	Active
009	Wastewater / Grey Treatment facility.	Active
011	Battery Receiving / Storage building. Storage of batteries prior to processing.	Active
012	Landfill, North Property, 1996	Active
014	roll off container/box	Active
016	Drums containing solid materials	Active
017	Lined and covered stockpile in boneyard	Active
018	Roll-offs located within the compounds of onsite landfill	Active
019	Pre-RCRA area of slag-containing fill located deep beneath the former Battery Storage Building.	Active
003	North disposal area, pre RCRA	Closed
004	South Disposal Area, pre RCRA	Closed
013	Stewart creek dredged sediments pile. 4/89 Closed 8/89. Waste code 149620.	Closed
001		Inactive
006	3-yard dump hoppers for storage of rubber chips. Unit is inactive.	Inactive
007	North Landfill, treated blast slag, inactive 1996, Non-Haz, class II, monof ill	Inactive
010	Accumulation area for Storage prior to shipment.	Inactive
015	Frac tank used to store purge water	Inactive

View TCEQ Unit: 019

Facility SWR #: 30516 Today's date is: 05/22/2014

Unit Sequence Number: 019

Unit Type: 01 - Surface Impoundment

Unit Status: Active

Regulatory Status: 10 - RCRA Permit exempt - Other

System Type Codes: 132 (List Codes)

Description: Pre-RCRA area of slag-containing fill located deep beneath the former Battery Storage Building.

Capacity: 100.0000

Capacity Unit: CY

Waste Managed: 0034304H

Does this unit manage waste generated off-site? No

Edit List Management Units

Faeth-Boyd, Anne

From: LOVE, Matt (Reading Equipment Center) <Matt.Love@exide.com>
Sent: Thursday, May 22, 2014 12:32 PM
To: Faeth-Boyd, Anne
Subject: FW: STEERS Unit Record Submitted

Provided below is confirmation that WMU 19 was added.

-----Original Message-----
From: MCKERCHER, David (Frisco)
Sent: Thursday, May 22, 2014 1:13 PM
To: Lori Siegelman; LOVE, Matt (Reading Equipment Center)
Subject: FW: STEERS Unit Record Submitted

FYI,

The NOR(WMU 19) has been added.

Dave

-----Original Message-----
From: steers@tceq.texas.gov [mailto:steers@tceq.texas.gov]
Sent: Thursday, May 22, 2014 12:12 PM
To: MCKERCHER, David (Frisco)
Subject: STEERS Unit Record Submitted

This confirms the submittal of your unit information to the TCEQ. Your submittal was received at 05/22/2014 12:12 PM.

The confirmation number for this submittal is 161250.
The data hash code is C42FCD2B5614146A5686784FAE1405D0E7DA3FA18A81237DF9D3EF035885757F.
You may access the copy of record from the submissions search which is available from the Home page of STEERS Internet Version 5.9.

If you have any questions please contact the STEERS Help Line at 512-239-6925 or by e-mail at steers@tceq.texas.gov.

This e-mail transmission and any attachments are believed to have been sent free of any virus or other defect that might affect any computer system into which it is received and opened. It is, however, the recipient's responsibility to ensure that the e-mail transmission and any attachments are virus free, and the sender accepts no responsibility for any damage that may in any way arise from their use.

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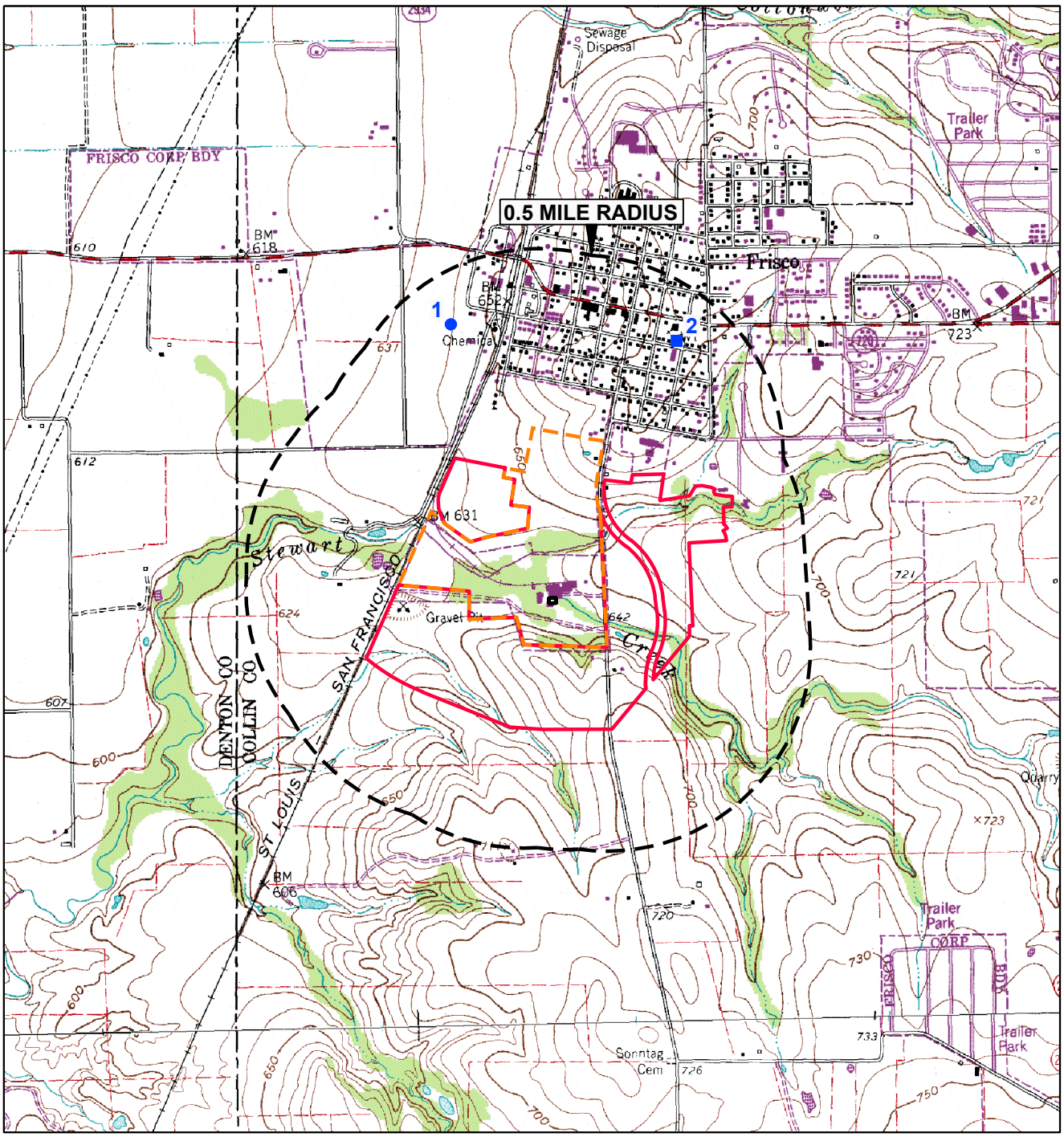
APPENDIX 5
WATER WELL RECORDS



EXPLANATION

- Water Well (Destroyed or Plugged and Abandoned)
- Water Well Cluster (Unused or Plugged and Abandoned)
- On-Site Property Boundary
- FRC Property Boundary

N

Scale in Feet

0 1000 2000

SOURCE:
Base map from www.tnris.org, Frisco, TX 7.5 min. USGS quadrangle dated 1995.

FORMER OPERATING PLANT
FRISCO RECYCLING CENTER
FRISCO, TEXAS

Figure 2C

WATER WELL MAP

PROJECT: 1755	BY: AJD	REVISIONS
DATE: JUNE, 2013	CHECKED: EFP	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

Table 2A Water Well Summary

Well ID on Figure 2C	Source Well ID	Owner of Record	Approximate Distance from Site (miles)	Screened Interval (feet bgs)	Casing Interval (feet bgs)	Cemented Interval (feet bgs)	Surface Completion Type	Total Depth (feet bgs)	Completion Date	Producing Formation	Current Water Use	Current Status	Data Source
1	18-50-8C	Frisco Concrete	0.25	600-620	0-600	--	--	620	2/14/1980	Woodbine	NA	Destroyed	TWDB, field survey, and interviews
2	18-50-802	City of Frisco	0.25	1440-1632	0-1440	--	--	1632	1/1/1940	Paluxy	Unused	inactive (possibly plugged and abandoned)[1]	TWDB, interview with City employee
2	18-50-803	City of Frisco	0.25	1440-2796	0-1440	0-1440	--	2796	3/22/1950	Paluxy and Twin Mountains	Unused	inactive (possibly plugged and abandoned)[1]	TWDB, interview with City employee
2	18-50-804	City of Frisco	0.25	--	--	--	--	1680	1/1/1924	Paluxy	Unused	Plugged and abandoned	TWDB, interview with City employee
2	G0430005A	City of Frisco	0.25	--	--	--	--	2796	3/22/1950	Paluxy and/or Twin Mountains	Unused	inactive (possibly plugged and abandoned)[1]	TCEQ, interview with City employee

Notes:

1. [1] - Donny Mayfield, City of Frisco employee, indicated that two of the four City of Frisco-owned wells have been plugged and abandoned and that the remaining two wells are capped and unused (see Section 2.4 for additional details
2. "--" - information not available.
3. NA - not applicable.
4. bgs - below ground surface.
5. TWDB - Texas Water Development Board.

MEMORANDUM

TO: Matt Love
CC: Eric Pastor

FROM: Larry Eagan

DATE: December 18, 2012

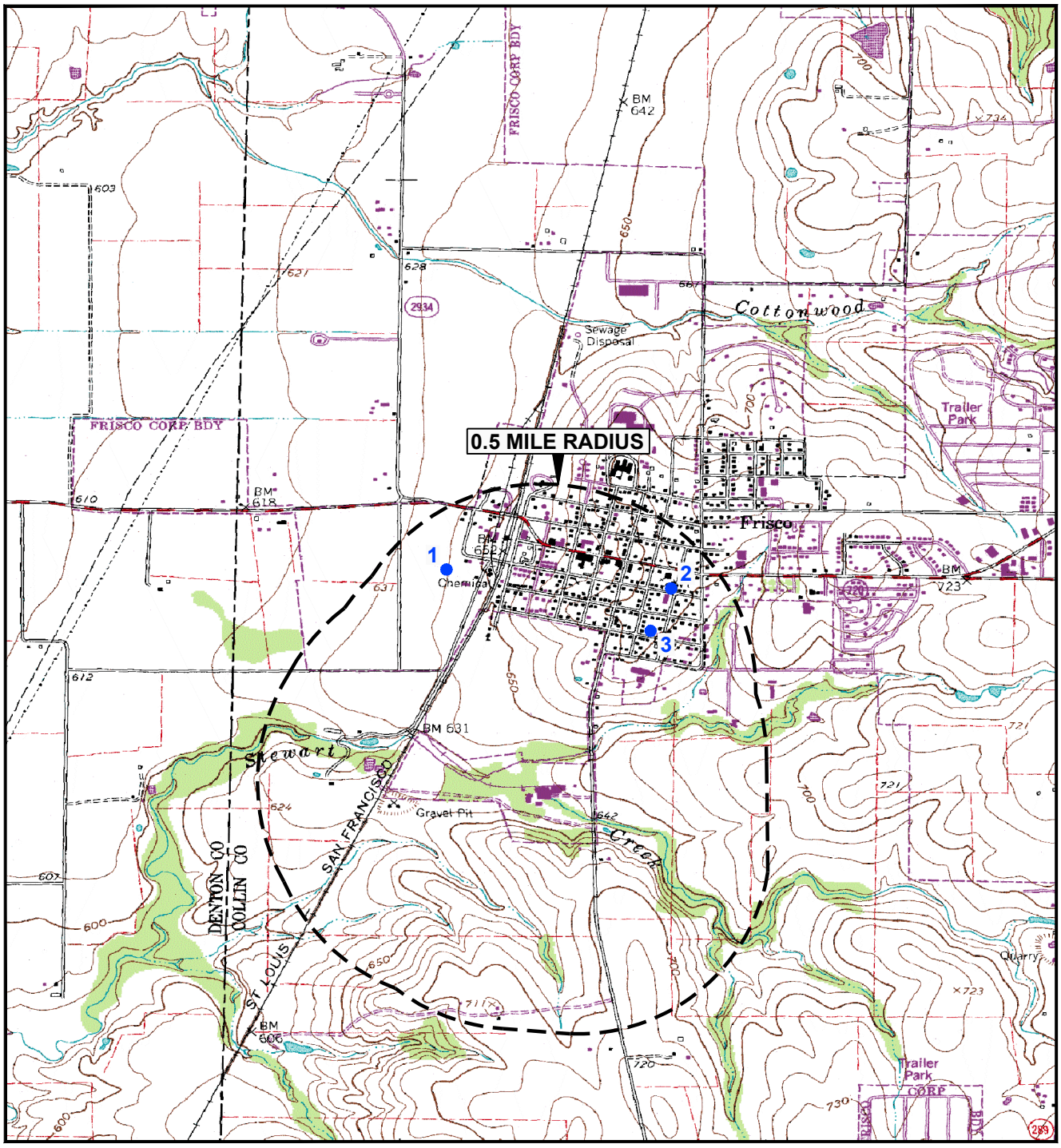
RE: Exide Frisco Recycling Center – Water Well Field Survey

A field water well survey and interviews were conducted by Larry Eagan during October and November 2012 to evaluate the status of wells located within a half-mile radius of the Exide Frisco Recycling Center in Frisco, Texas. The status of wells identified in a February 1, 2012 search of Texas state water well records was confirmed. In addition, a search for other wells not identified in Texas state well records was conducted by a drive-by survey and discussions with City of Frisco personnel and other persons. Well locations identified in the water well records search and field survey are presented on Figure 1.

Well location 1, located in the vicinity of the intersection at Pecan Street and John W. Elliot Dr., indicates a single well designated as owned by Frisco Concrete and as active in Texas state records. Donnie Mayfield, a current City of Frisco (the City) employee who oversaw the demolition of three home sites located in the vicinity of the well, was interviewed regarding the well on October 19, 2012. Mr. Mayfield indicated that the old Frisco Concrete cement plant was in the vicinity of the demolished home sites. Lynn Floyd, of Floyd Architectural Millwork at 8734 John W. Elliot Dr., the only current business owner and operator in the vicinity of the reported well, was interviewed on October 22, 2012. Mr. Floyd, who has operated a business at this address for 15 years, indicated that he was not aware of any active wells in the area. In addition, a walking survey performed on October 22, 2012, by Mr. Eagan did not indicate evidence of an active well in the area. As a result of this evaluation, the well is believed destroyed.

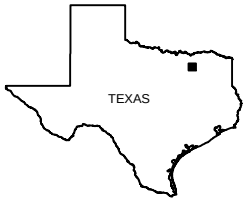
Well location number 2 is located in the vicinity of the corner of Elm and 7th Streets where the original fire station was located. Mr. Eagan met with Mr. Mayfield of the City on October 19, 2012, regarding these wells, which are all deep wells (1700-2200 ft.) and owned by the City of Frisco. Two of the wells are capped and not currently in use by the City, but could be utilized in an emergency. According to Mr. Mayfield, the other two wells have been plugged and abandoned.

Well location number 3, located at 8661 7th Street, was a suspected well location identified by a drive-by survey. A small concrete structure, possibly suggesting the presence of a well, was observed in the backyard at 8661 7th Street. The owner of the property, Janet Lovelady, was interviewed over the phone on November 7, 2012. She indicated that there is no active well currently on the property, but that there had been a well on the property in the distant past that was believed to have caved in. The water well records survey did not indicate a well at or near this location.



EXPLANATION

1 Approx. Potential Water Well Location



QUADRANGLE LOCATIONS

N

Scale in Feet

0 600 1200

SOURCE:
Base map from www.tnris.org, Frisco, TX 7.5 min. USGS quadrangle dated 1995.

FORMER STEWART CREEK WWTP
FRISCO, TEXAS

Figure 1

POTENTIAL WATER WELL LOCATION MAP

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Water Well Report™

Wednesday, June 05, 2013

CLIENT
PASTOR, BEHLING and WHEELER, L.L.C.
2201 Double Creek Drive
Suite 4004
Round Rock, TX 78664

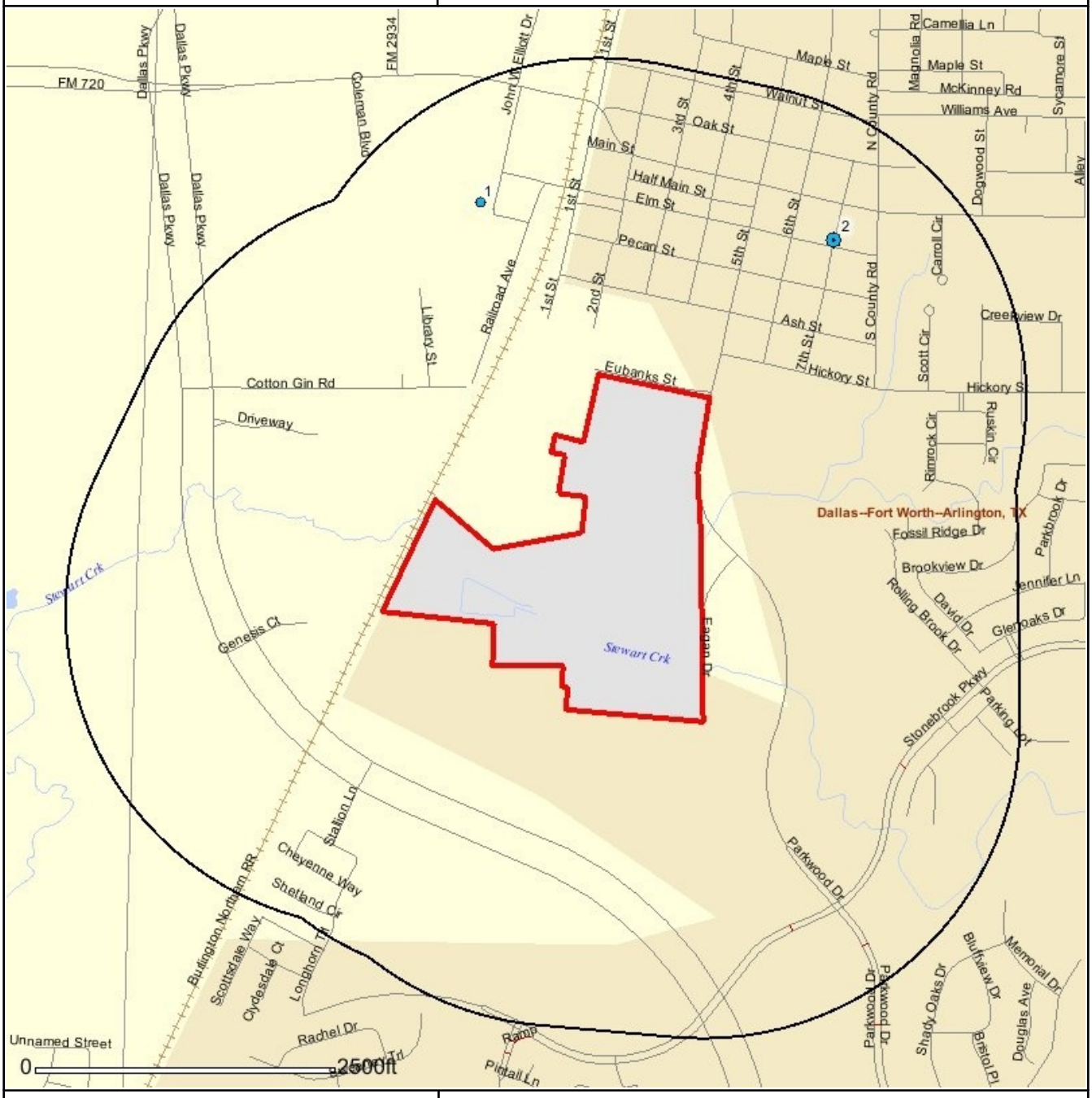
SITE
FRC
7471 5th Street
Frisco, TX
PO #: 1755
ES #: 105880
BISMap #: 060513-16060

1601 Rio Grande Suite 500 Austin, Texas 78701
PH 512.478.0059 FAX 512.478.1433 E-mail banks@banksinfo.com

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Water Well Report™

Map of Wells within 0.5 Mile(s)



★ Site	Roads
Well	Railroad
Cluster	County
Limited Access Hwy	State
Primary Highway	Urban Area
Secondary Highway	Water Bodies

One inch = 0.26 miles

N

FRC

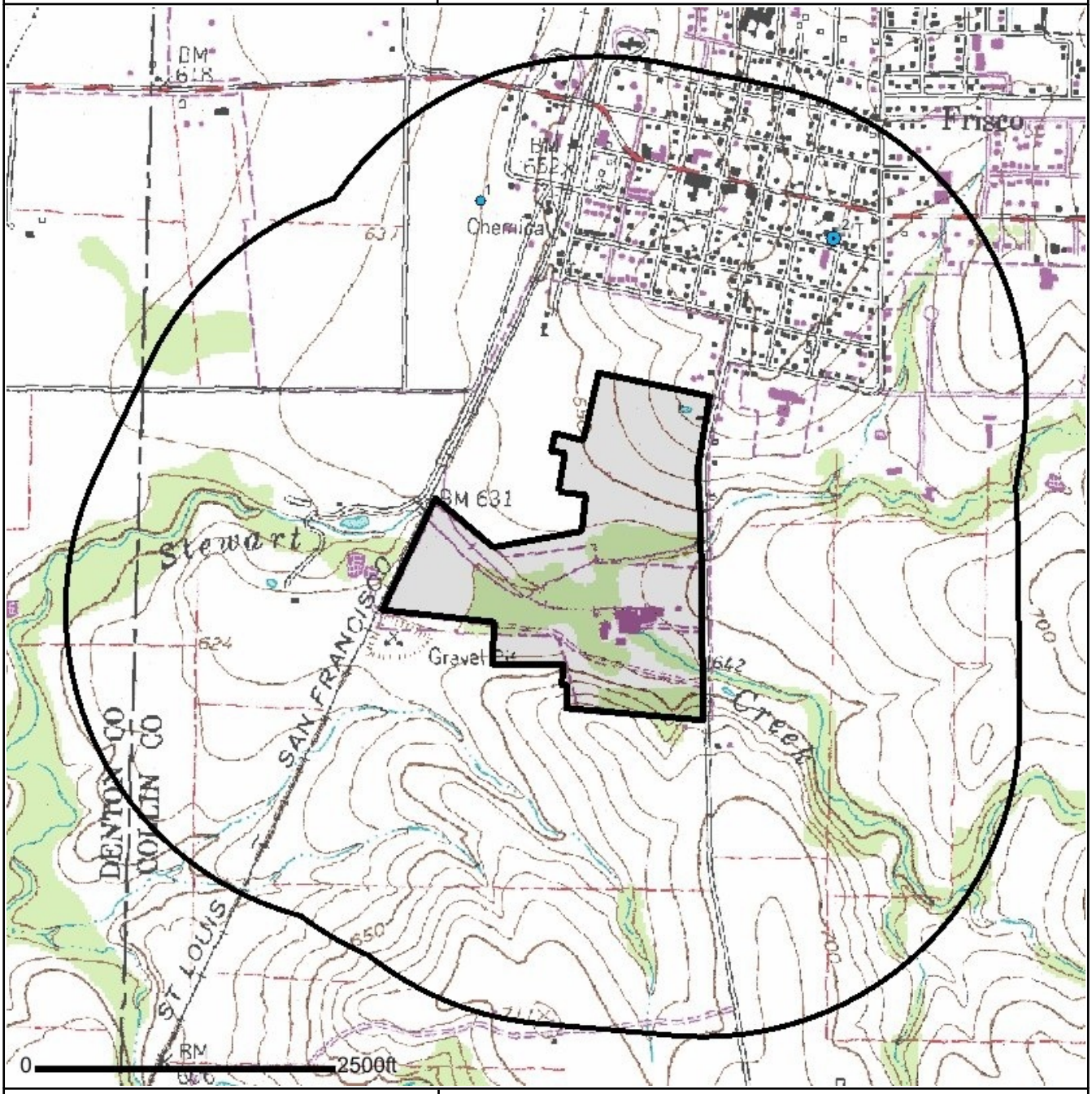
Banks Environmental Data
1601 Rio Grande Suite 500 Austin, Texas 78701
PH 512-478-0059 FAX 512-478-1433
E-Mail: banks@banksinfo.com

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Water Well Report™

on USGS Topo

Map of Wells within 0.5 Mile(s)



- ★ Subject Site
- Site
- Cluster
- Existing Road
- State Line
- County Line
- Unimproved Road

One inch = 0.26 miles

N

FRC

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E-Mail: banks@banksinfo.com

BANKS ENVIRONMENTAL DATA
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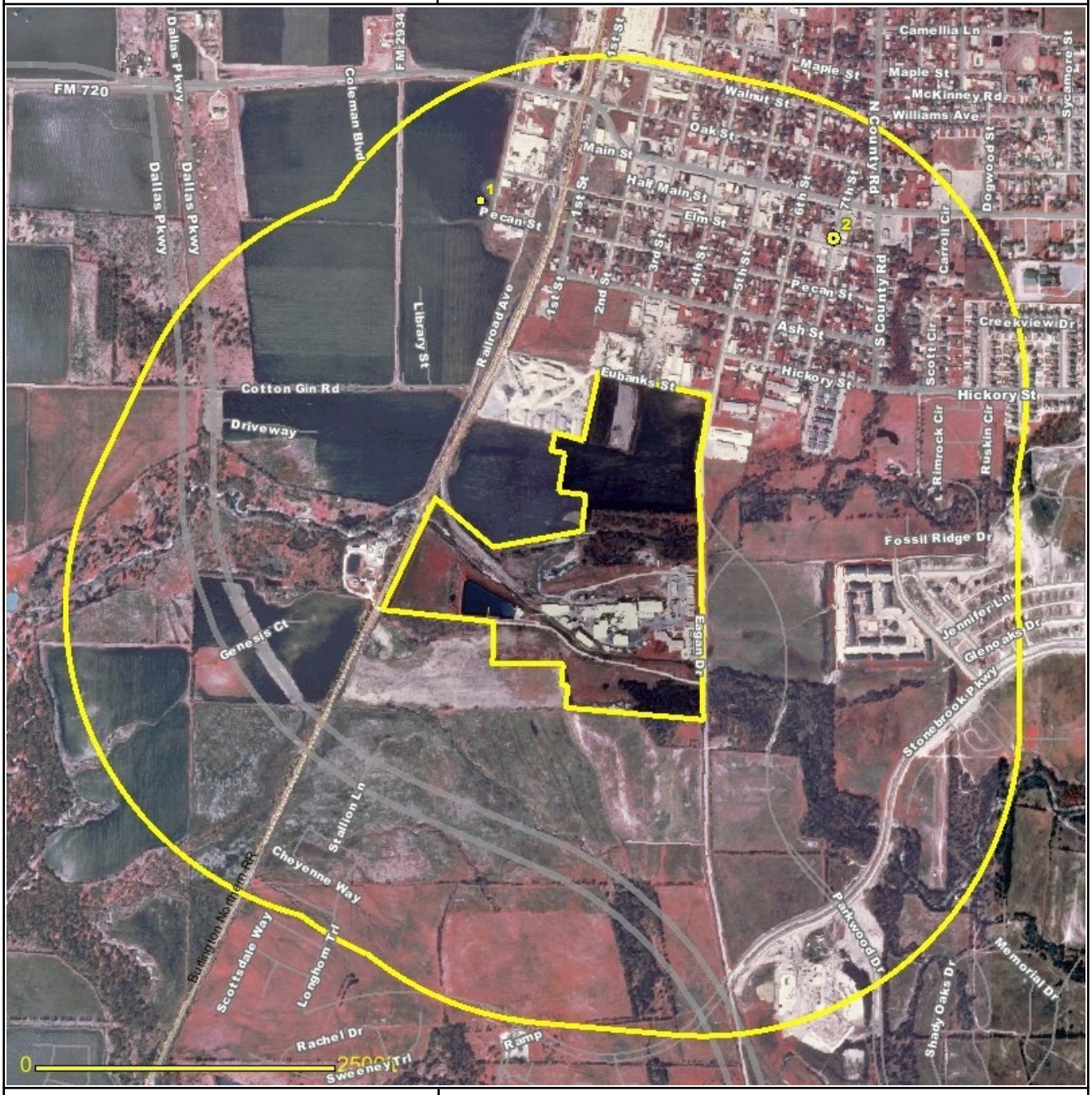
Water Well Report™

on 1996 Aerial Photo

Map of Wells within 0.5 Mile(s)



- Subject Site
- Site
- Cluster
- Primary Highway
- State Line
- County Line
- Roads & Ramps
- Railroad
- Limited Access Hwy

One inch = 0.26 miles

N

FRC

Banks Environmental Data
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E-Mail: banks@banksinfo.com

BANKS ENVIRONMENTAL DATA
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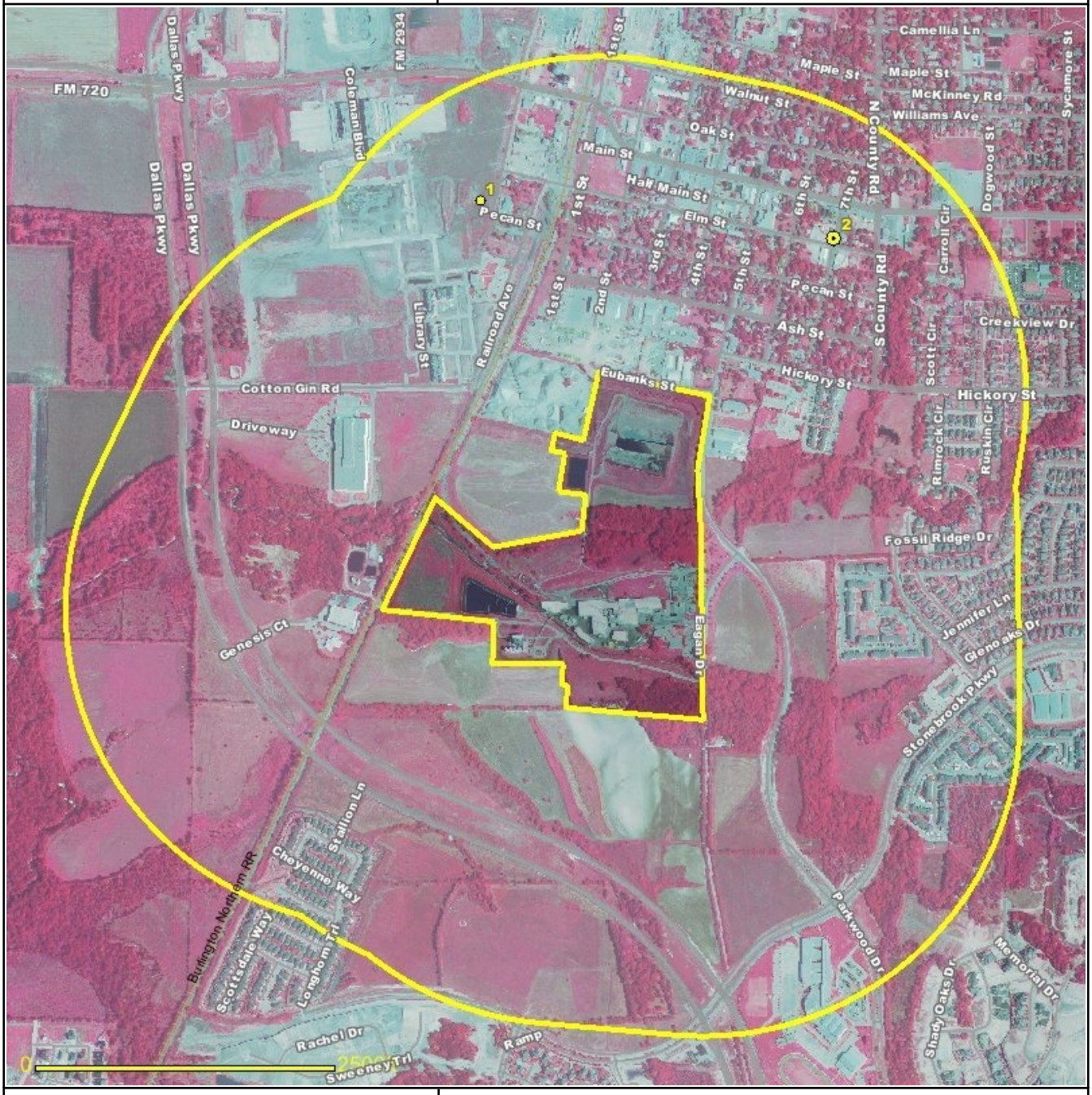
Water Well Report™

on 2004 Aerial Photo

Map of Wells within 0.5 Mile(s)



- Subject Site
- Site
- Cluster
- Primary Highway
- State Line
- County Line
- Roads & Ramps
- Railroad
- Limited Access Hwy

One inch = 0.26 miles

N

FRC

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E-Mail: banks@banksinfo.com

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Water Well Report™

DETAILS

Map #	Source ID	Owner of Well	Type of Well	Depth Drilled	Completion Date	Longitude	Latitude	Driller's Log
1	18-50-8C	Frisco Concrete	Domestic	620	2/14/1980	-96.83156	33.15007	View
2	18-50-803	City of Frisco Well #2	Plugged or Destroyed	2796	3/22/1950	-96.82194	33.14916	View
2	G0430005A	CITY OF FRISCO	Public Supply	2796	3/22/1950	-96.82194	33.14928	View
2	18-50-802	City of Frisco Well #1	Plugged or Destroyed	1632	1/1/1940	-96.82194	33.14944	View
2	18-50-804	City of Frisco Well No.1-A	Plugged or Destroyed	1680	1/1/1924	-96.82222	33.14944	View

1601 Rio Grande Suite 500 Austin, Texas 78701
PH 512.478.0059 FAX 512.478.1433 E-mail banks@banksinfo.com

Send original copy by certified mail to the Texas Department of Water Resources P. O. Box 13087 Austin, Texas 78711

State of Texas
WATER WELL REPORT

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

For TDWR use only
Well No. 18-50-8C
Located on map Yes
Received: C.F.S.

1) OWNER Frisco Concrete (Name) Address (Street or RFD) Frisco (City) Texas (State) 75034 (Zip)

2) LOCATION OF WELL: County Collin City Limits miles in W (N.E., S.W., etc.) direction from Frisco (Town)

Driller must complete the legal description to the right with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form.

☐ Legal description:
Section No. _____ Block No. _____ Township _____
Abstract No. _____ Survey Name _____
Distance and direction from two intersecting section or survey lines _____
☐ See attached map.

3) TYPE OF WORK (Check):
☒ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check):
☒ Domestic ☐ Industrial ☐ Public Supply ☐ Irrigation ☐ Test Well ☐ Other _____

5) DRILLING METHOD (Check):
☒ Mud Rotary ☐ Air Hammer ☐ Driven ☐ Bored ☐ Air Rotary ☐ Cable Tool ☐ Jetted ☐ Other _____

6) WELL LOG:

Date drilled 2-14-80

DIAMETER OF HOLE

Dia. (in.)	From (ft.)	To (ft.)
6 1/4	Surface	620

7) BOREHOLE COMPLETION:
☐ Open Hole ☐ Straight Wall ☐ Underreamed
☒ Gravel Packed ☐ Other _____
If Gravel Packed give interval . . . from 600 ft. to 620 ft.

From (ft.)	To (ft.)	Description and color of formation material
Surface	to 4'	= Black Soil
4'	to 14'	- Clay
14'	to 580'	- Shale blue
580'	to 620'	- Sand

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
4 1/2	N	Steel	0	600	9 1/

CEMENTING DATA
Cemented from 0 ft. to 600 ft.
Method used Pressure
Cemented by Boyd Drilling Co. (Company or Individual)

9) WATER LEVEL:
Static level 300 ft. below land surface Date _____
Artesian flow _____ gpm. Date _____

10) PACKERS: Type Depth

11) TYPE PUMP:
☐ Turbine ☐ Jet ☒ Submersible ☐ Cylinder
☐ Other _____
Depth to pump bowls, cylinder, jet, etc., 530 ft.

12) WELL TESTS:
☐ Type Test: ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.

RECEIVED
JUL 26 1982
CR/TD

(Use reverse side if necessary)

13) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable water? ☐ Yes ☒ No
If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? _____ Depth of strata _____
Was a chemical analysis made? ☐ Yes ☐ No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief.

NAME Boyd Drilling Co. (Type or Print) Water Well Drillers Registration No. 481

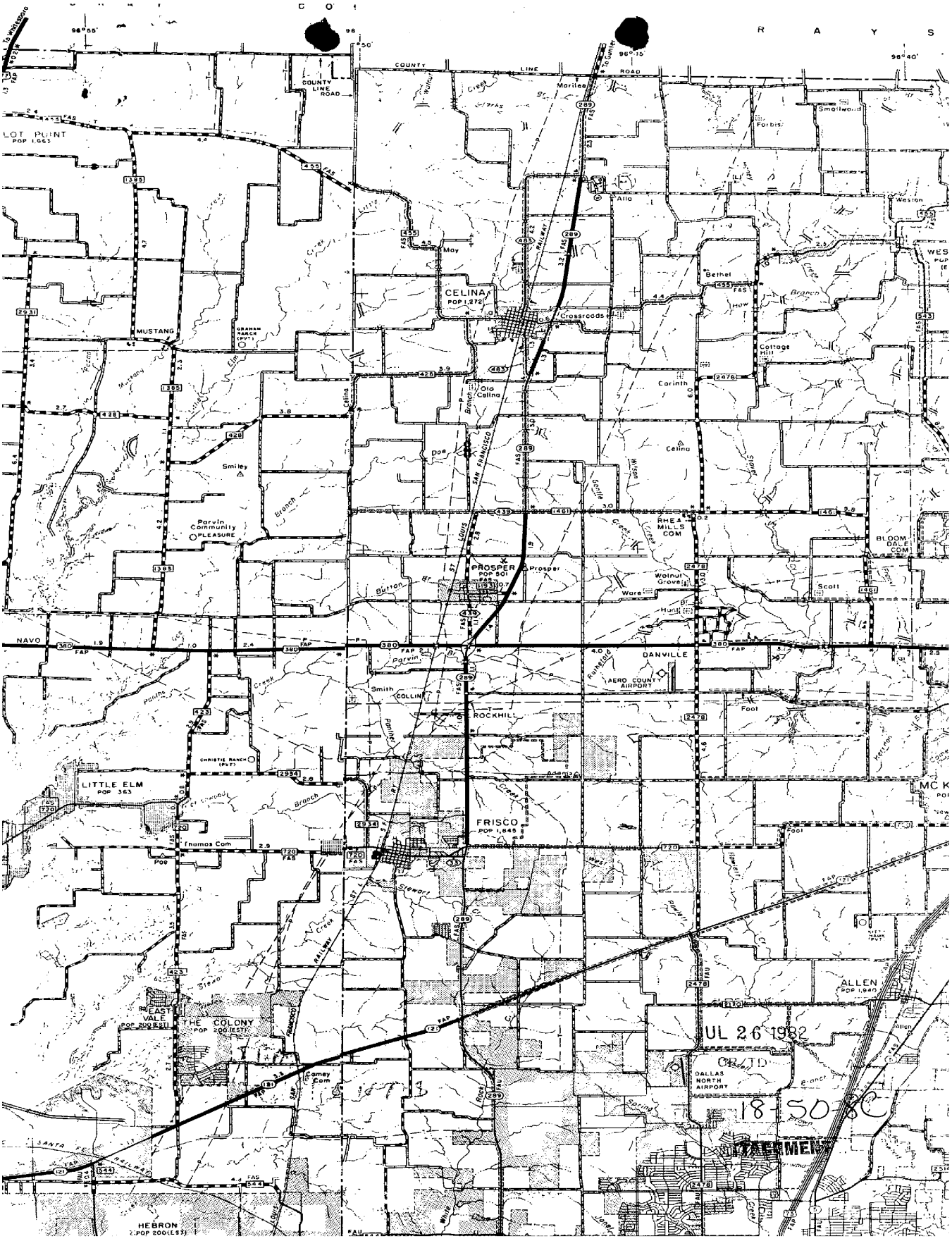
ADDRESS P. O. Box # 344 (Street or RFD) Frisco (City) Texas (State) 75034 (Zip)

(Signed) David Boyd (Water Well Driller) Boyd Drilling Co. (Company Name)

Please attach electric log, chemical analysis, and other pertinent information, if available.

TDWR-0392 (Rev. 1-12-79)

DEPARTMENT OF WATER RESOURCES COPY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POP 801
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POP 1,845
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POP 200 (EST)
HEBRON
POP 200 (EST)
ALLEN
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MUSTANG
ROCKHILL
NAVO
LOT POINT
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Thomas Com
Camey Com
Christie Ranch (PVT)
Orahan Ranch (PVT)
Rhea Mills Com
Bloomdale Com
AERO COUNT AIRPORT
DALLAS NORTH AIRPORT
COUNTY LINE ROAD
SAN FRANCISCO
ST LOUIS
Crossroads
Marilee
Allo
May
Bethel
Corinth
Cottage Hill
Smiley
Prosper
Walnut Grove
Ware
Scott
Smith
COLLIN
Foot
Stewart
Spring
Creek
Branch
Parvin
Button
Poe
Celina
Forbis
Smallwood
Weston
Hunt
Allen
UL 26 1982
GRTD
18 50 BC
TAXMEN

TEXAS WATER DEVELOPMENT BOARD

WELL SCHEDULE

Aquifer PALUXY and TWIN MOUNTAINS

Field No. _____ State Well No. 18-50-803

Owner's Well No. 2 County COLLIN

1. Location: ___ 1/4, ___ 1/4 Sec. ____, Block _____ Survey _____

2. Owner: CITY OF FRISCO Address: _____

Tenant: _____ Address: _____

Driller: J.L. MYERS SONS Address: _____

3. Elevation of L.S is 705 ft. above msl, determined by TOPO

4. Drilled: 3-22 1950; Dug, Cable Tool, (Rotary)

5. Depth: Rept. 2796 ft. Meas. _____ ft.

6. Completion: Open Hole, (Straight Wall), Underreamed, Gravel Packed _____

7. Pump: Mfgr. JOHNSTON Type TURBINE

No. Stages ____, Bowls Diam. ___ in., Setting 630 ft (8-13-74)

Column Diam. 5 in., Length Tailpipe _____ ft.

8. Motor: Fuel ELEC Make & Model U.S. MOTORS HP. 50

9. Yield: Flow ___ gpm, Pump 200 gpm, (Meas.) Rept., Est. 8-21-73

10. Performance Test: Date _____ Length of Test ____ Made by _____

Static Level ___ ft. Pumping Level ___ ft. Drawdown ___ ft.

Production _____ gpm Specific Capacity _____ gpm/ft.

11. Water Level (P.L.) 246 ft. (rept.) meas. 3 1950 above below _____ which is ____ ft. above below surface.

_____ ft. rept. meas. _____ 19__ above below _____ which is ____ ft. above below surface.

_____ ft. rept. meas. _____ 19__ above below _____ which is ____ ft. above below surface.

_____ ft. rept. meas. _____ 19__ above below _____ which is ____ ft. above below surface.

12. Use: Dom., Stock, (Public Supply) Ind., Irr., Waterflooding, Observation, Not Used, _____

13. Quality: (Remarks on taste, odor, color, etc.) _____

K, Pum. Temp. — °F, Date sampled for analysis 4-51 Laboratory TSDH

Temp. 104 °F, Date sampled for analysis 3-18-76 Laboratory TSDH

Temp. ___ °F, Date sampled for analysis _____ Laboratory _____

14. Other data available as circled: (Driller's Log) Radioactivity Log, (Electric Log),

Formation Samples, Pumping Test, _____

15. Record by: RNORDSTROM Date 3-15 1976

Source of Data J.L. MYERS CO., CITY, OBS.

16. Remarks: _____

no gauge on airline

CASING & BLANK PIPE

Cemented From 0 ft. to 1440 ft.

Diam. (in.)	Type	Setting, ft. from	to
8	STEEL	0	696
7	"	696	1440
5	LINER	1360	2796

WELL SCREEN

Screen Openings _____

Diam. (in.)	Type	Setting, ft. from	to
5	Perf.	opposite all water bearing sands	

Pump set at: 630'

E-log

see-802

(Sketch)

TWDBE-WD-2

10-50-803

TEXAS WATER DEVELOPMENT BOARD

WELL SCHEDULE

Aquifer PALUXY and TWIN MOUNTAINS Field No. _____ State Well No. 18-50-803

Owner's Well No. 2 County COLLIN

1. Location: ___ 1/4, ___ 1/4 Sec. ___, Block ___ Survey ___

2. Owner: CITY OF FRISCO Address: ___

Tenant: ___ Address: ___

Driller: J.L. MYERS SONS Address: ___

3. Elevation of L.S. is 705 ft. above msl, determined by TOPO

4. Drilled: 3-22 19 50; Dug, Cable Tool, (Rotary)

5. Depth: Rept. 2796 ft. Meas. ___ ft.

6. Completion: Open Hole, Straight Wall, Underreamed, Gravel Packed

7. Pump: Mfgr. JOHNSTON Type TURBINE

No. Stages ___, Bowls Diam. ___ in., Setting 630 ft (8-13-74)

Column Diam. 5 in., Length Tailpipe ___ ft.

8. Motor: Fuel ELEC Make & Model U.S. MOTORS HP. 50

9. Yield: Flow ___ gpm, Pump 200 gpm, (Meas.) Rept., Est. 8-21-73

10. Performance Test: Date ___ Length of Test ___ Made by ___

Static Level ___ ft. Pumping Level ___ ft. Drawdown ___ ft.

Production ___ gpm Specific Capacity ___ gpm/ft.

11. Water Level (P.L.) 246 ft. (rept.) meas. 3 19 50 above below ___ which is ___ ft. above below surface.

___ ft. rept. meas. ___ 19 ___ above below ___ which is ___ ft. above below surface.

___ ft. rept. meas. ___ 19 ___ above below ___ which is ___ ft. above below surface.

___ ft. rept. meas. ___ 19 ___ above below ___ which is ___ ft. above below surface.

12. Use: Dom., Stock, (Public Supply) Ind., Irr., Waterflooding, Observation, Not Used, ___

13. Quality: (Remarks on taste, odor, color, etc.) ___

K. Plus — Temp. — °F, Date sampled for analysis 4-51 Laboratory TSDH

Temp. 104 °F, Date sampled for analysis 3-18-76 Laboratory TSDH

Temp. ___ °F, Date sampled for analysis ___ Laboratory ___

14. Other data available as circled: (Driller's Log) Radioactivity Log, (Electric Log)

Formation Samples, Pumping Test, ___

15. Record by: R NORDSTROM Date 3-18 1976

Source of Data J.L. MYERS CO., CITY, ABS

16. Remarks: no gauge on airline

CASING & BLANK PIPE

Cemented From 0 ft. to 1440 ft.

Diam. (in.)	Type	Setting, ft. from	to
8	STEEL	0	696
7	"	696	1440
5	LINER	1360	2796

WELL SCREEN

Screen Openings

Diam. (in.)	Type	Setting, ft. from	to
5	Perf.	opposite all water bearing sands	

E - log

see-802

(Sketch)

TWDBE-WD-2

18-50-803

Depth	Thickness	Formation
38	38	Austin chalk
525	487	Eagle Ford
880	355	Woodbine
1330	450	Shale and lime
1360	30	Kiamichi Shale
1420	60	Goodland lime
1430	10	Walnut shale
1632	202	Paluxy
1833	201	Lime and shale
1923	90	Glen Rose sand and lime
2378	455	Lime and shale
2388	10	Sand
2391	3	Rock
2420	29	Sand
2426	6	Shale
2470	44	Sand
2560	90	Sandy lime and shale
2637	77	Sand
2796	159	Lime

m GW-1

TEXAS BOARD OF WATER ENGINEERS

GROUND-WATER DIVISION

WELL SCHEDULE

Date 6-23, 1960 Field No. _____

Record by RWH Office No. DT1850803

Source of data Oha + Jeff Black & 1957 Travis Pk. Rept + Sand

1. Location: County Collin

Map By Fire Station

Survey (Black. south of water tower)

2. Owner: City of Frisco #2 Address _____

Tenant _____ Address _____

Driller J L Myers Sons Address _____

3. Topography: _____

4. Elevation: 695± ft. (above) below MSL

5. Type: Dug, (drilled), driven, bored, jetted ____ 1950

6. Depth: Rept. ~~2660~~ 2796 ft. Meas. _____ ft.

7. Casing: Diam. 7 in., to 5 in. Type ____ (cemented)

Depth _____ ft., Finish _____

8. Chief Aquifer: K Trinity (Ktp) From _____ ft. to _____ ft.

Others _____

9. Water level: 143 ft. (rept) meas. Spring 1961 above LSD

WTM AIRLINE MEASURE Thick is _____ ft. (above) below surface

10. Pump: Type T Capacity _____ gpm _____

Power: Kind E Horsepower 50

11. Yield: Flow _____ gpm, Pump 175 gpm, Meas., (Rept) Est. _____

PL

Drawdown 407 ft. after 3 hours pumping ? gpm 10/23/56

12. Use: Dom., Stock, (PS), RR., Ind., Obs. Irr. _____

Adequacy, permanence _____

13. Quality: _____

Temp. _____ °F _____ Sample (Yes) No 51

14. Log: (Yes) No J L Myers _____

15. Remarks: P.S. @ 550 gpm 1956

well #65 in Sands 1957 Travis Pk. Rep.

_____

Typewrite (Black ribbon) or Print Plainly
(soft pencil or black ink)
Do not use ball point pen

Texas State Department of Health Laboratories
1100 West 49th Street
Austin, Texas 78756

TWDBE-GW ONLY
Program No. 6072
Proj. No. _____

CHEMICAL WATER ANALYSIS REPORT

Send report to:

Ground Water Data and Protection Division
Texas Water Development Board
P.O. Box 13087
Austin, Texas 78711

County DT Collin
State Well No. 18-50-803
Well No. 2
Date Collected 03-18-76
By A L. NORDSTROM

Location at Fire Station
Source (type of well) Turb-Elec. 50 HP Owner City of Frisco, Box 177, Frisco 75034
Date Drilled 3-22-50 Depth 2796 ft. WBF KCPA - KCTM
Producing intervals 1440-2796 Water level _____ ft.
Sampled after pumping _____ hrs. Yield _____ GPM meas. est. Temperature 104 °F °C
Point of collection faucet on well Appearance ☐ clear ☐ turbid ☐ colored ☐ other
Use P.S. Remarks Send copy to owner

(FOR LABORATORY USE ONLY)

CHEMICAL ANALYSIS

KEY PUNCHED

Laboratory No. 308656
Date Received MAR 22 1976
Date Reported APR 12 1976

	MG/L	ME/L
Silica	18	
Calcium	3	0.15
Magnesium	< 1	—
Sodium	302	13.14
Total		13.29
☐ Potassium		
☐ Manganese		
☐ Boron		
3/ ☐ Total Iron		
☐ (other) _____		

%Na _____
SAR _____
RSC _____

Specific Conductance (micromhos/cm³) 1350
Diluted Conductance (micromhos/cm³) 11 x 135 = 1485

" ☐ " items will be analyzed if checked.

	MG/L	ME/L
Carbonate	7	0.24
Bicarbonate (186)	378	6.20
Sulfate	79	1.65
Chloride	192	5.40
Fluoride	0.5	
Nitrate	< 0.4	
pH	8.6	
Total		13.49
1/ Dissolved Solids (sum in MG/L)		790
Phenolphthalein Alkalinity as C aCO₃	0.12	6
Total Alkalinity as C aCO₃	6.44	322
Total Hardness as C aCO₃	0.15	8

2/ Nitrogen Cycle

Ammonia - N	
Nitrite - N	
Nitrate - N	
Organic Nitrogen	

1/ The bicarbonate reported in this analysis is converted by computation (multiplying by 0.4917) to an equivalent amount of carbonate, and the carbonate figure is used in the computation of this sum.
2/ Nitrogen cycle requires separate sample.
3/ Total Iron requires separate sample.

TWDBE-WD-1 (Rev. 1-25-72)

Analyst _____ Checked By _____

Typewrite (Black ribbon) or Print Plainly
(soft pencil or black ink)
Do not use ball point pen

Texas Department of Health Laboratories
1100 West 49th Street
Austin, Texas 78756

TDWR ONLY
Program No. _____ Lab No. 03
Work No. _____

CHEMICAL WATER ANALYSIS REPORT

Send report to:
Ground Water Division
Texas Department of Water Resources
P.O. Box 13087
Austin, Texas 78711

County 043 Collin
State Well No. 18-50-803
Well No. _____
Date Collected 04-01-51

Location _____ Sample No. _____ By _____
Source (type of well) T, E SO MP Owner City of Frisco
Date Drilled 1950 Depth 2796 ft. WBF KCPA-KCTM
Producing intervals _____ Water level _____ ft. Sample depth _____ ft.
Sampled after pumping _____ hrs. Yield _____ GPM meas. est. Temperature _____ °F _____ °C
Point of collection well Appearance ☐ clear ☐ turbid ☐ colored ☐ other
Use QS, Remarks _____

(FOR LABORATORY USE ONLY)

CHEMICAL ANALYSIS

KEY PUNCHED

Laboratory No. _____ Date Received _____ Date Reported _____

	MG/L	ME/L
Silica	20	
Calcium	6	
Magnesium	1	
Sodium	314	
Total		
☐ Potassium		
☐ Manganese		
☐ Boron		
3/ ☒ Total Iron	0.1	
☐ (other) _____	MG/L	
Specific Conductance (micromhos/cm³)		
Diluted Conductance (micromhos/cm³)	_____ x	

%Na _____
SAR _____
RSC _____

" ☐ " items will be analyzed if checked.

	MG/L	ME/L
Carbonate		
Bicarbonate	415	
Sulfate	98	
Chloride	188	
Fluoride	2	
Nitrate	4	
pH	8.4	
Total		
1/ Dissolved Solids (sum in MG/L)	832	
Phenolphthalein Alkalinity as $CaCO_3$		
Total Alkalinity as $CaCO_3$	335	
Total Hardness as $CaCO_3$	19	
2/ Nitrogen Cycle		
Ammonia - N		
Nitrite - N		
Nitrate - N		
Organic Nitrogen		

1/ The bicarbonate reported in this analysis is converted by computation (multiplying by 0.4917) to an equivalent amount of carbonate, and the carbonate figure is used in the computation of this sum.
2/ Nitrogen cycle requires separate sample.
3/ Total Iron requires separate sample.

Analyst _____ Checked By _____

TDWR-0148

Typewrite (Black ribbon) or Print Plainly
(soft pencil or black ink)
Do not use ball point pen

Texas Department of Health Laboratories
1100 West 49th Street
Austin, Texas 78756

TDWR ONLY
Program No. _____ Lab No. 03
Work No. _____

CHEMICAL WATER ANALYSIS REPORT

Send report to:
Ground Water Division
Texas Department of Water Resources
P.O. Box 13087
Austin, Texas 78711

County 043 Collin
State Well No. 18-50-803
Well No. _____
Date Collected 08-09-66

Location _____ Sample No. _____ By _____
Source (type of well) _____ Owner FRISCO
Date Drilled 3-50 Depth 2796 ft. WBF KCPA-KGTM
Producing intervals _____ Water level _____ ft. Sample depth _____ ft.
Sampled after pumping _____ hrs. Yield _____ GPM meas. est. Temperature _____ °F _____ °C
Point of collection well Appearance ☐ clear ☐ turbid ☐ colored ☐ other
Use P Remarks _____

(FOR LABORATORY USE ONLY)

CHEMICAL ANALYSIS

KEY PUNCHED

Laboratory No. _____ Date Received _____ Date Reported _____

	MG/L	ME/L
Silica		
Calcium	3	
Magnesium	0	
Sodium	310	
Total		
☐ Potassium		
☐ Manganese		
☐ Boron		
3/ ☐ Total Iron	0.14	
☐ (other) _____	MG/L	
Specific Conductance (micromhos/cm3)	1544	
Diluted Conductance (micromhos/cm3)	_____ x _____	

%Na _____
SAR _____
RSC _____

	MG/L	ME/L
Carbonate	7	
Bicarbonate	383	
Sulfate	87	
Chloride	200	
Fluoride	0.6	
Nitrate	< 0.4	
pH	8.5	
Total		
1/ Dissolved Solids (sum in MG/L)	796	
Phenolphthalein Alkalinity as C aCO3	6	
Total Alkalinity as C aCO3	326	
Total Hardness as C aCO3	8	
2/ Nitrogen Cycle		
Ammonia - N		
Nitrite - N		
Nitrate - N		
Organic Nitrogen		

" ☐ " items will be analyzed if checked.

1/ The bicarbonate reported in this analysis is converted by computation (multiplying by 0.4917) to an equivalent amount of carbonate, and the carbonate figure is used in the computation of this sum.
2/ Nitrogen cycle requires separate sample.
3/ Total Iron requires seperate sample.

Analyst _____ Checked By _____

TDWR-0148

Typewrite (Black ribbon) or Print Plainly
(soft pencil or black ink)
Do not use ball point pen

Texas Department of Health Laboratories
1100 West 49th Street
Austin, Texas 78756

TWDB ONLY
Organization No. 422 Lab No. [ ]
Work No. 6042 (IAC (86-87)-1585)

CHEMICAL WATER ANALYSIS REPORT

Send Reply To:
Water Availability Data and Studies Section
Texas Water Development Board
Stephen F. Austin Building
1700 Congress Ave.
Austin, Texas 78711
Attn: Robert R. Flores Rm. 304-G

County COLLIN
State Well No. 18-50-803
Well No.
Date Collected 07-28-87

Owner City of Frisco ☐ Send copy to owner Sample No. 1 By RRF
Address P.O. Box 177, Frisco, TX 75034 Well Location
Date Drilled Depth ft. WBF Source (type of well)
Producing intervals Water level ft. Sample depth ft.
Sampled after pumping hrs. Yield GPM mass. est. Temperature °F °C
Point of collection Appearance ☑ clear ☐ turbid ☐ colored ☐ other
Use Remarks

(FOR LABORATORY USE ONLY)

CHEMICAL ANALYSIS

Laboratory No. [redacted] Date Received AUG 03 '87 Date Reported AUG 24 '87

WATER ANALYSIS
State Well No:18-50-8 Date:081987 Sample No:FB7-1956

	MG/L	ME/L		MG/L	ME/L
Silica:00955:	13		Carbonate:00445:	6	.20
Calcium:00915:	1	.07	Bicarbonate:00440:	555	9.10
Magnesium:00925:	<1	.05	Sulfate:00946:	189	3.94
Sodium:00930:	359	15.61	Chloride:00940:	78	2.20
Potassium:00935:	1	.03	Fluoride:00950:	2.4	.13
T.Cations		15.75	Nitrate as NO3:71851:	<0.04	0
Manganese:01055:		%Na	T. Anions		15.56
			pH:00403:	8.5	
Boron:01020:		SAR			
			TDS(Calc):70301:	923	
Total Iron:01045:		RSC	P. Alk.:00415:	5	
Other			T. Alk.:00410:	465	
(Specific Cond.:00025:		1200	T. Hardness:00900:	6	

Diluted Conductance (micromhos/cm3)
11 x151 =1661
__ items will be analyzed if checked.

Ammonia-N:00610:
Nitrite-N:00615:
Nitrate-N:00620:
OrganicNitrogen:00605:

TWDB-0811 (Rev.02-27-86)

TEXAS WATER DEVELOPMENT BOARD — WATER LEVEL MEASUREMENTS

AS OF

☐ Normal
☐ Publ.
☐ USGS

OLD WELL NUMBER

WELL LOCATION: LAT.
LONG.

YR. REC. BEGINS

LAST CHEMICAL ANALYSIS

STATE WELL NUMBER
DEPTH OF WELL

LAND SURFACE DATUM ELEVATION
COMPLETION INTERVAL

DATE OF CURRENT MEASUREMENT MO.	DAY	YR.	CURRENT DEPTH TO WATER FROM LAND SURFACE	CHANGE IN LEVEL SINCE LAST STATIC MEASUREMENT	Measurement Number	DEPTH TO WATER FROM MP	ELEVATION OF DEPTH TO WATER FROM MEAN SEA LEVEL	Measuring Agency	Measurement Method	REMARKS	WELL USE	FIELD OBSERVATIONS
10	12	93	-488.15					01	3		P	pump set at 630 ft.
2	8	95	-442					01	3		U	
11	07	96	444.8					01	1	43	U	
11	17	97	444.7			446.50		01	1	20	U	Very Spotty
11	10	98	451.0			452.80		01	1	20	U	FROM THE TOP VERY SPOTTY
11	9	99	452.5			454.3		01	1	20	U	
11	14	00	461.85					01	1	20	U	
12	4	01										
11	08	02	—		CH	—		01	1	40	U	

LOOP 3 C

AQUIFER 2-18 Travis Peak + Paluxy Sand

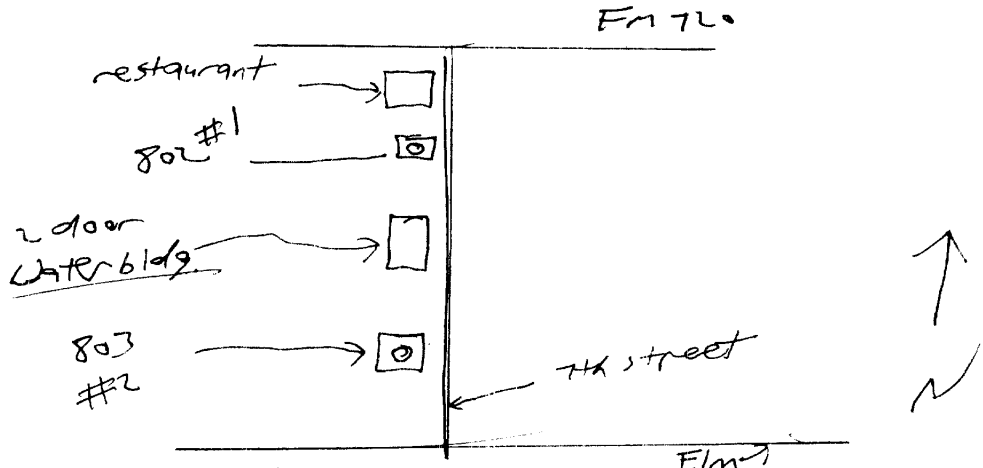
WATERSHED

COUNTY Collin

WELL CLASS AND NUMBER 18-50-803

MEASURING POINT (MP) 1.8

TWDB-0518



see 18-50-802
sketch ~~for location~~
~~to get key if locked~~

don't need to measure in ~~1993~~.
11/93 - 4/94. E.W.

18-50-803

06/05/2013 9:28:18AM

Texas Commission on Environmental Quality

Water System Data Sheet

WSDSR

PWS ID	PWS Name	Central Registry RN
0430005	**CITY OF FRISCO** Superior	**RN101420602**

Organization/Customer *	Central Registry CN
CITY OF FRISCO	**CN600245526**

* Regulatory mail will be addressed to this organization / person

Responsible Official **	Title
MAHER MASO	**MAYOR**

License Type	License Number

Mailing Address:

Street Address	C/O or Address Line 2
6101 FRISCO SQUARE BLVD	

City	State	Zip
FRISCO	**TX**	**75034 - 3253**

Business Phone	Other Phone	Other Phone Type	Email
(972) 292-5100 Ext.	**(972) 335-5505 Ext.** **(972) 292-5050 Ext.**	**CELLULAR**	**MMASO@FRISCOTEXAS.GOV**

** Regulatory mail will be addressed to this person

PWS Contact - If different than above ***	Title
GARY HARTWELL	**MICROBIAL CONTACT**

License Type	License Number

Mailing Address for PWS Primary Contact:

Street Address	C/O or Address Line 2
11300 RESEARCH RD	

City	State	Zip
FRISCO	**TX**	**75034 - 2047**

Business Phone	Other Phone	Other Phone Type	Email
(972) 292-5800 Ext.			**ghartwell@friscotexas.gov**

*** Copies of most regulatory mail will be addressed to this person

Emergency Contact Name ****	Emergency Phone	Emergency Email
KEVIN GRANT	**(469) 853-4659 Ext.**	**KGRANT@FRISCOTEXAS.GOV**

License Type	License Number

**** This contact information will be used only in the event of an emergency

Owner Type	Owner Type Options: AFFECTED COUNTIES, COUNTY, DISTRICT/AUTHORITY, EXEMPT, FEDERAL GOVERNMENT, INVESTOR, MUNICIPALITY, NATIVE AMERICAN, PRIVATE, SUBMETER \ ALLOCATION, STATE GOVERNMENT, NOT RETAIL PUBLIC UTILITIES, WATER SUPPLY CORPORATION, MISC/UNKNOWN
MUNICIPALITY	

System Type	System Type Options: SB 361, COMMUNITY, COMMUNITY (NON-GOVERNMENT OWNED), TRANSIENT/NON-COMMUNITY, NON-PUBLIC, NON-TRANSIENT/NON-COMMUNITY
COMMUNITY	

Customer Class	Customer Category	Population Served	# of Connect	# of Meters	# I/C w/other PWS
RESIDENTIAL	**RESIDENTIAL AREA**	**116,989**	**46,984**	**36,329**	**1**

Total Product (MGD)	Average Daily Consump.	Total Storage (MG)	Elev. Storage (MG)	Booster Pump Cap. (MGD)	Aux.Prod.Cap. Max.Pur.Cap.(MGD)	Pressure Tank Cap.(MG)
0.000	**20.316**	**36.250**	**10.250**	**64.152**	**60.531**	**0.00000**

Activity Status	Deactivation Date	Reason
ACTIVE		

Operator Grade	Number
WATER GRADE B DISTRIBUTION	**4**
WATER GRADE B SURFACE	**1**
WATER GRADE C DISTRIBUTION	**15**
WATER GRADE C GROUND	**1**
WATER GRADE D	**1**

Last Survey Date	Surveyor	Survey Type	Code	Region	County	Def.Score
04/28/2011	**IMRAN KHAWAJA**	**SURVEY**		**4**	**COLLIN**	**0**
02/28/2008	**IMRAN KHAWAJA**	**SURVEY**		**4**	**COLLIN**	**0**
11/30/2005	**IMRAN KHAWAJA**	**SURVEY**		**4**	**COLLIN**	**7**

(Entry Point)							
Entry Point	EP Name/Source Summation (Activity Status)	Plant Name (Activity Status)	WUD Plant Num	Chemical Mon Type	Chem Sample Point	Distribution Mon Type	Dist Sample Point
001	**SAMPLE TAP / LAKE LAVON(A)**	**EAST PS - 3 MASTER METERS(A)**	**20902**		**No**		**No**

(Active Sources)						
Source Number	Source Name (Activity Status)	Operational Status	Source Type	Depth	Tested GPM	Rated GPM
P0430005A	**SW FROM NTMWD(A)**	**O**	**S**	**0**	**0**	**0**

Water Body	Segment Number	Surface Water Intake Type
	()	

GPS Latitude (decimal)	GPS Longitude (decimal)	GPS Elevation	GPS Date	GPS Cert. No.	Seller
Not Available	**Not Available**	**Not Available**	**Not Available**	**Not Available**	**0430044**

(Inactive/Offline Sources)			
SourceNumber	Name	Status	Depth
G0430005B	**HWY 289 / LOOP 33**	**N**	**2742**
G0430005D	**LEBANON**	**N**	**1800**
G0430005A	**PS 1 - 7TH / ELM**	**N**	**2796**
G0430005C	**STONEBRIAR**	**N**	**2670**

Code Explanations
Monitoring Type Codes: (GW) GROUNDWATER , (GWP) GROUNDWATER - PURCHASED , (GUP) GROUNDWATER UNDER THE INFLUENCE - PURCHASED , (SWP) SURFACE WATER - PURCHASED , (GU) GROUNDWATER UNDER THE INFLUENCE OF SURFACE WATER , (N) NO SOURCES , (SW) SURFACE WATER
Activity Status Codes: (A) ACTIVE , (C) CCN CANCELLED , (D) DELETED/DISSOLVED , (G) SB 361 , (I) INACTIVE , (M) MERGED/ANNEXED , (N) NON-PUBLIC , (P) PROPOSED , (U) UNKNOWN-NO ACTIVITY OR NON-RESPONSIVE , (W) UTILITY WATER SYS XFER
Operational Status Codes: (C) CAPPED , (D) DEMAND , (E) EMERGENCY , (F) FORMER PWS SOURCE , (I) INACTIVE PWS SYSTEM , (N) NON-DRINKING WATER , (O) OPERATING , (P) PLUGGED , (T) TEST , (Y) PWS NOT ACTIVE AND NOT EXPECTED TO BE SO
Source Types: (G) GROUND WATER , (S) SURFACE WATER , (U) GROUND WATER UNDER THE INFLUENCE

- End of Report -

The Texas Commission on Environmental Quality is pleased to provide this information to you free of charge. Please understand that we cannot guarantee the accuracy or completeness of the information being supplied. At the time of your query this data was the most current information available from our database, which is updated weekly. Every effort was made to retrieve it according to your query. Thank-you for using WUD.

TEXAS WATER DEVELOPMENT BOARD

WELL SCHEDULE

Aquifer Paluxy Field No. State Well No. 18-50-802

Owner's Well No. 1 County COLLIN

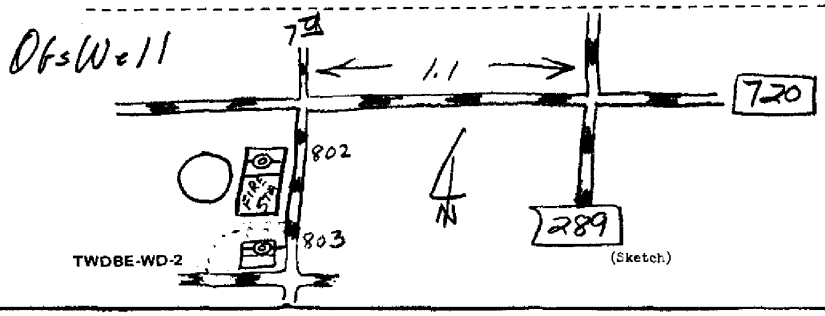
1. Location: 1/4, 1/4 Sec., Block, Survey
N of fire Sta. NE of water tank
2. Owner: CITY OF FRISCO Address: P.O. Box 177, FRISCO 75034
Tenant: Address:
Driller: MYERS Address:
3. Elevation of 65 is 705 ft. above msl, determined by TOPO
4. Drilled: ± 19 40; Dug, Cable Tool, Rotary,
5. Depth: Rept. 1632 ft. Meas. ft.
6. Completion: Open Hole, Straight Wall, Underreamed, Gravel Packed
7. Pump: Mfgr. Red Jacket Type Sub
No. Stages, Bowls Diam. in., Setting 605 ft.
Column Diam. in., Length Tailpipe ft.
8. Motor: Fuel ELEC Make & Model HP. 25
9. Yield: Flow gpm, Pump 121 gpm (Meas.) Rept., Est. 8-21-73
10. Performance Test: Date Length of Test Made by
Static Level ft. Pumping Level ft. Drawdown ft.
Production gpm Specific Capacity gpm/ft.
11. Water Level: 443 ft. (meas.) rept. 11-6 1973 above/below airline which is ft. above/below surface.
440 ft. (meas.) rept. 11-5 1974 above/below " which is ft. above/below surface.
402.0 ft. (meas.) rept. 3-18 1976 above/below " which is ft. above/below surface.
405 ft. (meas.) rept. 8-21 1973 above/below " (Myers Co.) which is ft. above/below surface.
12. Use: Dom., Stock, (Public Supply), Ind., Irr., Waterflooding, (Observation), Not Used,
13. Quality: (Remarks on taste, odor, color, etc.) 2-17-43
Temp. — °F, Date sampled for analysis 4-51 Laboratory TSDH
Temp. — °F, Date sampled for analysis 6-6-59 Laboratory "
Fe Temp. 84 °F, Date sampled for analysis 3-18-76 Laboratory "
14. Other data available as circled: (Driller's Log), Radioactivity Log, Electric Log, Formation Samples, Pumping Test, austin 3-18-76
15. Record by: John Derten PANOROSTRON Date 11-6 1973
Source of Data CITY OBS
16. Remarks: airline set at 607 ft.

CASING & BLANK PIPE
Cemented From ft. to ft.

Diam. (in.)	Type	Setting, ft. from	to
8 5/8	steel	0	696
7	"	696	1440
5	strainer	1428	1632

WELL SCREEN
Screen Openings

Diam. (in.)	Type	Setting, ft. from	to
5	perf	1440	1632



TWDBE-WD-2

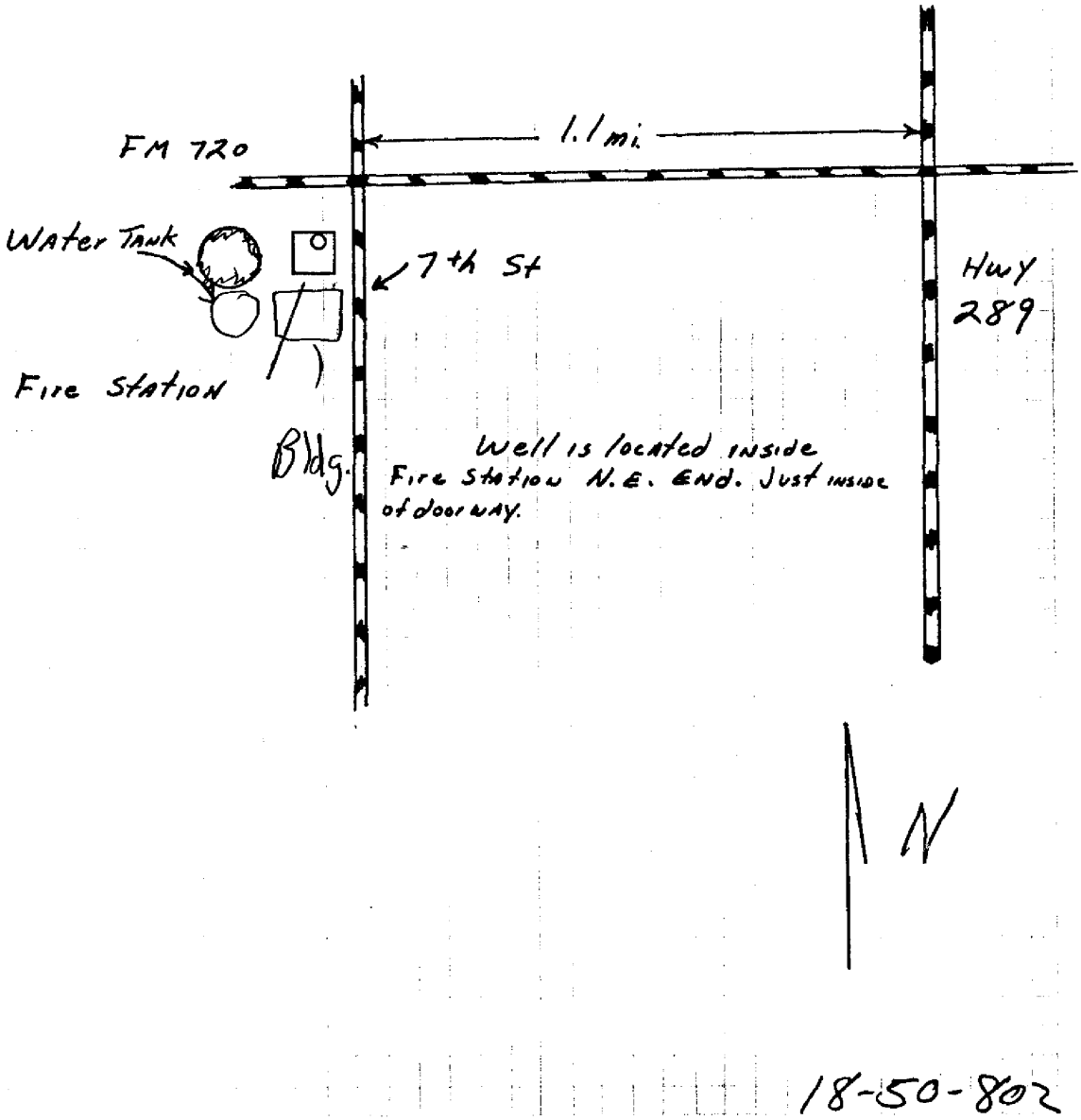
obs
18-50-802

TEXAS WATER DEVELOPMENT BOARD

BY_____ DATE_____ DIVISION _____ SHEET NO._____ OF____

CHKD_____ DATE_____ JOB NAME _____

18-50-802 JOB NO._____ PROG. CODE_____



18-50-802

TWDBS-SI-3

Typewrite (Black ribbon) or Print Plainly
(soft pencil or black ink)
Do not use ball point pen

Texas State Department of Health Laboratories
1100 West 49th Street
Austin, Texas 78756

TWDBE-GW ONLY
Program No. 6072
Proj. No. _____

CHEMICAL WATER ANALYSIS REPORT

County COLLIN
State Well No. 18-50-802
Well No. 1
Date Collected 03-18-76
By R.E. NORDSTROM

Send report to:
Ground Water Data and Protection Division
Texas Water Development Board
P.O. Box 13087
Austin, Texas 78711

Location at Firestation
Source (type of well) Sub Elec 25 HP Owner CITY OF FRISCO, P.O. BOX 177, FRISCO 75034
Date Drilled 1940 Depth 1632 ft. WBF PALUXY
Producing intervals UNKN Water level (205' on airline)
Sampled after pumping _____ hrs. Yield _____ GPM meas. est. Temperature 084 °F ___ °C
Point of collection hydrant off well pipe Appearance ☐ clear ☐ turbid ☐ colored ☐ other
Use P.S. Remarks Send copy to Owner

(FOR LABORATORY USE ONLY)

CHEMICAL ANALYSIS MAR 29 1976 KEY PUNCHED

19E +49

Laboratory No. 318648 Date Received _____ Date Reported APR 12 1976

	MG/L	ME/L
Silica	16	
Calcium	2	0.09
Magnesium	<1	—
Sodium	262	11.38
Total		11.47
☐ Potassium		
☐ Manganese		
☐ Boron		
3/ ☒ Total Iron	0.1	
☐ (other) _____	MG/L	
Specific Conductance (micromhos/cm³)	1057	
Diluted Conductance (micromhos/cm³)	9 x 130 = 1170	

%Na _____
SAR _____
RSC _____

" ☐ " items will be analyzed if checked.

	MG/L	ME/L
Carbonate 261	17	0.56
Bicarbonate	530	8.70
Sulfate	90	1.87
Chloride	19	0.54
Fluoride	1.1	
Nitrate	<0.4	
pH	8.7	Total 11.73
1/ Dissolved Solids (sum in MG/L)		670
Phenolphthalein Alkalinity as C aCO₃	0.28	14
Total Alkalinity as C aCO₃	9.32	466
Total Hardness as C aCO₃	0.09	5
2/ Nitrogen Cycle		
Ammonia - N		
Nitrite - N		
Nitrate - N		
Organic Nitrogen		

1/ The bicarbonate reported in this analysis is converted by computation (multiplying by 0.4917) to an equivalent amount of carbonate, and the carbonate figure is used in the computation of this sum.
2/ Nitrogen cycle requires separate sample.
3/ Total Iron requires separate sample.

TWDBE-WD-1 (Rev. 1-25-72)

Analyst _____ Checked By _____

Typewrite (Black ribbon) or Print Plainly
(soft pencil or black ink)
Do not use ball point pen

Texas State Department of Health Laboratories
1100 West 49th Street
Austin, Texas 78756

TWDB USE ONLY
Program No. _____
Proj. No. _____

CHEMICAL WATER ANALYSIS REPORT

County Collin
State Well No. 18-50-802
Well No. 1
Date Collected 04-01-51
By CITY

Send report to:
Ground Water Data and Protection Division
Texas Water Development Board
P.O. Box 13087
Austin, Texas 78711

Location _____
Source (type of well) S, E 25 Owner FRISCO
Date Drilled ± 1940 Depth 1632 ft. WBF PALUXY
Producing intervals _____ Water level _____ ft.
Sampled after pumping _____ hrs. Yield _____ GPM meas. est. Temperature _____ °F _____ °C
Point of collection well Appearance ☐ clear ☐ turbid ☐ colored ☐ other
Use P.S. Remarks _____

(FOR LABORATORY USE ONLY)

CHEMICAL ANALYSIS

KEY PUNCHED

Laboratory No. _____ Date Received _____ Date Reported _____

	MG/L	ME/L
Silica	19	
Calcium	8	
Magnesium	2	
Sodium	290	
Total		
☐ Potassium		
☐ Manganese		
☐ Boron		
3/ ☒ Total Iron	1.4	
☐ (other) _____	MG/L	
Specific Conductance (micromhos/cm3)		
Diluted Conductance (micromhos/cm3)	X	

%Na _____
SAR _____
RSC _____

	MG/L	ME/L
Carbonate		
259 Bicarbonate	527	
Sulfate	95	
Chloride	110	
Fluoride	.7	
Nitrate	<.4	
pH	8.4	
Total		
1/ Dissolved Solids (sum in MG/L)	775	
Phenolphthalein Alkalinity as $CaCO_3$		
Total Alkalinity as $CaCO_3$	405	
Total Hardness as $CaCO_3$	28	
2/ Nitrogen Cycle		
Ammonia - N		
Nitrite - N		
Nitrate - N		
Organic Nitrogen		

" ☐ " items will be analyzed if checked.

1/ The bicarbonate reported in this analysis is converted by computation (multiplying by 0.4917) to an equivalent amount of carbonate, and the carbonate figure is used in the computation of this sum.
2/ Nitrogen cycle requires separate sample.
3/ Total Iron requires separate sample.

TWDBS-SI-27

Analyst _____ Checked By _____

Typewrite (Black ribbon) or Print Plainly
(soft pencil or black ink)
Do not use ball point pen

Texas State Department of Health Laboratories
1100 West 49th Street
Austin, Texas 78756

TWDB USE ONLY
Program No. _____
Proj. No. _____

CHEMICAL WATER ANALYSIS REPORT

County 043 DT Collin

Send report to:
Ground Water Data and Protection Division
Texas Water Development Board
P.O. Box 13087
Austin, Texas 78711

State Well No. 18-50-802
Well No. 1
Date Collected 06-06-59
By CITY

Location at Fire Sta
Source (type of well) _____ Owner FRISCO
Date Drilled ±'40 Depth 1632 ft. WBF Paluxy
Producing intervals _____ Water level _____ ft.
Sampled after pumping _____ hrs. Yield _____ GPM meas. est. Temperature _____ °F _____ °C
Point of collection well Appearance ☐ clear ☐ turbid ☐ colored ☐ other
Use P. S. Remarks _____

(FOR LABORATORY USE ONLY)

CHEMICAL ANALYSIS

KEY PUNCHED

Laboratory No. _____ Date Received _____ Date Reported _____

	MG/L	ME/L
Silica		
Calcium	2	.10
Magnesium	1	.08
Sodium	263	11.44
Total		11.62
☐ Potassium		
☐ Manganese		
☐ Boron		
3/ ☒ Total Iron	0.1	
☐ (other) _____	MG/L	
Specific Conductance (micromhos/cm3)	1260	
Diluted Conductance (micromhos/cm3)	x	

%Na _____
SAR _____
RSC _____

	MG/L	ME/L
Carbonate		
Bicarbonate		
Sulfate	104	2.17
Chloride	22	.62
Fluoride	1.1	.06
Nitrate	.4	/
pH	8.6	Total
1/ Dissolved Solids (sum in MG/L)		756
Phenolphthalein Alkalinity as C aCO_3		
Total Alkalinity as C aCO_3		462
Total Hardness as C aCO_3		5
2/ Nitrogen Cycle		
Ammonia - N		
Nitrite - N		
Nitrate - N		
Organic Nitrogen		

" ☐ " items will be analyzed if checked.

1/ The bicarbonate reported in this analysis is converted by computation (multiplying by 0.4917) to an equivalent amount of carbonate, and the carbonate figure is used in the computation of this sum.
2/ Nitrogen cycle requires separate sample.
3/ Total Iron requires separate sample.

TWDBS-SI-27

Analyst _____ Checked By _____

DT1850802

(July 1948) UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY
WATER RESOURCES BRANCH

ANALYTICAL STATEMENT

[Parts per million] Collin County 1943

Location Frisco, Texas
Source well 1,680 ft. deep;
pumping 6 to 8 hours at 75 GPM;
Well #1
send analysis to
Jeff Black
Box 132, Frisco
Paluxy

Use Public supply
Color
Suspended matter
Hardness (calc.) 8
Ignition loss 15
Total dissolved solids 690
K × 10³ at 25°C.
pH 8.2

Chemist J. H. Rowley 3/30/43
W. R. Lab. No. 3096
Collector P. F. Livingston

KEY PUNCHED

Date Feb. 17
SiO_2 13
Fe 0.03
Ca 2.3
Mg 0.6
Na 272 calc
K 3.2
CO_3 52
HCO_3 470 576
SO_4 96
Cl 19
F 0.9
NO_3 2.5

Sum 693

16-81877

TEXAS WATER DEVELOPMENT BOARD

WELL SCHEDULE

Aquifer PALUXY Field No. _____ State Well No. 18-50-802

Owner's Well No. _____ County COLLIN

1. Location: ___ 1/4, ___ 1/4 Sec. ___, Block ___ Survey ___ NORTH of FIRE STATION N.E. of WATER TANK

2. Owner: City of FRISCO Address: _____

Tenant: _____ Address: _____

Driller: MEYERS Drlg Co. Address: DALLAS

3. Elevation of LSD is [redacted] 705 ft. above msl, determined by ~~Map~~ TopO

4. Drilled: ~~1946~~ 1940's Dug, Cable Tool, Rotary,

5. Depth: Rept. 1632 ft. Meas. _____ ft.

6. Completion: Open Hole, Straight Wall, Underreamed, Gravel Packed

7. Pump: Mfgr. Red Jacket Type Subm

No. Stages ___, Bowls Diam. ___ in., Setting 605 ~~655~~ ft.

Column Diam. ___ in., Length Tailpipe ___ ft.

8. Motor: Fuel ELEC Make & Model _____ HP 25

9. Yield: Flow ___ gpm, Pump 121 120 gpm, Meas., Rept., Est. 8-21-73

10. Performance Test: Date _____ Length of Test ___ Made by _____

Static Level ___ ft. Pumping Level ___ ft. Drawdown ___ ft.

Production _____ gpm Specific Capacity _____ gpm/ft.

11. Water Level: 443 ft. rept. 11-6 1973 above LSD-AIRLINE which is ___ ft. above/below surface.

1440.0 ft. meas. 11-5- 1974 above do which is ___ ft. above/below surface.

402.0 ft. meas. 3-18 1976 above do which is ___ ft. above/below surface.

___ ft. rept. ___ 19___ above/below which is ___ ft. above/below surface.

meas.

12. Use: Dom., Stock, Public Supply, Ind., Irr., Waterflooding, Observation, Not Used, _____

13. Quality: (Remarks on taste, odor, color, etc.) _____

Temp. ___ °F, Date sampled for analysis 4-51 Laboratory TSDH

Temp. ___ °F, Date sampled for analysis 6-6-59 Laboratory "

Fe Temp. 84 °F, Date sampled for analysis 3-18-76 Laboratory "

14. Other data available as circled: Driller's Log, Radioactivity Log, Electric Log, Austin - 3-18-76

Formation Samples, Pumping Test, _____

15. Record by: JOHN DERTON-FNOR Date 11-6 1973

Source of Data WATER Swd. + DrLR

16. Remarks: AIRLINE SET @ [redacted] 607'

WSP Bill McLain @ 9620

collected from tank after running 20 min w/chlo. off

CASING & BLANK PIPE

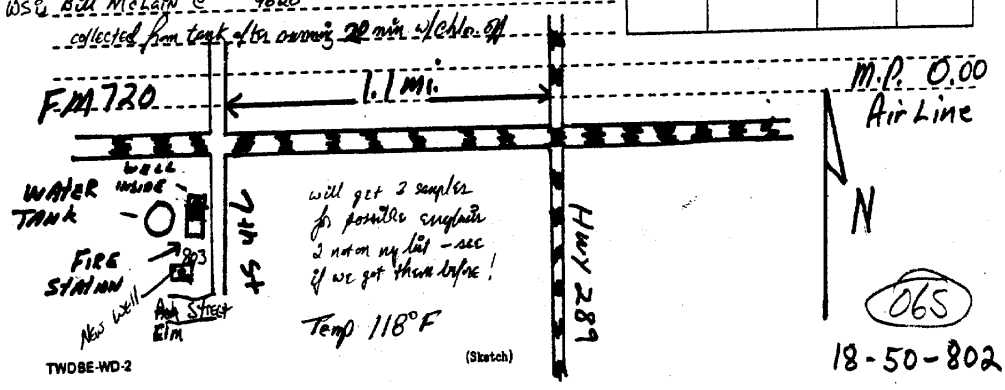
Cemented From ___ ft. to ___ ft.

Diam. (in.)	Type	Setting, ft. From	to
8 5/8	steel	0	696
7	"	696	1440
5	STRAINER last 100' slotted	1428	1632

WELL SCREEN

Screen Openings _____

Diam. (in.)	Type	Setting, ft. From	to
5	Perf	1440	1632



(Sketch)

TWDBE-WD-2

065

18-50-802

Original samples sent to Austin for analysis

Now one is adjacent

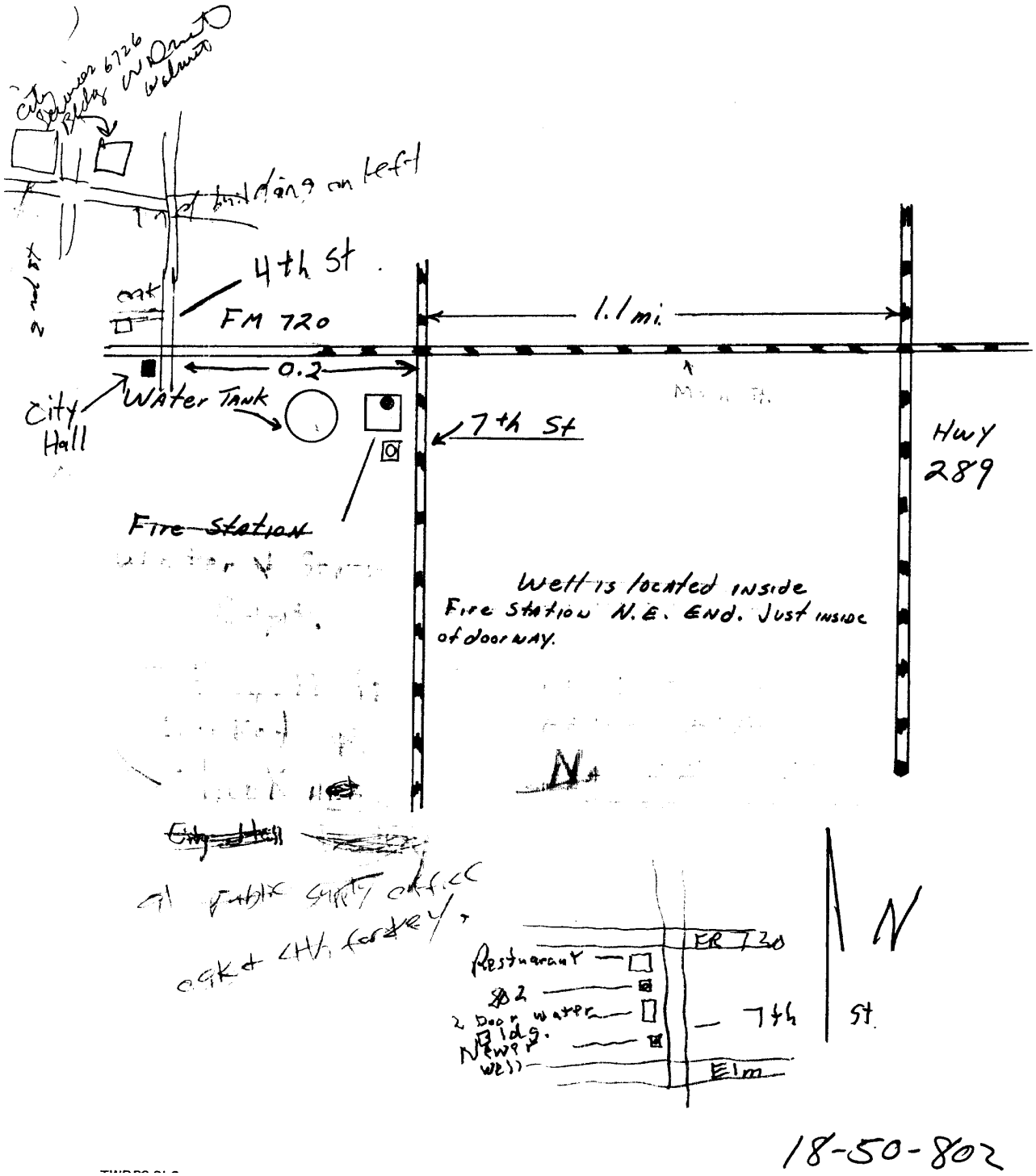
Assigned sequence # + new number

TEXAS WATER DEVELOPMENT BOAI

BY_____ DATE_____ DIVISION _____ SHEET NO._____ OF____

CHKD_____ DATE_____ JOB NAME _____

18-50-802 JOB NO._____ PROG. CODE _____



18-50-802

TEXAS DEPARTMENT OF WATER RESOURCES–WATER LEVEL MEASUREMENTS (IN FT.)

AS OF 05-01-84

☒ Normal ☐ Publ. ☐ USGS

OLD WELL NUMBER

COORDINATES 33-08-51N 096-49-16W

YR. REC. BEGINS 73

LAST CHEMICAL ANALYSIS 03-76

STATE WELL NUMBER DT-18-50-802

DEPTH OF WELL 1632

LAND SURFACE DATUM ELEVATION 705.00

COMPLETION INTERVAL 1440-1632

DATE OF CURRENT MEASUREMENT MO. DAY YR.	CURRENT DEPTH TO WATER FROM LSD	CHANGE IN LEVEL SINCE THE LAST MEASUREMENT	Measurement Number	DEPTH TO WATER FROM MP	MP	Measuring Agency	Measurement Method	REMARKS	WELL USE	FIELD OBSERVATIONS
08 21 73	415.00			415.00	+0.00	09	3		1	
11 06 73	443.00	-28.00		443.00	+0.00	01	3		1	
11 05 74	440.00	+3.00		440.00	+0.00	01	3		1	
11 26 75	435.00	+5.00		435.00	+0.00	01	3		1	
03 18 76	402.00	+33.00		402.00	+0.00	01	3		1	
11 22 76	437.00	-35.00		437.00	+0.00	01	3		1	
11 14 77	519.00	-82.00		519.00	+0.00	01	3	02	1	
10 03 78	522.00	-3.00		522.00	+0.00	01	3	02	1	
12 -- 79	470.00	+52.00		470.00	+0.00	09	3		1	
12 -- 79	520.00	-50.00	2	520.00	+0.00	09	3	02	1	
05 02 80					+0.00	01		42	1	
10 15 80	502.00			502.00	+0.00	01	3	02	1	
03 16 82	545.00	-43.00		545.00	+0.00	01	3	02	1	
03 17 83	522.00	+23.00		522.00	+0.00	01	3		1	
03 27 84	510.00	+12.00		510.00	+0.00	01	3		M	
3 15 85	530.00			530.00	0.00	1	3		M	
3 7 86	527.00			527.00	0.00	1	3		M	
1 14 88	532.00			532.00		1	3		M	

AQUIFER 138 - PALUXY FORMATION

WATERSHED 08 - TRINITY RIVER BASIN

COUNTY 043 - COLLIN

CURRENT 18-50-802

TDWR-0518

TEXA VATER DEVELOPMENT ARD
WATER LE.EL OBSERVATION WELL REPORT

STATE WELL NUMBER 18-50-802 ELEVATION OF LAND SURFACE
DEPTH OF WELL WATER USE

MO	DAY	YEAR	CURRENT DEPTH TO WATER FROM LAND SURFACE	CHANGE IN LEVEL SINCE LAST STATIC MEASUREMENT	MEASUREMENT NUMBER	ELEVATION OF WATER LEVEL	MEASURING AGENCY	MEASUREMENT METHOD	REMARKS	MEASURING POINT	FIELD OBSERVATIONS
1	10	91	514.0		01		01	3		+0.00	UNUSED
1	23	92							-1		measured wrong well measured well on southside
1	19	93	562.00		01		01	3		+0.00	
1	13	94	577.0				01	3			
2	8	95	-542		01		01	3			
11	07	96	Airline gave	unable to reach	water				43		
11	10	98	607.98				81	2			
11	9	99	628.00				01	2			
11	17	00									
12	4	01	677.90	mp=1.5	cm		01	2	52	U	REMOVE PVC Plug
11	08	02	—		<11	—			40	U	

18-50-802

TEXAS WATER DEVELOPMENT BOARD

WELL SCHEDULE

Aquifer Paluxy Field No. _____ State Well No. 18-50-804

Owner's Well No. 1-A County COLLIN

1. Location: ___ 1/4, ___ 1/4 Sec. ___, Block ___ Survey ___

2. Owner: CITY OF FRISCO Address: ___

Tenant: ___ Address: ___

Driller: J. L. MYERS & SON Address: ___

3. Elevation of LS is 705 ft. above msl, determined by TOPO

4. Drilled: ___ 19 24; Dug, (Cable Tool) Rotary, ___

5. Depth: Rept. 1680 ft. Meas. ___ ft.

6. Completion: Open Hole, Straight Wall, Underreamed, Gravel Packed ___

7. Pump: Mfgr. ___ Type AIR

No. Stages ___, Bowls Diam. ___ in., Setting ___ ft.

Column Diam. ___ in., Length Tailpipe ___ ft. none

8. Motor: Fuel ___ Make & Model ___ HP. ___

9. Yield: Flow ___ gpm, Pump 75 gpm, Meas., (Rept.), Est. 1943

10. Performance Test: Date ___ Length of Test ___ Made by ___

Static Level ___ ft. Pumping Level ___ ft. Drawdown ___ ft.

Production ___ gpm Specific Capacity ___ gpm/ft.

CASING & BLANK PIPE

Cemented From ___ ft. to ___ ft.

Diam. (in.)	Type	Setting, ft. from	to
10			

11. Water Level: 250 ft. (rept.) meas. 19 24 above below which is ___ ft. above below surface.

UIM ft. rept. meas. 3-10 19 17 above below ~~No place to Meas.~~ which is ___ ft. above below surface.

___ ft. rept. meas. ___ 19 ___ above below which is ___ ft. above below surface.

___ ft. rept. meas. ___ 19 ___ above below which is ___ ft. above below surface.

12. Use: Dom., Stock, (Public Supply), Ind., Irr., Waterflooding, Observation, (Not Used) completely gone

13. Quality: (Remarks on taste, odor, color, etc.) ___

Temp. ___ °F, Date sampled for analysis 2-17-43 Laboratory USGS

Temp. ___ °F, Date sampled for analysis ___ Laboratory ___

Temp. ___ °F, Date sampled for analysis ___ Laboratory ___

WELL SCREEN

Screen Openings

Diam. (in.)	Type	Setting, ft. from	to

14. Other data available as circled: Driller's Log, Radioactivity Log, Electric Log,

Formation Samples, Pumping Test, ___

15. Record by: RNORDSTROM Date 3-18 1976

Source of Data obs, city, U.S.G.S. records

16. Remarks: ~~No analysis~~

TWDBE-WD-2

see 802

(Sketch)

18-50-804

Typewrite (Black ribbon) or Print Plainly
(soft pencil or black ink)
Do not use ball point pen

~~Texas State Department of Health Laboratories~~
~~1100 West 49th Street~~
~~Austin, Texas 78756~~
USGS

TWDBE-GW ONLY
Program No. _____
Proj. No. _____

CHEMICAL WATER ANALYSIS REPORT

Send report to:
Ground Water Data and Protection Division
Texas Water Development Board
P.O. Box 13087
Austin, Texas 78711

County DT COLLIN
State Well No. 18-50-804
Well No. 1
Date Collected 02-17-43
By USGS

Location _____
Source (type of well) AIR PUMP Owner CITY OF FRISCO
Date Drilled 1924 Depth 1680 ft. WBF Paluxy
Producing intervals _____ Water level _____ ft.
Sampled after pumping _____ hrs. Yield 75 GPM meas./est. Temperature °F °C
Point of collection well Appearance ☐ clear ☐ turbid ☐ colored ☐ other
Use P.S. Remarks _____

(FOR LABORATORY USE ONLY)

CHEMICAL ANALYSIS

KEY PUNCHED

Laboratory No. _____ Date Received _____ Date Reported _____

	MG/L	ME/L
Silica	13	
Calcium	2.3	
Magnesium	0.6	
Sodium	272	
Total		
Potassium	3.2	
☐ Manganese		
☐ Boron		
3/ Total Iron	.03	
☐ (other) _____	MG/L	
Specific Conductance (micromhos/cm³)		
Diluted Conductance (micromhos/cm³)	X	

%Na _____
SAR _____
RSC _____

	MG/L	ME/L
Carbonate		
Bicarbonate	470	
Sulfate	96	
Chloride	19	
Fluoride	.9	
Nitrate	2.5	
pH	8.2	
Total		
1/ Dissolved Solids (sum in MG/L)	690	
Phenolphthalein Alkalinity as C aCO₃		
Total Alkalinity as C aCO₃		
Total Hardness as C aCO₃	8	
2/ Nitrogen Cycle		
Ammonia - N		
Nitrite - N		
Nitrate - N		
Organic Nitrogen		

" ☐ " items will be analyzed if checked.

1/ The bicarbonate reported in this analysis is converted by computation (multiplying by 0.4917) to an equivalent amount of carbonate, and the carbonate figure is used in the computation of this sum.
2/ Nitrogen cycle requires separate sample.
3/ Total Iron requires separate sample.

TWDBE-WD-1 (Rev. 1-25-72)

Analyst _____ Checked By _____

BANKS ENVIRONMENTAL DATA
A DIVISION OF THE BANKS GROUP

Water Well Report™

DISCLAIMER/DETAILS

Banks Environmental Data, Inc. has performed a thorough and diligent search of all wells recorded with Texas state agencies. All mapped locations are based on information obtained from the originating agency. Although Banks performs quality assurance and quality control on all research projects, we recognize that any inaccuracies of the records and mapped well locations could be traced to the appropriate regulatory authority or driller. Many water well schedules may have never been submitted to the regulatory authority by the driller and, may explain the possible unaccountability of privately drilled wells. Therefore, Banks Environmental Data, Inc. cannot guarantee the accuracy of the data or well locations of those maps and records maintained by the Texas regulatory authorities. Banks Environmental Data, Inc. Water Well Report™ is prepared from existing state water well databases and additional file research conducted at Texas' regulatory authorities. Submission of driller's log records became mandatory in 1985. The state of Texas has processed these records in several different filing systems within two state regulatory authorities. The water well files, records and map locations are maintained by the Texas Commission on Environmental Quality (TCEQ) and the Texas Water Development Board (TWDB). Actual water well site locations of this report are geocoded and geoplotted directly from the drilling records, drilling schedules, and driller's logs and maps submitted by the water well driller and maintained at these two primary water well regulatory authorities. Below is a description of the filing systems accessed for well drilling records.

The Texas Water Development Board (TWDB) maintains two datasets of located water well records:

1) TWDB Groundwater Data GW - A registered water well driller is required by law to send in a report to the State for every well that is drilled. This requirement began in 1966. TWDB GW wells are assigned a State Identification Number unique to that well (ie: 65-03-4 01.) Where exact latitude/longitude data was not provided by the driller, latitude and longitude were assigned that locate the well in the center of a 2 ½-minute grid on a topographic map. Records may also include analytical data.

2) TWDB Submitted Drillers Reports WIID - The Submitted Driller's Report Database is populated from the online Texas Well Report Submission and Retrieval System which is a cooperative Texas Department of Licensing and Regulation (TDLR) and Texas Water Development Board (TWDB) application that registered water-well drillers use to submit their required reports. This system was started 2/5/01 and is optional for the drillers to use. Reports that drillers submit by mail are geoplotted/geocoded by a TWDB staff member. WIID wells are assigned a unique tracking number by the Texas Well Report Submission and Retrieval System. (ie: 972 63, 9416)

The Texas Commission on Environmental Quality (TCEQ) maintains two datasets of water well records. Where TCEQ's datasets are included in the Banks Environmental Data, Inc. Water Well Report, a description and example identifier are listed below.

1) Water Utility Database - This database contains a collection of data from Texas Water Districts, Public Drinking Water Systems and Water and Sewer Utilities who submit information to the TCEQ.

Public Water Systems Database PWS - The Public Water Systems records included in the WUD report are obtained digitally from TCEQ. The PWS database does not contain Drillers Reports or analytical data. The PWS Watersource name is the unique identifier in Banks Reports (StateID- S2200199A, G2200322A). Public water system IDs that begin with 'G' are groundwater wells. PWS IDs that begin with 'S' are surface intakes.

2) TCEQ Central Records - Several different types of Driller's Reports are filed with TCEQ Central Records.

A) Plotted Water Well Reports - Plotted Well logs are filed at TCEQ Central File Room based on county name, and grid number. Water well site locations are documented on the logs by the drillers. The accuracy and location of the Plotted wells are relative to the information provided on the drillers report. (ie: 65-59-1)

From 1991 to the 2001, Texas Well Reports contain a grid location box, where drillers mark an X to indicate where the well is located within the 2.5 minute quadrant. These locations have not been verified by the state.

B) Partially Numbered Well Completion Reports that were provided a State Identification Number by the TWDB that establishes the well location somewhere within a 2.5 minute quadrant of a 7.5 minute quadrangle map. This method was the standard procedure from 1986 through 1991.

Some of the historical well logs have a letter following the grid number. TWDB assigned letters to the correlating grid number to identify these wells (ie: 65-59-1A). In some instances, a single well number can represent more than one well location. This type of mapping and filing procedure ceased in June 1986.

Local Groundwater Conservation Districts/Subsidence Districts maintain separate databases from state agencies. Duplicates groundwater wells are likely between local GCDs/GSDs and TWDB and TCEQ databases.

Where reasonably ascertainable, local GCD/SD data are included in the water well report. For example, in the Harris/Galvest on area the Harris Galveston Subsidence District dataset is included in the report. (ie: HGSD1234) HGSD does not maintain well completion logs.

U.S. Geological Survey (USGS) maintains The National Water Information System (NWIS)Inventory. Banks water well report includes NWIS inventory (ie: USGS1234).

1601 Rio Grande Suite 500 Austin, Texas 78701
PH 512.478.0059 FAX 512.478.1433 E-mail banks@banksinfo.com

APPENDIX 6
MONITORING WELL RECORDS

STATE OF TEXAS WELL REPORT for Tracking #317602

Owner:	**Exide**	Owner Well #:	**PMW19**
Address:	**7471 5th Ave Frisco , TX**	Grid #:	**18-50-8**
Well Location:	**SAME TX**	Latitude:	**33° 08' 37" N**
Well County:	**Collin**	Longitude:	**096° 49' 42" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date:	Started: **2/26/2013** Completed: **3/28/2013**
Diameter of Hole:	Diameter: **8.25 in From Surface To 20 ft**
Drilling Method:	**Hollow Stem Auger**
Borehole Completion:	Other: **20/40 Sand**
Annular Seal Data:	1st Interval: **From 0 ft to 2 ft with 1 cement (#sacks and material)** 2nd Interval: **From 2 ft to 4 ft with 1 bentonite (#sacks and material)** 3rd Interval: **From 4 ft to 20 ft with 10 sand (#sacks and material)** Method Used: **by hand** Cemented By: **SCI** Distance to Septic Field or other Concentrated Contamination: **No Data** Distance to Property Line: **No Data** Method of Verification: **No Data** Approved by Variance: **No Data**
Surface Completion:	**Surface Slab Installed**
Water Level:	Static level: **No Data** Artesian flow: **No Data**
Packers:	**No Data**
Plugging Info:	Casing or Cement/Bentonite left in well: **No Data**
Type Of Pump:	**No Data**
Well Tests:	**No Data**
Water Quality:	Type of Water: **No Data** Depth of Strata: **No Data** Chemical Analysis Made: **No** Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**
Certification Data:	The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**SCI 5070 Brush Creek Rd Fort Worth , TX 76119**
Driller License Number:	**3038**

Licensed Well Driller Signature:	**Dan Spaust**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking number (Tracking **#317602**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft)	To (ft)	Description
0	**6**	**ft brown clay**
6	**20**	**ft tan clay**

CASING, BLANK PIPE & WELL SCREEN DATA

Dia.	New/Used	Type	Setting From/To
2in	**new**	**pvc riser**	**0-5ft s40**
2in	**new**	**pvc screen**	**5-20ft 0.010**

STATE OF TEXAS WELL REPORT for Tracking #317603

Owner:	**Exide**	Owner Well #:	**PMW20R**
Address:	**7471 5th Ave** **Frisco , TX**	Grid #:	**18-50-8**
Well Location:	**SAME** **TX**	Latitude:	**33° 08' 37" N**
Well County:	**Collin**	Longitude:	**096° 49' 42" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date:	Started: **2/26/2013** Completed: **3/28/2013**
Diameter of Hole:	Diameter: **8.25 in From Surface To 25 ft**
Drilling Method:	**Hollow Stem Auger**
Borehole Completion:	Other: **20/40 Sand**
Annular Seal Data:	1st Interval: **From 0 ft to 2 ft with 1 cement (#sacks and material)** 2nd Interval: **From 2 ft to 8 ft with 4 bentonite (#sacks and material)** 3rd Interval: **From 8 ft to 25 ft with 10 sand (#sacks and material)** Method Used: **by hand** Cemented By: **SCI** Distance to Septic Field or other Concentrated Contamination: **No Data** Distance to Property Line: **No Data** Method of Verification: **No Data** Approved by Variance: **No Data**
Surface Completion:	**Surface Slab Installed**
Water Level:	Static level: **No Data** Artesian flow: **No Data**
Packers:	**No Data**
Plugging Info:	Casing or Cement/Bentonite left in well: **No Data**
Type Of Pump:	**No Data**
Well Tests:	**No Data**
Water Quality:	Type of Water: **No Data** Depth of Strata: **No Data** Chemical Analysis Made: **No** Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**
Certification Data:	The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**SCI** **5070 Brush Creek Rd** **Fort Worth , TX 76119**
Driller License Number:	**3038**

Licensed Well Driller Signature:	**Dan Spaust**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft)	To (ft)	Description
0	**6**	**ft brown clay**
6	**25**	**ft tan clay**

CASING, BLANK PIPE & WELL SCREEN DATA

Dia.	New/Used	Type	Setting From/To
2in	**new**	**pvc riser**	**0-10ft s40**
2in	**new**	**pvc screen**	**10-25ft 0.010**

STATE OF TEXAS WELL REPORT for Tracking #317599

Owner:	**Exide**	Owner Well #:	**LMW21**
Address:	**7471 5th Ave Frisco , TX**	Grid #:	**18-50-8**
Well Location:	**SAME TX**	Latitude:	**33° 08' 37" N**
Well County:	**Collin**	Longitude:	**096° 49' 42" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date:	Started: **2/26/2013** Completed: **3/28/2013**
Diameter of Hole:	Diameter: **8.25 in From Surface To 25 ft**
Drilling Method:	**Hollow Stem Auger**
Borehole Completion:	Other: **20/40 Sand**
Annular Seal Data:	1st Interval: **From 0 ft to 2 ft with 1 cement (#sacks and material)** 2nd Interval: **From 2 ft to 8 ft with 4 bentonite (#sacks and material)** 3rd Interval: **From 8 ft to 25 ft with 10 sand (#sacks and material)** Method Used: **by hand** Cemented By: **SCI** Distance to Septic Field or other Concentrated Contamination: **No Data** Distance to Property Line: **No Data** Method of Verification: **No Data** Approved by Variance: **No Data**
Surface Completion:	**Surface Slab Installed**
Water Level:	Static level: **No Data** Artesian flow: **No Data**
Packers:	**No Data**
Plugging Info:	Casing or Cement/Bentonite left in well: **No Data**
Type Of Pump:	**No Data**
Well Tests:	**No Data**
Water Quality:	Type of Water: **No Data** Depth of Strata: **No Data** Chemical Analysis Made: **No** Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**
Certification Data:	The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**SCI 5070 Brush Creek Rd Fort Worth , TX 76119**
Driller License Number:	**3038**

Licensed Well Driller Signature:	**Dan Spaust**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft)	To (ft)	Description
0	**6**	**ft brown clay**
6	**25**	**ft tan clay**

CASING, BLANK PIPE & WELL SCREEN DATA

Dia.	New/Used	Type	Setting From/To
2in	**new**	**pvc riser**	**0-10ft s40**
2in	**new**	**pvc screen**	**10-25ft 0.010**

STATE OF TEXAS WELL REPORT for Tracking #317601

Owner:	**Exide**	Owner Well #:	**LMW22**
Address:	**7471 5th Ave** **Frisco , TX**	Grid #:	**18-50-8**
Well Location:	**SAME** **TX**	Latitude:	**33° 08' 37" N**
Well County:	**Collin**	Longitude:	**096° 49' 42" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date:	Started: **2/26/2013** Completed: **3/28/2013**
Diameter of Hole:	Diameter: **8.25 in From Surface To 20 ft**
Drilling Method:	**Hollow Stem Auger**
Borehole Completion:	Other: **20/40 Sand**
Annular Seal Data:	1st Interval: **From 0 ft to 2 ft with 1 cement (#sacks and material)** 2nd Interval: **From 2 ft to 4 ft with 1 bentonite (#sacks and material)** 3rd Interval: **From 4 ft to 20 ft with 10 sand (#sacks and material)** Method Used: **by hand** Cemented By: **SCI** Distance to Septic Field or other Concentrated Contamination: **No Data** Distance to Property Line: **No Data** Method of Verification: **No Data** Approved by Variance: **No Data**
Surface Completion:	**Surface Slab Installed**
Water Level:	Static level: **No Data** Artesian flow: **No Data**
Packers:	**No Data**
Plugging Info:	Casing or Cement/Bentonite left in well: **No Data**
Type Of Pump:	**No Data**
Well Tests:	**No Data**
Water Quality:	Type of Water: **No Data** Depth of Strata: **No Data** Chemical Analysis Made: **No** Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**
Certification Data:	The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**SCI** **5070 Brush Creek Rd** **Fort Worth , TX 76119**
Driller License Number:	**3038**

Licensed Well Driller Signature:	**Dan Spaust**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

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Texas Department of Licensing & Regulation
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Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft)	To (ft)	Description
0	**6**	**brown clay**
6	**20**	**tan clay**

CASING, BLANK PIPE & WELL SCREEN DATA

Dia.	New/Used	Type	Setting From/To
2in	**new**	**pvc riser**	**0-5ft**
2in	**new**	**pvc screen**	**5-20ft 0.010**

STATE OF TEXAS WELL REPORT for Tracking #317586

Owner:	**Exide**	Owner Well #:	**MW21,MW22**
Address:	**7471 5th Ave** **Frisco , TX**	Grid #:	**18-50-8**
Well Location:	**SAME** **TX**	Latitude:	**33° 08' 37" N**
Well County:	**Collin**	Longitude:	**096° 49' 42" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date:	Started: **2/26/2013** Completed: **3/28/2013**
Diameter of Hole:	Diameter: **8.25 in From Surface To 15 ft**
Drilling Method:	**Hollow Stem Auger**
Borehole Completion:	Other: **20/40 Sand**
Annular Seal Data:	1st Interval: **From 0 ft to 1 ft with 1 cement (#sacks and material)** 2nd Interval: **From 1 ft to 2 ft with 1 bentonite (#sacks and material)** 3rd Interval: **From 2 ft to 15 ft with 6 sand (#sacks and material)** Method Used: **by hand** Cemented By: **SCI** Distance to Septic Field or other Concentrated Contamination: **No Data** Distance to Property Line: **No Data** Method of Verification: **No Data** Approved by Variance: **No Data**
Surface Completion:	**Surface Slab Installed**
Water Level:	Static level: **No Data** Artesian flow: **No Data**
Packers:	**No Data**
Plugging Info:	Casing or Cement/Bentonite left in well: **No Data**
Type Of Pump:	**No Data**
Well Tests:	**No Data**
Water Quality:	Type of Water: **No Data** Depth of Strata: **No Data** Chemical Analysis Made: **No** Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**
Certification Data:	The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**SCI** **5070 Brush Creek Rd** **Fort Worth , TX 76119**
Driller License Number:	**3038**

Licensed Well Driller Signature:	**Dan Spaust**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

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Texas Department of Licensing & Regulation
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Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft)	To (ft)	Description
0	**6**	**brown clay**
6	**15**	**tan clay**

CASING, BLANK PIPE & WELL SCREEN DATA

Dia.	New/Used	Type	Setting From/To
2in	**new**	**pvc riser**	**0-2.5ft s40**
2in	**new**	**pvc screen**	**2.5-15ft 0.010**

STATE OF TEXAS WELL REPORT for Tracking #317588

Owner:	**Exide**	Owner Well #:	**MW23**
Address:	**7471 5th Ave** **Frisco , TX**	Grid #:	**18-50-8**
Well Location:	**SAME** **TX**	Latitude:	**33° 08' 37" N**
Well County:	**Collin**	Longitude:	**096° 49' 42" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date:	Started: **2/26/2013** Completed: **3/28/2013**
Diameter of Hole:	Diameter: **8.25 in From Surface To 20 ft**
Drilling Method:	**Hollow Stem Auger**
Borehole Completion:	Other: **20/40 Sand**
Annular Seal Data:	1st Interval: **From 0 ft to 2 ft with 1 cement (#sacks and material)** 2nd Interval: **From 2 ft to 4 ft with 1 bentonite (#sacks and material)** 3rd Interval: **From 4 ft to 20 ft with 10 sand (#sacks and material)** Method Used: **by hand** Cemented By: **SCI** Distance to Septic Field or other Concentrated Contamination: **No Data** Distance to Property Line: **No Data** Method of Verification: **No Data** Approved by Variance: **No Data**
Surface Completion:	**Surface Slab Installed**
Water Level:	Static level: **No Data** Artesian flow: **No Data**
Packers:	**No Data**
Plugging Info:	Casing or Cement/Bentonite left in well: **No Data**
Type Of Pump:	**No Data**
Well Tests:	**No Data**
Water Quality:	Type of Water: **No Data** Depth of Strata: **No Data** Chemical Analysis Made: **No** Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**
Certification Data:	The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**SCI** **5070 Brush Creek Rd** **Fort Worth , TX 76119**
Driller License Number:	**3038**

Licensed Well Driller Signature:	**Dan Spaust**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

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Texas Department of Licensing & Regulation
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Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft)	To (ft)	Description
0	**6**	**brown clay**
6	**20**	**tan clay**

CASING, BLANK PIPE & WELL SCREEN DATA

Dia.	New/Used	Type	Setting From/To
2in	**new**	**pvc riser**	**0-5ft s40**
2in	**new**	**pvc screen**	**5-20ft 0.010**

STATE OF TEXAS WELL REPORT for Tracking #317589

Owner:	**Exide**	Owner Well #:	**MW24**
Address:	**7471 5th Ave Frisco , TX**	Grid #:	**18-50-8**
Well Location:	**SAME TX**	Latitude:	**33° 08' 37" N**
Well County:	**Collin**	Longitude:	**096° 49' 42" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date:	Started: **2/26/2013** Completed: **3/28/2013**
Diameter of Hole:	Diameter: **8.25 in From Surface To 30 ft**
Drilling Method:	**Hollow Stem Auger**
Borehole Completion:	Other: **20/40 Sand**
Annular Seal Data:	1st Interval: **From 0 ft to 2 ft with 1 cement (#sacks and material)** 2nd Interval: **From 2 ft to 12 ft with 6 bentonite (#sacks and material)** 3rd Interval: **From 12 ft to 30 ft with 10 sand (#sacks and material)** Method Used: **by hand** Cemented By: **SCI** Distance to Septic Field or other Concentrated Contamination: **No Data** Distance to Property Line: **No Data** Method of Verification: **No Data** Approved by Variance: **No Data**
Surface Completion:	**Surface Slab Installed**
Water Level:	Static level: **No Data** Artesian flow: **No Data**
Packers:	**No Data**
Plugging Info:	Casing or Cement/Bentonite left in well: **No Data**
Type Of Pump:	**No Data**
Well Tests:	**No Data**
Water Quality:	Type of Water: **No Data** Depth of Strata: **No Data** Chemical Analysis Made: **No** Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**
Certification Data:	The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**SCI 5070 Brush Creek Rd Fort Worth , TX 76119**
Driller License Number:	**3038**

Licensed Well Driller Signature:	**Dan Spaust**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

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P.O. Box 12157
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(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft)	To (ft)	Description
0	**6**	**ft brown clay**
6	**30**	**ft tan clay**

CASING, BLANK PIPE & WELL SCREEN DATA

Dia.	New/Used	Type	Setting From/To
2in	**new**	**pvc riser**	**0-15ft s40**
2in	**new**	**pvc screen**	**15-30ft 0.010**

STATE OF TEXAS WELL REPORT for Tracking #317590

Owner:	**Exide**	Owner Well #:	**MW25**
Address:	**7471 5th Ave** **Frisco , TX**	Grid #:	**18-50-8**
Well Location:	**SAME** **TX**	Latitude:	**33° 08' 37" N**
Well County:	**Collin**	Longitude:	**096° 49' 42" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date:	Started: **2/26/2013** Completed: **3/28/2013**
Diameter of Hole:	Diameter: **8.25 in From Surface To 22 ft**
Drilling Method:	**Hollow Stem Auger**
Borehole Completion:	Other: **20/40 Sand**
Annular Seal Data:	1st Interval: **From 0 ft to 2 ft with 1 cement (#sacks and material)** 2nd Interval: **From 2 ft to 4 ft with 1 bentonite (#sacks and material)** 3rd Interval: **From 4 ft to 22 ft with 10 sand (#sacks and material)** Method Used: **by hand** Cemented By: **SCI** Distance to Septic Field or other Concentrated Contamination: **No Data** Distance to Property Line: **No Data** Method of Verification: **No Data** Approved by Variance: **No Data**
Surface Completion:	**Surface Slab Installed**
Water Level:	Static level: **No Data** Artesian flow: **No Data**
Packers:	**No Data**
Plugging Info:	Casing or Cement/Bentonite left in well: **No Data**
Type Of Pump:	**No Data**
Well Tests:	**No Data**
Water Quality:	Type of Water: **No Data** Depth of Strata: **No Data** Chemical Analysis Made: **No** Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**
Certification Data:	The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**SCI** **5070 Brush Creek Rd** **Fort Worth , TX 76119**
Driller License Number:	**3038**

Licensed Well Driller Signature:	**Dan Spaust**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking number (Tracking **#317590**) on your written request.

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P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft)	To (ft)	Description
0	**6**	**ft brown clay**
6	**22**	**ft tan clay**

CASING, BLANK PIPE & WELL SCREEN DATA

Dia.	New/Used	Type	Setting From/To
2in	**new**	**pvc riser**	**0-7ft s40**
2in	**new**	**pvc screen**	**7-22ft 0.010**

STATE OF TEXAS WELL REPORT for Tracking #317591

Owner:	**Exide**	Owner Well #:	**MW26,MW27**
Address:	**7471 5th Ave** **Frisco , TX**	Grid #:	**18-50-8**
Well Location:	**SAME** **TX**	Latitude:	**33° 08' 37" N**
Well County:	**Collin**	Longitude:	**096° 49' 42" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date:	Started: **2/26/2013** Completed: **3/28/2013**
Diameter of Hole:	Diameter: **8.25 in From Surface To 15 ft**
Drilling Method:	**Hollow Stem Auger**
Borehole Completion:	Other: **20/40 Sand**
Annular Seal Data:	1st Interval: **From 0 ft to 2 ft with 1 cement (#sacks and material)** 2nd Interval: **From 2 ft to 4 ft with 1 bentonite (#sacks and material)** 3rd Interval: **From 4 ft to 15 ft with 8 sand (#sacks and material)** Method Used: **by hand** Cemented By: **SCI** Distance to Septic Field or other Concentrated Contamination: **No Data** Distance to Property Line: **No Data** Method of Verification: **No Data** Approved by Variance: **No Data**
Surface Completion:	**Surface Slab Installed**
Water Level:	Static level: **No Data** Artesian flow: **No Data**
Packers:	**No Data**
Plugging Info:	Casing or Cement/Bentonite left in well: **No Data**
Type Of Pump:	**No Data**
Well Tests:	**No Data**
Water Quality:	Type of Water: **No Data** Depth of Strata: **No Data** Chemical Analysis Made: **No** Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**
Certification Data:	The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**SCI** **5070 Brush Creek Rd** **Fort Worth , TX 76119**
Driller License Number:	**3038**

Licensed Well Driller Signature:	**Dan Spaust**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft)	To (ft)	Description
0	**6**	**ft brown clay**
6	**15**	**ft tan clay**

CASING, BLANK PIPE & WELL SCREEN DATA

Dia.	New/Used	Type	Setting From/To
2in	**new**	**pvc riser**	**0-5ft s40**
2in	**new**	**pvc screen**	**5-15ft 0.010**

STATE OF TEXAS WELL REPORT for Tracking #317593

Owner:	**Exide**	Owner Well #:	**MW28**
Address:	**7471 5th Ave** **Frisco , TX**	Grid #:	**18-50-8**
Well Location:	**SAME** **TX**	Latitude:	**33° 08' 37" N**
Well County:	**Collin**	Longitude:	**096° 49' 42" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date:	Started: **2/26/2013** Completed: **3/28/2013**
Diameter of Hole:	Diameter: **8.25 in From Surface To 20 ft**
Drilling Method:	**Hollow Stem Auger**
Borehole Completion:	Other: **20/40 Sand**
Annular Seal Data:	1st Interval: **From 0 ft to 2 ft with 1 cement (#sacks and material)** 2nd Interval: **From 2 ft to 4 ft with 1 bentonite (#sacks and material)** 3rd Interval: **From 4 ft to 20 ft with 10 sand (#sacks and material)** Method Used: **by hand** Cemented By: **SCI** Distance to Septic Field or other Concentrated Contamination: **No Data** Distance to Property Line: **No Data** Method of Verification: **No Data** Approved by Variance: **No Data**
Surface Completion:	**Surface Slab Installed**
Water Level:	Static level: **No Data** Artesian flow: **No Data**
Packers:	**No Data**
Plugging Info:	Casing or Cement/Bentonite left in well: **No Data**
Type Of Pump:	**No Data**
Well Tests:	**No Data**
Water Quality:	Type of Water: **No Data** Depth of Strata: **No Data** Chemical Analysis Made: **No** Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**
Certification Data:	The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**SCI** **5070 Brush Creek Rd** **Fort Worth , TX 76119**
Driller License Number:	**3038**

Licensed Well Driller Signature:	**Dan Spaust**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft)	To (ft)	Description
0	**6**	**ft brown clay**
6	**20**	**ft tan clay**

CASING, BLANK PIPE & WELL SCREEN DATA

Dia.	New/Used	Type	Setting From/To
2in	**new**	**pvc riser**	**0-5ft s40**
2in	**new**	**pvc screen**	**5-20ft 0.010**

STATE OF TEXAS WELL REPORT for Tracking #317598

Owner:	**Exide**	Owner Well #:	**MW29**
Address:	**7471 5th Ave** **Frisco , TX**	Grid #:	**18-50-8**
Well Location:	**SAME** **TX**	Latitude:	**33° 08' 37" N**
Well County:	**Collin**	Longitude:	**096° 49' 42" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date:	Started: **2/26/2013** Completed: **3/28/2013**
Diameter of Hole:	Diameter: **8.25 in From Surface To 15 ft**
Drilling Method:	**Hollow Stem Auger**
Borehole Completion:	Other: **20/40 Sand**
Annular Seal Data:	1st Interval: **From 0 ft to 2 ft with 1 cement (#sacks and material)** 2nd Interval: **From 2 ft to 4 ft with 1 bentonite (#sacks and material)** 3rd Interval: **From 4 ft to 15 ft with 8 sand (#sacks and material)** Method Used: **by hand** Cemented By: **SCI** Distance to Septic Field or other Concentrated Contamination: **No Data** Distance to Property Line: **No Data** Method of Verification: **No Data** Approved by Variance: **No Data**
Surface Completion:	**Surface Slab Installed**
Water Level:	Static level: **No Data** Artesian flow: **No Data**
Packers:	**No Data**
Plugging Info:	Casing or Cement/Bentonite left in well: **No Data**
Type Of Pump:	**No Data**
Well Tests:	**No Data**
Water Quality:	Type of Water: **No Data** Depth of Strata: **No Data** Chemical Analysis Made: **No** Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**
Certification Data:	The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**SCI** **5070 Brush Creek Rd** **Fort Worth , TX 76119**
Driller License Number:	**3038**

Licensed Well Driller Signature:	**Dan Spaust**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft)	To (ft)	Description
0	**6**	**ft brown clay**
6	**15**	**ft tan clay**

CASING, BLANK PIPE & WELL SCREEN DATA

Dia.	New/Used	Type	Setting From/To
2in	**new**	**pvc riser**	**0-5ft s40**
2in	**new**	**pvc screen**	**5-15ft 0.010**

STATE OF TEXAS WELL REPORT for Tracking #322302

Owner:	**Exide**	Owner Well #:	**MW 30**
Address:	**7471 5th Avenue** **Frisco , TX**	Grid #:	**18-50-8**
Well Location:	**Same** **TX**	Latitude:	**33° 08' 37" N**
Well County:	**Collin**	Longitude:	**096° 49' 42" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date: Started: **3/28/2013**
Completed: **3/28/2013**

Diameter of Hole: Diameter: **7.75 in From Surface To 32.5 ft**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: Other: **20/40 Sand**

Annular Seal Data:
1st Interval: **From 32.5 ft to 10.5 ft with 8 Sand (#sacks and material)**
2nd Interval: **From 10.5 ft to 2 ft with 5 Bentonite (#sacks and material)**
3rd Interval: **From 2 ft to 0 ft with 4 Cement (#sacks and material)**
Method Used: **Mix**
Cemented By: **Drill Crew**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Surface Slab Installed**

Water Level: Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality:
Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information: **Strata Core Services, LLC**
5070 Brush Creek Road

	Fort Worth , TX 76119
Driller License Number:	**3038**
Licensed Well Driller Signature:	**Dan Spaust**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description
0 to 5' Sandy Gravelly Clay
5' to 20' Brown Silty Clay
20' to 26.5' Gravelly Light Brown Clay
26.5' to 30.5' Gray Shale
30.5' to 32.5' Hard Gray Shale

CASING, BLANK PIPE & WELL SCREEN DATA

Dia. New/Used Type Setting From/To
2" New PVC Screen 32.5' to 12.5' .010
2" New PVC Riser 12.5' to 0 s40

STATE OF TEXAS WELL REPORT for Tracking #318675

Owner:	**Exide**	Owner Well #:	**MW 31**
Address:	**7451 5th Ave** **Frisco , TX**	Grid #:	**18-50-8**
Well Location:	**Same** **TX**	Latitude:	**33° 08' 37" N**
Well County:	**Collin**	Longitude:	**096° 49' 42" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date: Started: **5/9/2013**
Completed: **5/9/2013**

Diameter of Hole: Diameter: **7 in From Surface To 23 ft**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: Other: **20/40 Sand**

Annular Seal Data:
1st Interval: **From 23 ft to 6 ft with 8 Sand (#sacks and material)**
2nd Interval: **From 6 ft to 2 ft with 3 Bentonite (#sacks and material)**
3rd Interval: **From 2 ft to 0 ft with 2 Cement (#sacks and material)**
Method Used: **Mix**
Cemented By: **Drill Crew**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Surface Slab Installed**

Water Level: Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality:
Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information: **Strata Core Services, LLC**
5070 Brush Creek Road

	Fort Worth , TX 76119
Driller License Number:	**58164**
Licensed Well Driller Signature:	**Brad Eskue**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the report's Tracking number (Tracking **#318675**) on your written request.

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Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft)	To (ft)	Description
0	**6'**	**Brown Clay**
6'	**23'**	**Tan Clay**

CASING, BLANK PIPE & WELL SCREEN DATA

Dia.	New/Used	Type	Setting From/To
2"	**New**	**PVC Screen**	**23' to 8' .010**
2"	**New**	**PVC Riser**	**8' to 0 s40**

STATE OF TEXAS WELL REPORT for Tracking #277616

Owner:	**Exide Technologies**	Owner Well #:	**SL# 3**
Address:	**7471 South 5th St. Frisco , TX 75034**	Grid #:	**18-50-8**
Well Location:	**7471 South 5th St. Frisco , TX 75034**	Latitude:	**33° 08' 28" N**
Well County:	**Collin**	Longitude:	**096° 49' 39" W**
Elevation:	**638 ft.**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date: Started: **1/10/2012**
Completed: **1/10/2012**

Diameter of Hole: Diameter: **2 in From Surface To 12 ft**

Drilling Method: Other: **Direct Push**

Borehole Completion: Other: **(No Data)**

Annular Seal Data: 1st Interval: **No Data**
2nd Interval: **No Data**
3rd Interval: **No Data**

Surface Completion: **No Data**

Water Level: Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: The well **was** plugged within 48 hours.
Casing left in well: Cement/Bentonite left in well:
From (ft) To (ft) From (ft) To (ft) Cem/Bent Sacks Used
0 - 0 12 - 0 1 Hole Plug

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality: Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information: **Strata Core Services**
5070 Brush Creek Rd
Fort Worth , TX 76119

Driller License Number: **52694**

Licensed Well Driller Signature:	**Mario Robles**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**Amended 2/9/12 Ref.# 10138**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft)	To (ft)	Description
0	**4'**	**Dk Gray Clay**
4	**12'**	**Lt. Clay Clay**

CASING, BLANK PIPE & WELL SCREEN DATA

Dia.	New/Used	Type	Setting From/To
1"	**N**	**PVC Screen**	**12 - 7 .010**
1"	**N**	**PVC Riser**	**7 - 0 Sch 40**

STATE OF TEXAS WELL REPORT for Tracking #277402

Owner:	**Exide Technologies**	Owner Well #:	**NDA- 1**
Address:	**7471 South 5th St. Frisco , TX 75034**	Grid #:	**18-50-8**
Well Location:	**7471 South 5th St. Frisco , TX 75034**	Latitude:	**33° 08' 28" N**
Well County:	**Collin**	Longitude:	**096° 49' 39" W**
Elevation:	**638 ft.**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date: Started: **1/10/2012**
Completed: **1/10/2012**

Diameter of Hole: Diameter: **2 in From Surface To 8 ft**

Drilling Method: Other: **Direct Push**

Borehole Completion: **No Data**

Annular Seal Data: 1st Interval: **No Data**
2nd Interval: **No Data**
3rd Interval: **No Data**

Surface Completion: **No Data**

Water Level: Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing left in well: Cement/Bentonite left in well:
From (ft) To (ft) From (ft) To (ft) Cem/Bent Sacks Used
0 - 0 8 - 0 1 Hole Plug

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality: Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information: **Strata Core Services**
5070 Brush Creek Rd
Fort Worth , TX 76119

Driller License Number: **52694**

Licensed Well Driller Signature:	**Mario Robles**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description
0 - 8' Dk Gray Clay

CASING, BLANK PIPE & WELL SCREEN DATA

Dia. New/Used Type Setting From/To
1" N PVC Screen 8 - 3 .010
1" N PVC Riser 3 - 0 Sch 40

STATE OF TEXAS WELL REPORT for Tracking #277399

Owner:	**Exide Technologies**	Owner Well #:	**SL# 2**
Address:	**7471 South 5th St. Frisco , TX 75034**	Grid #:	**18-50-8**
Well Location:	**7471 South 5th St. Frisco , TX 75034**	Latitude:	**33° 08' 28" N**
Well County:	**Collin**	Longitude:	**096° 49' 39" W**
Elevation:	**638 ft.**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date: Started: **1/10/2012**
Completed: **1/10/2012**

Diameter of Hole: Diameter: **2 in From Surface To 8 ft**

Drilling Method: Other: **Direct Push**

Borehole Completion: Other: **(No Data)**

Annular Seal Data: 1st Interval: **No Data**
2nd Interval: **No Data**
3rd Interval: **No Data**

Surface Completion: **No Data**

Water Level: Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: The well **was** plugged within 48 hours.
Casing left in well: Cement/Bentonite left in well:
From (ft) To (ft) From (ft) To (ft) Cem/Bent Sacks Used
0 - 0 8 - 0 1 Hole Plug

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality: Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information: **Strata Core Services**
5070 Brush Creek Rd
Fort Worth , TX 76119

Driller License Number: **52694**

Licensed Well Driller Signature:	**Mario Robles**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**Amended 2/9/12 Ref.# 10139**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft)	To (ft)	Description
0	**1'**	**Dk Gray Clay**
1	**8'**	**Lt. Clay Clay**

CASING, BLANK PIPE & WELL SCREEN DATA

Dia.	New/Used	Type	Setting From/To
1"	**N**	**PVC Screen**	**8 - 3 .010**
1"	**N**	**PVC Riser**	**3 - 0 Sch 40**

STATE OF TEXAS WELL REPORT for Tracking #277393

Owner:	**Exide Technologies**	Owner Well #:	**MW# 19,20**
Address:	**7471 South 5th St. Frisco , TX 75034**	Grid #:	**18-50-8**
Well Location:	**7471 South 5th St. Frisco , TX 75034**	Latitude:	**33° 08' 28" N**
Well County:	**Collin**	Longitude:	**096° 49' 39" W**
Elevation:	**638 ft.**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date: Started: **1/12/2012**
Completed: **1/12/2012**

Diameter of Hole: Diameter: **8 1/4 in From Surface To 22 ft**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: Other: **Sand Packed**

Annular Seal Data:
1st Interval: **From 22 ft to 5 ft with 12 Sand (#sacks and material)**
2nd Interval: **From 5 ft to 3 ft with 1 Bentonite (#sacks and material)**
3rd Interval: **From 3 ft to 0 ft with 1 Cement (#sacks and material)**
Method Used: **TCEQ Standards**
Cemented By: **Strata Core**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Surface Slab Installed**

Water Level: Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality:
Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information: **Strata Core Services**
5070 Brush Creek Rd

	Fort Worth , TX 76119
Driller License Number:	**52694**
Licensed Well Driller Signature:	**Mario Robles**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description
0 - 2' Brown Clay w/ concrete rubble
2 - 12' Dk Brown Clay
12 - 19' Gray Weathered Clay
19 - 22' Gray Shale

CASING, BLANK PIPE & WELL SCREEN DATA

Dia. New/Used Type Setting From/To
2" N PVC Screen 22 - 7 .010
2" N PVC Riser 7 - 0 Sch 40

STATE OF TEXAS WELL REPORT for Tracking #351732

Owner:	**Exide**	Owner Well #:	**MW 32-36**
Address:	**7471 5th Ave** **Frisco , TX**	Grid #:	**18-50-8**
Well Location:	**Same** **TX**	Latitude:	**33° 08' 37" N**
Well County:	**Collin**	Longitude:	**096° 49' 42" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date: Started: **1/7/2014**
Completed: **1/14/2014**

Diameter of Hole: Diameter: **7 in From Surface To 5 ft**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: Other: **20/40 Sand**

Annular Seal Data:
1st Interval: **From 5 ft to 2 ft with 7 Sand (#sacks and material)**
2nd Interval: **From 2 ft to 2 ft with 4 Bentonite (#sacks and material)**
3rd Interval: **From 2 ft to 0 ft with 2 Cement (#sacks and material)**
Method Used: **Mix**
Cemented By: **Drill Crew**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Surface Slab Installed**

Water Level: Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality: Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information: **Strata Core Services, LLC**
5070 Brush Creek Road

	Fort Worth , TX 76119
Driller License Number:	**3038**
Licensed Well Driller Signature:	**Dan Spaust**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description
0 to 5' Clay

CASING, BLANK PIPE & WELL SCREEN DATA

Dia. New/Used Type Setting From/To
1" New PVC Screen 5' to 2.5' .010
1" New PVC Riser 2.5' to 0 s40

STATE OF TEXAS WELL REPORT for Tracking #351722

Owner:	**Exide**	Owner Well #:	**MW 43**
Address:	**7471 5th Ave** **Frisco , TX**	Grid #:	**18-50-8**
Well Location:	**Same** **TX**	Latitude:	**33° 08' 37" N**
Well County:	**Collin**	Longitude:	**096° 49' 42" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date: Started: **1/7/2014**
Completed: **1/14/2014**

Diameter of Hole: Diameter: **7 in From Surface To 20 ft**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: Other: **20/40 Sand**

Annular Seal Data:
1st Interval: **From 20 ft to 8 ft with 6 Sand (#sacks and material)**
2nd Interval: **From 8 ft to 2 ft with 4 Bentonite (#sacks and material)**
3rd Interval: **From 2 ft to 0 ft with 2 Cement (#sacks and material)**
Method Used: **Mix**
Cemented By: **Drill Crew**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Surface Slab Installed**

Water Level: Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality:
Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information: **Strata Core Services, LLC**
5070 Brush Creek Road

	Fort Worth , TX 76119
Driller License Number:	**3038**
Licensed Well Driller Signature:	**Dan Spaust**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

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Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description
0 to 20' Clay

CASING, BLANK PIPE & WELL SCREEN DATA

Dia. New/Used Type Setting From/To
2" New PVC Screen 20' to 10' .010
2" New PVC Riser 10' to 0 s40

STATE OF TEXAS WELL REPORT for Tracking #351723

Owner:	**Exide**	Owner Well #:	**MW 45**
Address:	**7471 5th Ave** **Frisco , TX**	Grid #:	**18-50-8**
Well Location:	**Same** **TX**	Latitude:	**33° 08' 37" N**
Well County:	**Collin**	Longitude:	**096° 49' 42" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date: Started: **1/7/2014**
Completed: **1/14/2014**

Diameter of Hole: Diameter: **7 in From Surface To 20 ft**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: Other: **20/40 Sand**

Annular Seal Data:
1st Interval: **From 20 ft to 8 ft with 6 Sand (#sacks and material)**
2nd Interval: **From 8 ft to 2 ft with 4 Bentonite (#sacks and material)**
3rd Interval: **From 2 ft to 0 ft with 2 Cement (#sacks and material)**
Method Used: **Mix**
Cemented By: **Drill Crew**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Surface Slab Installed**

Water Level: Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality: Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information: **Strata Core Services, LLC**
5070 Brush Creek Road

	Fort Worth , TX 76119
Driller License Number:	**3038**
Licensed Well Driller Signature:	**Dan Spaust**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

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Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description
0 to 20' Clay

CASING, BLANK PIPE & WELL SCREEN DATA

Dia. New/Used Type Setting From/To
2" New PVC Screen 20' to 10' .010
2" New PVC Riser 10' to 0 s40

STATE OF TEXAS WELL REPORT for Tracking #351724

Owner:	**Exide**	Owner Well #:	**MW 39**
Address:	**7471 5th Ave** **Frisco , TX**	Grid #:	**18-50-8**
Well Location:	**Same** **TX**	Latitude:	**33° 08' 37" N**
Well County:	**Collin**	Longitude:	**096° 49' 42" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date: Started: **1/7/2014**
Completed: **1/14/2014**

Diameter of Hole: Diameter: **7 in From Surface To 20 ft**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: Other: **20/40 Sand**

Annular Seal Data:
1st Interval: **From 20 ft to 8 ft with 6 Sand (#sacks and material)**
2nd Interval: **From 8 ft to 2 ft with 4 Bentonite (#sacks and material)**
3rd Interval: **From 2 ft to 0 ft with 2 Cement (#sacks and material)**
Method Used: **Mix**
Cemented By: **Drill Crew**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Surface Slab Installed**

Water Level: Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality:
Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information: **Strata Core Services, LLC**
5070 Brush Creek Road

	Fort Worth , TX 76119
Driller License Number:	**3038**
Licensed Well Driller Signature:	**Dan Spaust**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

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P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description
0 to 20' Clay

CASING, BLANK PIPE & WELL SCREEN DATA

Dia. New/Used Type Setting From/To
2" New PVC Screen 20' to 10' .010
2" New PVC Riser 10' to 0 s40

STATE OF TEXAS WELL REPORT for Tracking #351725

Owner:	**Exide**	Owner Well #:	**MW 40**
Address:	**7471 5th Ave** **Frisco , TX**	Grid #:	**18-50-8**
Well Location:	**Same** **TX**	Latitude:	**33° 08' 37" N**
Well County:	**Collin**	Longitude:	**096° 49' 42" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date: Started: **1/7/2014**
Completed: **1/14/2014**

Diameter of Hole: Diameter: **7 in From Surface To 15 ft**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: Other: **20/40 Sand**

Annular Seal Data:
1st Interval: **From 15 ft to 3 ft with 5 Sand (#sacks and material)**
2nd Interval: **From 3 ft to 2 ft with 2 Bentonite (#sacks and material)**
3rd Interval: **From 2 ft to 0 ft with 2 Cement (#sacks and material)**
Method Used: **Mix**
Cemented By: **Drill Crew**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Surface Slab Installed**

Water Level: Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality:
Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information: **Strata Core Services, LLC**
5070 Brush Creek Road

	Fort Worth , TX 76119
Driller License Number:	**3038**
Licensed Well Driller Signature:	**Dan Spaust**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft)	To (ft)	Description
0	**15'**	**Clay**

CASING, BLANK PIPE & WELL SCREEN DATA

Dia.	New/Used	Type	Setting From/To
2"	**New**	**PVC Screen**	**15' to 5' .010**
2"	**New**	**PVC Riser**	**5' to 0 s40**

STATE OF TEXAS WELL REPORT for Tracking #351726

Owner:	**Exide**	Owner Well #:	**MW 41**
Address:	**7471 5th Ave** **Frisco , TX**	Grid #:	**18-50-8**
Well Location:	**Same** **TX**	Latitude:	**33° 08' 37" N**
Well County:	**Collin**	Longitude:	**096° 49' 42" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date: Started: **1/7/2014**
Completed: **1/14/2014**

Diameter of Hole: Diameter: **7 in From Surface To 16 ft**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: Other: **20/40 Sand**

Annular Seal Data:
1st Interval: **From 16 ft to 4 ft with 5 Sand (#sacks and material)**
2nd Interval: **From 4 ft to 2 ft with 2 Bentonite (#sacks and material)**
3rd Interval: **From 2 ft to 0 ft with 2 Cement (#sacks and material)**
Method Used: **Mix**
Cemented By: **Drill Crew**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Surface Slab Installed**

Water Level: Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality:
Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information: **Strata Core Services, LLC**
5070 Brush Creek Road

Fort Worth , TX 76119

Driller License Number:	**3038**
Licensed Well Driller Signature:	**Dan Spaust**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description
0 to 16' Clay

CASING, BLANK PIPE & WELL SCREEN DATA

Dia. New/Used Type Setting From/To
2" New PVC Screen 16' to 6' .010
2" New PVC Riser 6' to 0 s40

STATE OF TEXAS WELL REPORT for Tracking #351727

Owner:	**Exide**	Owner Well #:	**MW 42**
Address:	**7471 5th Ave** **Frisco , TX**	Grid #:	**18-50-8**
Well Location:	**Same** **TX**	Latitude:	**33° 08' 37" N**
Well County:	**Collin**	Longitude:	**096° 49' 42" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date: Started: **1/7/2014**
Completed: **1/14/2014**

Diameter of Hole: Diameter: **7 in From Surface To 15 ft**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: Other: **20/40 Sand**

Annular Seal Data:
1st Interval: **From 15 ft to 3 ft with 5 Sand (#sacks and material)**
2nd Interval: **From 3 ft to 2 ft with 2 Bentonite (#sacks and material)**
3rd Interval: **From 2 ft to 0 ft with 2 Cement (#sacks and material)**
Method Used: **Mix**
Cemented By: **Drill Crew**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Surface Slab Installed**

Water Level: Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality:
Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information: **Strata Core Services, LLC**
5070 Brush Creek Road

	Fort Worth , TX 76119
Driller License Number:	**3038**
Licensed Well Driller Signature:	**Dan Spaust**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft)	To (ft)	Description
0	**15'**	**Clay**

CASING, BLANK PIPE & WELL SCREEN DATA

Dia.	New/Used	Type	Setting From/To
2"	**New**	**PVC Screen**	**15' to 5' .010**
2"	**New**	**PVC Riser**	**5' to 0 s40**

STATE OF TEXAS WELL REPORT for Tracking #351728

Owner:	**Exide**	Owner Well #:	**MW 38**
Address:	**7471 5th Ave** **Frisco , TX**	Grid #:	**18-50-8**
Well Location:	**Same** **TX**	Latitude:	**33° 08' 37" N**
Well County:	**Collin**	Longitude:	**096° 49' 42" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date: Started: **1/7/2014**
Completed: **1/14/2014**

Diameter of Hole: Diameter: **7 in From Surface To 15 ft**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: Other: **20/40 Sand**

Annular Seal Data:
1st Interval: **From 15 ft to 3 ft with 5 Sand (#sacks and material)**
2nd Interval: **From 3 ft to 2 ft with 2 Bentonite (#sacks and material)**
3rd Interval: **From 2 ft to 0 ft with 2 Cement (#sacks and material)**
Method Used: **Mix**
Cemented By: **Drill Crew**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Surface Slab Installed**

Water Level: Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality:
Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information: **Strata Core Services, LLC**
5070 Brush Creek Road

	Fort Worth , TX 76119
Driller License Number:	**3038**
Licensed Well Driller Signature:	**Dan Spaust**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking number (Tracking **#351728**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description
0 to 15' Clay

CASING, BLANK PIPE & WELL SCREEN DATA

Dia. New/Used Type Setting From/To
2" New PVC Screen 15' to 5' .010
2" New PVC Riser 5' to 0 s40

STATE OF TEXAS WELL REPORT for Tracking #351729

Owner:	**Exide**	Owner Well #:	**MW 37**
Address:	**7471 5th Ave** **Frisco , TX**	Grid #:	**18-50-8**
Well Location:	**Same** **TX**	Latitude:	**33° 08' 37" N**
Well County:	**Collin**	Longitude:	**096° 49' 42" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date: Started: **1/7/2014**
Completed: **1/14/2014**

Diameter of Hole: Diameter: **7 in From Surface To 10 ft**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: Other: **20/40 Sand**

Annular Seal Data:
1st Interval: **From 10 ft to 3 ft with 5 Sand (#sacks and material)**
2nd Interval: **From 3 ft to 2 ft with 2 Bentonite (#sacks and material)**
3rd Interval: **From 2 ft to 0 ft with 2 Cement (#sacks and material)**
Method Used: **Mix**
Cemented By: **Drill Crew**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Surface Slab Installed**

Water Level: Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality:
Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information: **Strata Core Services, LLC**
5070 Brush Creek Road

Fort Worth , TX 76119

Driller License Number:	**3038**
Licensed Well Driller Signature:	**Dan Spaust**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the report's Tracking number (Tracking **#351729**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft)	To (ft)	Description
0	**10'**	**Clay**

CASING, BLANK PIPE & WELL SCREEN DATA

Dia.	New/Used	Type	Setting From/To
2"	**New**	**PVC Screen**	**10' to 5' .010**
2"	**New**	**PVC Riser**	**5' to 0 s40**

STATE OF TEXAS WELL REPORT for Tracking #351730

Owner:	**Exide**	Owner Well #:	**MW 44**
Address:	**7471 5th Ave** **Frisco , TX**	Grid #:	**18-50-8**
Well Location:	**Same** **TX**	Latitude:	**33° 08' 37" N**
Well County:	**Collin**	Longitude:	**096° 49' 42" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date: Started: **1/7/2014**
Completed: **1/14/2014**

Diameter of Hole: Diameter: **7 in From Surface To 15 ft**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: Other: **20/40 Sand**

Annular Seal Data:
1st Interval: **From 15 ft to 3 ft with 5 Sand (#sacks and material)**
2nd Interval: **From 3 ft to 2 ft with 2 Bentonite (#sacks and material)**
3rd Interval: **From 2 ft to 0 ft with 2 Cement (#sacks and material)**
Method Used: **Mix**
Cemented By: **Drill Crew**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Surface Slab Installed**

Water Level: Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality:
Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information: **Strata Core Services, LLC**
5070 Brush Creek Road

Fort Worth , TX 76119

Driller License Number:	**3038**
Licensed Well Driller Signature:	**Dan Spaust**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking number (Tracking **#351730**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description
0 to 15' Clay

CASING, BLANK PIPE & WELL SCREEN DATA

Dia. New/Used Type Setting From/To
2" New PVC Screen 15' to 5' .010
2" New PVC Riser 5' to 0 s40

STATE OF TEXAS WELL REPORT for Tracking #351731

Owner:	**Exide**	Owner Well #:	**MW 46**
Address:	**7471 5th Ave** **Frisco , TX**	Grid #:	**18-50-8**
Well Location:	**Same** **TX**	Latitude:	**33° 08' 37" N**
Well County:	**Collin**	Longitude:	**096° 49' 42" W**
Elevation:	**No Data**	GPS Brand Used:	**Google Earth**
Type of Work:	**New Well**	Proposed Use:	**Monitor**

Drilling Date: Started: **1/7/2014**
Completed: **1/14/2014**

Diameter of Hole: Diameter: **7 in From Surface To 20 ft**

Drilling Method: **Hollow Stem Auger**

Borehole Completion: Other: **20/40 Sand**

Annular Seal Data:
1st Interval: **From 20 ft to 8 ft with 7 Sand (#sacks and material)**
2nd Interval: **From 8 ft to 2 ft with 4 Bentonite (#sacks and material)**
3rd Interval: **From 2 ft to 0 ft with 2 Cement (#sacks and material)**
Method Used: **Mix**
Cemented By: **Drill Crew**
Distance to Septic Field or other Concentrated Contamination: **No Data**
Distance to Property Line: **No Data**
Method of Verification: **No Data**
Approved by Variance: **No Data**

Surface Completion: **Surface Slab Installed**

Water Level: Static level: **No Data**
Artesian flow: **No Data**

Packers: **No Data**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **No Data**

Well Tests: **No Data**

Water Quality:
Type of Water: **No Data**
Depth of Strata: **No Data**
Chemical Analysis Made: **No Data**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information: **Strata Core Services, LLC**
5070 Brush Creek Road

	Fort Worth , TX 76119
Driller License Number:	**3038**
Licensed Well Driller Signature:	**Dan Spaust**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the report's Tracking number (Tracking **#351731**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL

From (ft) To (ft) Description
0 to 20' Clay

CASING, BLANK PIPE & WELL SCREEN DATA

Dia. New/Used Type Setting From/To
2" New PVC Screen 20' to 10' .010
2" New PVC Riser 10' to 0 s40

APPENDIX 8
STATISTICS DATA TABLES AND CALCULATIONS

EXIDE TECHNOLOGIES

May 30, 2013

Matthew A. Love
Director – Global Environmental Remediation

Exide Technologies
P.O. Box 14294
Reading, PA 19612-4294
610.921.4054 tel
610.921.4062 fax
matt.love@exide.com
www.exide.com

Mr. Gary Beyer, PG
Texas Commission on Environmental Quality
Remediation Division
MC-127
12100 Park 35 Circle, Bldg. D
Austin, TX 78753

Re: Revised Site-specific Background Soil Concentration Evaluation
Exide Technologies Former Operating Plant
7471 South 5th Street, Frisco, Texas

Dear Mr. Beyer:

Please find enclosed two copies of the Revised Site-specific Background Soil Concentration Evaluation performed for Exide Technologies Former Operating Plant in Frisco, Texas. This evaluation was prepared for Exide Technologies by Pastor, Behling & Wheeler, LLC (PBW) and represents an update to the evaluation previously submitted to you on April 12, 2013. Specifically, this update incorporates data for three additional soil samples that were collected from within the background study area on May 9, 2013 in accordance with your verbal request.

Should you or your staff have any questions or comments regarding this revised evaluation, please contact this office at (610) 921-4054.

Sincerely,

EXIDE TECHNOLOGIES

Matthew A. Love
Director, Global Environmental Remediation

cc: Paul James - EPA
Larry Champagne - TCEQ
Bill Shafford – TCEQ
Sam Barrett – Regional TCEQ (Ft. Worth)
Vanessa Coleman – Exide
Aileen Hooks – Baker Botts, LLP
Eric Pastor - Pastor, Behling & Wheeler, LLC

HAND DELIVERED

RECEIVED
MAY 31 2013
TCEQ Remediation Division

PBW

Consulting Engineers and Scientists

PASTOR, BEHLING & WHEELER, LLC
2201 Double Creek Drive, Suite 4004
Round Rock, TX 78664

Tel (512) 671-3434
Fax (512) 671-3446

May 30, 2013
PBW Project No. 1755

Mr. Gary Beyer
MC-127
Project Manager
Voluntary Cleanup Program – Corrective Action Section
Remediation Division
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

Re: Revised Site-specific Background Soil Concentration Evaluation
Exide Technologies Frisco Recycling Center, 7471 South 5th Street, Frisco, Texas 75034
TCEQ SWR No. 30516;EPA ID No. TXD006451090; Customer No. CN600129787; Regulated Entity No. RN100218643

Dear Mr. Beyer:

Pastor, Behling & Wheeler, LLC (PBW), on behalf of Exide Technologies (Exide), is pleased to provide herewith the results of a site-specific background soil concentration evaluation performed in support of the affected property assessment for the former operating plant at the Exide Frisco Recycling Center (the Site). This information represents an update to the previous letter regarding site-specific background concentrations submitted to you on April 12, 2013. Upon your approval, this evaluation will be included as Appendix 8 to the Affected Property Assessment Report (APAR) for the Site.

As you know, collection of background soil samples for the Site was specified in a Sampling and Analysis Work Plan (Work Plan) that was submitted to the United States Environmental Protection Agency (EPA) on November 14, 2011. This Work Plan was approved by EPA on December 2, 2011. The background study area was approved by the EPA in a meeting on January 4, 2012. Soil samples used in the April 12, 2013 site-specific background evaluation were collected from the background study area on March 29, 2012. In accordance with your verbal request, three additional soil samples were collected from the background study area on May 9, 2013. Collection, analysis and validation activities were performed in accordance with procedures described in the EPA-approved Work Plan. Sample location information, sample analytical reports, statistical evaluation results and calculation details for determination of site-specific background concentrations are provided in Appendix A to this letter. As indicated therein, the proposed site-specific background soil concentrations for arsenic and lead are 15.9 mg/kg and 31.5 mg/kg, respectively.

Please review the enclosed information and let us know if you have any questions or comments. You can contact us at (512) 671-3434 or you can reach Mr. Matt Love of Exide at (610) 921-4054.

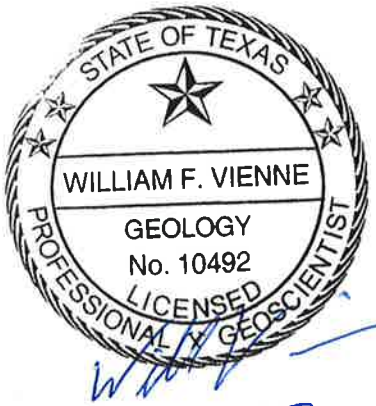
Sincerely,

PASTOR, BEHLING & WHEELER, LLC
Engineering Registration No. 4760
Geoscience Registration No. 50248

William F. Vienne, P.G.
Project Hydrogeologist

Eric F. Pastor, P.E.
Principal Engineer

cc: Mr. Paul James – EPA



5-30-13

5-30-13

APPENDIX A

SITE-SPECIFIC BACKGROUND SOIL CONCENTRATION EVALUATION

TOLERANCE LIMIT CALCULATIONS

APPENDIX A
SITE-SPECIFIC BACKGROUND SOIL CONCENTRATION EVALUATION
TOLERANCE LIMIT CALCULATIONS

Background soil samples were collected on March 29, 2012 and May 9, 2013, within an area of the City of Frisco's Grand Park near the intersection of Legacy Drive and Stonebrook Parkway (see Figures 1 and 2). The background sample area was approved by the United States Environmental Protection Agency (EPA) in a meeting on January 4, 2012. The samples were collected from a depth interval of 0 to 2 feet below ground surface. Background soil sample analytical results are summarized in Table 1. The data were validated and the data are considered usable for the intended purpose. The laboratory analytical reports and the data usability summaries are provided as Attachment 1.

Tolerance limits were calculated for background metals using the procedure described in Gibbons (1994) and the EPA Pro-UCL Technical Guide (EPA, 2010). Relevant pages from Gibbons (1994) describing this procedure are provided as Attachment 2. A step-by-step discussion of the procedure and calculations is provided below.

Step 1 – Identify outlying values using the following 5 steps (EPA, 2010):

1. Identify extreme high values that may be potential outliers;
2. Apply a statistical test;
3. Scientifically review the statistical outliers and decide on their proper disposition;
4. Conduct data analysis with and without the statistical outliers; and
5. Document the entire process.

The Dixon test, performed using EPA's *Pro UCL* statistical software package (EPA, 2010), statistically evaluated potential outliers for arsenic and lead. If multiple outliers were suspected, the test was applied to the least extreme value first and then subsequent values. The results of the outlier tests are provided in Attachment 3.

Following the above procedure, outliers were removed based on statistical analysis and professional judgment. For lead, outlying concentrations for samples 2012-BG-9 and 2012-BG-10 were excluded from tolerance limit calculations. Due to the high number of non-detect results, outlier tests and tolerance limit calculations were not performed for cadmium. The arsenic data set did not contain outliers and the full data set was utilized for tolerance limit calculations.

Step 2 - Calculate the Background Mean and Standard Deviation

After confirming the data were normally distributed, the background mean and standard deviation were calculated for arsenic and lead using EPA' s *Pro UCL* statistical software package (EPA, 2010). These parameters are summarized in Table 1.

Step 3- Calculate Tolerance Limit

Since the purpose of the tolerance limit is to identify metals concentrations that are higher than background, a one-sided upper tolerance limit was calculated. As provided in Gibbons (1994), the tolerance limit is calculated from:

TL = mean + K * (std. deviation)

Where K is a factor determined from statistical tables based on the number of samples in the background data set and the desired confidence and coverage goals. Consistent with Gibbons (1994) a 95% confidence level with 95% coverage was used. Based on these goals and background data sets of 11 samples for lead (after exclusion of 2 outliers) and 10 samples for arsenic, Table 4.2 of Gibbons (1994, see Attachment 2) was used to set K at 2.815 for the lead background data set and 2.911 for the arsenic background data set. The resultant upper tolerance limits, which are proposed as site-specific background concentrations, are listed in Table 1.

REFERENCES

Gibbons, Robert D., 1994. Statistical Methods for Groundwater Monitoring. John Wiley & Sons, Inc.

United States Environmental Protection Agency (EPA), 2010. Pro UCL Version 4.1 Statistical Software for Environmental Applications for Data Sets available at http://www.epa.gov/osp/hstl/tsc/softwaredocs.htm, Pro UCL Version 4.1 User Guide (Draft) and Pro UCL 4.1 Technical Guide (Draft). EPA 600/R-07/041. Office of Research and Development. May.

Table

TABLE 1
BACKGROUND SAMPLE SOIL ANALYTICAL AND STATISTICAL ANALYSIS RESULTS

Sample I. D.	Concentration (mg/Kg)		
	Arsenic	Cadmium	Lead
2012-BG-1	11.2	< 0.0313 UJ	13.2 J
2012-BG-2	9.29	< 0.0287 UJ	13 J
2012-BG-3	11.6	< 0.0301 UJ	11.5 J
2012-BG-4	10.8	< 0.0315 UJ	15.7 J
2012-BG-5	14.8	< 0.031 UJ	13.5 J
2012-BG-6	10.0	< 0.0314 UJ	14.3 J
2012-BG-7	9.74	< 0.031 UJ	14.1 J
2012-BG-8	9.83	0.122 J	24 J
2012-BG-9	12.6	8.09 J	*302 J*
2012-BG-10	11	< 0.615 UJ	*67.6 J*
2012-BG-11	--	--	20.6
2012-BG-12	--	--	27.5
2012-BG-13	--	--	18.9
Background Mean	11.1	Not Calculated[3]	16.9
Standard Deviation	1.64	Not Calculated[3]	5.16
K-Value	2.911	--	2.815
UTL[4]	15.9	Not Calculated[3]	31.5

Notes:

[1]All samples collected from the 0 to 2 ft below ground surface depth interval.

[2]See Figures 1 and 2 for sample locations.

[3]Statistical analysis was not performed on cadmium due to the high number of non-detect results.

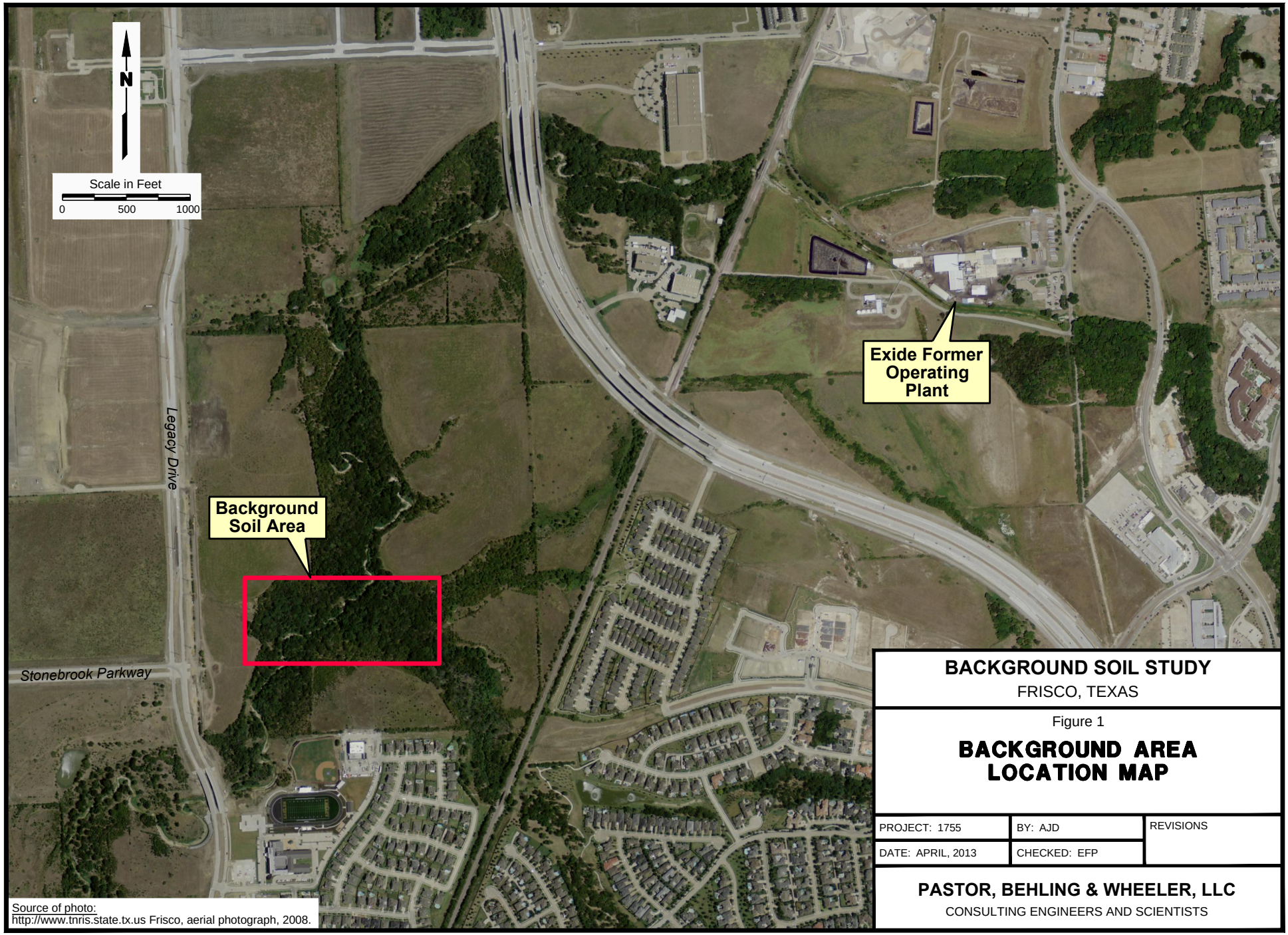
[4]UTL = upper tolerance limit

Data Qualifiers: J = estimated concentration; UJ - compound not detected at the indicated detection limit, estimated value.

mg/Kg - milligram/Kilogram

Values presented in *italic* type were excluded from background statistical analyses because they were statistically identified as outliers.

Figures



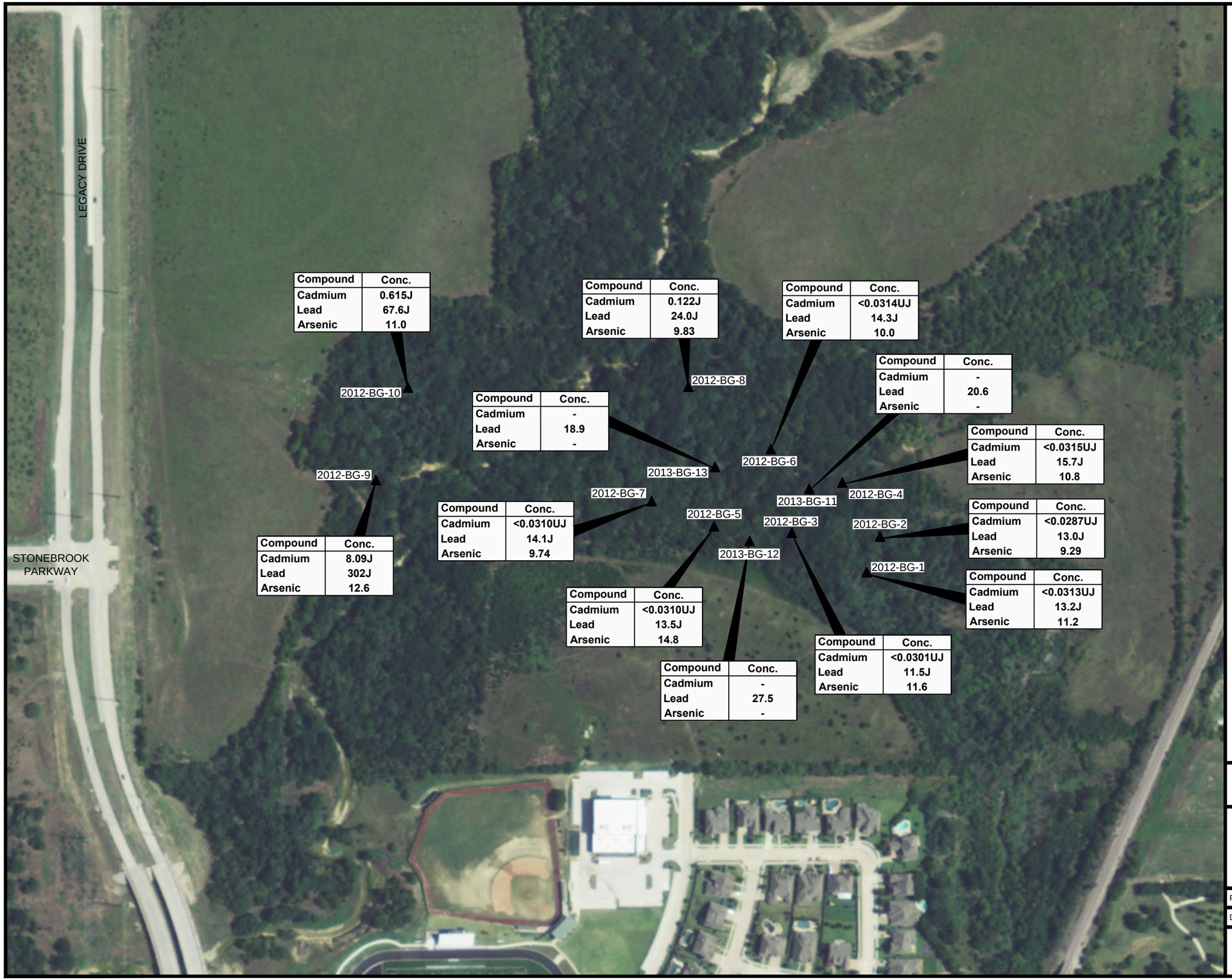
BACKGROUND SOIL STUDY
FRISCO, TEXAS

Figure 1

BACKGROUND AREA LOCATION MAP

PROJECT: 1755	BY: AJD	REVISIONS
DATE: APRIL, 2013	CHECKED: EFP	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS



EXPLANATION

▲ Soil Sample Location

Note:
1. All samples collected from a depth of 0 to 2 Ft. below ground surface.
2. All concentrations are in mg/Kg.
3. Data Qualifiers:
   J = Estimated Concentrations
   UJ = Estimated, Not-Detected

N

Scale in Feet

0 125 250

Source of photo:
http://www.tnris.state.tx.us Frisco, aerial photograph, 2010.

BACKGROUND SOIL STUDY
FRISCO, TEXAS

Figure 2

ARSENIC, CADMIUM AND LEAD IN BACKGROUND SOIL SAMPLES

PROJECT: 1755	BY: AJD	REVISIONS
DATE: MAY, 2013	CHECKED: EFP	

PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS

Attachment 1
Analytical Reports and Data Usability Summaries

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Tel: (713)690-4444

TestAmerica Job ID: 600-52867-1
Client Project/Site: Exide Recycling Center, Frisco TX Projec

For:
Pastor, Behling & Wheeler LLC
2201 Double Creek Dr
Suite 4004
Round Rock, Texas 78664

Attn: Mr. Chris Moore

Authorized for release by:
4/25/2012 3:58:18 PM
Cathy Upton
LAN Analyst
cathy.upton@testamericainc.com

Designee for

Sachin Kudchadkar
Project Manager II
sachin.kudchadkar@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Houston
TRRP Data Package Cover Page

Job Number: 600-52867-1

Project Name/Number: Exide Recycling Center, Frisco TX

This Data Package consists of:

This signature page, the laboratory review checklist, and the following Reportable Data:

- ☒ R1 Field Chain-of-Custody Form
- ☒ R2 Sample Identification Cross-reference;
- ☒ R3 Test Reports (Analytical Data Sheets) for each environmental sample that includes:
  - a) Items consistent with NELAC Chapter 5
  - b) dilution factors,
  - c) preparation methods,
  - d) cleanup methods, and
  - e) if required for the project, tentatively identified compounds (TICs).
- ☒ R4 Surrogate Recovery Data including:
  - a) Calculated recovery (%R), and
  - b) The laboratory's surrogate QC limits.
- ☒ R5 Test Reports/Summary Forms for Blank Samples;
- ☒ R6 Test Reports/Summary Forms for Laboratory Control Samples (LCSs) including:
  - a) LCS spiking amounts,
  - b) Calculated %R for each analyte, and
  - d) The laboratory's LCS QC limits
- ☒ R7 Test Reports for Matrix Spike/Matrix Spike Duplicates (MS/MSDs) including:
  - a) Samples associated with the MS/MSD clearly identified,
  - b) MS/MSD spiking amounts,
  - c) Concentration of each MS/MSD analyte measured in the parent and spiked sample,
  - d) Calculated %Rs and relative percent differences (RPDs), and
  - e) The laboratory's MS/MSD QC limits
- ☒ R8 Laboratory analytical duplicates (if applicable) recovery and precision, including:
  - a) the amount of analyte measured in the duplicate,
  - b) the calculated RPD, and
  - c) the laboratory's QC limits for analytical duplicates.
- ☒ R9 List of method quantitation limit (MQL) and detectability check sample results for each analyte for each method and matrix;
- ☒ R10 Other problems or anomalies

The exception report for each "No" or "Not Reviewed (NR)" item in the Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under Texas laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm, to the best of my knowledge, that all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Cathy Upton		04/25/2012
Name (printed)	Signature	Date
Data Delivery Analyst		
Official Title (printed)		

Appendix A (cont'd): Laboratory Review Checklist: Reportable Data

Laboratory Name: TestAmerica-Houston	LRC Date: 04/13/12
Project Name: Exide Recycling Center, Frisco TX	Laboratory Job Number: 600-52867
Reviewer Name: TWR	Prep Batch Number(s): 600-76449- ICP

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
		Chain-of-custody (C-O-C)					
R1	OI	Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?		X			1
		Were all departures from standard conditions described in an exception report?	X				
R2	OI	**Sample and quality control (QC) identification**					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**Test reports**					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?	X				
		Were bulk soil/solid samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, TICs reported?			X		
R4	O	**Surrogate recovery data**					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	OI	**Test reports/summary forms for blank samples**					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	**Laboratory control samples (LCS):**					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?			X		
R7	OI	**Matrix spike (MS) and matrix spike duplicate (MSD) data**					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			2
		Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	**Analytical duplicate data**					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?		X			3
R9	OI	**Method quantitation limits (MQLs):**					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	**Other problems/anomalies**					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference affects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Appendix A (cont'd): Laboratory Review Checklist: Reportable Data

Laboratory Name: TestAmerica-Houston	LRC Date: 04/13/12
Project Name: Exide Recycling Center, Frisco TX	Laboratory Job Number: 600-52867
Reviewer Name: TWR	Prep Batch Number(s): 600-76449- ICP

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**Initial calibration (ICAL)**					
		Were response factors and/or relative response factors for each analyte within QC limits?			X		
		Were percent RSDs or correlation coefficient criteria met?			X		
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?			X		
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	**Initial and continuing calibration verification (ICCV and CCV) and continuing calibration**					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	**Mass spectral tuning:**					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	**Internal standards (IS):**					
		Were IS area counts and retention times within the method-required QC limits?			X		
S5	OI	**Raw data (NELAC section 5.5.10)**					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?			X		
S6	O	**Dual column confirmation**					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	**Tentatively identified compounds (TICs):**					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	**Interference Check Sample (ICS) results:**					
		Were percent recoveries within method QC limits?	X				
S9	I	**Serial dilutions, post digestion spikes, and method of standard additions**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?				X	4
S10	OI	**Method detection limit (MDL) studies**					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	**Proficiency test reports:**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	**Standards documentation**					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	**Compound/analyte identification procedures**					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	**Demonstration of analyst competency (DOC)**					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**Verification/validation documentation for methods (NELAC Chapter 5)**					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory standard operating procedures (SOPs):**					
		Are laboratory SOPs current and on file for each method performed?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
3 NA = Not applicable.
4 NR = Not Reviewed.
5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Appendix A (cont'd): Laboratory Review Checklist: Exception Reports	
Laboratory Name: TestAmerica-Houston	LRC Date: 04/13/12
Project Name: Exide Recycling Center, Frisco TX	Laboratory Job Number: 600-52867
Reviewer Name: TWR	Prep Batch Number(s): 600-76449- ICP

ER #[1]	DESCRIPTION
1	See Case Narrative
2	The lead recoveries in samples 52867-10 MS and MSD were above acceptance limits due to matrix interference. Method performance is demonstrated by an acceptable LCS recovery.
3	The cadmium and lead RPDs between samples 52867-1 and 52867-1 MD were above acceptance limits due to the non-homogenous nature of the samples.
4	The lead percent difference between samples 52867-1 and 52867-1 SD was above acceptance limits due to matrix interference.

ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked on the LRC)

Detection Check Standard

Matrix:	Soil
Method:	6010B
Preparation:	3050
Date Analyzed:	3/28/2012
Date Prepared:	3/27/2012
Instrument:	Thermo 6500
TALS Batches:	75833
Prep/Reagent Factor =	50
Units:	mg/kg

Analyte	MDL	DCS Spike	Measured Result	MQL
Aluminum	0.299654	0.5	0.315	25
Antimony	0.231553	0.45	0.485	2.5
Arsenic	0.217923	0.5	0.43	1
Barium	0.011322	0.03	0.02	1
Beryllium	0.014513	0.02	0.02	0.25
Boron	0.385535	0.6	0.755	20
Cadmium	0.025642	0.05	0.045	0.25
Calcium	0.86399	1.5	2.88	100
Chromium	0.050606	0.1	0.1	0.5
Cobalt	0.067622	0.1	0.095	0.5
Copper	0.173703	0.5	0.43	0.5
Iron	2.534007	4	3.77	20
Lithium	0.007932	0.01	0.04	10
Lead	0.104832	0.2	0.2	0.5
Selenium	0.258884	0.5	0.555	2
Manganese	0.038111	0.05	0.065	1.5
Molybdenum	0.136448	0.35	0.345	0.5
Nickel	0.116599	0.15	0.145	1
Silver	0.118848	0.2	0.19	0.5
Sodium	0.885548	2.4	2.215	100
Strontium	0.00252	0.005	0.965	0.25
Thallium	0.276988	0.7	0.595	1.5
Tin	0.08729	0.15	0.14	1
Titanium	0.014529	0.03	0.045	0.5
Vanadium	0.079068	0.15	0.195	0.5
Zinc	0.108432	0.2	0.34	1.5

Case Narrative

Client: Pastor, Behling & Wheeler LLC
Project/Site: Exide Recycling Center, Frisco TX Projec

TestAmerica Job ID: 600-52867-1

Job ID: 600-52867-1

Laboratory: TestAmerica Houston

Narrative

Job Narrative
600-52867-1

Comments
No additional comments.

Receipt
The samples were received on 3/30/2012 9:31 AM; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 9.00 C.

Except:

The following sample(s) was received at the laboratory outside the required temperature criteria: 2012-BG-1 (600-52867-1), 2012-BG-10 (600-52867-9), 2012-BG-2 (600-52867-2), 2012-BG-3 (600-52867-3), 2012-BG-4 (600-52867-7), 2012-BG-5 (600-52867-6), 2012-BG-6 (600-52867-8), 2012-BG-7 (600-52867-4), 2012-BG-8 (600-52867-10), 2012-BG-9 (600-52867-5).

The container label for the following sample(s) did not match the information listed on the Chain-of-Custody (COC): 2012-BG-8 (600-52867-10). The container labels list 2012-BG-8. The COC lists 2012-BG-10.

Method Summary

Client: Pastor, Behling & Wheeler LLC
Project/Site: Exide Recycling Center, Frisco TX Projec

TestAmerica Job ID: 600-52867-1

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL HOU
Moisture	Percent Moisture	EPA	TAL HOU

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Sample Summary

Client: Pastor, Behling & Wheeler LLC
Project/Site: Exide Recycling Center, Frisco TX Projec

TestAmerica Job ID: 600-52867-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
600-52867-1	2012-BG-1	Solid	03/29/12 08:18	03/30/12 09:31
600-52867-2	2012-BG-2	Solid	03/29/12 08:40	03/30/12 09:31
600-52867-3	2012-BG-3	Solid	03/29/12 09:00	03/30/12 09:31
600-52867-4	2012-BG-7	Solid	03/29/12 09:46	03/30/12 09:31
600-52867-5	2012-BG-9	Solid	03/29/12 10:20	03/30/12 09:31
600-52867-6	2012-BG-5	Solid	03/29/12 11:25	03/30/12 09:31
600-52867-7	2012-BG-4	Solid	03/29/12 15:16	03/30/12 09:31
600-52867-8	2012-BG-6	Solid	03/29/12 15:32	03/30/12 09:31
600-52867-9	2012-BG-10	Solid	03/29/12 16:20	03/30/12 09:31
600-52867-10	2012-BG-8	Solid	03/29/12 16:25	03/30/12 09:31

Client Sample Results

Client: Pastor, Behling & Wheeler LLC
Project/Site: Exide Recycling Center, Frisco TX Projec

TestAmerica Job ID: 600-52867-1

Client Sample ID: 2012-BG-1

Lab Sample ID: 600-52867-1
Date Collected: 03/29/12 08:18
Matrix: Solid
Date Received: 03/30/12 09:31
Percent Solids: 77.2

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.0313	U	0.305	0.0313	mg/Kg	☼	04/04/12 14:49	04/05/12 09:26	1
Lead	**13.2**		0.611	0.128	mg/Kg	☼	04/04/12 14:49	04/05/12 09:26	1
Arsenic	**11.2**		1.22	0.266	mg/Kg	☼	04/04/12 14:49	04/05/12 09:26	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**23**		1.0	1.0	%			04/02/12 13:22	1
Percent Solids	**77**		1.0	1.0	%			04/02/12 13:22	1

Client Sample ID: 2012-BG-2

Lab Sample ID: 600-52867-2
Date Collected: 03/29/12 08:40
Matrix: Solid
Date Received: 03/30/12 09:31
Percent Solids: 85.0

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.0287	U	0.280	0.0287	mg/Kg	☼	04/04/12 14:49	04/05/12 09:30	1
Lead	**13.0**		0.560	0.117	mg/Kg	☼	04/04/12 14:49	04/05/12 09:30	1
Arsenic	**9.29**		1.12	0.244	mg/Kg	☼	04/04/12 14:49	04/05/12 09:30	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**15**		1.0	1.0	%			04/02/12 13:22	1
Percent Solids	**85**		1.0	1.0	%			04/02/12 13:22	1

Client Sample ID: 2012-BG-3

Lab Sample ID: 600-52867-3
Date Collected: 03/29/12 09:00
Matrix: Solid
Date Received: 03/30/12 09:31
Percent Solids: 80.3

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.0301	U	0.294	0.0301	mg/Kg	☼	04/04/12 14:49	04/05/12 09:42	1
Lead	**11.5**		0.588	0.123	mg/Kg	☼	04/04/12 14:49	04/05/12 09:42	1
Arsenic	**11.6**		1.18	0.256	mg/Kg	☼	04/04/12 14:49	04/05/12 09:42	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**20**		1.0	1.0	%			04/02/12 13:22	1
Percent Solids	**80**		1.0	1.0	%			04/02/12 13:22	1

Client Sample ID: 2012-BG-7

Lab Sample ID: 600-52867-4
Date Collected: 03/29/12 09:46
Matrix: Solid
Date Received: 03/30/12 09:31
Percent Solids: 78.8

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.0310	U	0.302	0.0310	mg/Kg	☼	04/04/12 14:49	04/05/12 09:46	1
Lead	**14.1**		0.604	0.127	mg/Kg	☼	04/04/12 14:49	04/05/12 09:46	1
Arsenic	**9.74**		1.21	0.263	mg/Kg	☼	04/04/12 14:49	04/05/12 09:46	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**21**		1.0	1.0	%			04/02/12 13:22	1

Client Sample Results

Client: Pastor, Behling & Wheeler LLC
Project/Site: Exide Recycling Center, Frisco TX Projec

TestAmerica Job ID: 600-52867-1

Client Sample ID: 2012-BG-7

Lab Sample ID: 600-52867-4
Date Collected: 03/29/12 09:46
Matrix: Solid
Date Received: 03/30/12 09:31

General Chemistry (Continued)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	79		1.0	1.0	%			04/02/12 13:22	1

Client Sample ID: 2012-BG-9

Lab Sample ID: 600-52867-5
Date Collected: 03/29/12 10:20
Matrix: Solid
Date Received: 03/30/12 09:31
Percent Solids: 80.6

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	8.09		0.310	0.0318	mg/Kg	☼	04/04/12 14:49	04/05/12 09:49	1
Lead	302		0.620	0.130	mg/Kg	☼	04/04/12 14:49	04/05/12 09:49	1
Arsenic	12.6		1.24	0.270	mg/Kg	☼	04/04/12 14:49	04/05/12 09:49	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	19		1.0	1.0	%			04/02/12 13:22	1
Percent Solids	81		1.0	1.0	%			04/02/12 13:22	1

Client Sample ID: 2012-BG-5

Lab Sample ID: 600-52867-6
Date Collected: 03/29/12 11:25
Matrix: Solid
Date Received: 03/30/12 09:31
Percent Solids: 81.2

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.0310	U	0.302	0.0310	mg/Kg	☼	04/04/12 14:49	04/05/12 09:53	1
Lead	13.5		0.604	0.127	mg/Kg	☼	04/04/12 14:49	04/05/12 09:53	1
Arsenic	14.8		1.21	0.263	mg/Kg	☼	04/04/12 14:49	04/05/12 09:53	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	19		1.0	1.0	%			04/02/12 13:22	1
Percent Solids	81		1.0	1.0	%			04/02/12 13:22	1

Client Sample ID: 2012-BG-4

Lab Sample ID: 600-52867-7
Date Collected: 03/29/12 15:16
Matrix: Solid
Date Received: 03/30/12 09:31
Percent Solids: 77.6

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.0315	U	0.307	0.0315	mg/Kg	☼	04/04/12 14:49	04/05/12 09:57	1
Lead	15.7		0.614	0.129	mg/Kg	☼	04/04/12 14:49	04/05/12 09:57	1
Arsenic	10.8		1.23	0.268	mg/Kg	☼	04/04/12 14:49	04/05/12 09:57	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	22		1.0	1.0	%			04/02/12 13:22	1
Percent Solids	78		1.0	1.0	%			04/02/12 13:22	1

Client Sample Results

Client: Pastor, Behling & Wheeler LLC
Project/Site: Exide Recycling Center, Frisco TX Projec

TestAmerica Job ID: 600-52867-1

Client Sample ID: 2012-BG-6

Lab Sample ID: 600-52867-8
Date Collected: 03/29/12 15:32
Matrix: Solid
Date Received: 03/30/12 09:31
Percent Solids: 78.6

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.0314	U	0.306	0.0314	mg/Kg	☼	04/04/12 14:49	04/05/12 10:01	1
Lead	14.3		0.612	0.128	mg/Kg	☼	04/04/12 14:49	04/05/12 10:01	1
Arsenic	10.0		1.22	0.267	mg/Kg	☼	04/04/12 14:49	04/05/12 10:01	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	21		1.0	1.0	%			04/02/12 13:22	1
Percent Solids	79		1.0	1.0	%			04/02/12 13:22	1

Client Sample ID: 2012-BG-10

Lab Sample ID: 600-52867-9
Date Collected: 03/29/12 16:20
Matrix: Solid
Date Received: 03/30/12 09:31
Percent Solids: 79.2

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.615		0.303	0.0311	mg/Kg	☼	04/04/12 14:49	04/05/12 10:05	1
Lead	67.6		0.607	0.127	mg/Kg	☼	04/04/12 14:49	04/05/12 10:05	1
Arsenic	11.0		1.21	0.264	mg/Kg	☼	04/04/12 14:49	04/05/12 10:05	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	21		1.0	1.0	%			04/02/12 13:22	1
Percent Solids	79		1.0	1.0	%			04/02/12 13:22	1

Client Sample ID: 2012-BG-8

Lab Sample ID: 600-52867-10
Date Collected: 03/29/12 16:25
Matrix: Solid
Date Received: 03/30/12 09:31
Percent Solids: 79.7

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.122	J	0.308	0.0316	mg/Kg	☼	04/04/12 14:49	04/05/12 10:09	1
Lead	24.0		0.615	0.129	mg/Kg	☼	04/04/12 14:49	04/05/12 10:09	1
Arsenic	9.83		1.23	0.268	mg/Kg	☼	04/04/12 14:49	04/05/12 10:09	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	20		1.0	1.0	%			04/02/12 13:22	1
Percent Solids	80		1.0	1.0	%			04/02/12 13:22	1

Definitions/Glossary

Client: Pastor, Behling & Wheeler LLC
Project/Site: Exide Recycling Center, Frisco TX Projec

TestAmerica Job ID: 600-52867-1

Qualifiers

Metals

Qualifier	Qualifier Description
U	Analyte was not detected at or above the SDL.
J	Result is less than the MQL but greater than or equal to the SDL and the concentration is an estimated value.
F	Duplicate RPD exceeds the control limit
N	MS, MSD: Spike recovery exceeds upper or lower control limits.

Glossary

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

QC Sample Results

Client: Pastor, Behling & Wheeler LLC
Project/Site: Exide Recycling Center, Frisco TX Projec

TestAmerica Job ID: 600-52867-1

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 600-76449/1-A
Matrix: Solid
Analysis Batch: 76526

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 76449

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.0256	U	0.250	0.0256	mg/Kg		04/04/12 14:49	04/05/12 08:56	1
Lead	0.105	U	0.500	0.105	mg/Kg		04/04/12 14:49	04/05/12 08:56	1
Arsenic	0.218	U	1.00	0.218	mg/Kg		04/04/12 14:49	04/05/12 08:56	1

Lab Sample ID: LCS 600-76449/2-A
Matrix: Solid
Analysis Batch: 76526

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 76449

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	71.0	68.92		mg/Kg		97	81 - 119
Lead	144	138.8		mg/Kg		96	79 - 121
Arsenic	138	138.4		mg/Kg		100	78 - 122

Lab Sample ID: 600-52867-10 MS
Matrix: Solid
Analysis Batch: 76526

Client Sample ID: 2012-BG-8
Prep Type: Total/NA
Prep Batch: 76449

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	0.122	J	30.8	26.61		mg/Kg	☼	86	75 - 125
Lead	24.0		61.5	163.2	N	mg/Kg	☼	226	75 - 125
Arsenic	9.83		61.5	63.80		mg/Kg	☼	88	75 - 125

Lab Sample ID: 600-52867-10 MSD
Matrix: Solid
Analysis Batch: 76526

Client Sample ID: 2012-BG-8
Prep Type: Total/NA
Prep Batch: 76449

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	0.122	J	29.6	24.72		mg/Kg	☼	83	75 - 125	7	20
Lead	24.0		59.2	145.7	N	mg/Kg	☼	206	75 - 125	11	20
Arsenic	9.83		59.2	61.49		mg/Kg	☼	87	75 - 125	4	20

Lab Sample ID: 600-52867-10 DU
Matrix: Solid
Analysis Batch: 76526

Client Sample ID: 2012-BG-8
Prep Type: Total/NA
Prep Batch: 76449

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cadmium	0.122	J	0.9071	F	mg/Kg	☼	153	20
Lead	24.0		63.49	F	mg/Kg	☼	90	20
Arsenic	9.83		10.04		mg/Kg	☼	2	20

Method: Moisture - Percent Moisture

Lab Sample ID: 600-52867-5 DU
Matrix: Solid
Analysis Batch: 76213

Client Sample ID: 2012-BG-9
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	19		21		%		6	
Percent Solids	81		79		%		2	

Unadjusted Detection Limits

Client: Pastor, Behling & Wheeler LLC
Project/Site: Exide Recycling Center, Frisco TX Projec

TestAmerica Job ID: 600-52867-1

Method: 6010B - Metals (ICP)

Analyte	MQL	MDL	Units	Method
Arsenic	1.00	0.218	mg/Kg	6010B
Cadmium	0.250	0.0256	mg/Kg	6010B
Lead	0.500	0.105	mg/Kg	6010B

General Chemistry

Analyte	MQL	MDL	Units	Method
Percent Moisture	1.0	1.0	%	Moisture
Percent Solids	1.0	1.0	%	Moisture

QC Association Summary

Client: Pastor, Behling & Wheeler LLC
Project/Site: Exide Recycling Center, Frisco TX Projec

TestAmerica Job ID: 600-52867-1

Metals

Prep Batch: 76449

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-52867-1	2012-BG-1	Total/NA	Solid	3050B	
600-52867-2	2012-BG-2	Total/NA	Solid	3050B	
600-52867-3	2012-BG-3	Total/NA	Solid	3050B	
600-52867-4	2012-BG-7	Total/NA	Solid	3050B	
600-52867-5	2012-BG-9	Total/NA	Solid	3050B	
600-52867-6	2012-BG-5	Total/NA	Solid	3050B	
600-52867-7	2012-BG-4	Total/NA	Solid	3050B	
600-52867-8	2012-BG-6	Total/NA	Solid	3050B	
600-52867-9	2012-BG-10	Total/NA	Solid	3050B	
600-52867-10	2012-BG-8	Total/NA	Solid	3050B	
600-52867-10 DU	2012-BG-8	Total/NA	Solid	3050B	
600-52867-10 MS	2012-BG-8	Total/NA	Solid	3050B	
600-52867-10 MSD	2012-BG-8	Total/NA	Solid	3050B	
LCS 600-76449/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 600-76449/1-A	Method Blank	Total/NA	Solid	3050B	

Analysis Batch: 76526

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-52867-1	2012-BG-1	Total/NA	Solid	6010B	76449
600-52867-2	2012-BG-2	Total/NA	Solid	6010B	76449
600-52867-3	2012-BG-3	Total/NA	Solid	6010B	76449
600-52867-4	2012-BG-7	Total/NA	Solid	6010B	76449
600-52867-5	2012-BG-9	Total/NA	Solid	6010B	76449
600-52867-6	2012-BG-5	Total/NA	Solid	6010B	76449
600-52867-7	2012-BG-4	Total/NA	Solid	6010B	76449
600-52867-8	2012-BG-6	Total/NA	Solid	6010B	76449
600-52867-9	2012-BG-10	Total/NA	Solid	6010B	76449
600-52867-10	2012-BG-8	Total/NA	Solid	6010B	76449
600-52867-10 DU	2012-BG-8	Total/NA	Solid	6010B	76449
600-52867-10 MS	2012-BG-8	Total/NA	Solid	6010B	76449
600-52867-10 MSD	2012-BG-8	Total/NA	Solid	6010B	76449
LCS 600-76449/2-A	Lab Control Sample	Total/NA	Solid	6010B	76449
MB 600-76449/1-A	Method Blank	Total/NA	Solid	6010B	76449

General Chemistry

Analysis Batch: 76213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-52867-1	2012-BG-1	Total/NA	Solid	Moisture	
600-52867-2	2012-BG-2	Total/NA	Solid	Moisture	
600-52867-3	2012-BG-3	Total/NA	Solid	Moisture	
600-52867-4	2012-BG-7	Total/NA	Solid	Moisture	
600-52867-5	2012-BG-9	Total/NA	Solid	Moisture	
600-52867-5 DU	2012-BG-9	Total/NA	Solid	Moisture	
600-52867-6	2012-BG-5	Total/NA	Solid	Moisture	
600-52867-7	2012-BG-4	Total/NA	Solid	Moisture	
600-52867-8	2012-BG-6	Total/NA	Solid	Moisture	
600-52867-9	2012-BG-10	Total/NA	Solid	Moisture	
600-52867-10	2012-BG-8	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Pastor, Behling & Wheeler LLC
Project/Site: Exide Recycling Center, Frisco TX Projec

TestAmerica Job ID: 600-52867-1

Client Sample ID: 2012-BG-1

Lab Sample ID: 600-52867-1

Date Collected: 03/29/12 08:18
Matrix: Solid
Date Received: 03/30/12 09:31
Percent Solids: 77.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			76449	04/04/12 14:49	NER	TAL HOU
Total/NA	Analysis	6010B		1	76526	04/05/12 09:26	DCL	TAL HOU
Total/NA	Analysis	Moisture		1	76213	04/02/12 13:22	KRD	TAL HOU

Client Sample ID: 2012-BG-2

Lab Sample ID: 600-52867-2

Date Collected: 03/29/12 08:40
Matrix: Solid
Date Received: 03/30/12 09:31
Percent Solids: 85.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			76449	04/04/12 14:49	NER	TAL HOU
Total/NA	Analysis	6010B		1	76526	04/05/12 09:30	DCL	TAL HOU
Total/NA	Analysis	Moisture		1	76213	04/02/12 13:22	KRD	TAL HOU

Client Sample ID: 2012-BG-3

Lab Sample ID: 600-52867-3

Date Collected: 03/29/12 09:00
Matrix: Solid
Date Received: 03/30/12 09:31
Percent Solids: 80.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			76449	04/04/12 14:49	NER	TAL HOU
Total/NA	Analysis	6010B		1	76526	04/05/12 09:42	DCL	TAL HOU
Total/NA	Analysis	Moisture		1	76213	04/02/12 13:22	KRD	TAL HOU

Client Sample ID: 2012-BG-7

Lab Sample ID: 600-52867-4

Date Collected: 03/29/12 09:46
Matrix: Solid
Date Received: 03/30/12 09:31
Percent Solids: 78.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			76449	04/04/12 14:49	NER	TAL HOU
Total/NA	Analysis	6010B		1	76526	04/05/12 09:46	DCL	TAL HOU
Total/NA	Analysis	Moisture		1	76213	04/02/12 13:22	KRD	TAL HOU

Client Sample ID: 2012-BG-9

Lab Sample ID: 600-52867-5

Date Collected: 03/29/12 10:20
Matrix: Solid
Date Received: 03/30/12 09:31
Percent Solids: 80.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			76449	04/04/12 14:49	NER	TAL HOU
Total/NA	Analysis	6010B		1	76526	04/05/12 09:49	DCL	TAL HOU
Total/NA	Analysis	Moisture		1	76213	04/02/12 13:22	KRD	TAL HOU

Lab Chronicle

Client: Pastor, Behling & Wheeler LLC
Project/Site: Exide Recycling Center, Frisco TX Projec

TestAmerica Job ID: 600-52867-1

Client Sample ID: 2012-BG-5

Lab Sample ID: 600-52867-6

Date Collected: 03/29/12 11:25
Matrix: Solid
Date Received: 03/30/12 09:31
Percent Solids: 81.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			76449	04/04/12 14:49	NER	TAL HOU
Total/NA	Analysis	6010B		1	76526	04/05/12 09:53	DCL	TAL HOU
Total/NA	Analysis	Moisture		1	76213	04/02/12 13:22	KRD	TAL HOU

Client Sample ID: 2012-BG-4

Lab Sample ID: 600-52867-7

Date Collected: 03/29/12 15:16
Matrix: Solid
Date Received: 03/30/12 09:31
Percent Solids: 77.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			76449	04/04/12 14:49	NER	TAL HOU
Total/NA	Analysis	6010B		1	76526	04/05/12 09:57	DCL	TAL HOU
Total/NA	Analysis	Moisture		1	76213	04/02/12 13:22	KRD	TAL HOU

Client Sample ID: 2012-BG-6

Lab Sample ID: 600-52867-8

Date Collected: 03/29/12 15:32
Matrix: Solid
Date Received: 03/30/12 09:31
Percent Solids: 78.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			76449	04/04/12 14:49	NER	TAL HOU
Total/NA	Analysis	6010B		1	76526	04/05/12 10:01	DCL	TAL HOU
Total/NA	Analysis	Moisture		1	76213	04/02/12 13:22	KRD	TAL HOU

Client Sample ID: 2012-BG-10

Lab Sample ID: 600-52867-9

Date Collected: 03/29/12 16:20
Matrix: Solid
Date Received: 03/30/12 09:31
Percent Solids: 79.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			76449	04/04/12 14:49	NER	TAL HOU
Total/NA	Analysis	6010B		1	76526	04/05/12 10:05	DCL	TAL HOU
Total/NA	Analysis	Moisture		1	76213	04/02/12 13:22	KRD	TAL HOU

Client Sample ID: 2012-BG-8

Lab Sample ID: 600-52867-10

Date Collected: 03/29/12 16:25
Matrix: Solid
Date Received: 03/30/12 09:31
Percent Solids: 79.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			76449	04/04/12 14:49	NER	TAL HOU
Total/NA	Analysis	6010B		1	76526	04/05/12 10:09	DCL	TAL HOU
Total/NA	Analysis	Moisture		1	76213	04/02/12 13:22	KRD	TAL HOU

Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Certification Summary

Client: Pastor, Behling & Wheeler LLC
Project/Site: Exide Recycling Center, Frisco TX Projec

TestAmerica Job ID: 600-52867-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Houston	Arkansas DEQ	State Program	6	88-0759
TestAmerica Houston	Louisiana	NELAC	6	30643
TestAmerica Houston	Oklahoma	State Program	6	9503
TestAmerica Houston	Texas	NELAC	6	T104704223-10-6-TX
TestAmerica Houston	USDA	Federal		P330-08-00217
TestAmerica Houston	Utah	NELAC	8	GULF

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Houston Job Number: 600-52867-1

SDG No.:

Project: Exide Recycling Center, Frisco TX Projec

Client Sample ID	Lab Sample ID
2012-BG-1	600-52867-1
2012-BG-2	600-52867-2
2012-BG-3	600-52867-3
2012-BG-7	600-52867-4
2012-BG-9	600-52867-5
2012-BG-5	600-52867-6
2012-BG-4	600-52867-7
2012-BG-6	600-52867-8
2012-BG-10	600-52867-9
2012-BG-8	600-52867-10

Comments:

1A-IN

INORGANIC ANALYSIS DATA SHEET

METALS

Client Sample ID: 2012-BG-1 Lab Sample ID: 600-52867-1

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG ID.:

Matrix: Solid Date Sampled: 03/29/2012 08:18

Reporting Basis: DRY Date Received: 03/30/2012 09:31

% Solids: 77.2

CAS No.	Analyte	Result	MQL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	0.0313	0.305	0.0313	mg/Kg	U		1	6010B
7439-92-1	Lead	13.2	0.611	0.128	mg/Kg			1	6010B
7440-38-2	Arsenic	11.2	1.22	0.266	mg/Kg			1	6010B

1A-IN

INORGANIC ANALYSIS DATA SHEET

METALS

Client Sample ID: 2012-BG-2 Lab Sample ID: 600-52867-2

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG ID.:

Matrix: Solid Date Sampled: 03/29/2012 08:40

Reporting Basis: DRY Date Received: 03/30/2012 09:31

% Solids: 85.0

CAS No.	Analyte	Result	MQL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	0.0287	0.280	0.0287	mg/Kg	U		1	6010B
7439-92-1	Lead	13.0	0.560	0.117	mg/Kg			1	6010B
7440-38-2	Arsenic	9.29	1.12	0.244	mg/Kg			1	6010B

1A-IN

INORGANIC ANALYSIS DATA SHEET

METALS

Client Sample ID: 2012-BG-3 Lab Sample ID: 600-52867-3

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG ID.:

Matrix: Solid Date Sampled: 03/29/2012 09:00

Reporting Basis: DRY Date Received: 03/30/2012 09:31

% Solids: 80.3

CAS No.	Analyte	Result	MQL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	0.0301	0.294	0.0301	mg/Kg	U		1	6010B
7439-92-1	Lead	11.5	0.588	0.123	mg/Kg			1	6010B
7440-38-2	Arsenic	11.6	1.18	0.256	mg/Kg			1	6010B

1A-IN

INORGANIC ANALYSIS DATA SHEET

METALS

Client Sample ID: 2012-BG-7 Lab Sample ID: 600-52867-4

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG ID.:

Matrix: Solid Date Sampled: 03/29/2012 09:46

Reporting Basis: DRY Date Received: 03/30/2012 09:31

% Solids: 78.8

CAS No.	Analyte	Result	MQL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	0.0310	0.302	0.0310	mg/Kg	U		1	6010B
7439-92-1	Lead	14.1	0.604	0.127	mg/Kg			1	6010B
7440-38-2	Arsenic	9.74	1.21	0.263	mg/Kg			1	6010B

1A-IN

INORGANIC ANALYSIS DATA SHEET

METALS

Client Sample ID: 2012-BG-9 Lab Sample ID: 600-52867-5

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG ID.:

Matrix: Solid Date Sampled: 03/29/2012 10:20

Reporting Basis: DRY Date Received: 03/30/2012 09:31

% Solids: 80.6

CAS No.	Analyte	Result	MQL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	8.09	0.310	0.0318	mg/Kg			1	6010B
7439-92-1	Lead	302	0.620	0.130	mg/Kg			1	6010B
7440-38-2	Arsenic	12.6	1.24	0.270	mg/Kg			1	6010B

1A-IN

INORGANIC ANALYSIS DATA SHEET

METALS

Client Sample ID: 2012-BG-5 Lab Sample ID: 600-52867-6

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG ID.:

Matrix: Solid Date Sampled: 03/29/2012 11:25

Reporting Basis: DRY Date Received: 03/30/2012 09:31

% Solids: 81.2

CAS No.	Analyte	Result	MQL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	0.0310	0.302	0.0310	mg/Kg	U		1	6010B
7439-92-1	Lead	13.5	0.604	0.127	mg/Kg			1	6010B
7440-38-2	Arsenic	14.8	1.21	0.263	mg/Kg			1	6010B

1A-IN

INORGANIC ANALYSIS DATA SHEET

METALS

Client Sample ID: 2012-BG-4 Lab Sample ID: 600-52867-7

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG ID.:

Matrix: Solid Date Sampled: 03/29/2012 15:16

Reporting Basis: DRY Date Received: 03/30/2012 09:31

% Solids: 77.6

CAS No.	Analyte	Result	MQL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	0.0315	0.307	0.0315	mg/Kg	U		1	6010B
7439-92-1	Lead	15.7	0.614	0.129	mg/Kg			1	6010B
7440-38-2	Arsenic	10.8	1.23	0.268	mg/Kg			1	6010B

1A-IN

INORGANIC ANALYSIS DATA SHEET

METALS

Client Sample ID: 2012-BG-6 Lab Sample ID: 600-52867-8

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG ID.:

Matrix: Solid Date Sampled: 03/29/2012 15:32

Reporting Basis: DRY Date Received: 03/30/2012 09:31

% Solids: 78.6

CAS No.	Analyte	Result	MQL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	0.0314	0.306	0.0314	mg/Kg	U		1	6010B
7439-92-1	Lead	14.3	0.612	0.128	mg/Kg			1	6010B
7440-38-2	Arsenic	10.0	1.22	0.267	mg/Kg			1	6010B

1A-IN

INORGANIC ANALYSIS DATA SHEET

METALS

Client Sample ID: 2012-BG-10 Lab Sample ID: 600-52867-9

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG ID.:

Matrix: Solid Date Sampled: 03/29/2012 16:20

Reporting Basis: DRY Date Received: 03/30/2012 09:31

% Solids: 79.2

CAS No.	Analyte	Result	MQL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	0.615	0.303	0.0311	mg/Kg			1	6010B
7439-92-1	Lead	67.6	0.607	0.127	mg/Kg			1	6010B
7440-38-2	Arsenic	11.0	1.21	0.264	mg/Kg			1	6010B

1A-IN

INORGANIC ANALYSIS DATA SHEET

METALS

Client Sample ID: 2012-BG-8 Lab Sample ID: 600-52867-10

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG ID.:

Matrix: Solid Date Sampled: 03/29/2012 16:25

Reporting Basis: DRY Date Received: 03/30/2012 09:31

% Solids: 79.7

CAS No.	Analyte	Result	MQL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium	0.122	0.308	0.0316	mg/Kg	J		1	6010B
7439-92-1	Lead	24.0	0.615	0.129	mg/Kg			1	6010B
7440-38-2	Arsenic	9.83	1.23	0.268	mg/Kg			1	6010B

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG No.:

ICV Source: MET0412CCV_00001 Concentration Units: mg/L

CCV Source: MET0412CCV_00001

Analyte	ICV 600-76526/4 04/05/2012 08:23				CCV 600-76526/9 04/05/2012 08:42				CCV 600-76526/21 04/05/2012 09:34			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Arsenic	0.5109		0.500	102	0.5084		0.500	102	0.5001		0.500	100
Cadmium	0.5118		0.500	102	0.5089		0.500	102	0.5069		0.500	101
Lead	0.5079		0.500	102	0.5043		0.500	101	0.4950		0.500	99

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG No.:

ICV Source: MET0412CCV_00001 Concentration Units: mg/L

CCV Source: MET0412CCV_00001

Analyte	CCV 600-76526/33 04/05/2012 10:20				CCV 600-76526/45 04/05/2012 11:06							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Arsenic	0.5046		0.500	101	0.5057		0.500	101				
Cadmium	0.5125		0.500	102	0.5188		0.500	104				
Lead	0.4987		0.500	100	0.4979		0.500	100				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG No.:

Method: 6010B Instrument ID: TJA1

Lab Sample ID: CRI 600-76526/6 Concentration Units: mg/L

CRQL Check Standard Source: MET0212LOW_00003

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Cadmium	0.00500	0.005300		106	0-500
Lead	0.0100	0.009440	J	94	0-500
Arsenic	0.0100	0.01147	J	115	0-500

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG No.:

Concentration Units: mg/L

Analyte	RL	ICB 600-76526/5 04/05/2012 08:27		CCB 600-76526/10 04/05/2012 08:46		CCB 600-76526/22 04/05/2012 09:38		CCB 600-76526/34 04/05/2012 10:24	
		Found	C	Found	C	Found	C	Found	C
Arsenic	0.0200	0.00328	U	0.00328	U	0.00328	U	0.00328	U
Cadmium	0.00500	0.000730	U	0.000730	U	0.000730	U	0.000730	U
Lead	0.0100	0.00290	U	0.00290	U	0.00290	U	0.00290	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG No.:

Concentration Units: mg/L

Analyte	RL	CCB 600-76526/46 04/05/2012 11:10							
		Found	C	Found	C	Found	C	Found	C
Arsenic	0.0200	0.00328	U						
Cadmium	0.00500	0.000730	U						
Lead	0.0100	0.00290	U						

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG No.:

Concentration Units: mg/Kg Lab Sample ID: MB 600-76449/1-A

Instrument Code: TJA1 Batch No.: 76526

CAS No.	Analyte	Concentration	C	Q	Method
7440-43-9	Cadmium	0.0256	U		6010B
7439-92-1	Lead	0.105	U		6010B
7440-38-2	Arsenic	0.218	U		6010B

FORM III-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG No.:

Lab Sample ID: ICSA 600-76526/7 Instrument ID: TJA1

Lab File ID: A040512 ICS Source: METISA_00072

Concentration Units: mg/L

Analyte	True Solution A	Found Solution A	Found Percent Recovery
Arsenic		**0.0006**	
Cadmium		**-0.0038**	
Lead		**0.0048**	
Aluminum	*500*	*496*	*99*
Antimony		*0.0033*	
Barium		*0.0014*	
Beryllium		*-0.0001*	
Boron		*-0.0038*	
Calcium	*500*	*447*	*89*
Chromium		*0.0018*	
Cobalt		*-0.0006*	
Copper		*0.0125*	
Iron	*200*	*194*	*97*
Lithium		*0.0042*	
Magnesium	*500*	*511*	*102*
Manganese		*-0.0078*	
Molybdenum		*0.0003*	
Nickel		*-0.0006*	
Potassium		*0.0420*	
Selenium		*-0.0050*	
Silicon		*0.0106*	
Silver		*-0.0006*	
Sodium		*0.155*	
Strontium		*-0.0091*	
Thallium		*-0.0127*	
Tin		*-0.0016*	
Titanium		*-0.0034*	
Vanadium		*0.0031*	
Zinc		*-0.0052*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG No.:

Lab Sample ID: ICSAB 600-76526/8 Instrument ID: TJA1

Lab File ID: A040512 ICS Source: METISB_00074

Concentration Units: mg/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Arsenic	**1.00**	**1.04**	**104**
Cadmium	**0.500**	**0.478**	**96**
Lead	**1.00**	**0.994**	**99**
Aluminum	*510*	*510*	*100*
Antimony	*1.00*	*1.06*	*106*
Barium	*1.00*	*1.05*	*105*
Beryllium	*0.500*	*0.504*	*101*
Boron	*1.00*	*1.06*	*106*
Calcium	*510*	*459*	*90*
Chromium	*1.00*	*0.992*	*99*
Cobalt	*1.00*	*0.962*	*96*
Copper	*1.00*	*1.10*	*110*
Iron	*210*	*206*	*98*
Lithium	*1.00*	*1.20*	*120*
Magnesium	*510*	*528*	*103*
Manganese	*1.00*	*0.990*	*99*
Molybdenum	*1.00*	*1.01*	*101*
Nickel	*1.00*	*0.967*	*97*
Potassium	*10.0*	*14.4*	*144*
Selenium	*1.00*	*1.03*	*103*
Silicon	*1.00*	*1.03*	*103*
Silver	*0.500*	*0.553*	*111*
Sodium	*10.0*	*13.5*	*135*
Strontium	*0.500*	*0.506*	*101*
Thallium	*1.00*	*0.984*	*98*
Tin	*1.00*	*1.01*	*101*
Titanium	*1.00*	*1.02*	*102*
Vanadium	*1.00*	*1.01*	*101*
Zinc	*1.00*	*1.04*	*104*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG No.:

Lab Sample ID: ICSA 600-76526/82 Instrument ID: TJA1

Lab File ID: A040512 ICS Source: METISA_00072

Concentration Units: mg/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Arsenic		**0.0005**	
Cadmium		**-0.0083**	
Lead		**0.0030**	
Aluminum	*500*	*468*	*94*
Antimony		*0.0075*	
Barium		*0.0019*	
Beryllium		*-0.0023*	
Boron		*-0.0029*	
Calcium	*500*	*437*	*87*
Chromium		*0.0013*	
Cobalt		*-0.0010*	
Copper		*0.0080*	
Iron	*200*	*201*	*100*
Lithium		*0.0061*	
Magnesium	*500*	*471*	*94*
Manganese		*-0.0066*	
Molybdenum		*-0.0011*	
Nickel		*0.0000*	
Potassium		*0.673*	
Selenium		*-0.0187*	
Silicon		*-0.0073*	
Silver		*-0.0020*	
Sodium		*0.0380*	
Sodium		*0.234*	
Strontium		*-0.0086*	
Thallium		*0.0347*	
Tin		*-0.0066*	
Titanium		*-0.0039*	
Vanadium		*0.0060*	
Zinc		*-0.0081*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG No.:

Lab Sample ID: ICSAB 600-76526/83 Instrument ID: TJA1

Lab File ID: A040512 ICS Source: METISB_00074

Concentration Units: mg/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Arsenic	**1.00**	**1.08**	**108**
Cadmium	**0.500**	**0.538**	**108**
Lead	**1.00**	**1.00**	**100**
Aluminum	*510*	*480*	*94*
Antimony	*1.00*	*1.18*	*118*
Barium	*1.00*	*1.18*	*118*
Beryllium	*0.500*	*0.422*	*84*
Boron	*1.00*	*1.16*	*116*
Calcium	*510*	*447*	*88*
Chromium	*1.00*	*0.896*	*90*
Cobalt	*1.00*	*0.857*	*86*
Copper	*1.00*	*0.960*	*96*
Iron	*210*	*213*	*101*
Lithium	*1.00*	*1.41*	*141*
Magnesium	*510*	*485*	*95*
Manganese	*1.00*	*0.952*	*95*
Molybdenum	*1.00*	*1.01*	*101*
Nickel	*1.00*	*1.00*	*100*
Potassium	*10.0*	*17.5*	*175*
Selenium	*1.00*	*0.968*	*97*
Silicon	*1.00*	*0.986*	*99*
Silver	*0.500*	*0.540*	*108*
Sodium	*10.0*	*12.7*	*127*
Sodium	*10.0*	*15.6*	*156*
Strontium	*0.500*	*0.570*	*114*
Thallium	*1.00*	*1.23*	*123*
Tin	*1.00*	*0.961*	*96*
Titanium	*1.00*	*1.02*	*102*
Vanadium	*1.00*	*0.936*	*94*
Zinc	*1.00*	*1.09*	*109*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: 2012-BG-8 MS
Lab ID: 600-52867-10 MS
Lab Name: TestAmerica Houston
Job No.: 600-52867-1
SDG No.:
Matrix: Solid
Concentration Units: mg/Kg
% Solids: 79.7

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Cadmium	26.61		0.122	J	30.8	86	75-125		6010B
Lead	163.2		24.0		61.5	226	75-125	N	6010B
Arsenic	63.80		9.83		61.5	88	75-125		6010B

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.
Note - Results and Reporting Limits have been adjusted for dry weight.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: 2012-BG-8 MSD
Lab ID: 600-52867-10 MSD
Lab Name: TestAmerica Houston
Job No.: 600-52867-1
SDG No.:
Matrix: Solid
Concentration Units: mg/Kg
% Solids: 79.7

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Cadmium	24.72		29.6	83	75-125	7	20		6010B
Lead	145.7		59.2	206	75-125	11	20	N	6010B
Arsenic	61.49		59.2	87	75-125	4	20		6010B

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.
Note - Results and Reporting Limits have been adjusted for dry weight.

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS

Client ID: 2012-BG-8 PDS Lab ID: 600-52867-10 PDS

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG No.:

Matrix: Solid Concentration Units: mg/Kg

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Cadmium	24.31		0.122	J	30.8	79	75-125		6010B
Lead	72.52		24.0		61.5	79	75-125		6010B
Arsenic	62.29		9.83		61.5	85	75-125		6010B

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.
Note - Results and Reporting Limits have been adjusted for dry weight.

FORM VB - IN

6-IN
DUPLICATES
METALS

Client ID: 2012-BG-8 DU
Lab ID: 600-52867-10 DU
Lab Name: TestAmerica Houston
Job No.: 600-52867-1
SDG No.:
% Solids for Sample: 79.7
% Solids for Duplicate: 79.7
Matrix: Solid
Concentration Units: mg/Kg

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Cadmium	0.302	0.122	J	0.9071		153	F	6010B
Lead	0.604	24.0		63.49		90	F	6010B
Arsenic	1.21	9.83		10.04		2		6010B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 600-76449/2-A

Lab Name: TestAmerica Houston Job No.: 600-52867-1

Sample Matrix: Solid LCS Source: METSLCSS_00016

Analyte	Solid(mg/Kg)							
	True	Found	C	%R	Limits		Q	Method
Cadmium	71.0	68.92		97	81	119		6010B
Lead	144	138.8		96	79	121		6010B
Arsenic	138	138.4		100	78	122		6010B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS

Lab ID: 600-52867-10

SDG No:

Lab Name: TestAmerica Houston Job No: 600-52867-1

Matrix: Solid Concentration Units: mg/Kg

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Cadmium	0.122	J	0.158	U	NC		6010B
Lead	24.0		28.94		21	*	6010B
Arsenic	9.83		12.14		NC		6010B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Houston Job Number: 600-52867-1

SDG Number:

Matrix: Solid Instrument ID: TJA1

Method: 6010B XMDL Date: 05/15/2008 13:46

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Arsenic		0.02	0.00328
Cadmium		0.005	0.00073
Lead		0.01	0.0029

FORM IX - IN

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Houston Job No: 600-52867-1

SDG No.:

Instrument ID: TJA1 Date: 03/14/2006 13:24

Analyte	Integ. Time (Sec.)	Concentration (mg/L)	Method
Cadmium		25	6010B
Lead		50	6010B
Arsenic		50	6010B

FORM XI - IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG No.:

Prep Method: 3050B

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight (g)	Initial Volume	Final Volume (mL)
MB 600-76449/1-A	04/04/2012 14:49	76449	1.00		50
LCS 600-76449/2-A	04/04/2012 14:49	76449	0.50		50
600-52867-1	04/04/2012 14:49	76449	1.06		50
600-52867-2	04/04/2012 14:49	76449	1.05		50
600-52867-3	04/04/2012 14:49	76449	1.06		50
600-52867-4	04/04/2012 14:49	76449	1.05		50
600-52867-5	04/04/2012 14:49	76449	1.00		50
600-52867-6	04/04/2012 14:49	76449	1.02		50
600-52867-7	04/04/2012 14:49	76449	1.05		50
600-52867-8	04/04/2012 14:49	76449	1.04		50
600-52867-9	04/04/2012 14:49	76449	1.04		50
600-52867-10	04/04/2012 14:49	76449	1.02		50
600-52867-10 DU	04/04/2012 14:49	76449	1.04		50
600-52867-10 MS	04/04/2012 14:49	76449	1.02		50
600-52867-10 MSD	04/04/2012 14:49	76449	1.06		50

FORM XII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG No.:

Instrument ID: TJA1 Method: 6010B

Start Date: 04/05/2012 08:11 End Date: 04/05/2012 16:21

Lab Sample ID	D/F	Type	Time	Analytes																				
				As	Cd	Pb																		
ZZZZZZ			08:11																					
STD 600-76526/2 IC			08:15	X	X	X																		
ZZZZZZ			08:19																					
ICV 600-76526/4	1		08:23	X	X	X																		
ICB 600-76526/5	1		08:27	X	X	X																		
CRI 600-76526/6	1		08:31	X	X	X																		
ICSA 600-76526/7	1		08:35	X	X	X																		
ICSAB 600-76526/8	1		08:39	X	X	X																		
CCV 600-76526/9	1		08:42	X	X	X																		
CCB 600-76526/10	1		08:46	X	X	X																		
MB 600-76449/1-A	1	T	08:56	X	X	X																		
LCS 600-76449/2-A	1	T	08:59	X	X	X																		
ZZZZZZ			09:03																					
ZZZZZZ			09:07																					
ZZZZZZ			09:11																					
ZZZZZZ			09:15																					
ZZZZZZ			09:19																					
ZZZZZZ			09:22																					
600-52867-1	1	T	09:26	X	X	X																		
600-52867-2	1	T	09:30	X	X	X																		
CCV 600-76526/21	1		09:34	X	X	X																		
CCB 600-76526/22	1		09:38	X	X	X																		
600-52867-3	1	T	09:42	X	X	X																		
600-52867-4	1	T	09:46	X	X	X																		
600-52867-5	1	T	09:49	X	X	X																		
600-52867-6	1	T	09:53	X	X	X																		
600-52867-7	1	T	09:57	X	X	X																		
600-52867-8	1	T	10:01	X	X	X																		
600-52867-9	1	T	10:05	X	X	X																		
600-52867-10	1	T	10:09	X	X	X																		
600-52867-10 DU	1	T	10:13	X	X	X																		
600-52867-10 MS	1	T	10:16	X	X	X																		
CCV 600-76526/33	1		10:20	X	X	X																		
CCB 600-76526/34	1		10:24	X	X	X																		
600-52867-10 MSD	1	T	10:28	X	X	X																		
ZZZZZZ			10:32																					
ZZZZZZ			10:36																					
ZZZZZZ			10:39																					
ZZZZZZ			10:43																					
ZZZZZZ			10:47																					
ZZZZZZ			10:51																					
ZZZZZZ			10:55																					

13-IN

ANALYSIS RUN LOG

METALS

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG No.:

Instrument ID: TJA1 Method: 6010B

Start Date: 04/05/2012 08:11 End Date: 04/05/2012 16:21

Lab Sample ID	D/F	Type	Time	Analytes																				
				As	Cd	Pb																		
600-52867-10 PDS	1	T	10:59	X	X	X																		
600-52867-10 SD	5	T	11:03	X	X	X																		
CCV 600-76526/45	1		11:06	X	X	X																		
CCB 600-76526/46	1		11:10	X	X	X																		
ZZZZZZ			11:43																					
ZZZZZZ			11:48																					
CCV 600-76526/49			11:52																					
CCB 600-76526/50			11:56																					
ZZZZZZ			13:04																					
ZZZZZZ			13:08																					
ZZZZZZ			13:12																					
ZZZZZZ			13:16																					
ZZZZZZ			13:20																					
ZZZZZZ			13:23																					
ZZZZZZ			13:27																					
ZZZZZZ			13:31																					
ZZZZZZ			13:35																					
ZZZZZZ			13:39																					
CCV 600-76526/61			13:43																					
CCB 600-76526/62			13:46																					
ZZZZZZ			13:50																					
ZZZZZZ			13:54																					
ZZZZZZ			13:58																					
ZZZZZZ			14:02																					
ZZZZZZ			14:06																					
ZZZZZZ			14:10																					
ZZZZZZ			14:13																					
ZZZZZZ			14:17																					
ZZZZZZ			14:21																					
ZZZZZZ			14:25																					
CCV 600-76526/73			14:29																					
CCB 600-76526/74			14:33																					
ZZZZZZ			14:37																					
ZZZZZZ			14:40																					
ZZZZZZ			14:44																					
ZZZZZZ			14:48																					
ZZZZZZ			14:52																					
CCV 600-76526/80			14:56																					
CCB 600-76526/81			15:00																					
ICSA 600-76526/82	1		16:17	X	X	X																		
ICSAB 600-76526/83	1		16:21	X	X	X																		

13-IN

ANALYSIS RUN LOG

METALS

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG No.:

Instrument ID: TJA1 Method: 6010B

Start Date: 04/05/2012 08:11 End Date: 04/05/2012 16:21

Prep Types

T = Total/NA

Method: 20076010 04/05/12 07:05:55 AM page 1

METHOD INFORMATION **

Sample Introduction Device: Normal
Calibration Mode: Concentration

Default Setup:

Number of Repeats : 2	Auto-store Analysis Data? Yes
Flush Time (sec) : 45.0	Auto-store Stdzn Data? Yes
Auto-Increment Sample Names? No	Store Individual Repeats? No
	Auto-print Analysis Data? Yes
	Auto-print Stdzn Report : +Readback
	Condensed Print Format? Yes

Default File Names:

Analysis Data File : A040512	Autosampler Table : TRAVIS
	Sample Limits Table : LCTAB
Calibration Data File : CALDATA	Blank Limits Table : BLCTAB
Calibration Stds Table : CALSTDS	QC Check Table : LCTAB

Standardization Rpt. 04/05/12 08:14:23 AM page 1

Method: 20076010 Standard: S0
Run Time: 04/05/12 08:11:00

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Avge	.00650	.00161	-.00132	.00204	-.01731	.00851	.00118
SDev	.00007	.00017	.00049	.00054	.00016	.00271	.00191
%RSD	1.0203	10.491	36.874	26.468	.92193	31.799	161.90
#1	.00655	.00149	-.00166	.00242	-.01742	.00660	-.00017
#2	.00646	.00173	-.00097	.00166	-.01720	.01043	.00253

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Mg2790
Avge	.01624	-.00002	-.00032	.00538	.00314	.06376	.03379
SDev	.00040	.00014	.00017	.00013	.00303	.00007	.00004
%RSD	2.4555	562.34	54.584	2.4690	96.353	.11604	.12218
#1	.01652	-.00012	-.00044	.00547	.00100	.06381	.03382
#2	.01596	.00007	-.00019	.00529	.00529	.06370	.03376

Elem	Mn2576	Mo2020	Ni2316	K_7664	Si2881	Ag3280	Na3302
Avge	.00023	.00021	-.00104	.41525	.03766	-.00023	-.00232
SDev	.00002	.00053	.00005	.00064	.00007	.00002	.00063
%RSD	7.2195	258.41	4.7673	.15366	.17848	7.6669	27.012
#1	.00022	-.00017	-.00100	.41570	.03771	-.00024	-.00276
#2	.00024	.00058	-.00107	.41480	.03761	-.00022	-.00188

Elem	Na5889	Sr4215	Tl1908	Sn1899	Ti3349	V_2924	Zn2138
Avge	.21540	.01174	-.00154	.00011	-.00238	.00002	.00800
SDev	.00135	.00068	.00052	.00050	.00013	.00003	.00064
%RSD	.62478	5.8102	33.883	453.60	5.3007	141.42	7.9845
#1	.21635	.01222	-.00191	.00046	-.00247	.00000	.00846
#2	.21445	.01125	-.00117	-.00024	-.00229	.00005	.00755

Elem	2203/1	2203/2	1960/1	1960/2
Avge	.00903	-.00348	-.00633	.00315

SDev	.00112	.00025	.00214	.00066			
%RSD	12.454	7.2195	33.728	21.049			
#1	.00982	-.00330	-.00784	.00362			
#2	.00823	-.00365	-.00482	.00268			

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	40984	--	--	--	--	--	--
SDev	91.92388	--	--	--	--	--	--
%RSD	.2242921	--	--	--	--	--	--
#1	40919	--	--	--	--	--	--
#2	41049	--	--	--	--	--	--

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Method: 20076010 Standard: STD
Run Time: 04/05/12 08:15:06

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Avge	.94035	1.0149	1.1302	13.259	23.455	6.8887	14.141
SDev	.00109	.0011	.0026	.018	.022	.0033	.013
%RSD	.11583	.11261	.22856	.13463	.09546	.04832	.09368
#1	.94112	1.0157	1.1320	13.272	23.471	6.8910	14.150
#2	.93958	1.0141	1.1284	13.247	23.439	6.8863	14.132

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Mg2790
Avge	2.9926	2.2974	1.3607	1.3914	5.0142	19.190	1.3044
SDev	.0032	.0033	.0022	.0014	.0051	.004	.0018
%RSD	.10750	.14303	.16182	.10059	.10126	.02245	.13755
#1	2.9949	2.2997	1.3622	1.3924	5.0178	19.193	1.3057
#2	2.9903	2.2951	1.3591	1.3904	5.0106	19.187	1.3031

Elem	Mn2576	Mo2020	Ni2316	K_7664	Si2881	Ag3280	Na3302
Avge	1.9177	1.6852	5.8341	2.6218	.90840	.78124	.13320
SDev	.0031	.0005	.0154	.0012	.00187	.00078	.00005
%RSD	.16313	.03054	.26318	.04675	.20612	.09955	.03786
#1	1.9199	1.6848	5.8232	2.6209	.90972	.78179	.13323
#2	1.9155	1.6855	5.8449	2.6226	.90707	.78069	.13316

Elem	Na5889	Sr4215	Tl1908	Sn1899	Ti3349	V_2924	Zn2138
Avge	16.173	43.371	.33411	2.8098	11.766	.57673	3.2754
SDev	.009	.052	.00079	.0108	.018	.00104	.0036
%RSD	.05568	.12051	.23557	.38600	.15121	.18043	.10991
#1	16.167	43.408	.33355	2.8175	11.778	.57746	3.2780
#2	16.180	43.334	.33467	2.8021	11.753	.57599	3.2729

Elem	2203/1	2203/2	1960/1	1960/2
Avge	4.0719	8.1787	1.2197	1.0621
SDev	.0235	.0139	.0083	.0046
%RSD	.57725	.17043	.68349	.43240
#1	4.0885	8.1886	1.2256	1.0654
#2	4.0553	8.1689	1.2138	1.0589

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	40970	--	--	--	--	--	--
SDev	57.98276	--	--	--	--	--	--
%RSD	.1415249	--	--	--	--	--	--
#1	40929	--	--	--	--	--	--
#2	41011	--	--	--	--	--	--

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Method: 20076010 Slope = Conc(SIR)/IR

Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Standardized
Al3082	308.215	STD	S0	21.4168	-.139265	04/05/12 08:15:06
Sb2068	206.838	STD	S0	1.98029	-.003189	04/05/12 08:15:06
As1890	189.042	STD	S0	1.75047	.002307	04/05/12 08:15:06
Ba4934	493.409	STD	S0	.150861	-.000307	04/05/12 08:15:06
Be3130	313.042	STD	S0	.042631	.000738	04/05/12 08:15:06
B_2496	249.678	STD	S0	.290691	-.002474	04/05/12 08:15:06
Cd2265	226.502	STD	S0	.070863	-.000084	04/05/12 08:15:06
Ca3179	317.933	STD	S0	6.71963	-.109117	04/05/12 08:15:06
Cr2677	267.716	STD	S0	.870534	.000021	04/05/12 08:15:06
Co2286	228.616	STD	S0	1.46951	.000466	04/05/12 08:15:06
Cu3247	324.753	STD	S0	1.44224	-.007760	04/05/12 08:15:06
Fe2714	271.441	STD	S0	3.82594	-.012029	04/05/12 08:15:06
Li6707	670.784	STD	S0	.104567	-.006667	04/05/12 08:15:06
Pb2203	220.353		NONE	.000000	.000000	*04/05/12 08:15:06
Se1960	196.026		NONE	.000000	.000000	*04/05/12 08:15:06
Mg2790	279.078	STD	S0	15.7404	-.531928	04/05/12 08:15:06
Mn2576	257.610	STD	S0	1.04325	-.000242	04/05/12 08:15:06
Mo2020	202.030	STD	S0	1.18698	-.000245	04/05/12 08:15:06
Ni2316	231.604	STD	S0	.342752	.000355	04/05/12 08:15:06
K_7664	766.491	STD	S0	9.06403	-3.76382	04/05/12 08:15:06
Si2881	288.158	STD	S0	2.27576	-.085708	04/05/12 08:15:06
Ag3280	328.068	STD	S0	1.27998	.000297	04/05/12 08:15:06
Na3302	330.232	STD	S0	147.587	.342206	04/05/12 08:15:06
Na5889	588.995	STD	S0	1.25331	-.269966	04/05/12 08:15:06
Sr4215	421.552	STD	S0	.023074	-.000271	04/05/12 08:15:06
Tl1908	190.864	STD	S0	5.97782	.009193	04/05/12 08:15:06
Sn1899	189.989	STD	S0	.711824	-.000079	04/05/12 08:15:06
Ti3349	334.941	STD	S0	.169950	.000404	04/05/12 08:15:06
V_2924	292.402	STD	S0	3.43476	-.000084	04/05/12 08:15:06
Zn2138	213.856	STD	S0	.612854	-.004905	04/05/12 08:15:06
2203/1	220.351	STD	S0	.495133	-.004471	04/05/12 08:15:06
2203/2	220.352	STD	S0	.243518	.000847	04/05/12 08:15:06
1960/1	196.021	STD	S0	1.63333	.010346	04/05/12 08:15:06
1960/2	196.022	STD	S0	1.88471	-.005934	04/05/12 08:15:06

Method: 20076010

Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration
Al3082	308.215	S0	.000000	-.000000	.000000
		STD	20.0000	20.0000	.000000

Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration

Sb2068	206.838	S0	.000000	-.000000	.000000
		STD	2.00000	2.00666	-.006658

Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration
As1890	189.042	S0	.000000	-.000000	.000000
		STD	2.00000	1.98066	.019338

Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration
Ba4934	493.409	S0	.000000	.000000	-.000000

		STD	2.00000	2.00000	.000000

Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration
Be3130	313.042	S0	.000000	.000000	-.000000
		STD	1.00000	1.00064	-.000640

Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration
B_2496	249.678	S0	.000000	-.000000	.000000
		STD	2.00000	2.00000	.000000

Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration
Cd2265	226.502	S0	.000000	.000000	-.000000
		STD	1.00000	1.00198	-.001980

Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration
Ca3179	317.933	S0	.000000	.000000	-.000000
		STD	20.0000	20.0000	.000000

Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration
Cr2677	267.716	S0	.000000	-.000000	.000000
		STD	2.00000	2.00000	.000000

Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration
Co2286	228.616	S0	.000000	.000000	-.000000
		STD	2.00000	2.00000	.000000

Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration
Cu3247	324.753	S0	.000000	-.000000	.000000
		STD	2.00000	1.99894	.001060

Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration
Fe2714	271.441	S0	.000000	.000000	-.000000
		STD	20.0000	19.1720	.828014

Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration
Li6707	670.784	S0	.000000	-.000000	.000000
		STD	2.00000	2.00000	.000000

Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration
Pb2203	220.353	NONE	.000000	.000000	.000000
			.000000	.000000	.000000

Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration
Se1960	196.026	NONE	.000000	.000000	.000000
			.000000	.000000	.000000

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Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration
Mg2790	279.078	S0	.000000	.000000	-.000000
		STD	20.0000	20.0000	.000000

Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration
Mn2576	257.610	S0	.000000	-.000000	.000000
		STD	2.00000	2.00038	-.000380

Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration
Mo2020	202.030	S0	.000000	.000000	-.000000
		STD	2.00000	2.00000	.000000

Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration
Ni2316	231.604	S0	.000000	.000000	-.000000
		STD	2.00000	2.00000	.000000

Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration
K_7664	766.491	S0	.000000	.000000	-.000000
		STD	20.0000	20.0000	.000000

Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration
Si2881	288.158	S0	.000000	-.000000	.000000
		STD	2.00000	1.98159	.018410

Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration
Ag3280	328.068	S0	.000000	-.000000	.000000
		STD	1.00000	1.00027	-.000274

Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration
Na3302	330.232	S0	.000000	-.000000	.000000
		STD	20.0000	20.0000	.000000

Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration
Na5889	588.995	S0	.000000	-.000000	.000000
		STD	20.0000	20.0000	.000000

Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration
Sr4215	421.552	S0	.000000	-.000000	.000000

		STD	1.00000	1.00048	-.000480

Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration
Tl1908	190.864	S0	.000000	-.000000	.000000
		STD	2.00000	2.00644	-.006442

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Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration
Sn1899	189.989	S0	.000000	.000000	-.000000
		STD	2.00000	2.00000	.000000

Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration
Ti3349	334.941	S0	.000000	-.000000	.000000
		STD	2.00000	2.00000	.000000

Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration
V_2924	292.402	S0	.000000	-.000000	.000000
		STD	2.00000	1.98084	.019164

Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration
Zn2138	213.856	S0	.000000	-.000000	.000000
		STD	2.00000	2.00245	-.002452

Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration
2203/1	220.351	S0	.000000	.000000	-.000000
		STD	2.00000	2.01167	-.011672

Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration
2203/2	220.352	S0	.000000	.000000	-.000000
		STD	2.00000	1.99251	.007490

Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration
1960/1	196.021	S0	.000000	-.000000	.000000
		STD	2.00000	2.00251	-.002508

Element	Wavelength	Standard	Known Concentration	Measured Concentration	Residual Concentration
1960/2	196.022	S0	.000000	.000000	-.000000
		STD	2.00000	1.99584	.004162

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Method: 20076010 Sample Name: S2 met0312cal_00001 Operator: DCL
Run Time: 04/05/12 08:19:49
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	20.062	2.0021	2.0079	2.0117	1.0046	2.0075	1.0035

SDev	.108	.0105	.0034	.0080	.0043	.0072	.0045
%RSD	.53872	.52344	.17087	.39667	.42799	.36024	.44968
#1	20.138	2.0095	2.0103	2.0173	1.0076	2.0126	1.0067
#2	19.986	1.9947	2.0054	2.0060	1.0016	2.0024	1.0003
Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	20.037	2.0041	1.9997	2.0053	20.068	2.0112	2.0120
SDev	.097	.0087	.0087	.0071	.102	.0069	.0133
%RSD	.48199	.43327	.43634	.35542	.50935	.34246	.66050
#1	20.105	2.0102	2.0059	2.0103	20.140	2.0160	2.0214
#2	19.969	1.9979	1.9935	2.0002	19.996	2.0063	2.0026
Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.0198	20.017	2.0020	2.0051	2.0346	20.129	2.0004
SDev	.0176	.098	.0092	.0052	.0098	.052	.0094
%RSD	.87012	.48924	.46169	.25959	.48039	.25727	.47154
#1	2.0322	20.087	2.0085	2.0087	2.0415	20.166	2.0070
#2	2.0074	19.948	1.9954	2.0014	2.0276	20.093	1.9937
Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0021	20.148	20.139	1.0065	2.0100	2.0052	2.0057
SDev	.0037	.106	.045	.0040	.0009	.0041	.0086
%RSD	.37401	.52623	.22463	.40098	.04263	.20587	.42954
#1	1.0048	20.223	20.171	1.0094	2.0094	2.0081	2.0118
#2	.99948	20.073	20.107	1.0037	2.0106	2.0022	1.9996
Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	2.0027	2.0049	2.0119	2.0121	2.0138	2.0228	
SDev	.0094	.0089	.0140	.0129	.0274	.0127	
%RSD	.47099	.44537	.69469	.64341	1.3585	.62702	
#1	2.0093	2.0112	2.0218	2.0212	2.0331	2.0318	
#2	1.9960	1.9986	2.0020	2.0029	1.9944	2.0139	

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	40910	--	--	--	--	--	--
SDev	187.3833	--	--	--	--	--	--
%RSD	.4580435	--	--	--	--	--	--

#1	40777	--	--	--	--	--	--
#2	41042	--	--	--	--	--	--

Method: 20076010 Sample Name: ICV met0412ccv_00001 Operator: DCL
Run Time: 04/05/12 08:23:41
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.5262	.50106	.51094	.50765	.51673	.50924	.51176
SDev	.0025	.00202	.00002	.00059	.00067	.00027	.00049
%RSD	.10056	.40227	.00361	.11678	.12954	.05365	.09601
#1	2.5280	.50249	.51095	.50807	.51720	.50904	.51211
#2	2.5244	.49964	.51093	.50723	.51626	.50943	.51141

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	12.758	.50825	.50913	.51394	2.5656	.46889	.50795
SDev	.016	.00066	.00002	.00049	.0072	.00038	.00028
%RSD	.12679	.12902	.00464	.09459	.28052	.08210	.05404
#1	12.770	.50871	.50914	.51428	2.5707	.46916	.50776
#2	12.747	.50778	.50911	.51360	2.5605	.46862	.50814

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.51923	5.0785	.50230	.51617	.52070	12.401	.96954
SDev	.00097	.0050	.00049	.00149	.00169	.012	.00167
%RSD	.18773	.09816	.09707	.28927	.32535	.09371	.17251
#1	.51992	5.0820	.50264	.51722	.51950	12.393	.97072
#2	.51854	5.0750	.50195	.51511	.52190	12.409	.96835

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.25250	12.983	12.284	.25270	.52289	.51327	.51341
SDev	.00002	.028	.000	.00030	.00125	.00300	.00049
%RSD	.00936	.21936	.00200	.11876	.23856	.58496	.09588
#1	.25252	13.003	12.284	.25291	.52377	.51539	.51376
#2	.25249	12.963	12.284	.25249	.52201	.51115	.51307

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.51399	.51640	.50506	.50939	.51385	.52198
SDev	.00103	.00026	.00109	.00014	.00150	.00221
%RSD	.19969	.04946	.21667	.02658	.29237	.42405
#1	.51471	.51658	.50429	.50949	.51279	.52355
#2	.51326	.51622	.50584	.50930	.51491	.52042

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED

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Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	40765	--	--	--	--	--	--
SDev	114.5513	--	--	--	--	--	--
%RSD	.2810040	--	--	--	--	--	--
#1	40846	--	--	--	--	--	--
#2	40684	--	--	--	--	--	--

Method: 20076010 Sample Name: ICB Operator: DCL
Run Time: 04/05/12 08:27:32

Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00093	.00073	.00299	-.00008	.00002	.00247	.00000
SDev	.00410	.00102	.00048	.00004	.00000	.00017	.00005
%RSD	443.12	139.15	16.153	46.481	4.0994	6.9154	2462.3
#1	-.00383	.00145	.00265	-.00011	.00002	.00259	-.00003
#2	.00198	.00001	.00333	-.00006	.00002	.00235	.00003

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.02864	.00039	-.00008	-.00034	-.00880	.00010	-.00020
SDev	.00280	.00052	.00008	.00010	.00974	.00000	.00045
%RSD	9.7793	133.66	90.402	30.192	110.74	.35716	221.62
#1	-.03062	.00002	-.00003	-.00042	-.01569	.00010	.00012
#2	-.02666	.00076	-.00014	-.00027	-.00191	.00010	-.00052

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00157	-.00399	.00004	.00325	-.00014	-.03319	-.00020
SDev	.00592	.00192	.00004	.00097	.00001	.00805	.00052
%RSD	376.17	48.094	101.02	29.861	4.4792	24.242	263.82
#1	.00576	-.00535	.00001	.00394	-.00013	-.03888	-.00057
#2	-.00261	-.00263	.00006	.00256	-.00014	-.02750	.00017

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00011	.00366	-.01189	-.00003	.00400	-.00029	.00022
SDev	.00004	.05524	.00060	.00003	.00286	.00013	.00007
%RSD	41.319	1507.9	5.0380	104.67	71.607	45.529	33.284
#1	-.00014	-.03540	-.01147	-.00005	.00602	-.00039	.00017
#2	-.00007	.04273	-.01232	-.00001	.00197	-.00020	.00027

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00028	-.00235	-.00072	.00005	.00403	.00034
SDev	.00034	.00047	.00049	.00092	.00631	.00572
%RSD	122.71	20.041	68.472	1730.7	156.36	1669.9
#1	.00004	-.00268	-.00106	.00070	.00849	.00439

#2	.00052	-.00202	-.00037	-.00060	-.00043	-.00370

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	41413	--	--	--	--	--	--
SDev	24.04163	--	--	--	--	--	--
%RSD	.0580533	--	--	--	--	--	--
#1	41430	--	--	--	--	--	--
#2	41396	--	--	--	--	--	--

Method: 20076010 Sample Name: CRI met0212low_00003 Operator: DCL
Run Time: 04/05/12 08:31:23
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.07702	.00960	.01147	.00932	.00517	.00916	.00531
SDev	.00406	.00044	.00151	.00010	.00000	.00050	.00013
%RSD	5.2760	4.5769	13.179	1.0659	.06108	5.4792	2.3721
#1	.07414	.00991	.01254	.00925	.00517	.00951	.00522
#2	.07989	.00929	.01040	.00940	.00517	.00880	.00540

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.03954	.00990	.00913	.00931	.07409	.00761	.00945
SDev	.00181	.00005	.00022	.00031	.00564	.00007	.00048
%RSD	4.5829	.53310	2.4244	3.3491	7.6131	.95635	5.1079
#1	.03826	.00994	.00898	.00909	.07010	.00756	.00911
#2	.04082	.00986	.00929	.00953	.07808	.00766	.00979

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01094	.09492	.00934	.01062	.00995	.57154	.00992
SDev	.00007	.00247	.00000	.00006	.00009	.02606	.00171
%RSD	.67308	2.5971	.03817	.53435	.91666	4.5590	17.199
#1	.01089	.09318	.00935	.01058	.00988	.55311	.00872
#2	.01099	.09666	.00934	.01066	.01001	.58996	.01113

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00491	.58710	.55200	.00400	.00736	.00779	.00966
SDev	.00016	.02908	.00468	.00003	.00214	.00108	.00001
%RSD	3.1666	4.9528	.84767	.61582	29.074	13.822	.10183
#1	.00480	.56654	.54869	.00399	.00585	.00703	.00967
#2	.00502	.60766	.55531	.00402	.00887	.00855	.00966

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00938	.00618	.00485	.01174	.00738	.01272

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SDev	.00011	.00028	.00243	.00194	.00435	.00206
%RSD	1.1544	4.4923	50.039	16.507	58.921	16.222
#1	.00930	.00598	.00657	.01037	.00430	.01418
#2	.00945	.00638	.00314	.01311	.01045	.01126

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	41294	--	--	--	--	--	--
SDev	215.6676	--	--	--	--	--	--
%RSD	.5222670	--	--	--	--	--	--
#1	41447	--	--	--	--	--	--

#2	41142	--	--	--	--	--	--

Method: 20076010 Sample Name: ICSA metisa_00072 Operator: DCL
Run Time: 04/05/12 08:35:14
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	495.64	.00334	.00061	.00136	-.00011	-.00378	-.00383
SDev	.06	.00167	.00003	.00005	.00001	.00013	.00006
%RSD	.01210	50.167	5.4827	3.5463	9.4379	3.4028	1.5767
#1	495.68	.00452	.00064	.00133	-.00012	-.00369	-.00379
#2	495.60	.00215	.00059	.00139	-.00011	-.00387	-.00387

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	446.94	.00176	-.00064	.01255	193.77	.00423	.00480
SDev	.11	.00025	.00011	.00015	.06	.00001	.00139
%RSD	.02570	14.214	17.784	1.2075	.03030	.11960	28.905
#1	446.86	.00158	-.00056	.01266	193.81	.00424	.00579
#2	447.02	.00193	-.00072	.01244	193.73	.00423	.00382

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00499	511.12	-.00784	.00028	-.00057	.04202	.01057
SDev	.00161	.53	.00003	.00025	.00022	.01321	.00045
%RSD	32.266	.10346	.33862	88.410	38.374	31.449	4.2890
#1	-.00613	510.74	-.00783	.00045	-.00073	.03267	.01089
#2	-.00385	511.49	-.00786	.00010	-.00042	.05136	.01025

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00065	-.02326	.15488	-.00914	-.01271	-.00163	-.00343
SDev	.00031	.00335	.00125	.00000	.00569	.00376	.00009
%RSD	48.549	14.419	.80353	.00580	44.774	230.15	2.7373
#1	-.00087	-.02089	.15400	-.00914	-.00868	.00103	-.00350
#2	-.00042	-.02563	.15576	-.00914	-.01673	-.00429	-.00336

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Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00309	-.00522	-.04142	.02791	-.00168	-.00665
SDev	.00020	.00026	.00276	.00070	.00239	.00122
%RSD	6.3906	5.0546	6.6569	2.5226	142.42	18.360
#1	.00295	-.00541	-.03947	.02841	-.00337	-.00751
#2	.00323	-.00504	-.04337	.02742	.00001	-.00579

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	37354	--	--	--	--	--	--
SDev	57.27565	--	--	--	--	--	--
%RSD	.1533300	--	--	--	--	--	--

#1	37395	--	--	--	--	--	--
#2	37314	--	--	--	--	--	--

Method: 20076010 Sample Name: ICSAB metisb_00074 Operator: DCL
Run Time: 04/05/12 08:39:04
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	509.71	1.0551	1.0413	1.0518	.50364	1.0556	.47803
SDev	1.67	.0062	.0014	.0033	.00102	.0032	.00038
%RSD	.32782	.58536	.13565	.31344	.20338	.30620	.07858
#1	510.89	1.0595	1.0423	1.0541	.50437	1.0578	.47829
#2	508.53	1.0507	1.0403	1.0495	.50292	1.0533	.47776

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	458.89	.99191	.96220	1.0979	205.75	1.2004	.99400
SDev	1.09	.00221	.00208	.0040	.46	.0047	.00313
%RSD	.23838	.22334	.21577	.36719	.22163	.39054	.31499
#1	459.67	.99347	.96367	1.1008	206.07	1.2037	.99622
#2	458.12	.99034	.96073	1.0951	205.43	1.1971	.99179

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0295	527.78	.98981	1.0138	.96708	14.423	1.0267
SDev	.0011	1.34	.00242	.0027	.00571	.066	.0040
%RSD	.10866	.25425	.24444	.26357	.59061	.45982	.39100
#1	1.0288	528.73	.99153	1.0119	.97112	14.470	1.0295
#2	1.0303	526.83	.98810	1.0156	.96304	14.376	1.0239

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.55315	12.125	13.510	.50578	.98399	1.0108	1.0184
SDev	.00213	.026	.053	.00147	.00786	.0006	.0032

%RSD	.38554	.21632	.38990	.28976	.79837	.06305	.30987
#1	.55466	12.107	13.547	.50682	.97843	1.0113	1.0206
#2	.55164	12.144	13.473	.50474	.98954	1.0104	1.0162

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0103	1.0368	.94996	1.0160	1.0279	1.0304
SDev	.0024	.0023	.00057	.0050	.0075	.0021
%RSD	.23754	.22100	.06001	.49029	.72745	.19996
#1	1.0120	1.0384	.94955	1.0195	1.0226	1.0319
#2	1.0086	1.0352	.95036	1.0125	1.0331	1.0289

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	37444	--	--	--	--	--	--

SDev	49.49748	--	--	--	--	--	--
%RSD	.1321907	--	--	--	--	--	--
#1	37409	--	--	--	--	--	--
#2	37479	--	--	--	--	--	--

Method: 20076010 Sample Name: CCV met0412ccv_00001 Operator: DCL
Run Time: 04/05/12 08:42:55
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.5290	.49710	.50836	.50471	.51267	.50306	.50885
SDev	.0064	.00047	.00383	.00128	.00207	.00063	.00235
%RSD	.25460	.09434	.75260	.25309	.40389	.12484	.46256
#1	2.5336	.49677	.51107	.50561	.51413	.50350	.51052
#2	2.5245	.49743	.50566	.50381	.51121	.50262	.50719

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	12.669	.50473	.50564	.51002	2.5684	.46762	.50428
SDev	.052	.00188	.00184	.00078	.0084	.00057	.00284
%RSD	.40819	.37344	.36408	.15328	.32615	.12118	.56268
#1	12.706	.50606	.50694	.51057	2.5743	.46802	.50628
#2	12.633	.50340	.50434	.50947	2.5625	.46722	.50227

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.51639	5.0730	.49902	.50941	.51239	12.400	.96194
SDev	.00272	.0200	.00177	.00092	.00194	.010	.00252
%RSD	.52608	.39435	.35431	.18086	.37777	.08419	.26215
#1	.51831	5.0871	.50027	.51006	.51376	12.408	.96372
#2	.51447	5.0588	.49777	.50876	.51102	12.393	.96016

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Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.25203	12.942	12.240	.25182	.51575	.51046	.51057
SDev	.00017	.098	.004	.00056	.00110	.00172	.00141
%RSD	.06876	.75978	.03244	.22357	.21223	.33665	.27704
#1	.25215	12.872	12.243	.25222	.51498	.51168	.51157
#2	.25190	13.012	12.237	.25142	.51653	.50925	.50957

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.51105	.51338	.50173	.50555	.50998	.51966
SDev	.00230	.00098	.00507	.00172	.00193	.00311
%RSD	.45042	.19122	1.0101	.34066	.37802	.59873
#1	.51268	.51408	.50531	.50677	.51134	.52186
#2	.50942	.51269	.49815	.50433	.50862	.51746

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--

Wavlen	371.030	--	--	--	--	--	--
Avge	40938	--	--	--	--	--	--
SDev	54.44722	--	--	--	--	--	--
%RSD	.1329976	--	--	--	--	--	--
#1	40977	--	--	--	--	--	--
#2	40900	--	--	--	--	--	--

Method: 20076010 Sample Name: CCB Operator: DCL
Run Time: 04/05/12 08:46:46
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00151	-.00048	-.00058	-.00013	-.00004	.00132	-.00014
SDev	.00231	.00429	.00060	.00005	.00002	.00073	.00012
%RSD	152.72	885.32	102.35	37.400	47.108	55.219	83.004
#1	.00314	.00255	-.00016	-.00010	-.00003	.00183	-.00006
#2	-.00012	-.00352	-.00100	-.00017	-.00005	.00080	-.00022

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.03940	.00011	-.00041	-.00082	-.01726	.00007	-.00069
SDev	.00046	.00036	.00012	.00042	.00304	.00006	.00111
%RSD	1.1685	337.06	30.211	51.103	17.601	97.408	160.49
#1	-.03972	.00036	-.00032	-.00052	-.01941	.00011	.00009
#2	-.03907	-.00015	-.00050	-.00112	-.01512	.00002	-.00148

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00040	-.00352	-.00006	.00244	-.00057	-.03656	-.00331
SDev	.00090	.00149	.00004	.00054	.00016	.02566	.00122
%RSD	225.26	42.339	56.701	22.119	28.266	70.184	36.776

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#1	-.00024	-.00247	-.00004	.00282	-.00069	-.01842	-.00245
#2	.00104	-.00458	-.00009	.00206	-.00046	-.05471	-.00417

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00056	-.05405	-.01932	-.00008	.00048	.00085	.00013
SDev	.00002	.01643	.00196	.00002	.00223	.00020	.00008
%RSD	4.4545	30.398	10.121	21.377	462.68	24.199	64.515
#1	-.00058	-.04243	-.01794	-.00007	.00206	.00070	.00019
#2	-.00054	-.06567	-.02070	-.00009	-.00110	.00099	.00007

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00002	.00049	-.00458	.00125	-.00342	.00231
SDev	.00030	.00019	.00292	.00313	.00833	.00281
%RSD	1660.4	39.433	63.782	250.50	243.39	121.72
#1	.00019	.00035	-.00664	.00346	-.00931	.00430
#2	-.00023	.00062	-.00251	-.00096	.00247	.00032

IntStd	1	2	3	4	5	6	7

Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	41153	--	--	--	--	--	--
SDev	137.1787	--	--	--	--	--	--
%RSD	.3333383	--	--	--	--	--	--
#1	41056	--	--	--	--	--	--
#2	41250	--	--	--	--	--	--

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Method: 20076010 Sample Name: mb 600-76449/1-a Operator: DCL
Run Time: 04/05/12 08:56:01
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00029	.00270	.00088	.00134	-.00009	-.00182	.00004
SDev	.00163	.00181	.00106	.00006	.00001	.00073	.00007
%RSD	562.50	66.980	120.95	4.2262	8.6293	39.899	184.18
#1	.00144	.00142	.00163	.00138	-.00009	-.00131	.00009
#2	-.00086	.00398	.00013	.00130	-.00010	-.00233	-.00001

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.44249	.00055	-.00061	.00010	.01262	.00033	-.00032
SDev	.00244	.00000	.00015	.00018	.00017	.00001	.00021
%RSD	.55044	.09992	25.073	179.44	1.3838	2.7525	66.076
#1	.44421	.00055	-.00072	.00023	.01250	.00034	-.00017
#2	.44076	.00055	-.00050	-.00003	.01275	.00032	-.00047

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00142	.01541	.00017	.00007	-.00001	.10786	.00140
SDev	.00123	.00193	.00004	.00070	.00061	.00779	.00042
%RSD	86.648	12.535	21.898	935.71	4226.0	7.2243	30.050
#1	.00229	.01678	.00019	.00057	-.00044	.11337	.00111
#2	.00055	.01405	.00014	-.00042	.00041	.10235	.00170

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00017	.32051	.20841	.00027	-.00084	.03140	.00031
SDev	.00018	.01025	.00261	.00000	.00196	.00101	.00000
%RSD	102.40	3.1975	1.2510	.18983	234.01	3.2058	.03043
#1	-.00030	.31326	.20657	.00027	.00055	.03212	.00031
#2	-.00005	.32776	.21026	.00027	-.00222	.03069	.00031

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00009	.02873	-.00140	.00021	-.00258	.00342
SDev	.00013	.00041	.00081	.00073	.00148	.00259
%RSD	147.42	1.4151	58.128	338.34	57.573	75.688
#1	.00017	.02902	-.00197	.00073	-.00363	.00525
#2	-.00000	.02844	-.00082	-.00030	-.00153	.00159

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	40822	--	--	--	--	--	--
SDev	42.42641	--	--	--	--	--	--
%RSD	.1039303	--	--	--	--	--	--

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#1	40792	--	--	--	--	--	--
#2	40852	--	--	--	--	--	--

Method: 20076010 Sample Name: lcs 600-76449/2-a Operator: DCL
Run Time: 04/05/12 08:59:52
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	85.544	.80432	1.3842	2.6595	1.5579	.85507	.68916
SDev	.285	.00586	.0022	.0038	.0028	.00383	.00032
%RSD	.33334	.72818	.15603	.14470	.18023	.44841	.04663
#1	85.746	.80018	1.3827	2.6622	1.5560	.85778	.68938
#2	85.343	.80846	1.3858	2.6568	1.5599	.85235	.68893

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	91.525	1.0206	1.4055	1.1087	175.50	.08617	1.3881
SDev	.018	.0002	.0012	.0048	.08	.00038	.0029
%RSD	.01976	.01889	.08322	.43339	.04485	.44082	.20999
#1	91.512	1.0204	1.4063	1.1121	175.56	.08644	1.3860
#2	91.538	1.0207	1.4046	1.1053	175.45	.08590	1.3901

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.9471	41.139	5.1055	.91644	1.2851	48.273	5.8637
SDev	.0139	.021	.0010	.00492	.0053	.285	.0089
%RSD	.71402	.05213	.01979	.53694	.41501	.59034	.15235
#1	1.9373	41.154	5.1062	.91296	1.2889	48.475	5.8700
#2	1.9569	41.124	5.1048	.91992	1.2814	48.072	5.8574

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.46541	3.5615	6.6014	2.4338	1.6348	1.6096	3.9656
SDev	.00103	.0399	.0468	.0065	.0089	.0030	.0005
%RSD	.22034	1.1190	.70965	.26713	.54425	.18796	.01244
#1	.46614	3.5897	6.6345	2.4384	1.6285	1.6118	3.9653
#2	.46468	3.5333	6.5683	2.4292	1.6411	1.6075	3.9660

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.63795	2.2258	1.3690	1.3976	1.9058	1.9677
SDev	.00041	.0026	.0008	.0048	.0033	.0225
%RSD	.06447	.11694	.05577	.34014	.17285	1.1435

#1	.63824	2.2277	1.3695	1.3943	1.9082	1.9518
#2	.63766	2.2240	1.3684	1.4010	1.9035	1.9836

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED

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Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	43392	--	--	--	--	--	--
SDev	50.91169	--	--	--	--	--	--
%RSD	.1173297	--	--	--	--	--	--
#1	43356	--	--	--	--	--	--
#2	43428	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-53032-a-1-a@10 Operator: DCL
Run Time: 04/05/12 09:03:43
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.32499	.00629	.00585	3.5253	-.00004	.00089	-.00088
SDev	.00436	.00153	.00029	.0115	.00001	.00038	.00009
%RSD	1.3428	24.331	4.9546	.32711	18.298	42.172	10.134
#1	.32807	.00737	.00565	3.5335	-.00004	.00116	-.00095
#2	.32190	.00521	.00606	3.5172	-.00003	.00063	-.00082

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.7603	.03176	.00389	.07808	38.014	.00047	.00549
SDev	.0075	.00032	.00013	.00036	.157	.00002	.00091
%RSD	.42330	.99457	3.3589	.45883	.41298	4.1853	16.613
#1	1.7656	.03198	.00398	.07833	38.125	.00049	.00613
#2	1.7551	.03154	.00379	.07783	37.903	.00046	.00484

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00339	3.5295	.26752	.00668	.01493	-.10164	.23016
SDev	.00135	.0186	.00116	.00131	.00042	.01288	.00390
%RSD	39.762	.52634	.43274	19.544	2.7859	12.676	1.6952
#1	.00434	3.5426	.26834	.00761	.01464	-.09253	.23292
#2	.00243	3.5163	.26670	.00576	.01522	-.11075	.22741

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00040	-.15250	.00543	3.1699	.00203	.00683	.14415
SDev	.00007	.07122	.00119	.0119	.00202	.00073	.00087
%RSD	16.707	46.700	21.955	.37613	99.585	10.685	.60127
#1	-.00045	-.20285	.00627	3.1783	.00346	.00631	.14476
#2	-.00035	-.10214	.00459	3.1614	.00060	.00735	.14354

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00623	.03536	.00237	.00704	-.00050	.00533

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 SDev    .00043    .00004    .00012    .00143     .00158   .00281
 %RSD    6.9310    .12486    4.9844    20.242    312.46    52.670

 #1      .00654    .03533    .00228    .00805    -.00162   .00732

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 #2      .00593    .03539    .00245    .00604    .00061    .00335

 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    41473     --        --        --        --        --        --
 SDev    63.63961  --        --        --        --        --        --
 %RSD    .1534483  --        --        --        --        --        --

 #1      41428     --        --        --        --        --        --
 #2      41518     --        --        --        --        --        --
-------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-53032-a-2-a@10     Operator: DCL
Run Time: 04/05/12 09:07:34
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    216.96    .00082    .00413    .02011    -.00008   .00162    -.00049
 SDev      1.09    .00135    .00003    .00011     .00001   .00012     .00009
 %RSD    .50304    163.93    .77244    .55221    10.784    7.1838    18.369

 #1      217.73    -.00013   .00411    .02019    -.00007   .00170    -.00055
 #2      216.19    .00177    .00416    .02003    -.00008   .00153    -.00042

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .89704    .00916    .00083    .02678    3.0370    .00060    .00398
 SDev    .00308    .00010    .00005    .00012     .0066    .00003    .00023
 %RSD    .34305    1.0321    6.1159    .43759    .21761    4.4920    5.8525

 #1      .89921    .00923    .00086    .02670    3.0417    .00058    .00415
 #2      .89486    .00909    .00079    .02686    3.0324    .00062    .00382

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .00015    1.6769    .05901    .00079    .00991    -.02938   .44076
 SDev    .00231     .0030    .00020    .00043    .00020     .01562   .00137
 %RSD    1592.5    .17993    .33662    54.978    2.0410    53.172    .31026

 #1      -.00149   1.6790    .05915    .00048    .00977    -.04043   .44173
 #2      .00178    1.6748    .05886    .00110    .01005    -.01834   .43979

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00015   .39837    .33727    .00491    -.00010   .00242    .03633
 SDev     .00004   .03838    .00173    .00001     .00507   .00106    .00000
 %RSD    30.032    9.6338    .51371    .17001    5098.0    43.789    .00804

 #1      -.00018   .42550    .33850    .00491    -.00368   .00317    .03634
 #2      -.00012   .37123    .33605    .00490    .00348    .00167    .03633

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
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Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.02076	.02375	-.01339	.01267	.00271	-.00114

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SDev	.00003	.00008	.00020	.00025	.00515	.00089
%RSD	.14380	.33335	1.4975	1.9693	190.49	78.137
#1	.02074	.02369	-.01325	.01285	-.00094	-.00176
#2	.02078	.02380	-.01353	.01250	.00635	-.00051

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	40716	--	--	--	--	--	--
SDev	50.20458	--	--	--	--	--	--
%RSD	.1233058	--	--	--	--	--	--
#1	40751	--	--	--	--	--	--
#2	40680	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-53032-a-3-a@10 Operator: DCL
Run Time: 04/05/12 09:11:25
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	19.677	.00233	.00324	.03123	.00129	.09816	-.00010
SDev	.003	.00069	.00096	.00008	.00000	.00012	.00001
%RSD	.01636	29.595	29.684	.24837	.09419	.12320	9.3984
#1	19.675	.00184	.00256	.03128	.00129	.09808	-.00011
#2	19.679	.00282	.00392	.03117	.00129	.09825	-.00009

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	85.870	.00929	.00086	.14430	3.3765	.04630	.00119
SDev	.117	.00002	.00000	.00024	.0119	.00004	.00106
%RSD	.13668	.17895	.13847	.16468	.35109	.08650	88.713
#1	85.953	.00931	.00086	.14414	3.3849	.04632	.00194
#2	85.787	.00928	.00086	.14447	3.3681	.04627	.00044

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00054	1.3971	.25262	.00062	.00062	5.5721	.78798
SDev	.00118	.0001	.00032	.00025	.00050	.0122	.00281
%RSD	218.43	.00595	.12806	39.927	80.937	.21830	.35663
#1	-.00029	1.3972	.25285	.00044	.00026	5.5635	.78997
#2	.00137	1.3971	.25239	.00079	.00097	5.5807	.78599

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00018	12.569	11.965	.28682	-.00177	.00424	.42292
SDev	.00024	.029	.002	.00050	.00038	.00151	.00073
%RSD	130.20	.23469	.01437	.17506	21.306	35.649	.17282
#1	-.00035	12.548	11.966	.28717	-.00204	.00531	.42343
#2	-.00001	12.590	11.964	.28646	-.00150	.00317	.42240

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Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00354	.01867	-.00085	.00222	.00029	.00066
SDev	.00005	.00014	.00278	.00020	.00157	.00098
%RSD	1.2845	.73893	325.27	8.9763	531.86	148.68
#1	.00358	.01857	.00111	.00236	-.00081	-.00003
#2	.00351	.01876	-.00282	.00207	.00140	.00136

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	41264	--	--	--	--	--	--
SDev	125.1579	--	--	--	--	--	--
%RSD	.3033138	--	--	--	--	--	--
#1	41352	--	--	--	--	--	--
#2	41175	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-53032-a-4-a@10 Operator: DCL
Run Time: 04/05/12 09:15:16
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.2558	-.00179	.00315	.02995	.00019	.01326	-.00013
SDev	.0022	.00316	.00009	.00001	.00000	.00001	.00004
%RSD	.17416	176.10	2.8181	.03532	.03531	.07378	29.240
#1	1.2574	-.00403	.00309	.02996	.00019	.01325	-.00011
#2	1.2543	.00044	.00321	.02994	.00019	.01327	-.00016

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	140.14	.00077	.25208	-.00027	1.1523	.39576	.00143
SDev	.32	.00018	.00107	.00009	.0141	.00077	.00200
%RSD	.22658	23.693	.42324	33.671	1.2220	.19377	140.00
#1	140.37	.00090	.25284	-.00033	1.1623	.39630	.00284
#2	139.92	.00064	.25133	-.00020	1.1424	.39521	.00001

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00244	11.926	.27862	-.00039	.00046	-.00012	1.5267
SDev	.00284	.029	.00056	.00082	.00000	.00962	.0047
%RSD	116.48	.24588	.20164	210.41	.03062	8003.4	.30568
#1	.00444	11.947	.27902	-.00097	.00046	.00668	1.5300
#2	.00043	11.905	.27822	.00019	.00046	-.00692	1.5234

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00008	.39294	.42019	.11058	-.00367	.00596	.05396
SDev	.00004	.05128	.00216	.00009	.00054	.00168	.00015

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%RSD	57.576	13.051	.51395	.08480	14.636	28.120	.28764
#1	.00011	.42921	.42172	.11064	-.00405	.00714	.05407
#2	.00005	.35668	.41867	.11051	-.00329	.00477	.05385

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00143	.00771	.00076	.00176	.00326	.00202
SDev	.00013	.00008	.00212	.00194	.00240	.00305
%RSD	8.7518	1.0521	278.89	110.01	73.687	150.90
#1	.00134	.00765	.00226	.00313	.00495	.00418
#2	.00152	.00776	-.00074	.00039	.00156	-.00014

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	40750	--	--	--	--	--	--
SDev	53.03301	--	--	--	--	--	--
%RSD	.1301407	--	--	--	--	--	--
#1	40713	--	--	--	--	--	--
#2	40788	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-53032-a-5-a@10 Operator: DCL
Run Time: 04/05/12 09:19:08
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00283	-.00006	.00264	.00046	-.00018	.00027	-.00000
SDev	.00140	.00057	.00059	.00003	.00001	.00015	.00010
%RSD	49.511	952.53	22.284	5.9172	3.5957	56.547	10448.
#1	.00382	.00034	.00306	.00048	-.00017	.00038	.00007
#2	.00184	-.00046	.00222	.00044	-.00018	.00016	-.00007

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00628	.00004	-.00025	-.00068	-.00514	-.00038	.00012
SDev	.00361	.00017	.00003	.00006	.00426	.00002	.00046
%RSD	57.502	414.46	10.652	8.1900	82.927	4.2702	390.37
#1	-.00372	.00017	-.00026	-.00072	-.00213	-.00037	-.00021
#2	-.00883	-.00008	-.00023	-.00064	-.00816	-.00039	.00044

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00175	-.04103	-.00008	-.00036	-.00021	-.26711	-.00281
SDev	.00072	.00245	.00002	.00048	.00014	.01580	.00011
%RSD	41.414	5.9705	22.049	133.31	68.317	5.9161	3.9707
#1	.00226	-.03929	-.00007	-.00002	-.00011	-.25593	-.00289
#2	.00124	-.04276	-.00009	-.00069	-.00031	-.27828	-.00273

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Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00008	.04540	-.02049	-.00015	-.00572	.00864	.00006
SDev	.00019	.06487	.00047	.00002	.00007	.00193	.00006
%RSD	235.33	142.87	2.2992	13.116	1.1440	22.364	89.408
#1	.00005	-.00047	-.02015	-.00014	-.00568	.00727	.00010
#2	-.00022	.09127	-.02082	-.00017	-.00577	.01001	.00002

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00005	.00496	-.00100	.00068	.00419	.00053
SDev	.00006	.00005	.00222	.00042	.00176	.00020
%RSD	133.82	1.0685	221.70	61.970	42.083	38.770
#1	-.00000	.00500	-.00257	.00097	.00543	.00067
#2	-.00009	.00492	.00057	.00038	.00294	.00038

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	42277	--	--	--	--	--	--
SDev	97.58073	--	--	--	--	--	--
%RSD	.2308128	--	--	--	--	--	--
#1	42208	--	--	--	--	--	--
#2	42346	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-53032-a-6-a@10 Operator: DCL
Run Time: 04/05/12 09:22:59
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.7942	.00048	.00342	5.3991	-.00016	-.00037	-.00008
SDev	.0077	.00294	.00129	.0103	.00001	.00011	.00007
%RSD	.42995	614.61	37.640	.19119	8.4467	30.518	90.424
#1	1.7996	-.00160	.00251	5.4064	-.00017	-.00029	-.00013
#2	1.7887	.00256	.00433	5.3918	-.00015	-.00045	-.00003

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.8331	.00372	.00292	.01096	4.6224	.00080	.00592
SDev	.0030	.00020	.00009	.00019	.0113	.00008	.00044
%RSD	.10423	5.2862	3.0045	1.7822	.24459	9.9566	7.4413
#1	2.8310	.00359	.00286	.01082	4.6144	.00075	.00561
#2	2.8352	.00386	.00298	.01110	4.6304	.00086	.00623

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00108	5.8144	.14950	-.00000	.00328	-.00858	.29949
SDev	.00023	.0038	.00011	.00034	.00024	.16552	.00036
%RSD	21.676	.06523	.07396	8777.7	7.3492	1928.5	.11846

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#1	.00091	5.8117	.14942	.00024	.00345	-.12562	.29924

#2	.00124	5.8171	.14958	-.00025	.00311	.10846	.29974

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00003	-.07954	.01824	4.3630	-.00219	.00558	.17254
SDev	.00046	.12319	.00251	.0120	.00035	.00004	.00016
%RSD	1779.6	154.87	13.758	.27419	15.853	.76906	.09366
#1	-.00035	-.16665	.01647	4.3714	-.00243	.00561	.17242
#2	.00030	.00757	.02001	4.3545	-.00194	.00555	.17265

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00363	.01328	.00566	.00605	.00262	.00031
SDev	.00025	.00001	.00144	.00006	.00218	.00144
%RSD	6.8744	.05559	25.503	.99938	83.121	468.70
#1	.00345	.01329	.00464	.00609	.00416	-.00071
#2	.00381	.01328	.00668	.00601	.00108	.00132

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	41611	--	--	--	--	--	--
SDev	217.7889	--	--	--	--	--	--
%RSD	.5233926	--	--	--	--	--	--
#1	41765	--	--	--	--	--	--
#2	41457	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-52867-a-1-a Operator: DCL
Run Time: 04/05/12 09:26:50
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	165.86	.00323	.18399	1.3651	.01223	.07936	-.00120
SDev	.06	.00126	.00231	.0011	.00002	.00026	.00011
%RSD	.03379	38.858	1.2528	.08155	.12910	.32741	9.2878
#1	165.82	.00412	.18236	1.3659	.01224	.07917	-.00128
#2	165.90	.00234	.18562	1.3643	.01222	.07954	-.00113

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	879.41	.22450	.12918	.23684	254.29	.12936	.21545
SDev	.29	.00009	.00012	.00000	.04	.00008	.00136
%RSD	.03332	.03833	.09118	.00037	.01492	.06073	.62894
#1	879.20	.22444	.12926	.23684	254.32	.12930	.21449
#2	879.62	.22457	.12909	.23684	254.27	.12941	.21640

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00416	29.005	9.8049	.01270	.34814	32.209	7.3132
SDev	.00176	.030	.0009	.00019	.00055	.005	.0024
%RSD	42.332	.10191	.00937	1.5260	.15848	.01693	.03297

#1	-.00292	28.984	9.8043	.01256	.34853	32.205	7.3114
#2	-.00541	29.026	9.8056	.01283	.34774	32.213	7.3149

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00318	3.0923	3.5207	4.3634	-.02418	.03305	.31460
SDev	.00020	.0119	.0021	.0020	.00026	.00015	.00033
%RSD	6.3435	.38505	.06103	.04565	1.0927	.46801	.10377

#1	-.00304	3.1007	3.5192	4.3648	-.02437	.03316	.31437
#2	-.00332	3.0839	3.5222	4.3620	-.02399	.03294	.31483

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.67215	.86862	.19230	.22702	-.00945	-.00152
SDev	.00029	.00057	.00169	.00119	.00121	.00325
%RSD	.04263	.06534	.88045	.52242	12.851	213.45

#1	.67235	.86822	.19110	.22618	-.01030	.00078
#2	.67194	.86902	.19350	.22786	-.00859	-.00382

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	45401	--	--	--	--	--	--
SDev	31.11270	--	--	--	--	--	--
%RSD	.0685287	--	--	--	--	--	--

#1	45423	--	--	--	--	--	--
#2	45379	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-52867-a-2-a Operator: DCL
Run Time: 04/05/12 09:30:41
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	139.76	.00527	.16588	1.1628	.01086	.08101	-.00053
SDev	.09	.00026	.00164	.0002	.00002	.00081	.00011
%RSD	.06143	4.9166	.98889	.01968	.19842	1.0036	20.202

#1	139.70	.00508	.16472	1.1626	.01088	.08044	-.00045
#2	139.82	.00545	.16704	1.1630	.01085	.08159	-.00060

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	973.73	.19185	.11833	.21335	239.05	.11890	.23206
SDev	1.63	.00012	.00010	.00062	.04	.00021	.00053
%RSD	.16732	.06369	.08344	.29053	.01585	.17777	.23008

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#1	974.88	.19176	.11840	.21291	239.08	.11875	.23168
#2	972.58	.19193	.11826	.21379	239.02	.11905	.23244

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm

Avge	-.00217	25.494	8.3864	.01311	.31465	32.065	6.4082
SDev	.00212	.004	.0003	.00005	.00131	.031	.0025
%RSD	97.641	.01604	.00298	.39536	.41675	.09549	.03932
#1	-.00067	25.491	8.3866	.01315	.31373	32.044	6.4065
#2	-.00366	25.497	8.3862	.01307	.31558	32.087	6.4100

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00338	2.2577	2.6242	5.0595	-.02303	.03289	.28885
SDev	.00002	.0311	.0024	.0023	.00455	.00099	.00006
%RSD	.63912	1.3778	.09001	.04622	19.739	3.0219	.02208
#1	-.00337	2.2357	2.6225	5.0578	-.02624	.03219	.28889
#2	-.00340	2.2796	2.6258	5.0611	-.01981	.03359	.28880

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.55162	.93788	.21178	.24220	-.00622	-.00014
SDev	.00041	.00077	.00031	.00064	.00091	.00272
%RSD	.07433	.08267	.14674	.26651	14.623	1911.1
#1	.55133	.93733	.21156	.24174	-.00557	.00178
#2	.55191	.93843	.21200	.24266	-.00686	-.00207

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	44574	--	--	--	--	--	--
SDev	15.55635	--	--	--	--	--	--
%RSD	.0349001	--	--	--	--	--	--
#1	44585	--	--	--	--	--	--
#2	44563	--	--	--	--	--	--

Method: 20076010 Sample Name: CCV met0412ccv_00001 Operator: DCL
Run Time: 04/05/12 09:34:32
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.4546	.49335	.50006	.49925	.49788	.49638	.50685
SDev	.0061	.00225	.00230	.00066	.00039	.00002	.00011
%RSD	.24742	.45533	.46069	.13308	.07884	.00332	.02084
#1	2.4589	.49177	.49843	.49972	.49816	.49639	.50693
#2	2.4503	.49494	.50169	.49878	.49760	.49637	.50678

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	12.490	.49262	.49205	.49543	2.5451	.46228	.49504
SDev	.011	.00026	.00014	.00122	.0111	.00184	.00097
%RSD	.08782	.05274	.02851	.24697	.43772	.39865	.19689
#1	12.498	.49281	.49215	.49629	2.5372	.46358	.49435
#2	12.482	.49244	.49195	.49456	2.5529	.46098	.49573

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.49928	4.9376	.48846	.49969	.51016	12.237	.94401
SDev	.00281	.0034	.00013	.00013	.00035	.057	.00076
%RSD	.56359	.06967	.02704	.02557	.06850	.46695	.08059
#1	.49729	4.9400	.48855	.49978	.50991	12.278	.94455
#2	.50127	4.9352	.48836	.49960	.51041	12.197	.94348

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.24780	12.825	12.033	.24873	.51237	.49948	.50262
SDev	.00017	.030	.075	.00029	.00369	.00208	.00072
%RSD	.06877	.23260	.62466	.11755	.72000	.41554	.14357
#1	.24768	12.846	12.086	.24894	.50976	.49801	.50313
#2	.24792	12.804	11.979	.24852	.51498	.50095	.50211

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.49993	.50861	.48494	.50009	.48468	.50664
SDev	.00001	.00056	.00291	.00001	.00537	.00153
%RSD	.00265	.11103	.60081	.00105	1.1088	.30275
#1	.49994	.50901	.48288	.50008	.48088	.50556
#2	.49992	.50821	.48700	.50009	.48848	.50773

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	41424	--	--	--	--	--	--
SDev	43.13351	--	--	--	--	--	--
%RSD	.1041281	--	--	--	--	--	--
#1	41454	--	--	--	--	--	--
#2	41393	--	--	--	--	--	--

Method: 20076010 Sample Name: CCB Operator: DCL
Run Time: 04/05/12 09:38:23
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01817	.00052	.00197	-.00009	-.00023	.00094	-.00013
SDev	.00109	.00149	.00175	.00004	.00001	.00031	.00007

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%RSD	5.9825	286.49	88.515	39.055	5.2736	33.327	54.145
#1	.01740	-.00053	.00321	-.00007	-.00022	.00072	-.00017
#2	.01894	.00157	.00074	-.00012	-.00024	.00116	-.00008

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.03347	.00032	-.00011	-.00155	-.01181	.00006	-.00004
SDev	.00007	.00015	.00061	.00021	.02791	.00001	.00067
%RSD	.21076	46.911	570.48	13.736	236.22	14.315	1804.0

#1	-.03342	.00021	-.00054	-.00140	-.03155	.00005	-.00051
#2	-.03352	.00042	.00032	-.00170	.00792	.00007	.00044

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00064	-.00262	-.00000	.00116	-.00033	-.01863	-.00563
SDev	.00328	.00059	.00002	.00068	.00096	.00045	.00008
%RSD	509.99	22.677	3806.2	58.586	288.35	2.4404	1.3887

#1	.00296	-.00304	.00001	.00164	-.00102	-.01895	-.00558
#2	-.00167	-.00220	-.00001	.00068	.00035	-.01831	-.00569

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00014	-.02446	-.01740	-.00006	.00316	.00021	.00009
SDev	.00084	.18888	.00079	.00001	.00215	.00016	.00001
%RSD	596.64	772.34	4.5654	21.916	68.032	77.087	7.3662

#1	-.00073	-.15801	-.01684	-.00007	.00468	.00032	.00009
#2	.00045	.10910	-.01796	-.00005	.00164	.00009	.00009

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00003	-.00287	-.00112	.00050	-.00025	.00109
SDev	.00005	.00011	.00377	.00088	.00163	.00410
%RSD	170.19	3.7542	336.61	174.45	659.23	376.83

#1	-.00007	-.00294	-.00379	.00113	.00091	.00398
#2	.00001	-.00279	.00155	-.00012	-.00140	-.00181

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	41082	--	--	--	--	--	--
SDev	101.1163	--	--	--	--	--	--
%RSD	.2461298	--	--	--	--	--	--

#1	41011	--	--	--	--	--	--
#2	41154	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-52867-a-3-a Operator: DCL
Run Time: 04/05/12 09:42:14
Comment: TRACE 61E

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Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	184.45	.00510	.19704	1.5667	.01327	.07298	-.00139
SDev	.45	.00222	.00235	.0024	.00000	.00009	.00016
%RSD	.24138	43.450	1.1908	.15246	.02016	.12267	11.459

#1	184.76	.00354	.19870	1.5684	.01327	.07305	-.00128
#2	184.13	.00667	.19538	1.5650	.01327	.07292	-.00151

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm

Avge	859.02	.24577	.13746	.24872	264.29	.13749	.19584
SDev	1.43	.00032	.00082	.00035	.35	.00038	.00102
%RSD	.16673	.12913	.59464	.14204	.13057	.27548	.51995
#1	860.03	.24599	.13803	.24897	264.53	.13775	.19512
#2	858.00	.24555	.13688	.24847	264.05	.13722	.19656

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00571	30.059	11.321	.01206	.39336	34.318	8.7683
SDev	.00031	.031	.015	.00025	.00187	.118	.0078
%RSD	5.4683	.10228	.13222	2.0465	.47642	.34491	.08938
#1	-.00549	30.081	11.332	.01223	.39468	34.401	8.7738
#2	-.00593	30.038	11.311	.01188	.39203	34.234	8.7627

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00296	2.7202	3.0763	3.9701	-.01960	.03340	.34548
SDev	.00022	.0881	.0116	.0056	.00156	.00084	.00027
%RSD	7.5066	3.2372	.37675	.14111	7.9674	2.5011	.07716
#1	-.00281	2.7824	3.0845	3.9740	-.01849	.03400	.34567
#2	-.00312	2.6579	3.0681	3.9661	-.02070	.03281	.34529

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.78853	.81602	.17019	.20866	-.01193	-.00261
SDev	.00077	.00073	.00019	.00162	.00297	.00101
%RSD	.09762	.08977	.11270	.77795	24.867	38.954
#1	.78907	.81654	.17033	.20751	-.00983	-.00332
#2	.78799	.81550	.17006	.20980	-.01403	-.00189

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	46272	--	--	--	--	--	--
SDev	177.4838	--	--	--	--	--	--
%RSD	.3835622	--	--	--	--	--	--
#1	46147	--	--	--	--	--	--
#2	46398	--	--	--	--	--	--

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Method: 20076010 Sample Name: 600-52867-a-4-a Operator: DCL
Run Time: 04/05/12 09:46:05
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	136.40	.00326	.16113	1.1871	.01086	.09457	-.00060
SDev	.26	.00015	.00183	.0023	.00000	.00036	.00018
%RSD	.19129	4.4866	1.1356	.19487	.03736	.38518	29.764
#1	136.59	.00316	.16242	1.1887	.01086	.09483	-.00072
#2	136.22	.00337	.15984	1.1855	.01086	.09432	-.00047

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	917.38	.19054	.12035	.22625	236.34	.11879	.23301
SDev	.26	.00020	.00006	.00116	.14	.00030	.00032
%RSD	.02813	.10735	.04657	.51155	.05744	.25375	.13533
#1	917.20	.19069	.12039	.22707	236.44	.11900	.23279
#2	917.56	.19040	.12031	.22543	236.24	.11857	.23323

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00045	26.105	8.1422	.01076	.32513	33.545	8.3980
SDev	.00172	.015	.0062	.00037	.00012	.096	.0155
%RSD	381.53	.05678	.07608	3.4107	.03650	.28762	.18405
#1	-.00166	26.115	8.1466	.01102	.32504	33.613	8.4090
#2	.00076	26.094	8.1378	.01050	.32521	33.477	8.3871

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00270	1.8977	2.1697	4.6632	-.02071	.03455	.31282
SDev	.00008	.0154	.0097	.0124	.00268	.00128	.00121
%RSD	2.9089	.81010	.44618	.26690	12.928	3.7118	.38704
#1	-.00265	1.9086	2.1766	4.6720	-.02260	.03546	.31368
#2	-.00276	1.8869	2.1629	4.6544	-.01881	.03365	.31196

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.53538	.91612	.21069	.24417	-.00496	.00180
SDev	.00008	.00199	.00020	.00037	.00369	.00073
%RSD	.01508	.21767	.09679	.15196	74.459	40.390
#1	.53544	.91753	.21055	.24391	-.00757	.00129
#2	.53532	.91471	.21084	.24443	-.00235	.00232

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	44593	--	--	--	--	--	--

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SDev	38.18377	--	--	--	--	--	--
%RSD	.0856273	--	--	--	--	--	--
#1	44566	--	--	--	--	--	--
#2	44620	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-52867-a-5-a Operator: DCL
Run Time: 04/05/12 09:49:55
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	209.83	.02774	.20344	1.6811	.01479	.06013	.13049
SDev	1.17	.00002	.00321	.0066	.00006	.00001	.00026
%RSD	.55784	.06381	1.5770	.39115	.42766	.02045	.19963

#1	209.01	.02772	.20117	1.6764	.01474	.06014	.13030
#2	210.66	.02775	.20571	1.6857	.01483	.06012	.13067

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	929.47	.26152	.08421	.34496	206.66	.17459	4.8791
SDev	3.28	.00077	.00012	.00174	.72	.00115	.0282
%RSD	.35238	.29310	.14248	.50344	.35072	.65841	.57798
#1	927.15	.26098	.08412	.34373	206.14	.17378	4.8591
#2	931.78	.26206	.08429	.34619	207.17	.17540	4.8990

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00230	33.386	4.0391	.00438	.29051	33.054	9.6141
SDev	.00039	.115	.0133	.00004	.00145	.227	.0400
%RSD	17.131	.34317	.32970	.99285	.49758	.68820	.41620
#1	-.00258	33.305	4.0297	.00441	.28949	32.893	9.5858
#2	-.00202	33.467	4.0485	.00435	.29154	33.214	9.6424

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00259	1.3924	1.6273	3.4859	-.01474	.07542	.27626
SDev	.00019	.0814	.0153	.0141	.00026	.00160	.00064
%RSD	7.3750	5.8442	.94068	.40445	1.7477	2.1142	.23136
#1	-.00246	1.4499	1.6165	3.4760	-.01456	.07655	.27580
#2	-.00273	1.3348	1.6381	3.4959	-.01492	.07429	.27671

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.62637	1.0591	4.7669	4.9352	-.00627	-.00031
SDev	.00221	.0047	.0268	.0289	.00257	.00069
%RSD	.35214	.44379	.56208	.58565	41.008	222.39
#1	.62481	1.0558	4.7479	4.9147	-.00808	.00018
#2	.62793	1.0625	4.7858	4.9556	-.00445	-.00080

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IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	44546	--	--	--	--	--	--
SDev	125.8650	--	--	--	--	--	--
%RSD	.2825506	--	--	--	--	--	--
#1	44635	--	--	--	--	--	--
#2	44457	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-52867-a-6-a Operator: DCL
Run Time: 04/05/12 09:53:46
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm

Avge	153.77	.00282	.24460	1.3233	.01475	.08252	-.00465
SDev	.26	.00047	.00043	.0019	.00001	.00101	.00010
%RSD	.16986	16.808	.17421	.14284	.03087	1.2186	2.2419
#1	153.95	.00316	.24490	1.3246	.01474	.08181	-.00472
#2	153.58	.00249	.24430	1.3219	.01475	.08323	-.00457

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	803.18	.22033	.17785	.22841	358.90	.16205	.22361
SDev	.99	.00002	.00036	.00043	.32	.00032	.00025
%RSD	.12274	.01105	.20417	.18825	.09014	.19517	.11173
#1	803.88	.22035	.17810	.22871	359.13	.16227	.22378
#2	802.48	.22031	.17759	.22811	358.67	.16182	.22343

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00565	24.820	8.5837	.01422	.38535	29.564	5.9619
SDev	.00125	.032	.0099	.00051	.00001	.045	.0113
%RSD	22.179	.12730	.11575	3.5744	.00349	.15334	.19005
#1	-.00654	24.842	8.5908	.01458	.38536	29.596	5.9699
#2	-.00477	24.797	8.5767	.01386	.38534	29.532	5.9539

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00471	2.3530	2.6901	4.3674	-.02631	.02878	.35316
SDev	.00007	.0108	.0039	.0041	.00568	.00030	.00030
%RSD	1.5148	.45754	.14385	.09468	21.587	1.0371	.08595
#1	-.00476	2.3606	2.6928	4.3703	-.02229	.02900	.35337
#2	-.00466	2.3454	2.6874	4.3644	-.03032	.02857	.35294

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.67945	.94340	.19543	.23769	-.01151	-.00273
SDev	.00097	.00079	.00341	.00133	.00143	.00260
%RSD	.14271	.08419	1.7455	.55994	12.421	95.190

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#1	.68014	.94397	.19784	.23675	-.01050	-.00456
#2	.67877	.94284	.19302	.23863	-.01252	-.00089

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	49102	--	--	--	--	--	--
SDev	159.0990	--	--	--	--	--	--
%RSD	.3240141	--	--	--	--	--	--
#1	48990	--	--	--	--	--	--
#2	49215	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-52867-a-7-a Operator: DCL
Run Time: 04/05/12 09:57:37
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	153.62	.00448	.17628	1.2593	.01201	.08109	-.00127
SDev	.21	.00180	.00017	.0021	.00002	.00066	.00005
%RSD	.13460	40.094	.09703	.16548	.16933	.81801	3.8821
#1	153.76	.00321	.17640	1.2608	.01202	.08155	-.00123
#2	153.47	.00576	.17615	1.2579	.01199	.08062	-.00130

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	833.75	.20636	.12254	.22003	257.08	.13211	.25626
SDev	.67	.00037	.00044	.00036	.46	.00016	.00116
%RSD	.08092	.18125	.36033	.16485	.17824	.11946	.45315
#1	834.23	.20662	.12285	.22028	257.41	.13222	.25544
#2	833.27	.20610	.12223	.21977	256.76	.13199	.25709

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00286	26.990	8.0869	.01099	.32688	34.490	6.9109
SDev	.00100	.034	.0120	.00036	.00145	.027	.0113
%RSD	34.951	.12670	.14809	3.3101	.44378	.07857	.16299
#1	-.00357	27.015	8.0954	.01124	.32791	34.509	6.9189
#2	-.00215	26.966	8.0785	.01073	.32586	34.471	6.9030

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00351	1.7745	2.0466	4.1464	-.01742	.03227	.28788
SDev	.00037	.0405	.0036	.0061	.00310	.00468	.00052
%RSD	10.460	2.2845	.17783	.14745	17.767	14.488	.18163
#1	-.00325	1.8031	2.0491	4.1507	-.01523	.03558	.28825
#2	-.00377	1.7458	2.0440	4.1420	-.01961	.02896	.28751

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2

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Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.60007	.89159	.22939	.26970	-.01122	.00132
SDev	.00099	.00175	.00007	.00178	.00485	.00392
%RSD	.16435	.19629	.03001	.65861	43.232	298.34
#1	.60077	.89283	.22944	.26844	-.00779	-.00146
#2	.59937	.89035	.22935	.27096	-.01465	.00409

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	45390	--	--	--	--	--	--
SDev	99.70206	--	--	--	--	--	--
%RSD	.2196588	--	--	--	--	--	--
#1	45460	--	--	--	--	--	--
#2	45319	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-52867-a-8-a Operator: DCL
Run Time: 04/05/12 10:01:28
Comment: TRACE 61E

Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	181.54	.00332	.16430	1.4661	.01313	.06762	-.00192
SDev	.25	.00116	.00143	.0029	.00004	.00109	.00011
%RSD	.13866	34.851	.86799	.19443	.32405	1.6172	5.6372
#1	181.72	.00414	.16531	1.4682	.01316	.06840	-.00184
#2	181.36	.00250	.16330	1.4641	.01310	.06685	-.00199

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	770.24	.23069	.11619	.21617	253.11	.14461	.23334
SDev	.92	.00018	.00000	.00070	.30	.00014	.00066
%RSD	.11935	.07947	.00247	.32589	.11920	.09665	.28477
#1	770.89	.23082	.11619	.21667	253.32	.14470	.23381
#2	769.59	.23056	.11619	.21567	252.90	.14451	.23287

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00333	28.456	8.4308	.00874	.33041	30.965	8.3328
SDev	.00245	.039	.0129	.00109	.00048	.035	.0144
%RSD	73.733	.13823	.15256	12.452	.14453	.11196	.17253
#1	-.00159	28.483	8.4399	.00951	.33074	30.989	8.3430
#2	-.00506	28.428	8.4217	.00797	.33007	30.940	8.3226

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00349	1.2850	1.7006	3.3359	-.01836	.03224	.31945
SDev	.00013	.0084	.0013	.0045	.00089	.00118	.00091
%RSD	3.5992	.65208	.07792	.13449	4.8594	3.6678	.28532

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#1	-.00358	1.2909	1.6997	3.3391	-.01773	.03140	.32009
#2	-.00341	1.2791	1.7015	3.3328	-.01899	.03307	.31880

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.66581	.78842	.20765	.24618	-.00906	-.00046
SDev	.00126	.00104	.00454	.00326	.00148	.00442
%RSD	.18979	.13181	2.1843	1.3260	16.365	955.43
#1	.66670	.78916	.20444	.24849	-.01011	.00266
#2	.66491	.78769	.21085	.24387	-.00801	-.00359

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	45320	--	--	--	--	--	--
SDev	70.71068	--	--	--	--	--	--
%RSD	.1560253	--	--	--	--	--	--
#1	45270	--	--	--	--	--	--
#2	45370	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-52867-a-9-a Operator: DCL

Run Time: 04/05/12 10:05:18
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	180.12	.01278	.18152	1.5714	.01279	.05833	.01013
SDev	.66	.00021	.00206	.0052	.00006	.00043	.00001
%RSD	.36481	1.6743	1.1349	.32926	.45173	.73387	.06508
#1	180.58	.01293	.18006	1.5751	.01283	.05802	.01013
#2	179.65	.01262	.18297	1.5677	.01275	.05863	.01014

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	973.22	.23874	.11128	.24649	223.74	.13212	1.1146
SDev	6.27	.00125	.00103	.00121	1.15	.00022	.0080
%RSD	.64400	.52411	.93039	.48915	.51408	.16360	.71978
#1	977.65	.23962	.11201	.24734	224.55	.13227	1.1203
#2	968.79	.23785	.11055	.24564	222.92	.13197	1.1090

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00167	30.128	7.6806	.00843	.35202	29.681	8.9719
SDev	.00316	.180	.0386	.00078	.00253	.062	.0392
%RSD	189.54	.59736	.50271	9.3069	.71793	.20756	.43660
#1	-.00390	30.255	7.7079	.00899	.35381	29.724	8.9995
#2	.00057	30.001	7.6533	.00788	.35023	29.637	8.9442

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm

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Avge	-.00321	1.5840	1.9556	4.2853	-.01567	.03525	.29108
SDev	.00023	.0406	.0024	.0144	.00322	.00040	.00136
%RSD	7.2863	2.5642	.12079	.33651	20.534	1.1470	.46675
#1	-.00305	1.6128	1.9573	4.2955	-.01339	.03496	.29204
#2	-.00338	1.5553	1.9540	4.2751	-.01794	.03553	.29012

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.68448	.81831	1.0688	1.1375	-.00441	-.00030
SDev	.00286	.00332	.0116	.0063	.00131	.00409
%RSD	.41835	.40632	1.0819	.54964	29.617	1382.2
#1	.68651	.82066	1.0770	1.1420	-.00534	-.00319
#2	.68246	.81596	1.0607	1.1331	-.00349	.00260

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	44752	--	--	--	--	--	--
SDev	371.2310	--	--	--	--	--	--
%RSD	.8295388	--	--	--	--	--	--
#1	44489	--	--	--	--	--	--
#2	45014	--	--	--	--	--	--

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--------------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-52867-a-10-a       Operator: DCL
Run Time: 04/05/12 10:09:09
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    176.16    .00714    .15979    1.5229    .01253    .05583    .00198
 SDev       .19    .00093    .00145     .0014    .00002    .00001    .00003
 %RSD    .10579    13.053    .90528    .09390    .15091    .01639    1.5242

 #1      176.29    .00780    .15876    1.5239    .01254    .05582    .00201
 #2      176.02    .00648    .16081    1.5219    .01252    .05583    .00196

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    928.25    .23173    .11370    .23212    223.82    .12926    .39026
 SDev       .82    .00031    .00022    .00044       .32    .00017    .00023
 %RSD    .08835    .13220    .19115    .19136    .14429    .12811    .06013

 #1      928.83    .23195    .11385    .23243    224.04    .12937    .39009
 #2      927.67    .23152    .11354    .23180    223.59    .12914    .39042

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00511   29.118    7.9677    .00844    .33726    24.871    8.8696
 SDev     .00297     .003     .0055    .00084    .00034      .016     .0077
 %RSD    58.077    .01058    .06957    9.9760    .10236    .06478    .08683

 #1      -.00720   29.120    7.9716    .00904    .33750    24.882    8.8750

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 #2      -.00301   29.116    7.9638    .00785    .33701    24.859    8.8641

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00269   1.3437    1.6660    4.0950    -.01589   .03296    .31845
 SDev     .00050    .0257     .0008     .0032     .00121   .00262    .00068
 %RSD    18.713    1.9098    .04591    .07745    7.6379    7.9382    .21475

 #1      -.00234   1.3619    1.6665    4.0973    -.01504   .03481    .31893
 #2      -.00305   1.3256    1.6655    4.0928    -.01675   .03111    .31797

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .69003    .74775    .36039    .40519    -.00908   -.00312
 SDev    .00055    .00034    .00036    .00017     .00739    .00075
 %RSD    .07965    .04498    .09888    .04290    81.461    24.067

 #1      .69041    .74751    .36013    .40507    -.01430   -.00365
 #2      .68964    .74799    .36064    .40531    -.00385   -.00259

 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    44872     --        --        --        --        --        --
 SDev    3.535534  --        --        --        --        --        --
 %RSD    .0078792  --        --        --        --        --        --
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 #1      44869     --        --        --        --        --        --
 #2      44874     --        --        --        --        --        --
-------------------------------------------------------------------------------
Method: 20076010   Sample Name: 600-52867-a-10-b du    Operator: DCL
Run Time: 04/05/12 10:13:01
Comment: TRACE 61E
Mode: CONC   Corr. Factor: 1

 Elem    Al3082    Sb2068    As1890    Ba4934    Be3130    B_2496    Cd2265
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    172.08    .00893    .16631    1.5305    .01240    .05887    .01503
 SDev       .42    .00059    .00120     .0018    .00002    .00010    .00025
 %RSD    .24680    6.6008    .71940    .11828    .13118    .17572    1.6511

 #1      172.38    .00852    .16715    1.5318    .01241    .05880    .01521
 #2      171.78    .00935    .16546    1.5292    .01239    .05895    .01486

 Elem    Ca3179    Cr2677    Co2286    Cu3247    Fe2714    Li6707    Pb2203
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    957.57    .22795    .11498    .24673    224.05    .12826    1.0520
 SDev      1.20    .00021    .00009    .00027       .24    .00034     .0011
 %RSD    .12583    .09431    .07776    .10939    .10602    .26499    .10034

 #1      958.42    .22810    .11504    .24693    223.88    .12850    1.0528
 #2      956.72    .22779    .11492    .24654    224.22    .12802    1.0513

 Elem    Se1960    Mg2790    Mn2576    Mo2020    Ni2316    K_7664    Si2881
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00361   29.251    8.0647    .00788    .34216    26.407    7.9528

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 SDev     .00162     .027     .0046    .00009    .00159      .109     .0105
 %RSD    44.816    .09373    .05708    1.0807    .46347    .41090    .13167

 #1      -.00246   29.271    8.0680    .00782    .34328    26.484    7.9602
 #2      -.00475   29.232    8.0615    .00794    .34103    26.330    7.9454

 Elem    Ag3280    Na3302    Na5889    Sr4215    Tl1908    Sn1899    Ti3349
 Units   ppm       ppm       ppm       ppm       ppm       ppm       ppm
 Avge    -.00286   1.4009    1.6927    4.2511    -.01551   .04125    .29336
 SDev     .00025    .0315     .0081     .0011     .00138   .00011    .00022
 %RSD    8.8830    2.2498    .47993    .02498    8.8979    .26140    .07482

 #1      -.00268   1.3786    1.6985    4.2519    -.01648   .04132    .29351
 #2      -.00303   1.4232    1.6870    4.2504    -.01453   .04117    .29320

 Elem    V_2924    Zn2138    2203/1    2203/2    1960/1    1960/2
 Units   ppm       ppm       ppm       ppm       ppm       ppm
 Avge    .67046    .81491    1.0048    1.0756    -.00538   -.00272
 SDev    .00028    .00061     .0018     .0007     .00016    .00250
 %RSD    .04188    .07503    .17422    .06584    2.9573    92.149

 #1      .67066    .81534    1.0061    1.0761    -.00550   -.00095
 #2      .67026    .81448    1.0036    1.0751    -.00527   -.00449


 IntStd  1         2         3         4         5         6         7
 Mode    *Counts   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED   NOTUSED
 Elem    Y         --        --        --        --        --        --
 Wavlen  371.030   --        --        --        --        --        --
 Avge    44536     --        --        --        --        --        --
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SDev	152.7351	--	--	--	--	--	--
%RSD	.3429474	--	--	--	--	--	--
#1	44428	--	--	--	--	--	--
#2	44644	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-52867-a-10-c ms Operator: DCL
Run Time: 04/05/12 10:16:52
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	222.12	.33247	1.0367	2.3811	.43148	.67739	.43237
SDev	.56	.00102	.0042	.0058	.00063	.00136	.00125
%RSD	.25249	.30577	.40507	.24380	.14493	.20119	.28876
#1	222.52	.33319	1.0337	2.3852	.43192	.67835	.43326
#2	221.73	.33175	1.0397	2.3770	.43104	.67643	.43149

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	982.28	1.0880	.92207	1.1567	245.93	.66481	2.6520
SDev	1.08	.0019	.00239	.0030	.39	.00188	.0070
%RSD	.10998	.17370	.25935	.26315	.15845	.28354	.26444
#1	983.04	1.0894	.92376	1.1589	246.20	.66615	2.6570

#2	981.51	1.0867	.92038	1.1546	245.65	.66348	2.6471

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.81109	42.428	8.9553	.76357	1.1789	42.136	8.1642
SDev	.00019	.083	.0157	.00140	.0027	.125	.0191
%RSD	.02308	.19667	.17558	.18292	.22666	.29695	.23449
#1	.81095	42.487	8.9664	.76258	1.1808	42.225	8.1777
#2	.81122	42.369	8.9441	.76456	1.1770	42.048	8.1507

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.46579	12.220	13.414	4.9718	.84921	.83291	.64707
SDev	.00123	.016	.051	.0110	.00229	.00322	.00136
%RSD	.26319	.13132	.37666	.22041	.26994	.38698	.21095
#1	.46666	12.231	13.450	4.9796	.84759	.83519	.64804
#2	.46492	12.208	13.379	4.9641	.85083	.83063	.64610

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.5593	1.7767	2.5521	2.7020	.77486	.82920
SDev	.0030	.0032	.0076	.0067	.00186	.00065
%RSD	.19313	.18094	.29761	.24877	.24010	.07832
#1	1.5614	1.7789	2.5575	2.7068	.77355	.82966
#2	1.5571	1.7744	2.5467	2.6973	.77618	.82874

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED

Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	43888	--	--	--	--	--	--
SDev	41.71930	--	--	--	--	--	--
%RSD	.0950596	--	--	--	--	--	--
#1	43858	--	--	--	--	--	--
#2	43917	--	--	--	--	--	--

Method: 20076010 Sample Name: CCV met0412ccv_00001 Operator: DCL
Run Time: 04/05/12 10:20:44
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.4680	.50321	.50463	.50436	.49482	.50215	.51247
SDev	.0076	.00511	.00598	.00238	.00259	.00181	.00157
%RSD	.30600	1.0159	1.1861	.47107	.52398	.36038	.30609
#1	2.4733	.50683	.50886	.50604	.49665	.50343	.51357
#2	2.4627	.49960	.50040	.50268	.49298	.50087	.51136

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm

Avge	12.605	.49180	.49003	.49413	2.5838	.46852	.49868
SDev	.048	.00289	.00162	.00091	.0184	.00183	.00161
%RSD	.38252	.58827	.33068	.18337	.71312	.39084	.32249
#1	12.640	.49385	.49118	.49477	2.5708	.46981	.49982
#2	12.571	.48976	.48889	.49349	2.5969	.46722	.49754

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.49837	4.9528	.48756	.50591	.51834	12.434	.95359
SDev	.00093	.0222	.00234	.00080	.00004	.017	.00736
%RSD	.18556	.44775	.48019	.15753	.00745	.13591	.77173
#1	.49772	4.9685	.48921	.50647	.51831	12.446	.95880
#2	.49903	4.9371	.48590	.50535	.51836	12.422	.94839

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.24999	12.973	12.176	.25157	.52780	.49716	.50502
SDev	.00026	.167	.028	.00102	.00101	.00403	.00239
%RSD	.10262	1.2856	.22822	.40544	.19183	.81035	.47371
#1	.25018	12.855	12.195	.25229	.52852	.50001	.50671
#2	.24981	13.091	12.156	.25085	.52709	.49431	.50333

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.49927	.51396	.48139	.50732	.47785	.50869
SDev	.00253	.00205	.00090	.00196	.00041	.00118
%RSD	.50604	.39963	.18716	.38670	.08585	.23230
#1	.50105	.51541	.48203	.50871	.47756	.50786
#2	.49748	.51251	.48075	.50593	.47814	.50953

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	40821	--	--	--	--	--	--
SDev	31.11270	--	--	--	--	--	--
%RSD	.0762174	--	--	--	--	--	--
#1	40799	--	--	--	--	--	--
#2	40843	--	--	--	--	--	--

Method: 20076010 Sample Name: CCB Operator: DCL
Run Time: 04/05/12 10:24:35
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.02641	.00045	.00103	-.00010	-.00038	.00086	-.00014
SDev	.00058	.00222	.00048	.00002	.00002	.00053	.00002
%RSD	2.2015	492.35	46.697	21.879	5.0491	62.044	12.827

#1	.02682	.00202	.00069	-.00008	-.00037	.00123	-.00016
#2	.02600	-.00112	.00137	-.00011	-.00040	.00048	-.00013

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.02297	.00017	-.00057	-.00213	-.01807	.00009	.00017
SDev	.00062	.00039	.00026	.00034	.00078	.00009	.00059
%RSD	2.7090	228.92	44.929	16.077	4.3141	93.132	350.35
#1	-.02342	.00045	-.00075	-.00189	-.01752	.00015	.00058
#2	-.02253	-.00011	-.00039	-.00237	-.01863	.00003	-.00025

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00259	-.00410	.00004	.00149	-.00065	-.02847	-.00455
SDev	.00183	.00375	.00004	.00188	.00027	.03649	.00248
%RSD	70.538	91.388	98.145	126.45	41.375	128.16	54.574
#1	.00130	-.00145	.00006	.00282	-.00084	-.00267	-.00279
#2	.00388	-.00675	.00001	.00016	-.00046	-.05428	-.00630

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00058	-.07631	-.01416	-.00006	.00105	-.00004	.00006
SDev	.00000	.15125	.00226	.00003	.00141	.00023	.00007
%RSD	.54180	198.20	15.934	43.417	133.96	651.65	119.77
#1	-.00058	-.18326	-.01256	-.00004	.00205	-.00020	.00010
#2	-.00057	.03064	-.01575	-.00008	.00006	.00013	.00001

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00006	-.00199	-.00307	.00179	.00077	.00350
SDev	.00043	.00004	.00396	.00286	.00296	.00126
%RSD	762.55	2.1002	129.21	160.33	386.30	36.061

#1	.00036	-.00196	-.00587	.00381	-.00132	.00261
#2	-.00025	-.00202	-.00026	-.00024	.00285	.00440

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	41109	--	--	--	--	--	--
SDev	144.2498	--	--	--	--	--	--
%RSD	.3508959	--	--	--	--	--	--
#1	41007	--	--	--	--	--	--
#2	41211	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-52867-a-10-d msd Operator: DCL
Run Time: 04/05/12 10:28:26
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265

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Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	240.25	.29557	1.0384	2.4661	.43044	.64760	.41751
SDev	.53	.00142	.0030	.0051	.00003	.00032	.00049
%RSD	.22121	.48064	.28907	.20529	.00679	.04883	.11754
#1	240.62	.29457	1.0363	2.4697	.43042	.64783	.41786
#2	239.87	.29658	1.0405	2.4626	.43046	.64738	.41716

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	972.14	1.1047	.92036	1.1624	263.14	.67895	2.4609
SDev	.64	.0001	.00107	.0024	.12	.00186	.0038
%RSD	.06570	.00700	.11609	.20506	.04705	.27413	.15510
#1	972.60	1.1047	.92111	1.1641	263.23	.68027	2.4582
#2	971.69	1.1046	.91960	1.1607	263.05	.67763	2.4636

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.80172	44.169	9.0864	.73720	1.1896	42.828	10.545
SDev	.00303	.015	.0080	.00209	.0018	.137	.005
%RSD	.37836	.03455	.08768	.28371	.15280	.31964	.04542
#1	.79957	44.158	9.0920	.73572	1.1909	42.925	10.549
#2	.80386	44.179	9.0808	.73868	1.1883	42.731	10.542

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.46461	12.314	13.521	4.9981	.85236	.81325	.62914
SDev	.00103	.005	.041	.0085	.00034	.00108	.00083
%RSD	.22188	.04421	.30221	.16969	.04034	.13301	.13146
#1	.46534	12.310	13.550	5.0041	.85212	.81402	.62972
#2	.46388	12.318	13.492	4.9921	.85261	.81249	.62855

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.6116	1.7839	2.3600	2.5113	.76078	.82218

SDev	.0009	.0007	.0014	.0050	.00693	.00802
%RSD	.05354	.03648	.06116	.19923	.91138	.97507
#1	1.6122	1.7843	2.3589	2.5078	.76568	.81651
#2	1.6110	1.7834	2.3610	2.5149	.75588	.82785

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	44374	--	--	--	--	--	--
SDev	180.3122	--	--	--	--	--	--
%RSD	.4063511	--	--	--	--	--	--
#1	44246	--	--	--	--	--	--
#2	44501	--	--	--	--	--	--

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Method: 20076010 Sample Name: mb 600-76449/28-a Operator: DCL
Run Time: 04/05/12 10:32:17
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.02859	.00378	.00074	.00029	-.00046	-.00138	.00003
SDev	.00652	.00048	.00037	.00001	.00000	.00018	.00011
%RSD	22.788	12.796	50.705	3.4653	.96741	13.276	419.37
#1	.03320	.00412	.00100	.00028	-.00046	-.00125	.00010
#2	.02399	.00344	.00047	.00029	-.00045	-.00151	-.00005

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.34176	.00015	-.00044	-.00221	.02153	.00034	.00084
SDev	.03191	.00027	.00019	.00032	.02599	.00012	.00061
%RSD	9.3356	183.12	43.791	14.571	120.69	34.038	73.530
#1	.36432	-.00004	-.00030	-.00244	.03991	.00042	.00127
#2	.31920	.00034	-.00057	-.00198	.00316	.00026	.00040

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00088	.01508	.00039	.00166	-.00039	.04546	.00417
SDev	.00208	.00839	.00017	.00158	.00068	.05631	.00553
%RSD	236.97	55.618	44.301	95.497	174.38	123.87	132.84
#1	.00235	.02101	.00051	.00277	.00009	.08528	.00808
#2	-.00059	.00915	.00027	.00054	-.00087	.00564	.00025

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00014	.17031	.06628	.00002	-.00170	.00085	.00021
SDev	.00053	.15464	.00530	.00008	.00381	.00102	.00011
%RSD	374.34	90.802	7.9938	539.79	224.39	119.80	52.701
#1	.00052	.27965	.07003	.00007	.00100	.00157	.00029
#2	-.00023	.06096	.06254	-.00004	-.00439	.00013	.00013

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2

Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00011	.01799	.00081	.00085	-.00467	.00365
SDev	.00017	.00050	.00107	.00146	.00050	.00287
%RSD	148.26	2.7567	132.30	171.63	10.660	78.723
#1	-.00023	.01834	.00005	.00188	-.00431	.00568
#2	.00001	.01764	.00157	-.00018	-.00502	.00162

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	40520	--	--	--	--	--	--
SDev	580.5347	--	--	--	--	--	--
%RSD	1.432694	--	--	--	--	--	--

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#1	40110	--	--	--	--	--	--
#2	40931	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-52989-b-1-a Operator: DCL
Run Time: 04/05/12 10:36:08
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.09291	.00057	.00685	.01620	-.00049	-.00061	-.00064
SDev	.00055	.00297	.00094	.00005	.00000	.00097	.00008
%RSD	.59613	516.58	13.702	.30431	.18793	158.39	12.191
#1	.09252	-.00152	.00752	.01616	-.00049	-.00130	-.00069
#2	.09331	.00267	.00619	.01623	-.00049	.00007	-.00058

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.1479	2.2178	.00566	6.4954	24.327	.00131	.17292
SDev	.0036	.0015	.00035	.0083	.027	.00002	.00047
%RSD	.31656	.06749	6.1918	.12711	.10950	1.5835	.26972
#1	1.1454	2.2167	.00541	6.5013	24.309	.00132	.17259
#2	1.1505	2.2188	.00590	6.4896	24.346	.00129	.17325

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00584	.08507	11.782	.16911	.91285	.43366	.12520
SDev	.00085	.00005	.004	.00073	.00035	.00707	.00002
%RSD	14.528	.06278	.03775	.43001	.03786	1.6311	.01568
#1	.00524	.08503	11.779	.16962	.91261	.43866	.12519
#2	.00644	.08510	11.785	.16859	.91309	.42866	.12522

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00026	37.519	33.365	.00788	-.01155	.01092	.11856
SDev	.00009	.014	.082	.00005	.00010	.00119	.00020
%RSD	33.390	.03787	.24450	.65299	.83897	10.863	.17290
#1	.00020	37.529	33.422	.00784	-.01148	.01175	.11841

#2	.00033	37.509	33.307	.00792	-.01162	.01008	.11870

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00986	.03770	.16491	.17693	.00280	.00736
SDev	.00016	.00006	.00021	.00080	.00269	.00007
%RSD	1.6623	.16028	.12532	.45383	96.044	.98844
#1	.00975	.03774	.16505	.17637	.00090	.00741
#2	.00998	.03765	.16476	.17750	.00470	.00731

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED

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Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	41048	--	--	--	--	--	--
SDev	32.52691	--	--	--	--	--	--
%RSD	.0792412	--	--	--	--	--	--
#1	41025	--	--	--	--	--	--
#2	41071	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-53045-a-1-a Operator: DCL
Run Time: 04/05/12 10:39:59
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	149.24	.00513	.31549	5.5010	.00996	.03424	.00921
SDev	.15	.00160	.00099	.0015	.00002	.00011	.00013
%RSD	.09884	31.211	.31336	.02772	.20541	.31381	1.4243
#1	149.13	.00626	.31619	5.5021	.00997	.03432	.00930
#2	149.34	.00400	.31479	5.5000	.00995	.03417	.00911

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	60.092	.28424	.08492	1.9645	201.54	.13053	1.7845
SDev	.038	.00044	.00003	.0006	.14	.00013	.0027
%RSD	.06402	.15610	.03978	.02989	.07011	.09877	.14971
#1	60.119	.28456	.08495	1.9641	201.64	.13044	1.7864
#2	60.065	.28393	.08490	1.9649	201.44	.13062	1.7826

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00631	18.514	1.4182	.01730	.15972	9.4530	7.0947
SDev	.00148	.001	.0013	.00003	.00040	.0168	.0076
%RSD	23.539	.00441	.09511	.16613	.25383	.17751	.10766
#1	.00526	18.514	1.4191	.01728	.15943	9.4412	7.0893
#2	.00735	18.515	1.4172	.01732	.16000	9.4649	7.1001

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.02635	10.837	10.352	.51895	-.01052	.15986	.23210
SDev	.00021	.073	.035	.00028	.00107	.00147	.00028

%RSD	.78048	.67007	.33517	.05355	10.151	.91874	.12142
#1	.02649	10.889	10.328	.51915	-.00977	.16090	.23229
#2	.02620	10.786	10.377	.51876	-.01128	.15883	.23190

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.26233	3.0335	1.7009	1.8264	.00143	.00874
SDev	.00014	.0010	.0048	.0016	.00041	.00243
%RSD	.05264	.03188	.28022	.08895	28.663	27.798
#1	.26243	3.0341	1.7042	1.8275	.00172	.00703

#2	.26224	3.0328	1.6975	1.8252	.00114	.01046

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	45604	--	--	--	--	--	--
SDev	116.6726	--	--	--	--	--	--
%RSD	.2558358	--	--	--	--	--	--
#1	45522	--	--	--	--	--	--
#2	45687	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-53045-a-1-b du Operator: DCL
Run Time: 04/05/12 10:43:49
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	171.37	.00507	.37174	6.6749	.01031	.03687	.01072
SDev	.31	.00045	.00114	.0145	.00000	.00007	.00006
%RSD	.17942	8.9547	.30768	.21756	.04154	.18637	.60294
#1	171.58	.00475	.37255	6.6851	.01031	.03682	.01077
#2	171.15	.00539	.37093	6.6646	.01031	.03692	.01068

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	68.227	.33374	.08157	2.3475	225.67	.15675	2.1075
SDev	.006	.00027	.00025	.0081	.04	.00033	.0119
%RSD	.00901	.08090	.30552	.34438	.01621	.21146	.56236
#1	68.231	.33393	.08174	2.3532	225.70	.15699	2.0991
#2	68.222	.33355	.08139	2.3417	225.64	.15652	2.1158

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00450	19.324	1.4479	.01959	.18475	10.042	7.2078
SDev	.00336	.008	.0010	.00023	.00029	.017	.0103
%RSD	74.668	.04122	.06938	1.1909	.15539	.17100	.14342
#1	.00688	19.318	1.4486	.01975	.18495	10.054	7.2151
#2	.00213	19.329	1.4472	.01942	.18455	10.030	7.2005

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm

Avge	.03336	11.103	10.623	.56938	-.01051	.18839	.23091
SDev	.00010	.035	.036	.00115	.00441	.00077	.00015
%RSD	.28659	.31713	.33627	.20164	42.014	.40995	.06681
#1	.03342	11.128	10.648	.57020	-.00739	.18893	.23102
#2	.03329	11.078	10.597	.56857	-.01363	.18784	.23080

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.27678	3.4898	2.0013	2.1606	-.00443	.00897

SDev	.00017	.0001	.0050	.0153	.00169	.00420
%RSD	.06077	.00421	.25044	.70683	38.227	46.796
#1	.27666	3.4899	1.9977	2.1498	-.00323	.01194
#2	.27690	3.4897	2.0048	2.1713	-.00563	.00600

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	45480	--	--	--	--	--	--
SDev	142.1285	--	--	--	--	--	--
%RSD	.3125111	--	--	--	--	--	--
#1	45580	--	--	--	--	--	--
#2	45379	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-53045-a-1-c ms Operator: DCL
Run Time: 04/05/12 10:47:40
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	194.17	.28332	1.1935	6.4526	.45174	.67230	.45526
SDev	.91	.00265	.0004	.0336	.00010	.00107	.00014
%RSD	.46750	.93441	.03750	.52072	.02217	.15888	.02997
#1	194.82	.28145	1.1939	6.4764	.45167	.67306	.45536
#2	193.53	.28519	1.1932	6.4288	.45181	.67155	.45517

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	71.470	1.1959	.96315	2.9071	224.21	.63206	2.6120
SDev	.034	.0011	.00028	.0180	.13	.00410	.0035
%RSD	.04795	.08978	.02884	.61994	.05948	.64832	.13560
#1	71.446	1.1966	.96334	2.9198	224.31	.63496	2.6095
#2	71.494	1.1951	.96295	2.8943	224.12	.62916	2.6145

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.80854	30.215	2.4929	.86112	1.1138	21.383	7.0683
SDev	.00083	.017	.0020	.00107	.0011	.135	.0268
%RSD	.10315	.05521	.08196	.12391	.10156	.63349	.37883
#1	.80795	30.204	2.4944	.86037	1.1146	21.479	7.0873
#2	.80913	30.227	2.4915	.86188	1.1130	21.287	7.0494

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.48752	21.296	20.708	1.0174	.92577	.93454	.56829
SDev	.00109	.076	.157	.0048	.00367	.00105	.00132
%RSD	.22283	.35757	.76005	.47431	.39609	.11256	.23272
#1	.48828	21.350	20.819	1.0208	.92318	.93528	.56923
#2	.48675	21.242	20.597	1.0140	.92837	.93379	.56736

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Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.1971	3.7097	2.4820	2.6771	.75404	.83579
SDev	.0024	.0051	.0043	.0075	.00366	.00308
%RSD	.20211	.13845	.17515	.27965	.48580	.36882
#1	1.1988	3.7133	2.4851	2.6718	.75663	.83362
#2	1.1954	3.7061	2.4789	2.6823	.75145	.83797

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	44906	--	--	--	--	--	--
SDev	41.01219	--	--	--	--	--	--
%RSD	.0913290	--	--	--	--	--	--
#1	44935	--	--	--	--	--	--
#2	44877	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-53045-a-1-d msd Operator: DCL
Run Time: 04/05/12 10:51:31
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	210.99	.27775	1.2321	7.7035	.44656	.64545	.45288
SDev	.08	.00127	.0012	.0028	.00015	.00060	.00126
%RSD	.03960	.45716	.09481	.03667	.03400	.09336	.27892
#1	211.05	.27685	1.2329	7.7055	.44645	.64503	.45199
#2	210.93	.27864	1.2313	7.7015	.44667	.64588	.45378

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	74.972	1.2223	.95078	3.2940	252.46	.64716	2.9506
SDev	.076	.0002	.00043	.0049	.17	.00093	.0090
%RSD	.10190	.01634	.04535	.14767	.06809	.14290	.30439
#1	74.918	1.2224	.95047	3.2975	252.34	.64781	2.9442
#2	75.026	1.2222	.95108	3.2906	252.58	.64650	2.9569

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.79440	30.123	2.4724	.85549	1.1381	21.463	6.5642
SDev	.00203	.027	.0014	.00062	.0015	.026	.0014
%RSD	.25605	.09096	.05706	.07217	.13162	.12059	.02198
#1	.79296	30.104	2.4714	.85505	1.1391	21.481	6.5652

#2	.79584	30.142	2.4734	.85592	1.1370	21.444	6.5632

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.48765	21.537	20.769	1.0566	.91798	.96583	.51871
SDev	.00036	.015	.033	.0002	.00138	.00079	.00002

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%RSD	.07390	.06851	.15966	.01782	.15073	.08190	.00462
#1	.48790	21.526	20.792	1.0567	.91896	.96527	.51870
#2	.48739	21.547	20.745	1.0564	.91701	.96639	.51873

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.1782	4.3391	2.8071	3.0223	.74790	.81765
SDev	.0001	.0027	.0177	.0046	.00434	.00088
%RSD	.00997	.06119	.63176	.15235	.58091	.10747
#1	1.1781	4.3372	2.7946	3.0191	.74482	.81703
#2	1.1783	4.3410	2.8197	3.0256	.75097	.81828

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	44991	--	--	--	--	--	--
SDev	70.71068	--	--	--	--	--	--
%RSD	.1571663	--	--	--	--	--	--
#1	45041	--	--	--	--	--	--
#2	44941	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-53048-b-1-a Operator: DCL
Run Time: 04/05/12 10:55:22
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	13.523	.00645	.01374	1.4061	-.00021	.00788	.11349
SDev	.014	.00236	.00424	.0007	.00001	.00109	.00001
%RSD	.10606	36.617	30.841	.04813	3.0583	13.780	.01256
#1	13.533	.00812	.01674	1.4066	-.00021	.00865	.11348
#2	13.512	.00478	.01074	1.4056	-.00022	.00711	.11350

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	7.4422	.45771	.03212	.10694	43.163	.00383	6.6654
SDev	.0144	.00117	.00025	.00011	.077	.00003	.0239
%RSD	.19368	.25471	.78772	.10484	.17937	.77812	.35892
#1	7.4524	.45853	.03194	.10702	43.218	.00385	6.6824
#2	7.4320	.45689	.03230	.10686	43.109	.00381	6.6485

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00103	1.5786	.32704	.02381	.05578	.54221	1.4722
SDev	.00096	.0064	.00080	.00107	.00009	.01478	.0062
%RSD	93.313	.40764	.24518	4.5099	.15320	2.7265	.42424

#1	.00035	1.5831	.32761	.02457	.05572	.55266	1.4766
#2	.00171	1.5740	.32648	.02305	.05584	.53175	1.4678

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Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00032	.92044	.27763	.04891	-.00031	.03400	.23842
SDev	.00033	.05379	.00104	.00001	.00322	.00037	.00043
%RSD	104.60	5.8443	.37439	.02188	1047.9	1.0840	.17903
#1	-.00055	.88240	.27836	.04892	.00197	.03374	.23873
#2	-.00008	.95848	.27689	.04890	-.00258	.03426	.23812

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01837	12.384	6.3437	6.8263	-.00637	.00473
SDev	.00037	.024	.0063	.0327	.00868	.00290
%RSD	2.0116	.19050	.09921	.47959	136.23	61.339
#1	.01863	12.400	6.3482	6.8495	-.01251	.00678
#2	.01811	12.367	6.3393	6.8032	-.00023	.00268

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	40710	--	--	--	--	--	--
SDev	2.828427	--	--	--	--	--	--
%RSD	.0069477	--	--	--	--	--	--
#1	40708	--	--	--	--	--	--
#2	40712	--	--	--	--	--	--

Method: 20076010 Sample Name: PDS 600-52867-a-10-a Operator: DCL
Run Time: 04/05/12 10:59:13
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	181.01	.87113	1.0122	2.3880	.40678	.92567	.39503
SDev	.51	.00270	.0026	.0052	.00002	.00207	.00004
%RSD	.28186	.31051	.25295	.21738	.00521	.22367	.01106
#1	181.37	.87304	1.0140	2.3917	.40676	.92714	.39500
#2	180.65	.86921	1.0103	2.3844	.40679	.92421	.39506

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	927.63	1.0123	.87598	1.0806	231.13	1.1363	1.1785
SDev	1.36	.0009	.00006	.0039	.04	.0050	.0013
%RSD	.14663	.08690	.00662	.35824	.01736	.44289	.10645
#1	926.67	1.0129	.87594	1.0833	231.10	1.1399	1.1776
#2	928.59	1.0117	.87602	1.0778	231.16	1.1328	1.1794

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.79545	36.401	8.6098	.84029	1.1455	35.808	9.6073

SDev	.00177	.016	.0021	.00262	.0021	.132	.0175
%RSD	.22237	.04522	.02436	.31133	.18749	.36856	.18172

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#1	.79671	36.389	8.6113	.83844	1.1470	35.901	9.6197
#2	.79420	36.413	8.6083	.84214	1.1440	35.715	9.5950

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.44257	10.956	12.692	4.6141	.84182	.82970	1.1403
SDev	.00122	.037	.059	.0098	.00003	.00038	.0015
%RSD	.27466	.33901	.46615	.21320	.00358	.04616	.13518
#1	.44343	10.983	12.734	4.6210	.84179	.82997	1.1414
#2	.44171	10.930	12.650	4.6071	.84184	.82943	1.1392

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	1.4853	1.5878	1.1101	1.2127	.74999	.81819	
SDev	.0006	.0014	.0010	.0014	.00169	.00181	
%RSD	.04326	.08665	.09256	.11280	.22500	.22116	
#1	1.4857	1.5888	1.1094	1.2117	.75119	.81947	
#2	1.4848	1.5868	1.1109	1.2137	.74880	.81691	

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	43973	--	--	--	--	--	--
SDev	91.92388	--	--	--	--	--	--
%RSD	.2090462	--	--	--	--	--	--
#1	44038	--	--	--	--	--	--
#2	43908	--	--	--	--	--	--

Method: 20076010 Sample Name: SD 600-52867-a-10a@5 Operator: DCL
Run Time: 04/05/12 11:03:04
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	40.076	.00560	.03948	.35600	.00251	.01343	.00016
SDev	.033	.00138	.00083	.00054	.00002	.00050	.00003
%RSD	.08286	24.586	2.1078	.15044	.81809	3.6984	15.690
#1	40.099	.00463	.04007	.35638	.00253	.01379	.00018
#2	40.052	.00657	.03889	.35562	.00250	.01308	.00014

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	275.31	.05554	.02660	.05002	52.916	.02711	.09407
SDev	.74	.00019	.00041	.00006	.101	.00005	.00059
%RSD	.26721	.33878	1.5321	.12426	.19024	.19504	.62333
#1	275.83	.05568	.02631	.04997	52.988	.02715	.09449
#2	274.79	.05541	.02688	.05006	52.845	.02707	.09366

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881

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Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00055	6.9967	1.9368	.00331	.08359	4.8129	2.0463
SDev	.00079	.0187	.0047	.00159	.00033	.0160	.0034
%RSD	142.72	.26761	.24019	48.022	.39681	.33197	.16620
#1	.00111	7.0099	1.9401	.00443	.08383	4.8242	2.0487
#2	-.00001	6.9834	1.9336	.00218	.08336	4.8016	2.0439

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00073	.21244	.31815	.90381	.00331	.00866	.07286
SDev	.00018	.05641	.00131	.00130	.00174	.00113	.00009
%RSD	24.760	26.554	.41085	.14346	52.532	13.049	.11814
#1	-.00085	.17255	.31908	.90472	.00454	.00786	.07292
#2	-.00060	.25233	.31723	.90289	.00208	.00946	.07280

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.16180	.17675	.08215	.10003	-.00339	.00252
SDev	.00030	.00047	.00142	.00017	.00058	.00089
%RSD	.18436	.26623	1.7278	.16984	17.172	35.267
#1	.16201	.17708	.08316	.10015	-.00298	.00315
#2	.16159	.17641	.08115	.09991	-.00380	.00189

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	40968	--	--	--	--	--	--
SDev	116.6726	--	--	--	--	--	--
%RSD	.2847862	--	--	--	--	--	--
#1	40886	--	--	--	--	--	--
#2	41051	--	--	--	--	--	--

Method: 20076010 Sample Name: CCV met0412ccv_00001 Operator: DCL
Run Time: 04/05/12 11:06:55
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.4688	.50455	.50571	.51170	.48994	.50688	.51884
SDev	.0013	.00058	.00246	.00045	.00176	.00028	.00147
%RSD	.05413	.11551	.48600	.08760	.35820	.05557	.28368
#1	2.4697	.50496	.50745	.51202	.49118	.50708	.51988
#2	2.4678	.50414	.50398	.51139	.48870	.50668	.51780

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	12.604	.49005	.48598	.49136	2.5880	.47574	.49788
SDev	.036	.00135	.00098	.00041	.0001	.00081	.00312
%RSD	.28706	.27563	.20097	.08255	.00534	.17115	.62629

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#1	12.629	.49100	.48667	.49164	2.5879	.47632	.50008
#2	12.578	.48909	.48529	.49107	2.5881	.47517	.49567
Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.49370	4.9349	.48745	.50639	.52766	12.667	.94825
SDev	.00099	.0172	.00136	.00056	.00125	.033	.00227
%RSD	.20124	.34780	.27963	.11068	.23699	.25894	.23898
#1	.49441	4.9471	.48842	.50599	.52854	12.690	.94985
#2	.49300	4.9228	.48649	.50679	.52677	12.643	.94665
Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.25080	12.906	12.361	.25617	.53038	.49665	.50744
SDev	.00008	.076	.016	.00032	.00546	.00046	.00128
%RSD	.03233	.58953	.12572	.12659	1.0296	.09267	.25218
#1	.25086	12.852	12.372	.25640	.52652	.49697	.50834
#2	.25075	12.960	12.350	.25594	.53424	.49632	.50653
Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	.49781	.51849	.47244	.51059	.46611	.50756	
SDev	.00141	.00125	.00056	.00496	.00186	.00056	
%RSD	.28328	.24069	.11878	.97097	.39871	.11058	
#1	.49881	.51937	.47204	.51410	.46742	.50795	
#2	.49681	.51761	.47284	.50709	.46480	.50716	

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	40357	--	--	--	--	--	--
SDev	96.16652	--	--	--	--	--	--
%RSD	.2382896	--	--	--	--	--	--
#1	40289	--	--	--	--	--	--
#2	40425	--	--	--	--	--	--

Method: 20076010 Sample Name: CCB Operator: DCL
Run Time: 04/05/12 11:10:46
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04108	.00065	.00263	-.00009	-.00056	.00170	-.00006
SDev	.00174	.00191	.00040	.00014	.00003	.00091	.00001
%RSD	4.2449	293.30	15.103	160.13	6.0748	53.484	14.174
#1	.04231	.00200	.00291	.00001	-.00053	.00235	-.00006
#2	.03984	-.00070	.00235	-.00018	-.00058	.00106	-.00007

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.03609	.00052	-.00048	-.00259	-.01283	.00012	.00040
SDev	.00107	.00061	.00012	.00041	.01036	.00011	.00088
%RSD	2.9545	118.36	25.689	16.015	80.727	88.392	219.74
#1	-.03533	.00095	-.00039	-.00229	-.00551	.00020	.00102
#2	-.03684	.00008	-.00056	-.00288	-.02015	.00005	-.00022

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00170	-.00462	.00009	.00088	-.00080	-.04163	-.00687
SDev	.00235	.00592	.00007	.00143	.00013	.03842	.00352
%RSD	138.28	128.32	83.360	162.46	15.659	92.291	51.300
#1	.00336	-.00043	.00014	.00189	-.00071	-.01446	-.00438
#2	.00004	-.00881	.00004	-.00013	-.00089	-.06880	-.00936

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00040	.00972	-.01841	-.00005	.00311	.00060	.00022
SDev	.00011	.05445	.00330	.00005	.00043	.00054	.00022
%RSD	27.969	560.42	17.932	118.02	13.893	90.582	100.18
#1	-.00048	.04822	-.01608	-.00001	.00280	.00098	.00037
#2	-.00032	-.02878	-.02075	-.00008	.00341	.00021	.00006

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00034	-.00281	-.00138	.00129	.00238	.00136
SDev	.00084	.00001	.00369	.00317	.00702	.00704
%RSD	245.09	.52637	267.90	245.45	295.42	517.57
#1	.00094	-.00282	-.00399	.00353	-.00259	.00633
#2	-.00025	-.00280	.00123	-.00095	.00735	-.00362

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	41269	--	--	--	--	--	--
SDev	147.0782	--	--	--	--	--	--
%RSD	.3563891	--	--	--	--	--	--
#1	41165	--	--	--	--	--	--
#2	41373	--	--	--	--	--	--

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Method: 20076010 Sample Name: 600-52989-b-1-a@5 Operator: DCL
Run Time: 04/05/12 11:43:41
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.05366	-.00085	.00305	.00317	-.00072	-.00155	-.00030
SDev	.00014	.00014	.00145	.00002	.00000	.00026	.00006
%RSD	.26554	16.170	47.465	.74610	.62173	16.649	20.148
#1	.05356	-.00075	.00408	.00318	-.00072	-.00136	-.00034
#2	.05376	-.00095	.00203	.00315	-.00072	-.00173	-.00026

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.21867	.44744	.00070	1.2984	4.9646	.00023	.03521
SDev	.00032	.00188	.00003	.0038	.0046	.00001	.00142
%RSD	.14412	.42089	3.5111	.29387	.09307	5.3052	4.0281
#1	.21889	.44877	.00068	1.3011	4.9679	.00024	.03621
#2	.21845	.44611	.00072	1.2957	4.9613	.00022	.03421

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00273	.01136	2.4724	.03386	.18879	.02834	.01622
SDev	.00241	.00086	.0102	.00130	.00023	.01119	.00055
%RSD	88.291	7.5605	.41096	3.8431	.12284	39.469	3.4059
#1	.00443	.01197	2.4796	.03294	.18895	.03626	.01661
#2	.00102	.01075	2.4652	.03478	.18862	.02043	.01583

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00019	7.3444	6.7705	.00140	-.00330	.00232	.02410
SDev	.00029	.0292	.0033	.00001	.00201	.00068	.00013
%RSD	154.63	.39703	.04941	.73442	61.021	29.146	.54437
#1	-.00039	7.3238	6.7681	.00141	-.00188	.00184	.02419
#2	.00002	7.3650	6.7729	.00140	-.00472	.00280	.02400

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00199	.00500	.03212	.03675	.00631	.00093
SDev	.00001	.00030	.00175	.00125	.00447	.00137
%RSD	.35574	6.0985	5.4343	3.4135	70.859	147.12
#1	.00199	.00479	.03336	.03764	.00947	.00191
#2	.00200	.00522	.03089	.03586	.00315	-.00004

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	41184	--	--	--	--	--	--
SDev	126.5721	--	--	--	--	--	--
%RSD	.3073295	--	--	--	--	--	--

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#1	41095	--	--	--	--	--	--
#2	41274	--	--	--	--	--	--

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Method: 20076010 Sample Name: lcs 600-76449/2-a Operator: DCL
Run Time: 04/05/12 11:48:28
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	82.925	.80453	1.3855	2.7259	1.4713	.87220	.70440

SDev	.098	.00568	.0034	.0031	.0013	.00068	.00073
%RSD	.11830	.70586	.24534	.11228	.08659	.07823	.10343
#1	82.994	.80051	1.3831	2.7281	1.4704	.87268	.70492
#2	82.855	.80854	1.3879	2.7237	1.4722	.87171	.70389

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	90.825	.98283	1.3402	1.0696	176.28	.08859	1.3652
SDev	.095	.00012	.0008	.0016	.22	.00012	.0000
%RSD	.10455	.01260	.06092	.15368	.12473	.13612	.00185
#1	90.757	.98274	1.3407	1.0707	176.44	.08868	1.3652
#2	90.892	.98291	1.3396	1.0684	176.12	.08851	1.3653

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.8839	39.886	4.9732	.91425	1.3221	49.443	7.0882
SDev	.0002	.002	.0022	.00186	.0021	.035	.0025
%RSD	.00999	.00586	.04448	.20302	.16006	.07102	.03536
#1	1.8838	39.884	4.9748	.91294	1.3236	49.467	7.0899
#2	1.8840	39.888	4.9717	.91556	1.3206	49.418	7.0864

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.46359	3.3639	6.7620	2.5116	1.7197	1.5541	3.9654
SDev	.00059	.1002	.0245	.0025	.0083	.0016	.0008
%RSD	.12610	2.9799	.36173	.09891	.48276	.10304	.01920
#1	.46400	3.4348	6.7793	2.5134	1.7139	1.5552	3.9659
#2	.46318	3.2930	6.7448	2.5099	1.7256	1.5529	3.9649

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.62118	2.2606	1.2749	1.4104	1.7441	1.9538
SDev	.00059	.0049	.0054	.0027	.0013	.0003
%RSD	.09543	.21621	.42262	.19369	.07203	.01770
#1	.62076	2.2571	1.2787	1.4085	1.7433	1.9540
#2	.62160	2.2640	1.2711	1.4123	1.7450	1.9535

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	42638	--	--	--	--	--	--
SDev	36.06245	--	--	--	--	--	--
%RSD	.0845772	--	--	--	--	--	--

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#1	42664	--	--	--	--	--	--
#2	42613	--	--	--	--	--	--

Method: 20076010 Sample Name: CCV met0412ccv_00001 Operator: DCL
Run Time: 04/05/12 11:52:20
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.4143	.50134	.49877	.50764	.47316	.50228	.51140
SDev	.0055	.00063	.00158	.00054	.00099	.00009	.00077
%RSD	.22607	.12625	.31636	.10677	.20918	.01694	.15086
#1	2.4182	.50178	.49765	.50802	.47386	.50222	.51195
#2	2.4104	.50089	.49988	.50726	.47246	.50234	.51086

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	12.265	.47428	.47020	.47808	2.5292	.47177	.48556
SDev	.021	.00025	.00075	.00024	.0080	.00009	.00127
%RSD	.16750	.05325	.15955	.04928	.31774	.01953	.26152
#1	12.280	.47446	.47073	.47825	2.5235	.47184	.48646
#2	12.251	.47410	.46967	.47791	2.5348	.47171	.48466

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.48305	4.7675	.47510	.49945	.51024	12.512	.92297
SDev	.00047	.0064	.00085	.00143	.00134	.000	.00386
%RSD	.09718	.13406	.17933	.28656	.26301	.00184	.41875
#1	.48338	4.7720	.47570	.49844	.51119	12.512	.92570
#2	.48271	4.7629	.47450	.50046	.50929	12.512	.92023

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.24590	12.646	12.275	.25483	.53474	.48138	.49806
SDev	.00007	.067	.017	.00020	.00314	.00111	.00089
%RSD	.02964	.52681	.13615	.08001	.58806	.22964	.17914
#1	.24595	12.599	12.264	.25497	.53251	.48216	.49869
#2	.24584	12.693	12.287	.25468	.53696	.48060	.49743

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.48325	.50883	.45335	.50166	.44710	.50107
SDev	.00031	.00081	.00260	.00321	.00117	.00129
%RSD	.06482	.15824	.57420	.63914	.26154	.25722
#1	.48347	.50939	.45151	.50393	.44627	.50199
#2	.48303	.50826	.45520	.49940	.44793	.50016

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED

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Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	40862	--	--	--	--	--	--
SDev	43.13351	--	--	--	--	--	--
%RSD	.1055603	--	--	--	--	--	--
#1	40892	--	--	--	--	--	--
#2	40831	--	--	--	--	--	--

Method: 20076010 Sample Name: CCB Operator: DCL
Run Time: 04/05/12 11:56:11

Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.05030	.00186	.00132	-.00011	-.00073	.00118	-.00009
SDev	.00300	.00242	.00085	.00017	.00002	.00026	.00005
%RSD	5.9593	129.65	64.409	148.05	2.3410	21.923	55.032
#1	.05242	.00357	.00193	.00001	-.00072	.00137	-.00005
#2	.04818	.00016	.00072	-.00023	-.00074	.00100	-.00012

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.03471	.00004	-.00022	-.00329	-.01076	.00007	-.00012
SDev	.00349	.00054	.00015	.00039	.00160	.00004	.00021
%RSD	10.068	1283.3	70.185	11.877	14.851	51.995	169.85
#1	-.03718	.00042	-.00032	-.00301	-.01189	.00005	-.00027
#2	-.03223	-.00034	-.00011	-.00356	-.00963	.00010	.00002

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00330	-.00672	-.00004	.00112	-.00043	-.03965	-.01094
SDev	.00161	.00499	.00011	.00041	.00061	.02934	.00243
%RSD	48.798	74.252	283.85	36.503	142.57	74.000	22.194
#1	.00444	-.01025	.00004	.00140	-.00086	-.06040	-.00923
#2	.00216	-.00319	-.00011	.00083	.00000	-.01890	-.01266

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00025	.07204	-.01704	-.00009	.00233	.00020	.00013
SDev	.00024	.12694	.00012	.00004	.00042	.00020	.00028
%RSD	96.885	176.20	.71344	44.472	18.220	98.708	212.20
#1	-.00042	-.01772	-.01695	-.00006	.00263	.00006	.00033
#2	-.00008	.16180	-.01712	-.00012	.00203	.00034	-.00007

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00007	-.00251	-.00064	.00013	.00079	.00455
SDev	.00048	.00007	.00071	.00004	.00083	.00200
%RSD	651.76	2.6883	111.22	30.215	105.16	43.888
#1	.00026	-.00256	-.00114	.00016	.00138	.00597

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#2	-.00041	-.00246	-.00014	.00011	.00020	.00314	
IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	40954	--	--	--	--	--	--
SDev	71.41779	--	--	--	--	--	--
%RSD	.1743832	--	--	--	--	--	--
#1	41005	--	--	--	--	--	--
#2	40904	--	--	--	--	--	--

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Method: 20076010 Sample Name: mb 600-76503/1-a Operator: DCL
Run Time: 04/05/12 13:04:37
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.09286	.00384	.00160	.00171	-.00117	-.00187	.00000
SDev	.00011	.00062	.00003	.00000	.00001	.00030	.00007
%RSD	.11883	16.045	1.8702	.02034	.57686	15.966	1719.7
#1	.09279	.00340	.00162	.00171	-.00117	-.00208	.00005
#2	.09294	.00427	.00158	.00171	-.00118	-.00166	-.00004

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.19448	.00080	-.00017	-.00338	.06755	.00021	.00124
SDev	.00878	.00001	.00033	.00006	.02747	.00000	.00047
%RSD	4.5151	1.7755	198.34	1.6773	40.671	1.4928	37.658
#1	.20069	.00079	.00007	-.00334	.08697	.00021	.00091
#2	.18827	.00082	-.00040	-.00342	.04812	.00021	.00157

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00225	.00531	.00043	-.00085	-.00046	-.07826	.00222
SDev	.00143	.00104	.00007	.00068	.00008	.00007	.00101
%RSD	63.535	19.546	17.222	80.739	18.149	.08665	45.659
#1	.00124	.00458	.00048	-.00036	-.00040	-.07821	.00293
#2	.00326	.00604	.00038	-.00133	-.00051	-.07831	.00150

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00050	.27311	.02337	-.00014	-.00459	.03110	.00022
SDev	.00029	.09772	.00087	.00001	.00092	.00081	.00005
%RSD	57.845	35.781	3.7213	6.8254	20.062	2.6006	22.789
#1	.00071	.34221	.02275	-.00014	-.00394	.03053	.00019
#2	.00030	.20401	.02398	-.00013	-.00524	.03167	.00026

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00025	.02873	.00311	.00030	-.00248	.00461
SDev	.00001	.00170	.00087	.00113	.00127	.00277
%RSD	2.8021	5.9240	27.973	375.03	51.035	60.169
#1	.00025	.02993	.00372	-.00050	-.00159	.00265
#2	.00024	.02753	.00249	.00110	-.00338	.00657

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	40550	--	--	--	--	--	--
SDev	45.96194	--	--	--	--	--	--
%RSD	.1133477	--	--	--	--	--	--

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#1	40517	--	--	--	--	--	--
#2	40582	--	--	--	--	--	--

Method: 20076010 Sample Name: lcs 600-76503/2-a Operator: DCL
Run Time: 04/05/12 13:08:28
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	78.583	.84570	1.3799	2.6763	1.4545	.90180	.75833
SDev	.113	.01379	.0007	.0014	.0006	.00056	.00010
%RSD	.14362	1.6304	.05081	.05317	.04247	.06179	.01291
#1	78.663	.83595	1.3804	2.6753	1.4541	.90140	.75840
#2	78.503	.85545	1.3794	2.6773	1.4550	.90219	.75827

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	92.901	.99104	1.3389	1.0986	163.70	.08526	1.3355
SDev	.047	.00079	.0011	.0024	.05	.00009	.0022
%RSD	.05102	.07948	.08491	.21417	.02999	.10093	.16229
#1	92.934	.99160	1.3397	1.1003	163.73	.08532	1.3370
#2	92.867	.99048	1.3381	1.0970	163.66	.08520	1.3339

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.9141	38.506	4.9463	.95945	1.4070	47.961	3.4086
SDev	.0013	.039	.0043	.00432	.0110	.044	.0040
%RSD	.06954	.10055	.08652	.45048	.77914	.09236	.11813
#1	1.9132	38.533	4.9493	.95640	1.4147	47.993	3.4114
#2	1.9151	38.478	4.9433	.96251	1.3992	47.930	3.4057

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.47515	3.4485	6.8976	2.6607	1.7742	1.5328	3.6932
SDev	.00103	.0857	.0149	.0031	.0032	.0024	.0020
%RSD	.21597	2.4844	.21556	.11610	.17769	.15637	.05351
#1	.47588	3.5090	6.9081	2.6585	1.7720	1.5311	3.6918
#2	.47443	3.3879	6.8871	2.6629	1.7765	1.5345	3.6945

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.59646	2.2126	1.2132	1.3966	1.7402	2.0010
SDev	.00009	.0002	.0044	.0010	.0106	.0073
%RSD	.01520	.00923	.36317	.07504	.61036	.36518
#1	.59652	2.2128	1.2163	1.3973	1.7478	1.9959
#2	.59640	2.2125	1.2101	1.3958	1.7327	2.0062

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED

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Elem	Y	--	--	--	--	--	--

Wavlen	371.030	--	--	--	--	--	--
Avge	43002	--	--	--	--	--	--
SDev	245.3661	--	--	--	--	--	--
%RSD	.5705855	--	--	--	--	--	--
#1	42829	--	--	--	--	--	--
#2	43176	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-52201-a-24-a Operator: DCL
Run Time: 04/05/12 13:12:19
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	158.68	.02199	.06908	4.3538	.00843	.20093	-.00266
SDev	.13	.00528	.00071	.0005	.00002	.00006	.00004
%RSD	.08200	23.998	1.0333	.01143	.27081	.03032	1.3483
#1	158.77	.02572	.06958	4.3542	.00845	.20088	-.00268
#2	158.59	.01826	.06858	4.3535	.00842	.20097	-.00263

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	897.99	.17948	.05311	.08625	151.66	.14029	.21821
SDev	.71	.00024	.00002	.00026	.03	.00015	.00096
%RSD	.07938	.13475	.03111	.30259	.01869	.10771	.43872
#1	898.49	.17931	.05309	.08643	151.64	.14039	.21754
#2	897.49	.17965	.05312	.08606	151.68	.14018	.21889

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00591	43.396	2.8399	.01286	.10734	41.760	5.2226
SDev	.00289	.027	.0002	.00123	.00033	.022	.0026
%RSD	48.904	.06167	.00801	9.5331	.31149	.05247	.04996
#1	-.00387	43.377	2.8400	.01373	.10758	41.776	5.2245
#2	-.00795	43.415	2.8397	.01199	.10710	41.745	5.2208

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00304	4.7574	5.5625	3.3129	.00735	.03203	.28969
SDev	.00034	.0295	.0116	.0005	.00320	.00281	.00016
%RSD	11.145	.62013	.20908	.01470	43.618	8.7762	.05659
#1	-.00280	4.7783	5.5707	3.3132	.00961	.03401	.28980
#2	-.00328	4.7366	5.5542	3.3125	.00508	.03004	.28957

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.27973	.57395	.18366	.23549	-.00467	-.00653
SDev	.00032	.00035	.00276	.00006	.00335	.00266
%RSD	.11308	.06026	1.5013	.02436	71.773	40.737
#1	.27950	.57419	.18171	.23545	-.00230	-.00465

#2	.27995	.57370	.18561	.23553	-.00703	-.00841
IntStd	1	2	3	4	5	6	7

Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	42252	--	--	--	--	--	--
SDev	45.96194	--	--	--	--	--	--
%RSD	.1087818	--	--	--	--	--	--
#1	42219	--	--	--	--	--	--
#2	42284	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-52201-a-24-b du Operator: DCL
Run Time: 04/05/12 13:16:10
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	193.91	.00911	.08279	4.0972	.00964	.20798	-.00353
SDev	.02	.00042	.00028	.0029	.00000	.00093	.00010
%RSD	.01166	4.6058	.34166	.07064	.02957	.44707	2.8805
#1	193.89	.00881	.08259	4.0952	.00964	.20732	-.00346
#2	193.92	.00941	.08299	4.0993	.00963	.20864	-.00360

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	975.22	.24862	.05823	.09163	183.31	.17793	.21736
SDev	1.11	.00016	.00034	.00025	.10	.00005	.00008
%RSD	.11411	.06384	.59186	.27647	.05487	.02785	.03517
#1	976.01	.24873	.05798	.09181	183.38	.17790	.21742
#2	974.43	.24851	.05847	.09145	183.24	.17797	.21731

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.01115	49.831	3.1533	.01229	.12164	47.106	5.3626
SDev	.00340	.029	.0001	.00063	.00071	.035	.0020
%RSD	30.514	.05912	.00211	5.1189	.57953	.07345	.03745
#1	-.01356	49.852	3.1532	.01274	.12214	47.081	5.3612
#2	-.00875	49.810	3.1533	.01185	.12115	47.130	5.3640

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00302	5.5399	6.3129	3.5303	.00684	.03009	.24836
SDev	.00041	.0145	.0113	.0007	.00000	.00011	.00045
%RSD	13.433	.26104	.17886	.02112	.00791	.34965	.18268
#1	-.00273	5.5501	6.3209	3.5298	.00684	.03002	.24868
#2	-.00331	5.5297	6.3049	3.5308	.00684	.03016	.24804

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.35024	.58016	.18299	.23455	-.00702	-.01322

SDev	.00002	.00121	.00656	.00316	.00029	.00496
%RSD	.00670	.20893	3.5819	1.3484	4.0815	37.529
#1	.35025	.57931	.18763	.23231	-.00722	-.01673
#2	.35022	.58102	.17836	.23678	-.00681	-.00971

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	42081	--	--	--	--	--	--
SDev	36.76955	--	--	--	--	--	--
%RSD	.0873780	--	--	--	--	--	--
#1	42055	--	--	--	--	--	--
#2	42107	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-52201-a-24-c ms Operator: DCL
Run Time: 04/05/12 13:20:00
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	239.28	.31159	1.0063	4.0960	.42487	.93310	.44059
SDev	.06	.00104	.0018	.0035	.00025	.00161	.00008
%RSD	.02714	.33532	.17646	.08453	.05840	.17291	.01908
#1	239.33	.31085	1.0050	4.0984	.42504	.93196	.44053
#2	239.23	.31233	1.0075	4.0935	.42469	.93424	.44065

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	976.73	1.0925	.86544	1.0134	194.99	.76236	1.1325
SDev	.02	.0000	.00116	.0009	.08	.00004	.0001
%RSD	.00160	.00432	.13371	.08411	.03998	.00560	.00767
#1	976.72	1.0925	.86626	1.0140	195.05	.76233	1.1325
#2	976.74	1.0926	.86463	1.0128	194.94	.76239	1.1324

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.84573	65.595	3.8863	.81128	1.0083	64.983	6.3992
SDev	.00345	.009	.0011	.00540	.0030	.019	.0032
%RSD	.40833	.01391	.02955	.66555	.29410	.02897	.05019
#1	.84328	65.601	3.8871	.80747	1.0062	64.969	6.4015
#2	.84817	65.589	3.8854	.81510	1.0104	64.996	6.3970

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.48620	17.232	19.337	4.1429	.98219	.77658	.56242
SDev	.00022	.013	.004	.0027	.00322	.00242	.00049
%RSD	.04540	.07631	.01910	.06514	.32749	.31218	.08672
#1	.48635	17.241	19.334	4.1448	.98447	.77829	.56276
#2	.48604	17.223	19.339	4.1410	.97992	.77486	.56207

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Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.2062	1.7232	1.0155	1.1909	.77695	.88011
SDev	.0001	.0001	.0015	.0009	.00215	.00410
%RSD	.00458	.00758	.14702	.07361	.27729	.46617

#1	1.2062	1.7233	1.0145	1.1916	.77543	.87721	
#2	1.2061	1.7232	1.0166	1.1903	.77847	.88302	
IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	41734	--	--	--	--	--	--
SDev	7.778174	--	--	--	--	--	--
%RSD	.0186377	--	--	--	--	--	--
#1	41728	--	--	--	--	--	--
#2	41739	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-52201-a-24-d msd Operator: DCL
Run Time: 04/05/12 13:23:52
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	234.48	.30058	.97605	4.7321	.41429	.86620	.42992
SDev	3.00	.00497	.01260	.0654	.00569	.01220	.00588
%RSD	1.2811	1.6524	1.2907	1.3816	1.3734	1.4088	1.3676
#1	232.36	.29707	.96715	4.6859	.41027	.85757	.42576
#2	236.61	.30409	.98496	4.7784	.41832	.87483	.43408

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	927.64	1.0543	.83842	.97537	195.86	.74452	1.0768
SDev	12.21	.0145	.01196	.01234	2.75	.01009	.0133
%RSD	1.3164	1.3766	1.4264	1.2647	1.4035	1.3559	1.2362
#1	919.01	1.0440	.82997	.96665	193.92	.73738	1.0674
#2	936.28	1.0646	.84688	.98409	197.80	.75166	1.0862

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.83058	62.901	3.8315	.79607	.97836	60.863	4.7544
SDev	.00622	.859	.0530	.01077	.01422	.808	.0675
%RSD	.74910	1.3656	1.3834	1.3528	1.4536	1.3280	1.4206
#1	.82618	62.294	3.7940	.78845	.96830	60.292	4.7066
#2	.83497	63.509	3.8690	.80368	.98842	61.435	4.8021

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.47402	16.789	18.589	3.9499	.96786	.73817	.50892
SDev	.00620	.187	.251	.0550	.01239	.01023	.00688

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%RSD	1.3084	1.1154	1.3481	1.3917	1.2796	1.3855	1.3519
#1	.46963	16.657	18.412	3.9110	.95910	.73094	.50406
#2	.47840	16.922	18.767	3.9888	.97661	.74540	.51379

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.1550	1.5269	.95864	1.1359	.74569	.87302
SDev	.0157	.0208	.01224	.0138	.00543	.00662

%RSD	1.3612	1.3651	1.2769	1.2190	.72805	.75809
#1	1.1439	1.5122	.94999	1.1261	.74185	.86834
#2	1.1662	1.5417	.96730	1.1457	.74952	.87770

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	41850	--	--	--	--	--	--
SDev	444.7702	--	--	--	--	--	--
%RSD	1.062760	--	--	--	--	--	--
#1	42165	--	--	--	--	--	--
#2	41536	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-53078-a-1-a@10 Operator: DCL
Run Time: 04/05/12 13:27:43
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.41794	.01091	.00549	12.220	-.00122	.00204	-.00130
SDev	.00492	.00299	.00173	.048	.00001	.00124	.00006
%RSD	1.1767	27.426	31.504	.38961	1.1977	60.588	4.7576
#1	.42142	.01303	.00671	12.254	-.00121	.00292	-.00126
#2	.41447	.00880	.00426	12.187	-.00124	.00117	-.00134

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.5923	.02773	.00571	.07393	35.881	.00055	.00486
SDev	.0274	.00032	.00009	.00063	.167	.00006	.00052
%RSD	1.7185	1.1397	1.5322	.85478	.46528	11.010	10.808
#1	1.6117	.02795	.00577	.07438	35.999	.00060	.00523
#2	1.5730	.02750	.00565	.07348	35.763	.00051	.00449

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00023	3.1921	.29201	.00694	.01489	-.16192	.99437
SDev	.00039	.0212	.00158	.00110	.00017	.02059	.00838
%RSD	168.44	.66493	.54058	15.840	1.1728	12.715	.84290
#1	-.00004	3.2071	.29313	.00772	.01476	-.14737	1.0003
#2	.00050	3.1771	.29090	.00616	.01501	-.17648	.98844

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Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00078	-.09288	.00932	3.0052	.00156	.00769	.08842
SDev	.00033	.05180	.00228	.0100	.00043	.00109	.00038
%RSD	42.698	55.775	24.440	.33416	27.668	14.130	.43467
#1	-.00102	-.12951	.01093	3.0123	.00125	.00692	.08870
#2	-.00054	-.05625	.00771	2.9981	.00186	.00846	.08815

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm

Avge	.00613	.03742	.00187	.00636	-.00051	.00060
SDev	.00032	.00021	.00116	.00021	.00163	.00023
%RSD	5.2163	.55950	61.903	3.3032	316.53	38.624
#1	.00636	.03757	.00268	.00650	-.00167	.00077
#2	.00591	.03727	.00105	.00621	.00064	.00044

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	41050	--	--	--	--	--	--
SDev	90.50967	--	--	--	--	--	--
%RSD	.2204864	--	--	--	--	--	--
#1	40986	--	--	--	--	--	--
#2	41114	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-53078-a-2-a@10 Operator: DCL
Run Time: 04/05/12 13:31:34
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	207.07	.00727	.00251	.03281	-.00122	.00242	-.00075
SDev	.58	.00259	.00172	.00006	.00000	.00089	.00020
%RSD	.28073	35.668	68.699	.16645	.11345	36.904	26.017
#1	207.48	.00910	.00373	.03285	-.00122	.00305	-.00089
#2	206.66	.00544	.00129	.03277	-.00122	.00179	-.00061

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.93381	.00998	.00029	.01846	2.9773	.00041	.00285
SDev	.00207	.00014	.00030	.00045	.0040	.00003	.00051
%RSD	.22168	1.3521	106.36	2.4447	.13511	7.7958	17.768
#1	.93528	.01007	.00007	.01878	2.9802	.00043	.00320
#2	.93235	.00988	.00050	.01814	2.9745	.00039	.00249

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00049	1.7292	.06706	.00003	.01011	-.21788	.40662
SDev	.00537	.0116	.00033	.00117	.00011	.02263	.00371
%RSD	1089.3	.67314	.48738	4167.7	1.0572	10.387	.91225

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#1	.00330	1.7374	.06729	-.00080	.01004	-.20188	.40924
#2	-.00429	1.7210	.06683	.00085	.01019	-.23388	.40400

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00097	.11708	.29936	.00473	-.00046	.00142	.03811
SDev	.00034	.00322	.00127	.00003	.00127	.00035	.00013
%RSD	34.491	2.7494	.42328	.54317	272.61	24.708	.34925
#1	-.00121	.11481	.30026	.00475	-.00136	.00117	.03820
#2	-.00073	.11936	.29847	.00471	.00043	.00167	.03802

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01920	.02241	-.01213	.01033	.00298	-.00223
SDev	.00007	.00020	.00055	.00103	.00094	.00759
%RSD	.37594	.88560	4.5413	10.004	31.408	340.27
#1	.01915	.02255	-.01252	.01106	.00364	.00314
#2	.01925	.02227	-.01174	.00960	.00232	-.00760

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	40974	--	--	--	--	--	--
SDev	122.3295	--	--	--	--	--	--
%RSD	.2985503	--	--	--	--	--	--
#1	40888	--	--	--	--	--	--
#2	41061	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-53078-a-3-a@10 Operator: DCL
Run Time: 04/05/12 13:35:26
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	204.44	.00010	.00248	.00993	-.00126	.00186	-.00193
SDev	.02	.00081	.00355	.00002	.00001	.00007	.00002
%RSD	.01184	834.65	143.00	.24145	.53431	3.7669	.77631
#1	204.46	.00067	-.00003	.00995	-.00126	.00181	-.00194
#2	204.42	-.00048	.00499	.00992	-.00126	.00191	-.00192

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.92142	.01615	.00529	.03391	42.639	.00034	.00327
SDev	.00152	.00008	.00009	.00027	.085	.00001	.00066
%RSD	.16509	.52229	1.7194	.78323	.19825	3.5286	20.121
#1	.92250	.01621	.00536	.03410	42.699	.00034	.00373
#2	.92035	.01609	.00523	.03372	42.579	.00035	.00280

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00023	1.3937	.08659	.00140	.01909	-.19924	.57031
SDev	.00149	.0025	.00031	.00146	.00048	.01211	.00057
%RSD	650.31	.17804	.35860	104.32	2.4922	6.0805	.10065
#1	-.00128	1.3954	.08681	.00243	.01876	-.20781	.57071
#2	.00082	1.3919	.08637	.00037	.01943	-.19068	.56990

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00026	.20661	.35427	.00290	-.00270	.00217	.19108
SDev	.00020	.03806	.00362	.00002	.00189	.00069	.00071
%RSD	77.769	18.422	1.0223	.52390	69.962	31.584	.37325
#1	-.00040	.17969	.35171	.00291	-.00137	.00266	.19158

#2	-.00011	.23352	.35683	.00289	-.00404	.00169	.19057

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.02236	.14904	-.01153	.01067	-.00115	.00023
SDev	.00010	.00006	.00355	.00276	.00597	.00075
%RSD	.42975	.04067	30.811	25.899	517.97	323.16
#1	.02230	.14899	-.01405	.01262	-.00538	.00077
#2	.02243	.14908	-.00902	.00871	.00307	-.00030

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	40802	--	--	--	--	--	--
SDev	91.92388	--	--	--	--	--	--
%RSD	.2252926	--	--	--	--	--	--
#1	40867	--	--	--	--	--	--
#2	40737	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-53078-a-4-a@10 Operator: DCL
Run Time: 04/05/12 13:39:17
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	28.676	.00030	.00218	.38546	-.00112	.00166	-.00037
SDev	.002	.00055	.00133	.00040	.00000	.00052	.00011
%RSD	.00608	182.98	61.110	.10336	.42313	31.099	28.735
#1	28.675	.00068	.00124	.38574	-.00113	.00129	-.00045
#2	28.677	-.00009	.00312	.38518	-.00112	.00202	-.00030

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.2360	.00011	.00041	-.00384	1.6641	.00544	.00046
SDev	.0040	.00006	.00069	.00053	.0202	.00003	.00111
%RSD	.18095	56.556	166.24	13.703	1.2144	.61815	241.75

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#1	2.2331	.00006	-.00007	-.00422	1.6498	.00541	-.00032
#2	2.2388	.00015	.00090	-.00347	1.6784	.00546	.00124

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00160	3.9672	.05149	-.00065	.00171	8.3918	.29215
SDev	.00437	.0092	.00001	.00033	.00005	.0147	.00213
%RSD	273.31	.23230	.01856	50.407	2.7250	.17476	.72955
#1	.00469	3.9607	.05148	-.00042	.00175	8.3814	.29064
#2	-.00149	3.9738	.05149	-.00088	.00168	8.4021	.29365

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00125	19.005	18.604	.01380	-.00159	.00430	.34320
SDev	.00046	.245	.024	.00004	.00278	.00065	.00008

%RSD	37.030	1.2880	.12777	.26805	175.04	15.227	.02266
#1	-.00158	18.832	18.588	.01378	-.00356	.00384	.34325
#2	-.00092	19.178	18.621	.01383	.00038	.00476	.34314

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00167	.01039	-.00018	.00078	.00711	-.00116
SDev	.00047	.00032	.00339	.00336	.01110	.00100
%RSD	28.251	3.1174	1834.5	430.73	156.12	86.581
#1	.00134	.01016	.00221	-.00159	.01496	-.00045
#2	.00201	.01062	-.00258	.00315	-.00074	-.00187

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	40892	--	--	--	--	--	--
SDev	21.92031	--	--	--	--	--	--
%RSD	.0536047	--	--	--	--	--	--
#1	40908	--	--	--	--	--	--
#2	40877	--	--	--	--	--	--

Method: 20076010 Sample Name: CCV met0412ccv_00001 Operator: DCL
Run Time: 04/05/12 13:43:08
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.4718	.52646	.51383	.53405	.45894	.52333	.53794
SDev	.0090	.00131	.00560	.00153	.00165	.00338	.00248
%RSD	.36398	.24802	1.0903	.28578	.35985	.64523	.46129
#1	2.4654	.52554	.50987	.53297	.45777	.52094	.53619
#2	2.4781	.52739	.51779	.53513	.46011	.52571	.53970

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	12.288	.46609	.46268	.47095	2.6130	.48717	.49240
SDev	.043	.00098	.00138	.00048	.0142	.00159	.00289
%RSD	.35274	.20955	.29889	.10245	.54523	.32637	.58748
#1	12.258	.46540	.46170	.47061	2.6029	.48605	.49036
#2	12.319	.46678	.46365	.47129	2.6231	.48830	.49445

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.49787	4.7113	.47632	.50547	.51539	12.896	.93689
SDev	.00196	.0230	.00166	.00175	.00052	.047	.00371
%RSD	.39436	.48853	.34942	.34670	.10161	.36403	.39650
#1	.49649	4.6951	.47515	.50423	.51576	12.863	.93427
#2	.49926	4.7276	.47750	.50671	.51502	12.929	.93952

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.24723	12.782	12.639	.26730	.56150	.47735	.50559
SDev	.00034	.033	.031	.00091	.00617	.00342	.00171
%RSD	.13613	.25702	.24251	.33905	1.0985	.71700	.33799
#1	.24699	12.759	12.618	.26666	.55714	.47493	.50438
#2	.24747	12.806	12.661	.26795	.56586	.47977	.50679

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.48021	.52394	.44307	.51707	.45051	.52161
SDev	.00150	.00168	.00356	.00256	.00148	.00221
%RSD	.31260	.31988	.80233	.49542	.32814	.42295
#1	.47915	.52276	.44056	.51526	.44946	.52005
#2	.48127	.52513	.44558	.51888	.45155	.52317

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	40918	--	--	--	--	--	--
SDev	158.3919	--	--	--	--	--	--
%RSD	.3870960	--	--	--	--	--	--
#1	41030	--	--	--	--	--	--
#2	40806	--	--	--	--	--	--

Method: 20076010 Sample Name: CCB Operator: DCL
Run Time: 04/05/12 13:46:59
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.11137	.00190	.00197	-.00018	-.00137	.00066	-.00014
SDev	.00561	.00083	.00162	.00003	.00004	.00022	.00007

%RSD	5.0371	43.589	82.032	13.831	3.1333	33.583	53.413
#1	.11533	.00249	.00083	-.00016	-.00140	.00082	-.00019
#2	.10740	.00131	.00312	-.00020	-.00134	.00050	-.00009

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.04987	-.00027	-.00064	-.00486	-.02935	-.00006	.00036
SDev	.00222	.00006	.00045	.00001	.01310	.00025	.00069
%RSD	4.4496	20.283	70.093	.29001	44.636	417.49	191.20
#1	-.04830	-.00031	-.00096	-.00485	-.03862	.00012	.00084
#2	-.05144	-.00023	-.00032	-.00487	-.02009	-.00024	-.00013

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00207	-.01013	-.00010	.00123	-.00109	-.13649	-.00780
SDev	.00328	.01724	.00001	.00126	.00077	.11935	.00197
%RSD	158.48	170.21	14.496	102.85	71.020	87.438	25.206
#1	.00439	.00206	-.00011	.00212	-.00163	-.05210	-.00641

#2	-.00025	-.02232	-.00009	.00034	-.00054	-.22088	-.00919
Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00089	-.19471	-.02073	-.00012	.00024	-.00035	-.00014
SDev	.00017	.12645	.00903	.00001	.00035	.00129	.00004
%RSD	19.449	64.940	43.572	6.2685	150.19	365.81	30.990
#1	-.00101	-.28412	-.01434	-.00011	.00049	.00056	-.00011
#2	-.00077	-.10530	-.02712	-.00013	-.00001	-.00126	-.00017
Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	-.00024	-.00269	-.00177	.00142	.00205	.00208	
SDev	.00001	.00004	.00286	.00246	.00072	.00528	
%RSD	2.7499	1.4402	161.20	172.54	35.327	253.84	
#1	-.00024	-.00266	-.00379	.00316	.00154	.00581	
#2	-.00025	-.00271	.00025	-.00031	.00256	-.00165	

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	40006	--	--	--	--	--	--
SDev	1257.943	--	--	--	--	--	--
%RSD	3.144425	--	--	--	--	--	--
#1	39116	--	--	--	--	--	--
#2	40895	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-53078-a-5-a@10 Operator: DCL
Run Time: 04/05/12 13:50:50
Comment: TRACE 61E

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Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.42093	.00170	.00180	.00337	-.00137	-.00132	-.00004
SDev	.00131	.00038	.00012	.00001	.00002	.00040	.00002
%RSD	.31056	22.169	6.7479	.34778	1.4577	30.675	53.194
#1	.42001	.00143	.00172	.00336	-.00135	-.00103	-.00005
#2	.42185	.00197	.00189	.00337	-.00138	-.00160	-.00002
Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.42561	.00051	-.00005	.00120	.30444	.00002	-.00011
SDev	.00073	.00015	.00003	.00010	.00067	.00000	.00044
%RSD	.17184	29.484	49.134	8.5334	.21866	16.779	385.50
#1	.42613	.00040	-.00003	.00113	.30397	.00002	.00020
#2	.42509	.00061	-.00007	.00127	.30491	.00002	-.00042
Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00146	.87856	.01261	-.00000	.00022	-.21128	.21021
SDev	.00108	.00030	.00010	.00010	.00019	.00705	.00038

%RSD	74.087	.03445	.81707	95887.	84.985	3.3369	.18181
#1	.00223	.87877	.01268	.00007	.00036	-.21627	.20994
#2	.00070	.87834	.01253	-.00007	.00009	-.20630	.21048

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00037	.23812	.09326	.00040	-.00238	.00511	.00131
SDev	.00002	.02534	.00054	.00001	.00031	.00080	.00008
%RSD	5.8773	10.643	.57580	1.8218	13.150	15.619	6.0604
#1	.00036	.22020	.09364	.00040	-.00216	.00454	.00125
#2	.00039	.25604	.09288	.00039	-.00260	.00567	.00136

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00171	.00697	.00041	-.00038	.00262	.00088
SDev	.00030	.00011	.00102	.00015	.00079	.00123
%RSD	17.228	1.5735	248.30	39.047	30.065	139.82
#1	.00150	.00689	.00113	-.00027	.00318	.00175
#2	.00192	.00704	-.00031	-.00048	.00207	.00001

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	41118	--	--	--	--	--	--
SDev	14.84924	--	--	--	--	--	--
%RSD	.0361142	--	--	--	--	--	--
#1	41128	--	--	--	--	--	--
#2	41107	--	--	--	--	--	--

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Method: 20076010 Sample Name: 600-53078-a-6-a@10 Operator: DCL
Run Time: 04/05/12 13:54:40
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	17.497	.00230	.00289	.02852	-.00028	.06273	-.00033
SDev	.050	.00064	.00025	.00009	.00003	.00008	.00000
%RSD	.28816	27.803	8.5097	.32919	9.3143	.12946	.85356
#1	17.462	.00185	.00271	.02845	-.00026	.06267	-.00033
#2	17.533	.00275	.00306	.02858	-.00030	.06278	-.00034

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	80.879	.00759	.00032	.12517	3.4655	.02752	.00105
SDev	.307	.00028	.00046	.00087	.0209	.00011	.00012
%RSD	.37963	3.6284	140.09	.69739	.60318	.39397	11.645
#1	80.662	.00739	.00000	.12455	3.4508	.02744	.00096
#2	81.096	.00778	.00065	.12579	3.4803	.02759	.00113

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00031	1.1281	.22702	.00014	.00003	5.6019	.21668
SDev	.00002	.0054	.00096	.00018	.00075	.0109	.00365
%RSD	6.4675	.47520	.42284	126.33	2699.6	.19513	1.6868
#1	.00029	1.1243	.22634	.00027	-.00050	5.5942	.21409
#2	.00032	1.1319	.22770	.00002	.00056	5.6096	.21926

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00090	12.404	12.371	.19800	-.00232	.00373	.29994
SDev	.00024	.240	.004	.00076	.00005	.00085	.00146
%RSD	26.224	1.9311	.02902	.38287	2.0399	22.784	.48768
#1	-.00107	12.234	12.374	.19746	-.00236	.00313	.29890
#2	-.00074	12.573	12.369	.19854	-.00229	.00434	.30097

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00276	.00731	-.00149	.00232	-.00067	.00079
SDev	.00013	.00025	.00164	.00100	.00239	.00117
%RSD	4.7036	3.3753	110.34	43.327	359.80	147.09
#1	.00267	.00714	-.00033	.00161	-.00236	.00162
#2	.00285	.00749	-.00265	.00303	.00103	-.00003

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	41092	--	--	--	--	--	--

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SDev	193.0402	--	--	--	--	--	--
%RSD	.4697812	--	--	--	--	--	--
#1	41228	--	--	--	--	--	--
#2	40955	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-53078-a-7-a@10 Operator: DCL
Run Time: 04/05/12 13:58:31
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.77853	-.00011	.00150	.02032	-.00124	.01172	-.00014
SDev	.01163	.00063	.00103	.00036	.00002	.00039	.00001
%RSD	1.4942	574.54	68.415	1.7619	1.7944	3.3359	4.7596
#1	.78675	.00034	.00077	.02057	-.00125	.01200	-.00015
#2	.77030	-.00056	.00223	.02007	-.00122	.01145	-.00014

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	113.61	.00069	.15946	-.00327	.92891	.25764	.00108
SDev	2.00	.00013	.00248	.00054	.00965	.00397	.00046
%RSD	1.7575	18.970	1.5564	16.569	1.0390	1.5402	42.062
#1	115.02	.00079	.16121	-.00289	.93573	.26044	.00141

#2	112.20	.00060	.15770	-.00366	.92208	.25483	.00076

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00196	7.0821	.25300	-.00071	-.00017	-.14099	.71023
SDev	.00011	.1305	.00452	.00074	.00008	.05990	.01230
%RSD	5.6117	1.8420	1.7859	104.09	48.006	42.485	1.7325
#1	.00188	7.1744	.25620	-.00123	-.00022	-.09863	.71893
#2	.00203	6.9899	.24981	-.00019	-.00011	-.18334	.70153

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00039	.22443	.31030	.08254	-.00265	.00372	.05641
SDev	.00008	.03795	.01085	.00137	.00079	.00019	.00111
%RSD	19.764	16.908	3.4974	1.6657	29.922	5.0197	1.9602
#1	-.00044	.19760	.31797	.08351	-.00321	.00359	.05719
#2	-.00033	.25126	.30263	.08157	-.00209	.00385	.05562

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00119	.01147	-.00131	.00228	.00242	.00172
SDev	.00013	.00022	.00093	.00115	.00338	.00153
%RSD	10.995	1.9216	71.271	50.453	140.09	88.581
#1	.00129	.01163	-.00197	.00309	.00002	.00281
#2	.00110	.01132	-.00065	.00147	.00481	.00064

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IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	40186	--	--	--	--	--	--
SDev	542.3509	--	--	--	--	--	--
%RSD	1.349585	--	--	--	--	--	--
#1	39803	--	--	--	--	--	--
#2	40570	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-53128-a-1-a Operator: DCL
Run Time: 04/05/12 14:02:22
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.16126	-.01533	.02477	.02017	-.00143	-.00024	-.00023
SDev	.00307	.00045	.00068	.00002	.00000	.00007	.00011
%RSD	1.9050	2.9443	2.7631	.10752	.26354	28.261	48.168
#1	.15909	-.01565	.02429	.02018	-.00143	-.00019	-.00015
#2	.16343	-.01501	.02526	.02015	-.00144	-.00029	-.00031

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.50424	.02318	.47012	-.00312	.08895	.00038	.00257
SDev	.00041	.00014	.00133	.00036	.02665	.00007	.00009

%RSD	.08130	.58416	.28337	11.398	29.957	19.639	3.5118
#1	.50453	.02308	.47106	-.00337	.10780	.00033	.00251
#2	.50395	.02327	.46918	-.00287	.07011	.00043	.00264

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04039	-.02228	.00291	.00268	.03256	-.30742	.04245
SDev	.00088	.00558	.00008	.00037	.00032	.04382	.00158
%RSD	2.1706	25.060	2.6841	13.773	.99844	14.254	3.7155
#1	.04101	-.02623	.00285	.00242	.03279	-.33840	.04357
#2	.03977	-.01833	.00296	.00294	.03233	-.27643	.04134

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00056	.28937	.09262	.00127	-.04856	.06710	.00044
SDev	.00090	.25079	.00246	.00000	.00003	.00121	.00007
%RSD	161.13	86.667	2.6514	.26620	.05623	1.7969	16.624
#1	.00119	.46670	.09088	.00127	-.04854	.06625	.00039
#2	-.00008	.11203	.09436	.00127	-.04858	.06795	.00049

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00019	.02517	.00274	.00249	.06263	.02928
SDev	.00012	.00011	.00016	.00006	.00116	.00073
%RSD	64.115	.44209	5.8197	2.2446	1.8536	2.5097

#1	.00011	.02510	.00262	.00245	.06345	.02980
#2	.00028	.02525	.00285	.00253	.06181	.02876

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	41264	--	--	--	--	--	--
SDev	321.0265	--	--	--	--	--	--
%RSD	.7779819	--	--	--	--	--	--
#1	41491	--	--	--	--	--	--
#2	41037	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-53079-a-1-a Operator: DCL
Run Time: 04/05/12 14:06:13
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.4533	.00470	.02685	74.248	-.00059	.01161	-.00035
SDev	.0047	.00076	.00119	.369	.00001	.00090	.00022
%RSD	.08555	16.277	4.4245	.49643	1.4842	7.7216	63.284
#1	5.4500	.00524	.02769	73.988	-.00059	.01224	-.00019
#2	5.4566	.00416	.02601	74.509	-.00058	.01097	-.00050

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm

Avge	4.6174	.04321	.03693	.13662	62.340	.00164	.01665
SDev	.0070	.00018	.00075	.00035	.196	.00002	.00032
%RSD	.15217	.41655	2.0343	.25840	.31389	1.0495	1.9201
#1	4.6124	.04334	.03746	.13687	62.202	.00165	.01687
#2	4.6224	.04308	.03640	.13637	62.478	.00163	.01642

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00346	.40139	2.6644	.00659	.09021	2.3156	1.5231
SDev	.00016	.00083	.0082	.00112	.00091	.0232	.0031
%RSD	4.5536	.20720	.30651	16.968	1.0133	1.0023	.20089
#1	.00335	.40198	2.6586	.00738	.09086	2.3320	1.5209
#2	.00357	.40080	2.6702	.00580	.08957	2.2992	1.5253

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00021	.48384	.32098	.60642	-.00049	.02835	.03075
SDev	.00096	.19519	.00035	.00122	.00112	.00049	.00012
%RSD	445.06	40.342	.11024	.20075	229.00	1.7334	.38636
#1	.00089	.62186	.32073	.60556	.00030	.02870	.03084
#2	-.00046	.34582	.32123	.60728	-.00128	.02801	.03067

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2

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Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.03989	.38582	.01505	.01745	-.00294	.00666
SDev	.00002	.00080	.00076	.00010	.00088	.00020
%RSD	.03941	.20624	5.0507	.57007	29.965	3.0565
#1	.03988	.38525	.01558	.01752	-.00356	.00681
#2	.03991	.38638	.01451	.01738	-.00232	.00652

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	40746	--	--	--	--	--	--
SDev	155.5635	--	--	--	--	--	--
%RSD	.3817884	--	--	--	--	--	--
#1	40636	--	--	--	--	--	--
#2	40856	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-53079-a-1-b du Operator: DCL
Run Time: 04/05/12 14:10:04
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.5756	.00279	.02544	74.277	-.00054	.01100	-.00029
SDev	.0056	.00340	.00080	.166	.00002	.00057	.00013
%RSD	.10080	122.01	3.1383	.22359	3.9287	5.1909	44.065
#1	5.5716	.00038	.02600	74.395	-.00056	.01060	-.00038
#2	5.5796	.00520	.02487	74.160	-.00053	.01141	-.00020

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.5428	.04829	.03809	.13981	64.127	.00175	.01540
SDev	.0171	.00051	.00029	.00004	.169	.00011	.00023
%RSD	.37626	1.0539	.76194	.03158	.26295	6.4340	1.4960
#1	4.5307	.04793	.03788	.13978	64.007	.00167	.01524
#2	4.5548	.04865	.03829	.13984	64.246	.00183	.01556

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00119	.42717	2.7425	.00702	.09196	2.3990	1.5353
SDev	.00158	.01163	.0048	.00043	.00037	.0511	.0038
%RSD	132.63	2.7230	.17671	6.1376	.40292	2.1283	.24949
#1	.00230	.41895	2.7391	.00672	.09170	2.3629	1.5326
#2	.00007	.43540	2.7459	.00733	.09223	2.4351	1.5380

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00028	.51679	.32544	.57057	.00205	.02799	.03121
SDev	.00011	.14921	.00322	.00102	.00010	.00040	.00013
%RSD	40.538	28.874	.99068	.17941	4.8372	1.4166	.42012

#1	.00035	.62230	.32316	.57129	.00198	.02771	.03112
#2	.00020	.41128	.32772	.56984	.00212	.02827	.03131

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04221	.36600	.01301	.01659	-.00504	.00430
SDev	.00046	.00069	.00244	.00087	.00324	.00074
%RSD	1.0986	.18971	18.739	5.2650	64.406	17.268
#1	.04189	.36550	.01129	.01721	-.00274	.00483
#2	.04254	.36649	.01474	.01597	-.00733	.00378

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	40586	--	--	--	--	--	--
SDev	18.38478	--	--	--	--	--	--
%RSD	.0452983	--	--	--	--	--	--
#1	40573	--	--	--	--	--	--
#2	40599	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-53079-a-1-c ms Operator: DCL
Run Time: 04/05/12 14:13:55
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	18.435	.85396	1.0381	82.312	.44694	1.0328	.53422
SDev	.085	.01825	.0051	.210	.00128	.0043	.00180
%RSD	.46355	2.1375	.49066	.25505	.28602	.41314	.33704
#1	18.374	.84105	1.0345	82.164	.44604	1.0298	.53295

#2	18.495	.86686	1.0417	82.461	.44785	1.0358	.53549

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	14.315	.96195	.94943	1.0627	72.579	.49836	.65526
SDev	.047	.00359	.00316	.0033	.219	.00224	.00511
%RSD	.32619	.37330	.33262	.30597	.30235	.44919	.77981
#1	14.282	.95941	.94720	1.0604	72.424	.49678	.65165
#2	14.348	.96448	.95167	1.0650	72.734	.49994	.65887

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.92432	9.9306	3.6109	1.0264	1.0805	13.476	3.2172
SDev	.00296	.0374	.0099	.0037	.0016	.080	.0087
%RSD	.32026	.37618	.27351	.36252	.15076	.59007	.27036
#1	.92223	9.9041	3.6039	1.0237	1.0817	13.419	3.2110
#2	.92641	9.9570	3.6179	1.0290	1.0793	13.532	3.2233

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm

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Avge	.49191	10.377	10.821	1.0823	1.1051	.95775	.98957
SDev	.00120	.021	.059	.0035	.0062	.00230	.00309
%RSD	.24462	.20194	.54682	.32366	.56264	.24038	.31224
#1	.49106	10.362	10.779	1.0798	1.1007	.95613	.98739
#2	.49276	10.392	10.862	1.0848	1.1095	.95938	.99176

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0072	1.3895	.57783	.69397	.81785	.97755
SDev	.0034	.0055	.00067	.00733	.00169	.00528
%RSD	.33902	.39456	.11606	1.0561	.20621	.54049
#1	1.0047	1.3856	.57736	.68879	.81905	.97382
#2	1.0096	1.3934	.57831	.69915	.81666	.98129

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	40172	--	--	--	--	--	--
SDev	177.4838	--	--	--	--	--	--
%RSD	.4418042	--	--	--	--	--	--
#1	40298	--	--	--	--	--	--
#2	40047	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-53079-a-1-d msd Operator: DCL
Run Time: 04/05/12 14:17:46
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	18.995	.89289	1.0561	87.201	.45635	1.0626	.54672
SDev	.005	.00645	.0034	.074	.00071	.0002	.00069
%RSD	.02648	.72284	.32477	.08521	.15496	.02082	.12692

#1	18.991	.88832	1.0585	87.253	.45685	1.0624	.54721
#2	18.998	.89745	1.0537	87.148	.45585	1.0628	.54623
Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	14.712	.97859	.96990	1.0867	74.634	.51492	.69398
SDev	.014	.00207	.00128	.0007	.074	.00083	.00089
%RSD	.09474	.21172	.13164	.06321	.09966	.16168	.12815
#1	14.722	.98006	.97080	1.0872	74.686	.51433	.69461
#2	14.702	.97713	.96899	1.0862	74.581	.51550	.69335
Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.93666	10.146	3.7006	1.0534	1.0948	13.915	3.3288
SDev	.00253	.001	.0050	.0021	.0032	.027	.0058
%RSD	.26968	.01168	.13510	.20276	.29396	.19695	.17366
#1	.93845	10.147	3.7042	1.0519	1.0971	13.895	3.3329

#2	.93488	10.145	3.6971	1.0549	1.0925	13.934	3.3247
Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.50252	10.513	11.117	1.0374	1.1369	.98069	1.0140
SDev	.00035	.106	.040	.0007	.0007	.00140	.0012
%RSD	.06896	1.0052	.35744	.06991	.05766	.14266	.12227
#1	.50277	10.588	11.089	1.0379	1.1374	.98168	1.0148
#2	.50228	10.439	11.145	1.0368	1.1365	.97970	1.0131
Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	1.0309	1.4519	.60873	.73660	.82180	.99410	
SDev	.0023	.0004	.00208	.00030	.00705	.00026	
%RSD	.22687	.02538	.34153	.03998	.85823	.02640	
#1	1.0326	1.4516	.61020	.73681	.82678	.99429	
#2	1.0293	1.4521	.60726	.73639	.81681	.99391	

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	39664	--	--	--	--	--	--
SDev	94.04520	--	--	--	--	--	--
%RSD	.2371017	--	--	--	--	--	--
#1	39598	--	--	--	--	--	--
#2	39731	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-53079-a-2-a Operator: DCL
Run Time: 04/05/12 14:21:37
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	26.514	.06902	.10198	83.384	.00006	.02871	.02895

SDev	.074	.00783	.00030	.051	.00001	.00137	.00008
%RSD	.27781	11.340	.29898	.06143	20.343	4.7826	.26554
#1	26.462	.07455	.10220	83.348	.00007	.02968	.02901
#2	26.567	.06348	.10177	83.420	.00005	.02773	.02890
Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	149.21	.07209	.03531	1.0603	37.873	.01461	2.3999
SDev	.26	.00056	.00026	.0026	.048	.00002	.0022
%RSD	.17528	.77441	.74347	.24213	.12542	.14918	.09112
#1	149.40	.07249	.03550	1.0585	37.907	.01460	2.4015
#2	149.03	.07170	.03513	1.0621	37.840	.01463	2.3984
Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00281	3.9957	2.7260	.01063	.05192	6.8288	5.4384

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SDev	.00089	.0074	.0033	.00104	.00008	.0162	.0013
%RSD	31.524	.18544	.12250	9.8347	.15337	.23770	.02433
#1	.00218	4.0009	2.7284	.01137	.05198	6.8173	5.4375
#2	.00344	3.9905	2.7237	.00989	.05186	6.8403	5.4394
Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00911	1.0470	.94033	5.7906	.00285	.02700	.26492
SDev	.00026	.2114	.00626	.0055	.00038	.00148	.00020
%RSD	2.8986	20.194	.66610	.09460	13.348	5.4677	.07456
#1	.00929	1.1966	.93590	5.7867	.00312	.02596	.26506
#2	.00892	.89754	.94476	5.7944	.00258	.02804	.26478
Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2	
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	.12803	4.2705	2.0989	2.5504	.00208	.00317	
SDev	.00032	.0036	.0136	.0035	.00048	.00109	
%RSD	.25003	.08473	.64680	.13752	23.217	34.250	
#1	.12825	4.2730	2.1085	2.5480	.00174	.00240	
#2	.12780	4.2679	2.0893	2.5529	.00242	.00394	

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	42422	--	--	--	--	--	--
SDev	140.7142	--	--	--	--	--	--
%RSD	.3316972	--	--	--	--	--	--
#1	42323	--	--	--	--	--	--
#2	42522	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-53079-a-3-a Operator: DCL
Run Time: 04/05/12 14:25:29
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	16.527	1.1475	2.0650	103.73	.00045	-.00192	.01144
SDev	.024	.0168	.0004	.04	.00001	.00048	.00003
%RSD	.14446	1.4656	.01835	.03401	2.7170	25.147	.26581
#1	16.511	1.1356	2.0648	103.76	.00046	-.00226	.01142
#2	16.544	1.1594	2.0653	103.71	.00044	-.00158	.01147

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	14.395	.17647	.12062	1.7969	206.82	.01337	23.423
SDev	.027	.00023	.00037	.0038	.39	.00001	.012
%RSD	.18925	.13184	.30655	.21151	.18914	.06400	.05056
#1	14.414	.17664	.12088	1.7942	207.10	.01338	23.431

#2	14.376	.17631	.12036	1.7996	206.54	.01337	23.415

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.01112	.93300	22.531	.05295	.07742	1.8152	2.5900
SDev	.00218	.00576	.046	.00044	.00070	.0103	.0001
%RSD	19.628	.61747	.20584	.82304	.90863	.56942	.00538
#1	-.00958	.93708	22.564	.05326	.07791	1.8225	2.5899
#2	-.01267	.92893	22.498	.05265	.07692	1.8079	2.5901

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.02985	.36458	.20170	5.4351	.02537	.02895	.14872
SDev	.00005	.03694	.00105	.0021	.00307	.00001	.00027
%RSD	.16586	10.131	.51954	.03819	12.078	.04472	.18070
#1	.02981	.33846	.20095	5.4337	.02321	.02896	.14891
#2	.02988	.39070	.20244	5.4366	.02754	.02894	.14853

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.10033	4.6893	20.453	24.908	-.02309	-.00514
SDev	.00035	.0041	.054	.009	.00051	.00353
%RSD	.34596	.08839	.26563	.03773	2.2018	68.704
#1	.10057	4.6923	20.491	24.902	-.02345	-.00264
#2	.10008	4.6864	20.414	24.915	-.02273	-.00763

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	39504	--	--	--	--	--	--
SDev	86.97414	--	--	--	--	--	--
%RSD	.2201682	--	--	--	--	--	--
#1	39442	--	--	--	--	--	--
#2	39565	--	--	--	--	--	--

Method: 20076010 Sample Name: CCV met0412ccv_00001 Operator: DCL
Run Time: 04/05/12 14:29:20

Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.4418	.54821	.50988	.54335	.44420	.52541	.54235
SDev	.0034	.00912	.00371	.00760	.00151	.00031	.00125
%RSD	.14104	1.6642	.72693	1.3996	.33943	.05866	.23093
#1	2.4442	.55467	.51250	.54872	.44527	.52563	.54323
#2	2.4393	.54176	.50726	.53797	.44313	.52520	.54146

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm

Avge	12.212	.45484	.44677	.45456	2.6136	.49863	.49019
SDev	.032	.00127	.00108	.00110	.0163	.00074	.00263
%RSD	.26495	.27980	.24213	.24145	.62284	.14885	.53581
#1	12.235	.45574	.44753	.45534	2.6251	.49915	.49205
#2	12.189	.45394	.44600	.45378	2.6021	.49810	.48833

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.48106	4.6533	.46776	.50122	.48781	13.447	.91348
SDev	.00060	.0144	.00217	.00116	.00049	.000	.00524
%RSD	.12540	.30934	.46471	.23058	.10000	.00242	.57326
#1	.48149	4.6634	.46930	.50203	.48815	13.447	.91718
#2	.48064	4.6431	.46623	.50040	.48746	13.446	.90977

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.24443	12.897	12.889	.26692	.56006	.46774	.49893
SDev	.00108	.057	.013	.00059	.00122	.00051	.00104
%RSD	.44034	.44280	.10421	.21900	.21766	.10969	.20818
#1	.24519	12.937	12.898	.26734	.56092	.46811	.49967
#2	.24367	12.857	12.879	.26651	.55920	.46738	.49820

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.46974	.52498	.42125	.52466	.41818	.51256
SDev	.00067	.00054	.00359	.00214	.00840	.00329
%RSD	.14159	.10291	.85299	.40848	2.0077	.64244
#1	.47021	.52536	.42379	.52618	.42411	.51023
#2	.46927	.52460	.41871	.52315	.41224	.51489

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	39398	--	--	--	--	--	--
SDev	111.7229	--	--	--	--	--	--
%RSD	.2835750	--	--	--	--	--	--
#1	39477	--	--	--	--	--	--
#2	39319	--	--	--	--	--	--

Method: 20076010 Sample Name: CCB Operator: DCL
Run Time: 04/05/12 14:33:11
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.11760	.01152	.00082	.00098	-.00147	.00130	-.00028
SDev	.00057	.00155	.00054	.00008	.00001	.00041	.00002
%RSD	.48174	13.466	65.992	8.2229	.68374	31.707	8.8078

#1	.11800	.01262	.00044	.00104	-.00147	.00159	-.00030
#2	.11720	.01043	.00120	.00092	-.00148	.00101	-.00026

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.05451	.00014	-.00114	-.00532	-.04671	.00044	.00104
SDev	.00032	.00014	.00022	.00035	.00293	.00005	.00005
%RSD	.59299	98.568	19.049	6.5037	6.2703	11.889	4.5259
#1	-.05428	.00024	-.00130	-.00508	-.04879	.00048	.00100
#2	-.05473	.00004	-.00099	-.00557	-.04464	.00041	.00107

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00187	.02422	.00004	.00109	-.00096	.12706	-.01650
SDev	.00323	.00489	.00006	.00107	.00038	.03219	.00194
%RSD	172.69	20.198	156.88	98.839	39.291	25.331	11.735
#1	.00415	.02768	.00008	.00184	-.00069	.14982	-.01513
#2	-.00041	.02076	-.00000	.00033	-.00123	.10430	-.01787

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00128	-.23414	-.00421	-.00010	-.00031	-.00029	-.00001
SDev	.00025	.04726	.00225	.00004	.00050	.00081	.00001
%RSD	19.295	20.186	53.401	36.903	164.45	282.46	59.458
#1	-.00111	-.26756	-.00262	-.00007	.00005	.00028	-.00001
#2	-.00146	-.20072	-.00580	-.00013	-.00066	-.00086	-.00002

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00003	-.00249	.00144	.00083	.00090	.00235
SDev	.00044	.00016	.00277	.00146	.00352	.00308
%RSD	1538.3	6.2649	192.19	175.01	391.02	130.93
#1	.00028	-.00260	.00340	-.00020	.00339	.00453
#2	-.00034	-.00238	-.00052	.00186	-.00159	.00017

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	39313	--	--	--	--	--	--
SDev	145.6640	--	--	--	--	--	--
%RSD	.3705237	--	--	--	--	--	--

#1	39210	--	--	--	--	--	--
#2	39416	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-53079-a-4-a Operator: DCL
Run Time: 04/05/12 14:37:02
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.7783	.01031	.02698	67.009	-.00070	.01149	-.00071
SDev	.0054	.00160	.00119	.148	.00000	.00021	.00008
%RSD	.11344	15.552	4.4034	.22063	.46469	1.8231	11.736
#1	4.7745	.01144	.02782	66.904	-.00071	.01164	-.00077
#2	4.7822	.00917	.02614	67.114	-.00070	.01134	-.00065

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.3865	.03815	.03694	.12327	57.009	.00209	.01722
SDev	.0015	.00015	.00043	.00031	.004	.00006	.00012
%RSD	.03389	.38922	1.1542	.24856	.00640	2.8463	.69929
#1	4.3876	.03805	.03724	.12306	57.012	.00213	.01730
#2	4.3855	.03826	.03664	.12349	57.007	.00204	.01713

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00049	.40522	2.6310	.00610	.08271	2.5636	1.3999
SDev	.00120	.00326	.0006	.00074	.00046	.0008	.0003
%RSD	243.17	.80380	.02268	12.144	.55378	.03155	.01988
#1	-.00035	.40752	2.6314	.00662	.08303	2.5641	1.3997
#2	.00134	.40292	2.6306	.00557	.08238	2.5630	1.4001

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00016	.46625	.33322	.62569	.00220	.02502	.02665
SDev	.00032	.11180	.00100	.00092	.00001	.00048	.00002
%RSD	195.82	23.979	.30018	.14632	.50236	1.9221	.07407
#1	.00006	.54531	.33251	.62505	.00219	.02468	.02666
#2	-.00039	.38719	.33393	.62634	.00221	.02536	.02663

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.03834	.33475	.01558	.01804	-.00172	.00160
SDev	.00009	.00014	.00077	.00020	.00120	.00120
%RSD	.24534	.04214	4.9290	1.1277	69.764	75.148
#1	.03841	.33465	.01612	.01789	-.00256	.00075
#2	.03827	.33485	.01504	.01818	-.00087	.00245

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--

Avge	39303	--	--	--	--	--	--
SDev	89.09545	--	--	--	--	--	--
%RSD	.2266887	--	--	--	--	--	--
#1	39240	--	--	--	--	--	--
#2	39366	--	--	--	--	--	--

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Method: 20076010 Sample Name: 600-53079-a-5-a Operator: DCL
Run Time: 04/05/12 14:40:54
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.271	.04728	.09755	82.028	-.00007	.02496	.02815
SDev	.076	.00072	.00214	.167	.00000	.00035	.00020
%RSD	.29941	1.5171	2.1922	.20341	4.0362	1.3881	.70505
#1	25.325	.04778	.09907	82.146	-.00007	.02472	.02801
#2	25.218	.04677	.09604	81.910	-.00006	.02521	.02829

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	143.02	.06526	.03630	1.0938	36.389	.01421	2.1907
SDev	.16	.00006	.00012	.0032	.028	.00004	.0017
%RSD	.11280	.08956	.32585	.29107	.07604	.29326	.07713
#1	143.13	.06531	.03621	1.0960	36.409	.01424	2.1919
#2	142.91	.06522	.03638	1.0915	36.370	.01418	2.1895

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00151	3.7365	2.4944	.00921	.05010	6.6369	5.0378
SDev	.00075	.0104	.0029	.00034	.00054	.0248	.0150
%RSD	49.566	.27846	.11608	3.6932	1.0801	.37345	.29764
#1	.00098	3.7438	2.4964	.00897	.05048	6.6545	5.0484
#2	.00203	3.7291	2.4923	.00945	.04972	6.6194	5.0272

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01042	.99022	.90510	5.5408	.00130	.02399	.24933
SDev	.00015	.03101	.00390	.0104	.00272	.00103	.00030
%RSD	1.4449	3.1312	.43040	.18748	208.62	4.2931	.12087
#1	.01031	.96829	.90786	5.5482	.00322	.02326	.24954
#2	.01052	1.0121	.90235	5.5335	-.00062	.02472	.24912

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.12140	4.1663	1.8800	2.3460	-.00096	.00274
SDev	.00062	.0062	.0081	.0015	.00149	.00038
%RSD	.50959	.14806	.43343	.06564	154.88	13.732
#1	.12184	4.1707	1.8858	2.3449	-.00201	.00247
#2	.12096	4.1620	1.8743	2.3471	.00009	.00300

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED

Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	41790	--	--	--	--	--	--
SDev	94.04520	--	--	--	--	--	--
%RSD	.2250397	--	--	--	--	--	--

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#1	41724	--	--	--	--	--	--
#2	41857	--	--	--	--	--	--

Method: 20076010 Sample Name: 600-53079-a-6-a Operator: DCL
Run Time: 04/05/12 14:44:44
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	16.699	1.1272	2.0498	103.10	.00046	-.00268	.01089
SDev	.030	.0145	.0022	.35	.00000	.00058	.00011
%RSD	.18060	1.2869	.10878	.34431	.19952	21.740	.98820
#1	16.721	1.1169	2.0514	103.35	.00046	-.00227	.01097
#2	16.678	1.1374	2.0482	102.85	.00046	-.00309	.01081

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	17.126	.18212	.12314	1.8598	222.12	.01359	20.399
SDev	.054	.00107	.00036	.0078	.86	.00004	.027
%RSD	.31412	.58793	.29182	.42105	.38649	.29945	.13034
#1	17.165	.18288	.12340	1.8654	222.73	.01362	20.418
#2	17.088	.18136	.12289	1.8543	221.51	.01356	20.381

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.01467	1.0979	21.250	.04297	.07465	1.9763	2.5507
SDev	.00173	.0037	.082	.00024	.00049	.0107	.0036
%RSD	11.822	.33557	.38691	.54828	.65184	.54319	.14169
#1	-.01589	1.1005	21.309	.04280	.07499	1.9839	2.5532
#2	-.01344	1.0953	21.192	.04313	.07430	1.9687	2.5481

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04980	.49396	.27334	5.7011	.03312	.02717	.14907
SDev	.00003	.07293	.00010	.0188	.00049	.00040	.00075
%RSD	.06568	14.764	.03487	.32914	1.4711	1.4697	.50526
#1	.04978	.44240	.27341	5.7144	.03278	.02689	.14960
#2	.04982	.54553	.27327	5.6878	.03347	.02745	.14854

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.10149	5.2213	17.504	21.847	-.02401	-.01000
SDev	.00051	.0171	.018	.031	.00379	.00449
%RSD	.49879	.32834	.10440	.14072	15.764	44.952
#1	.10184	5.2334	17.517	21.869	-.02133	-.01317
#2	.10113	5.2091	17.491	21.825	-.02669	-.00682

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED

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Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	38386	--	--	--	--	--	--
SDev	120.9153	--	--	--	--	--	--
%RSD	.3150024	--	--	--	--	--	--
#1	38300	--	--	--	--	--	--
#2	38471	--	--	--	--	--	--

Method: 20076010 Sample Name: PDS 600-52201-a-24-a Operator: DCL
Run Time: 04/05/12 14:48:35
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	162.83	.98004	.98527	5.4246	.38627	1.1692	.44097
SDev	.26	.00871	.00432	.0114	.00053	.0003	.00031
%RSD	.16064	.88871	.43898	.21011	.13632	.02532	.06955
#1	163.02	.98620	.98833	5.4327	.38664	1.1690	.44118
#2	162.65	.97388	.98221	5.4166	.38590	1.1694	.44075

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	898.38	.94218	.79133	.91037	159.44	1.2884	1.0501
SDev	2.23	.00047	.00112	.00141	.19	.0006	.0043
%RSD	.24808	.04972	.14160	.15526	.11899	.04597	.41011
#1	899.96	.94251	.79212	.91137	159.58	1.2879	1.0532
#2	896.81	.94185	.79054	.90937	159.31	1.2888	1.0471

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.81807	49.982	3.5488	.88217	.91611	55.752	5.9779
SDev	.00311	.074	.0040	.00168	.00148	.046	.0052
%RSD	.38050	.14725	.11311	.18983	.16194	.08322	.08773
#1	.82027	50.034	3.5516	.88098	.91716	55.785	5.9816
#2	.81587	49.930	3.5459	.88335	.91506	55.719	5.9741

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.45494	15.184	18.051	3.8979	.97891	.83199	1.1445
SDev	.00178	.149	.019	.0009	.00025	.00527	.0012
%RSD	.39076	.97844	.10740	.02334	.02531	.63365	.10217
#1	.45619	15.289	18.065	3.8973	.97873	.83572	1.1453
#2	.45368	15.079	18.037	3.8986	.97909	.82826	1.1437

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0777	1.5418	.89456	1.1279	.70792	.87315
SDev	.0011	.0014	.00786	.0025	.00501	.00216
%RSD	.10675	.09372	.87875	.22425	.70739	.24798

#1	1.0785	1.5429	.90012	1.1297	.71146	.87468

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#2	1.0768	1.5408	.88900	1.1261	.70438	.87162

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	39404	--	--	--	--	--	--
SDev	120.2082	--	--	--	--	--	--
%RSD	.3050659	--	--	--	--	--	--
#1	39319	--	--	--	--	--	--
#2	39489	--	--	--	--	--	--

Method: 20076010 Sample Name: SD 600-52201-a-24a@5 Operator: DCL
Run Time: 04/05/12 14:52:26
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	34.759	.01010	.01865	1.0102	.00051	.04680	-.00082
SDev	.039	.00102	.00059	.0010	.00003	.00109	.00009
%RSD	.11149	10.131	3.1431	.10311	5.6554	2.3343	11.207
#1	34.786	.01083	.01906	1.0109	.00053	.04758	-.00076
#2	34.731	.00938	.01824	1.0094	.00049	.04603	-.00089

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	253.81	.04011	.01194	.01420	35.001	.02998	.05121
SDev	.44	.00036	.00057	.00018	.061	.00009	.00024
%RSD	.17216	.88962	4.7732	1.2754	.17490	.28780	.45985
#1	254.12	.04036	.01235	.01407	35.044	.03004	.05138
#2	253.50	.03985	.01154	.01432	34.957	.02992	.05105

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00206	9.8787	.64625	.00449	.02415	8.8001	1.1482
SDev	.00059	.0207	.00062	.00101	.00068	.0030	.0022
%RSD	28.694	.20948	.09547	22.431	2.8357	.03405	.19291
#1	-.00248	9.8933	.64669	.00520	.02463	8.8022	1.1497
#2	-.00164	9.8640	.64581	.00378	.02366	8.7980	1.1466

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00040	1.1118	1.0937	.72938	.00414	.00627	.06292
SDev	.00059	.1307	.0023	.00014	.00033	.00236	.00015
%RSD	148.99	11.754	.21222	.01888	7.9074	37.691	.24320
#1	.00002	1.2042	1.0953	.72947	.00437	.00794	.06303
#2	-.00081	1.0194	1.0920	.72928	.00391	.00460	.06281

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.06202	.14470	.04291	.05537	.00053	-.00335

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SDev	.00014	.00028	.00128	.00029	.00223	.00200
%RSD	.22899	.19154	2.9783	.51610	417.80	59.609
#1	.06212	.14489	.04381	.05516	.00211	-.00477
#2	.06192	.14450	.04201	.05557	-.00104	-.00194

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	38352	--	--	--	--	--	--
SDev	3.535534	--	--	--	--	--	--
%RSD	.0092185	--	--	--	--	--	--
#1	38350	--	--	--	--	--	--
#2	38355	--	--	--	--	--	--

Method: 20076010 Sample Name: CCV met0412ccv_00001 Operator: DCL
Run Time: 04/05/12 14:56:17
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.4528	.53337	.51248	.54287	.43925	.53275	.55126
SDev	.0007	.00023	.00004	.00020	.00034	.00126	.00030
%RSD	.02859	.04235	.00795	.03697	.07745	.23642	.05521
#1	2.4523	.53322	.51245	.54301	.43900	.53186	.55105
#2	2.4533	.53353	.51251	.54273	.43949	.53364	.55148

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	12.234	.45344	.44507	.44837	2.6356	.51123	.49303
SDev	.004	.00006	.00027	.00020	.0010	.00042	.00029
%RSD	.02964	.01231	.06070	.04519	.03848	.08260	.05846
#1	12.232	.45348	.44488	.44823	2.6349	.51153	.49323
#2	12.237	.45340	.44526	.44851	2.6364	.51093	.49282

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.48181	4.6771	.46691	.50103	.50165	13.916	.91157
SDev	.00261	.0057	.00028	.00124	.00044	.012	.00164
%RSD	.54125	.12092	.06064	.24835	.08816	.08581	.17952
#1	.48365	4.6731	.46671	.50015	.50196	13.924	.91273
#2	.47996	4.6811	.46711	.50191	.50134	13.908	.91041

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.24468	13.068	13.173	.27037	.56883	.46850	.50073
SDev	.00048	.103	.020	.00017	.00084	.00077	.00040
%RSD	.19694	.78587	.15411	.06399	.14728	.16537	.08068
#1	.24434	12.995	13.188	.27024	.56943	.46905	.50045
#2	.24503	13.141	13.159	.27049	.56824	.46796	.50102

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Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.46853	.53040	.41916	.52996	.41326	.51613
SDev	.00011	.00069	.00263	.00175	.00170	.00476
%RSD	.02259	.12990	.62807	.32994	.41142	.92259
#1	.46846	.52992	.41730	.53120	.41205	.51950
#2	.46861	.53089	.42102	.52873	.41446	.51277

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	38127	--	--	--	--	--	--
SDev	86.26703	--	--	--	--	--	--
%RSD	.2262623	--	--	--	--	--	--
#1	38188	--	--	--	--	--	--
#2	38066	--	--	--	--	--	--

Method: 20076010 Sample Name: CCB Operator: DCL
Run Time: 04/05/12 15:00:08
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.13209	.00335	.00249	.00019	-.00162	.00068	-.00016
SDev	.00550	.00381	.00176	.00021	.00002	.00164	.00000
%RSD	4.1609	113.60	70.624	113.83	1.4384	242.28	.93319
#1	.13598	.00605	.00373	.00034	-.00160	.00184	-.00016
#2	.12821	.00066	.00125	.00004	-.00163	-.00048	-.00016

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.05456	-.00004	-.00032	-.00545	-.00831	.00068	.00067
SDev	.00113	.00066	.00079	.00091	.03775	.00001	.00007
%RSD	2.0802	1849.6	244.11	16.635	454.24	1.4410	9.8636
#1	-.05536	.00043	-.00088	-.00481	-.03500	.00069	.00062
#2	-.05376	-.00050	.00024	-.00609	.01838	.00068	.00072

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00128	.03810	-.00005	.00067	-.00078	.24016	-.01914
SDev	.00081	.00043	.00008	.00042	.00020	.00147	.00438
%RSD	63.309	1.1272	151.80	62.179	26.133	.61210	22.881
#1	.00071	.03779	.00000	.00038	-.00092	.23912	-.01605
#2	.00186	.03840	-.00011	.00097	-.00063	.24120	-.02224

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00029	-.01589	.00307	-.00012	-.00194	-.00100	-.00016
SDev	.00112	.20524	.00139	.00007	.00111	.00313	.00043

%RSD	383.82	1291.6	45.371	63.324	57.436	312.13	263.19

#1	-.00108	-.16101	.00208	-.00006	-.00115	-.00322	.00014
#2	.00050	.12923	.00405	-.00017	-.00273	.00121	-.00047

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00012	-.00289	.00177	.00012	.00677	-.00146
SDev	.00082	.00013	.00348	.00164	.00318	.00037
%RSD	673.55	4.4732	196.66	1354.3	46.992	25.527

#1	.00046	-.00280	-.00069	.00128	.00452	-.00120
#2	-.00071	-.00298	.00423	-.00104	.00902	-.00173

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	38120	--	--	--	--	--	--
SDev	9.192388	--	--	--	--	--	--
%RSD	.0241140	--	--	--	--	--	--

#1	38127	--	--	--	--	--	--
#2	38114	--	--	--	--	--	--

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Method: 20076010 Sample Name: ICSA metisa_00072 Operator: DCL
Run Time: 04/05/12 16:17:18
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	468.02	.00752	.00055	.00186	-.00233	-.00291	-.00826
SDev	.71	.00203	.00437	.00001	.00001	.00040	.00015
%RSD	.15124	27.055	795.64	.45126	.58664	13.603	1.7811

#1	468.52	.00608	-.00254	.00186	-.00234	-.00319	-.00816
#2	467.52	.00896	.00364	.00187	-.00232	-.00263	-.00836

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	437.23	.00130	-.00099	.00801	200.75	.00611	.00295
SDev	.56	.00048	.00055	.00030	.14	.00002	.00109
%RSD	.12800	37.178	55.814	3.7659	.07083	.33183	37.011

#1	437.63	.00095	-.00060	.00780	200.85	.00612	.00372
#2	436.84	.00164	-.00138	.00822	200.65	.00609	.00218

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.01869	471.09	-.00658	-.00109	.00002	.67316	-.00730
SDev	.00277	.06	.00002	.00003	.00012	.00583	.00231
%RSD	14.808	.01199	.27738	2.6118	752.82	.86672	31.589

#1	-.02065	471.13	-.00659	-.00111	-.00007	.67728	-.00567
#2	-.01673	471.06	-.00657	-.00107	.00010	.66903	-.00893

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00204	.03798	.23352	-.00864	.03471	-.00659	-.00387
SDev	.00028	.14060	.00150	.00001	.00020	.00073	.00011

%RSD	13.697	370.23	.64266	.14608	.58715	11.050	2.8721
#1	-.00184	.13739	.23458	-.00865	.03456	-.00711	-.00379
#2	-.00224	-.06144	.23246	-.00863	.03485	-.00608	-.00395

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00602	-.00810	-.00370	.00627	.00608	-.03108
SDev	.00022	.00009	.00100	.00114	.00667	.00082
%RSD	3.5828	1.1162	27.051	18.143	109.59	2.6333
#1	.00586	-.00816	-.00299	.00708	.00137	-.03166
#2	.00617	-.00803	-.00440	.00547	.01080	-.03050

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	31758	--	--	--	--	--	--
SDev	73.53911	--	--	--	--	--	--
%RSD	.2315609	--	--	--	--	--	--

#1	31706	--	--	--	--	--	--
#2	31810	--	--	--	--	--	--

Method: 20076010 Sample Name: ICSAB metisb_00074 Operator: DCL
Run Time: 04/05/12 16:21:09
Comment: TRACE 61E
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1890	Ba4934	Be3130	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	479.84	1.1838	1.0792	1.1843	.42203	1.1633	.53753
SDev	.00	.0030	.0033	.0013	.00045	.0018	.00036
%RSD	.00086	.25605	.30937	.11176	.10591	.15355	.06712
#1	479.83	1.1816	1.0768	1.1852	.42234	1.1645	.53778
#2	479.84	1.1859	1.0815	1.1833	.42171	1.1620	.53727

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Li6707	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	446.90	.89591	.85653	.96046	212.81	1.4127	1.0009
SDev	.38	.00037	.00088	.00076	.11	.0013	.0016
%RSD	.08430	.04101	.10225	.07894	.05000	.09119	.16370
#1	447.17	.89617	.85715	.96099	212.89	1.4117	.99975
#2	446.64	.89565	.85591	.95992	212.74	1.4136	1.0021

Elem	Se1960	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.96773	484.77	.95231	1.0066	1.0047	17.531	.98573
SDev	.01118	.01	.00059	.0007	.0063	.048	.00052
%RSD	1.1553	.00186	.06195	.06485	.62616	.27200	.05261
#1	.95983	484.78	.95273	1.0070	1.0091	17.497	.98609
#2	.97564	484.76	.95190	1.0061	1.0002	17.564	.98536

Elem	Ag3280	Na3302	Na5889	Sr4215	Tl1908	Sn1899	Ti3349

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.53992	12.656	15.571	.57024	1.2285	.96063	1.0204
SDev	.00061	.184	.031	.00059	.0064	.00053	.0010
%RSD	.11289	1.4507	.19634	.10415	.52037	.05530	.09528
#1	.54035	12.786	15.550	.57066	1.2240	.96025	1.0211
#2	.53949	12.526	15.593	.56982	1.2330	.96100	1.0197

Elem	V_2924	Zn2138	2203/1	2203/2	1960/1	1960/2
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.93558	1.0894	.83971	1.0815	.85735	1.0229
SDev	.00092	.0009	.00329	.0041	.00617	.0199
%RSD	.09848	.08587	.39198	.37942	.71916	1.9409
#1	.93623	1.0888	.84204	1.0786	.86171	1.0089
#2	.93493	1.0901	.83738	1.0844	.85299	1.0370

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED

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Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	31641	--	--	--	--	--	--
SDev	2.828427	--	--	--	--	--	--
%RSD	.0089391	--	--	--	--	--	--
#1	31643	--	--	--	--	--	--
#2	31639	--	--	--	--	--	--

METALS BATCH WORKSHEET

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG No.:

Batch Number: 76449 Batch Start Date: 04/04/12 14:49 Batch Analyst: Racelis, Froilan Noel E

Batch Method: 3050B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	CalcMsg	InitialAmount	FinalAmount	METH202 00020	METHCL 00037	METHNO3 00027
MB 600-76449/1		3050B, 6010B		CALC NOT SET TO RUN	1.00 g	50 mL	4 mL	2.5 mL	5 mL
LCS 600-76449/2		3050B, 6010B		CALC NOT SET TO RUN	0.50 g	50 mL	4 mL	2.5 mL	5 mL
600-52867-A-1	2012-BG-1	3050B, 6010B	T	CALC NOT SET TO RUN	1.06 g	50 mL	4 mL	2.5 mL	5 mL
600-52867-A-2	2012-BG-2	3050B, 6010B	T	CALC NOT SET TO RUN	1.05 g	50 mL	4 mL	2.5 mL	5 mL
600-52867-A-3	2012-BG-3	3050B, 6010B	T	CALC NOT SET TO RUN	1.06 g	50 mL	4 mL	2.5 mL	5 mL
600-52867-A-4	2012-BG-7	3050B, 6010B	T	CALC NOT SET TO RUN	1.05 g	50 mL	4 mL	2.5 mL	5 mL
600-52867-A-5	2012-BG-9	3050B, 6010B	T	CALC NOT SET TO RUN	1.00 g	50 mL	4 mL	2.5 mL	5 mL
600-52867-A-6	2012-BG-5	3050B, 6010B	T	CALC NOT SET TO RUN	1.02 g	50 mL	4 mL	2.5 mL	5 mL
600-52867-A-7	2012-BG-4	3050B, 6010B	T	CALC NOT SET TO RUN	1.05 g	50 mL	4 mL	2.5 mL	5 mL
600-52867-A-8	2012-BG-6	3050B, 6010B	T	CALC NOT SET TO RUN	1.04 g	50 mL	4 mL	2.5 mL	5 mL
600-52867-A-9	2012-BG-10	3050B, 6010B	T	CALC NOT SET TO RUN	1.04 g	50 mL	4 mL	2.5 mL	5 mL
600-52867-A-10	2012-BG-8	3050B, 6010B	T	CALC NOT SET TO RUN	1.02 g	50 mL	4 mL	2.5 mL	5 mL
600-52867-A-10 DU	2012-BG-8	3050B, 6010B	T	CALC NOT SET TO RUN	1.04 g	50 mL	4 mL	2.5 mL	5 mL
600-52867-A-10 MS	2012-BG-8	3050B, 6010B	T	CALC NOT SET TO RUN	1.02 g	50 mL	4 mL	2.5 mL	5 mL
600-52867-A-10 MSD	2012-BG-8	3050B, 6010B	T	CALC NOT SET TO RUN	1.06 g	50 mL	4 mL	2.5 mL	5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	METSLCSS 00016	METSPIKEA 00011	METSPIKEB 00012			
MB 600-76449/1		3050B, 6010B							
LCS 600-76449/2		3050B, 6010B		0.5 g					
600-52867-A-1	2012-BG-1	3050B, 6010B	T						
600-52867-A-2	2012-BG-2	3050B, 6010B	T						
600-52867-A-3	2012-BG-3	3050B, 6010B	T						
600-52867-A-4	2012-BG-7	3050B, 6010B	T						
600-52867-A-5	2012-BG-9	3050B, 6010B	T						
600-52867-A-6	2012-BG-5	3050B, 6010B	T						

METALS BATCH WORKSHEET

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG No.:

Batch Number: 76449 Batch Start Date: 04/04/12 14:49 Batch Analyst: Racelis, Froilan Noel E

Batch Method: 3050B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	METSLCSS 00016	METSPIKEA 00011	METSPIKEB 00012			
600-52867-A-7	2012-BG-4	3050B, 6010B	T						
600-52867-A-8	2012-BG-6	3050B, 6010B	T						
600-52867-A-9	2012-BG-10	3050B, 6010B	T						
600-52867-A-10	2012-BG-8	3050B, 6010B	T						
600-52867-A-10 DU	2012-BG-8	3050B, 6010B	T						
600-52867-A-10 MS	2012-BG-8	3050B, 6010B	T		250 uL	250 uL			
600-52867-A-10 MSD	2012-BG-8	3050B, 6010B	T		250 uL	250 uL			

Batch Notes	
Balance ID	B-6
Hood ID or number	M5
Hot Block ID number	HB 02
Temperature	95 Degrees C
ID number of the thermometer	517

Basis	Basis Description
T	Total/NA

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Houston Job Number: 600-52867-1

SDG No.:

Project: Exide Recycling Center, Frisco TX Projec

Client Sample ID	Lab Sample ID
2012-BG-1	600-52867-1
2012-BG-2	600-52867-2
2012-BG-3	600-52867-3
2012-BG-7	600-52867-4
2012-BG-9	600-52867-5
2012-BG-5	600-52867-6
2012-BG-4	600-52867-7
2012-BG-6	600-52867-8
2012-BG-10	600-52867-9
2012-BG-8	600-52867-10

Comments:

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Houston Job Number: 600-52867-1

SDG Number:

Matrix: Solid Instrument ID: NOEQUIP

Method: Moisture RL Date: 09/05/2005 11:35

Analyte	Wavelength/ Mass	RL (%)	
Percent Moisture		1	
Percent Solids		1	

FORM IX - IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG No.:

Instrument ID: NOEQUIP Method: Moisture

Start Date: 04/02/2012 13:22 End Date: 04/02/2012 13:22

Lab Sample ID	D/F	Type	Time	Analytes																				
				% Sol	Moist																			
ZZZZZZ			13:22																					
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600-52867-1	1	T	13:22	X	X																			
600-52867-2	1	T	13:22	X	X																			
600-52867-3	1	T	13:22	X	X																			
600-52867-4	1	T	13:22	X	X																			
600-52867-5	1	T	13:22	X	X																			
600-52867-5 DU	1	T	13:22	X	X																			
600-52867-6	1	T	13:22	X	X																			
600-52867-7	1	T	13:22	X	X																			
600-52867-8	1	T	13:22	X	X																			
600-52867-9	1	T	13:22	X	X																			
600-52867-10	1	T	13:22	X	X																			
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Prep Types
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GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Houston Job No.: 600-52867-1

SDG No.:

Batch Number: 76213 Batch Start Date: 04/02/12 13:22 Batch Analyst: Daniel, Kevin R

Batch Method: Moisture Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	DISH#	DishWeight	SampleMassWet	SampleMassDry		
600-52867-A-1	2012-BG-1	Moisture	T	10	3.01 g	13.72 g	11.28 g		
600-52867-A-2	2012-BG-2	Moisture	T	11	3.01 g	13.94 g	12.30 g		
600-52867-A-3	2012-BG-3	Moisture	T	12	3.01 g	13.60 g	11.51 g		
600-52867-A-4	2012-BG-7	Moisture	T	13	3.01 g	13.57 g	11.33 g		
600-52867-A-5	2012-BG-9	Moisture	T	14	3.01 g	15.05 g	12.72 g		
600-52867-A-5 DU	2012-BG-9	Moisture	T	15	3.01 g	14.88 g	12.44 g		
600-52867-A-6	2012-BG-5	Moisture	T	16	3.01 g	13.38 g	11.43 g		
600-52867-A-7	2012-BG-4	Moisture	T	17	3.01 g	14.91 g	12.24 g		
600-52867-A-8	2012-BG-6	Moisture	T	18	3.01 g	14.88 g	12.34 g		
600-52867-A-9	2012-BG-10	Moisture	T	19	3.01 g	13.80 g	11.56 g		
600-52867-A-10	2012-BG-8	Moisture	T	20	3.01 g	14.71 g	12.33 g		

Batch Notes	
Balance ID	b-2 No Unit
Date samples were placed in the oven	04/02/2012

Basis	Basis Description
T	Total/NA

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
PBW, LLC	Sachin Kuchadkar, Chris Moore	3/29/12	090335
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
2201 Double Creek Dr, Ste 4004	512-671-3434 / 3446		
City / State / Zip Code	**Site Contact**	**Lab Contact**	
Round Rock / TX / 78664	Chris Moore		
Project Name and Location (State)	**Carrier/Waybill Number**		
Exide Frisco (TX)	FedEx		
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: CAt Pb (6010/6020)	Special Instructions/ Conditions of Receipt
2012-BG-1	3/29/12	0818				X	X						X	
2012-BG-2		0840				X	X						X	
2012-BG-3		0900				X	X						X	
2012-BG-7		0946				X	X						X	
2012-BG-9		1020				X	X						X	
2012-BG-5		1125				X	X						X	
2012-BG-4		1516				X	X						X	
2012-BG-6		1532				X	X						X	
2012-BG-10		1620				X	X						X	
2012-BG-10		1625				X	X						X	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☒ Archive For Indefinite 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 Std

QC Requirements (Specify) TV

	Relinquished By	Date	Time	Received By	Date	Time
1.		3/28/12	1712		3.30.12	931
2.						
3.						

Comments

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

2014 EXIDE APAR PAGE 1971 OF 3116

4/25/2012

Login Sample Receipt Checklist

Client: Pastor, Behling & Wheeler LLC

Job Number: 600-52867-1

Login Number: 52867

List Number: 1

Creator: Capps, Dana

List Source: TestAmerica Houston

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.	False	
Cooler Temperature is recorded.	True	9.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

DATA VALIDATION AND USABILITY SUMMARY

FRISCO RECYCLING CENTER
EXIDE TECHNOLOGIES
FRISCO, TEXAS

MARCH 2012 SOIL SAMPLING EVENT
BACKGROUND AND ADDITIONAL SITE SAMPLES

Prepared by:

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June 13, 2012

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Attachment A – Validator's Checklists
Attachment B – Supplemental Laboratory Submissions

1.0 PROJECT OVERVIEW AND SUMMARY

Quality Assurance Associates (QAA) completed a third party QA/QC data validation of chemical analysis data from the Exide Technologies Frisco Recycling Center in Frisco, Texas. The independent data validation, which included a data verification process and usability determination, was completed in accord with the Quality Assurance Project Plan (revised November 2011), hereinafter called the QAPP, using Level IV data packages and electronic data deliverables (EDD) supplied by the laboratory (TestAmerica-Houston). The data include 17 metals samples, with 7 soil samples from the site and 10 background soil samples, as listed in Table 1. The samples were collected by Pastor, Behling, and Wheeler, LLC (PBW) in March 2012 and the results will be used to define the nature, location, extent, and movement of hazardous wastes and/or hazardous constituents, which are present at or have been released from the site, specifically by comparison of the results to delineation standards and to establish background levels of metals. QAA performed the validation per the procedures specified in section 6.0 of the QAPP using the guidelines presented in the U.S. EPA Contract Laboratory Program *National Functional Guidelines for Inorganic Superfund Data Review* (January 2010), hereinafter called the NFG, and the QC requirements in the analytical methodology used by the laboratory.

The results of the review are summarized in Table 4, which lists all of the qualified sample results. All qualified data is considered useable with limitations as discussed in Section 5.0. Additionally, all unqualified results for non-detects are at or below the delineation standards and thus suitable for demonstrating conformance with standards.

2.0 PROCEDURES

QAA completed the validation by examining the hardcopy packages and EDD produced by the laboratory, which include analysis results, QC reports, and raw data. QAA examined the data for all of the samples for:

- Data Package Completeness,
- Chain-of-Custody Procedures,
- Sample Preservation and Holding Time,
- Instrument Calibration and Performance,
- Calibration Verification,
- Blanks (Laboratory and Field),
- Matrix Spike/Matrix Spike Duplicates (MS/MSD),
- Matrix Duplicates (MD),
- Serial Dilutions (SD),
- Laboratory Control Sample/Laboratory Control Sample Duplicates (LCS/LCSD), and
- Field Duplicates

The remaining QC Level IV checks (surrogates, internal standards, and target compound identification) do not apply for the SW846-6010 methodology employed by the laboratory for this event.

Additionally, using the EDD, the validator verified that the reporting limits and detection limits for all of the samples were properly adjusted for sample-specific factors such as dilution, dry-weight correction, and use of a smaller or larger sample aliquot. For three of the 17 samples with one from each laboratory work order, the validator reviewed the raw data and determined that the sample results were correctly calculated and reported.

The validator performed the validation using data validation checklists (Attachment A) and the following QC criteria:

- Laboratory Accuracy – the method-specified recovery control limits of 75-125% for metals with a data rejection limit of 30%
- Laboratory Precision – the method-specified RPD control limit of 20% or an absolute difference control limit of 1x the reporting limit (if either result is less than or equal to 5x the reporting limit) per the NFG

After completing the examination, the validator applied qualifying flags to any data with a QC deficiency. The qualifiers were applied in accord with the NFG and include the expected direction of bias if apparent from the QC outcome. The validator considered each QC deficiency separately and then, for multiple deficiencies, applied the most severe flag. The data validation qualifiers (DVQs) are defined in Table 2. Note that the DVQ replaces all qualifiers applied by the laboratory.

Upon completion of the validation, QAA performed data verification to assess the entire data set for overall trends in data quality and usability. Data quality was examined in terms of precision, accuracy, representativeness, sensitivity, completeness, and comparability. Data usability was then determined considering the intended use, laboratory reporting limits, and QC deficiencies found during validation using the U.S. EPA's Guidance for Data Useability in Risk Assessment, Part A (April 1992).

3.0 DATA VALIDATION RESULTS

The soil samples were analyzed for total metals and synthetic precipitation leaching procedure (SPLP) metals. All of the samples were included in the validation and the outcomes are summarized below.

3.1 PRECISION

QAA evaluated the sampling and analytical precision of the sample results using the relative percent difference (RPD) for the laboratory control sample duplicates (LCSD), the unspiked matrix duplicates (MD) and matrix spike duplicates (MSD), and the field duplicates (FD). LCSD are prepared using a clean sample matrix (reagent water or sand) and provide an indication of the precision of the preparation and analysis technique on a sample free of matrix effects. MD and MSD are prepared by the laboratory using a field sample. They provide an indication of the precision of the preparation and analysis technique on the specific sample matrix. FD are prepared by the sampler in the field and provide an indication of the precision of the sampling technique plus the preparation and analysis technique on the specific sample matrix.

3.1.1 LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) PRECISION

No LCSD were analyzed or required per the analytical methodology for the tests performed during this event.

3.1.2 MATRIX DUPLICATE (MD) AND MATRIX SPIKE DUPLICATE (MSD) PRECISION

The laboratory analyzed an MD and MSD with every analytical batch (maximum 20 samples) and reported RPDs for all target compounds for MD and MSD prepared using a sample from the site. As indicated in Table 1, at least one MD and MSD was prepared using a sample from the site for each test and each investigative media (site soil, background soil).

Some MD and MSD RPDs are above the QC criteria (maximum 20%) and the validator qualified the associated data per the NFG as detailed in Table 3. Table 4 lists all qualified sample results. Note that, for cases where either result for the duplicate pair is less than 5x the reporting limit, the validator compared the absolute difference between the two results to a control limit of 1x the reporting limit rather than evaluating the RPD per the NFG. Additionally, the validator considered samples of the same media to be of similar matrix (e.g., if deficiencies were noted for a MD or MSD prepared using a background soil sample, all background soil samples in the same analytical batch were qualified).

3.1.3 FIELD DUPLICATE (FD) PRECISION

No FD were collected or required per the QAPP for the media sampled during this event.

3.2 ACCURACY

QAA evaluated the analytical accuracy of the sample results using the results for the laboratory control samples (LCS/LCSD), matrix spikes (MS/MSD) and post-digestion spikes (PDS), and serial dilutions (SD). LCS/LCSD are prepared using a clean sample matrix (reagent water or sand) and provide an indication of the accuracy of the preparation and analysis technique on a sample free of matrix effects. MS/MSD are prepared using a field sample and provide an indication of the accuracy of the preparation and analysis technique on the specific sample matrix. PDS are prepared like MS/MSD except the spike is added after preparation just before analysis rather than before preparation. SD are prepared using a field sample and indicate whether or not matrix interferences are affecting the accuracy of the preparation and analysis technique on the specific sample matrix.

3.2.1 LABORATORY CONTROL SAMPLE (LCS/LCSD) ACCURACY

The laboratory analyzed a LCS with every analytical batch (maximum 20 samples) as required and reported recoveries for all target compounds. No LCSD were analyzed or required for the analytical methodology used for this event. All LCS recoveries are within the QC criteria (75-125% for metals).

3.2.2 MATRIX SPIKE (MS/MSD) AND POST-DIGESTION SPIKE (PDS) ACCURACY

The laboratory analyzed an MS and MSD for every analytical batch (maximum 20 samples) and reported recoveries for all target compounds for MS/MSD prepared using a sample from the site. Additionally, the laboratory analyzed a PDS for every metals analytical batch and reported recoveries for any target metals with a MS/MSD recovery outside the control limits. As indicated in Table 1, at least one MS/MSD was prepared using a sample from the site for each test and each investigative media (site soil, background soil).

Some MS, MSD and/or PDS recoveries are outside the QC criteria (75-125% for metals) and the validator qualified the associated data per the NFG as detailed in Table 3. Table 4 lists all qualified sample results. Note that if an analyte was detected in the unspiked parent sample at a concentration well above (greater than four times) the concentration of spike added to the sample, thereby rendering the recoveries inconclusive, the check was waived and the validator did not qualify the data. Additionally, the validator considered samples of the same media to be of similar matrix (e.g., if deficiencies were noted for a MS/MSD prepared using a background soil sample, all background soil samples in the same analytical batch were qualified).

3.2.3 SERIAL DILUTION (SD) %DIFFERENCE

For each metals MS/MSD, the laboratory analyzed an SD and reported the %difference for all target metals detected above 50x the method detection limit (MDL) for SD prepared using a sample from the site.

Some SD %differences are above the QC criteria (10%) and the validator qualified the associated data per the NFG as detailed in Table 3. Table 4 lists all qualified sample results. Note that the validator considered samples of the same media (site soil, background soil) to be of similar matrix (e.g., if deficiencies were noted for a SD prepared using a background soil sample, all background soil samples in the same analytical batch were qualified).

3.3 REPRESENTATIVENESS

QAA evaluated representativeness of the sample results by examining the custody procedures, calculating holding times, examining blanks for evidence of contamination, and examining sample results for outliers or suspect values.

3.3.1 CHAIN-OF-CUSTODY

All samples were delivered to the laboratory by an overnight, commercial carrier within two days of collection with properly executed chain-of-custody records, which confirms that sample integrity was maintained. The validator noted a few minor inconsistencies between the information on the custody records and that assigned by the laboratory. However, all issues were resolved and/or do not affect the integrity of the investigative samples. Details are listed in the validator's checklists included as Attachment A.

3.3.2 SAMPLE PRESERVATION AND HOLDING TIME

All samples were properly preserved and analyzed within the holding times listed in Table 5-1 of the QAPP, which confirms that sample results are not affected by sample degradation, except as follows:

- The samples in work order 600-52864 and 600-52867 were received at 9.0 C.

The samples were analyzed for total arsenic, cadmium, and lead, which require preservation at 4±2 C per Table 3 in the QAPP. However, no preservation is required for metals in solid samples per the analytical method and thus analyte degradation is not suspected and the sample results were not qualified.

3.3.3 BLANK CONTAMINATION

The laboratory analyzed a preparation blank for every analytical batch (maximum 20 samples) and a calibration blank for every 10 metals analyses. Additionally, the QAPP requires one equipment rinsate blank per day of soil sample collection, which requires re-usable equipment. However, no equipment rinsate blanks were collected with the 17 soil samples for this event.

One detect is reported in the laboratory QC blanks and the validator qualified the associated data per the NFG as detailed in Table 3. Table 4 lists all qualified sample results. Note that the validator calculated a blank equivalent concentration taking into account the sample weight, moisture content, and dilution factor for each sample when determining if the contamination in the blank is near that in the sample, and thus if data quality is affected for that sample.

3.3.4 SAMPLE RESULTS EVALUATION

As previously noted, no field duplicate results are available for comparison. For samples with total metals and SPLP metals, the validator examined the results to determine the maximum possible leachate concentration and found no apparent outliers.

3.4 SENSITIVITY

QAA evaluated sensitivity by examining the instrument performance and the sample reporting limits as compared to decision criteria.

3.4.1 INSTRUMENT PERFORMANCE AND CALIBRATION

The laboratory calibrated each instrument and analyzed a calibration verification standard at the beginning of every analytical shift and for every 10 metals analyses. Recoveries for all calibration verification standards are within the QC criteria (70-130%), which indicates the instruments were properly calibrated and stable throughout the analytical shift.

The laboratory also analyzed quarterly low-level detectability check standards (DCS).The DCS confirm the reasonableness of the laboratory method detection limits (MDLs) (i.e., they indicate that the analyte is recoverable at a spike level within about 3x the MDL) for all investigative samples.

3.4.2 COMPARISON OF REPORTING LIMITS TO DECISION CRITERIA

The laboratory reported non-detects at the sample detection limit (SDL), which is the method detection limit (MDL) adjusted for sample-specific actions such as dilution, dry-weight correction, or use of a smaller sample aliquot. Detects above the SDL but below the SQL, which is the method quantitation limit (MQL) adjusted for sample-specific actions, are reported as laboratory J values. All of the SDLs for non-detects are at or below the delineations standards for this event.

3.5 COMPLETENESS

QAA evaluated completeness by examining the laboratory data packages and by determining the amount of valid data obtained for the samples.

The Level IV data packages contain all necessary information, or the information was provided upon request as follows:

- For work orders 600-52584-1 and 600-52864-1, the original packages do not include the post digestion spike (PDS) results, serial dilution (SD) results, and/or raw data for one or more metals analytical shifts. The laboratory added the necessary data and submitted revised reports.
- For the same two work orders, the packages do not include the bench logs for the synthetic precipitation leaching procedure. The laboratory provided these pages separately and they are included in Attachment B.

QAA evaluated field completeness by comparing the total number of tests performed with the total number of tests planned for investigative samples. All planned investigative samples were collected and analyzed for the requested tests, giving a field completeness of 100%. The typical goal is 90%. (The QAPP does not include completeness goals.)

QAA evaluated laboratory completeness by comparing the total number of valid analytical results with the total number of results reported for investigative samples. The validator did not reject any results, giving a laboratory completeness of 100%. The typical goal is 90%. (The QAPP does not include completeness goals.)

3.6 COMPARABILITY

Samples were analyzed using standard EPA protocols as shown in Table 1. The methodologies employed by the laboratory are specified for use in the QAPP and provide definitive, quantitative data. The hardcopy sample results are reported with the sample detection limit (SDL) and the method quantitation limit (MQL). The EDD includes the SDL (under the Low Limit column) and the sample quantitation limit (SQL, under the High Limit column). A detection limit corresponds to the lowest concentration at which a target analyte can be positively identified but not necessarily accurately measured and is statistically determined by the laboratory. A quantitation limit reflects the lowest concentration at which a target analyte can be both positively identified and accurately measured. The SDLs and SQLs reported by the laboratory are adjusted for sample-specific actions such as dilution or use of a smaller aliquot size and include dry-weight correction for all solid samples. Results for the total metals soil samples are reported in mg/kg and results for the SPLP samples are reported in mg/L. Non-detects are reported as less than the SDL and detects between the SDL and SQL are reported with a laboratory J flag. Since these detects are below the calibration range, the validator qualified each as estimated with an unknown bias (J).

The analytical results were reviewed and are classified as Level IV data. The analytical results are considered comparable to other results similarly generated.

4.0 DATA VERIFICATION RESULTS

Upon completion of the validation, data verification was completed to summarize overall trends in data quality as follows:

1. Precision is the degree of mutual agreement among individual measurements of the same property, usually under prescribed similar conditions, without assumption of any prior information as to the true result. Precision is measured through the analysis of replicate or duplicate samples and calculation of the relative percent difference (RPD) between the results. The validator assessed precision using the laboratory duplicates. The laboratory prepared at least one MD and MSD using a sample from the site for each test and each investigative media. The RPDs for these laboratory duplicates are within the limits, which indicates good precision for the analytical method on the specific sample matrix, or the validator qualified the results for similar samples in the same analytical batch as the duplicate. Of the 50 results, 30 results (all of which are for total metals in soil) are qualified as estimated (J) based on laboratory duplicate precision.

2. Accuracy is the degree of agreement of a measurement with an accepted reference or true value. Accuracy is measured through the analysis of reference samples or the introduction of reference materials (spikes) to field samples and calculation of the percent recovery of the known value. The validator assessed accuracy using the laboratory spikes and matrix spikes. The laboratory prepared a laboratory control sample (LCS) using reagent water or sand with each analytical batch and reported the recoveries for all target compounds. All LCS recoveries are within the limits, which indicates good accuracy for the analytical method on a sample free of matrix effects. Additionally, the laboratory prepared at least one matrix spike using a sample from the site for each test and each investigative media and also prepared several post digestion spikes (PDS) and serial dilutions (SD) for the metals analyses. The MS/MSD and PDS recoveries are within the laboratory limits, which indicates good accuracy for the analytical method on the specific sample matrix, or the validator qualified the results for similar samples in the same analytical batch as the MS/MSD. Likewise, the SD %differences are within the laboratory limits, which indicates there is no matrix interference affecting the accuracy of the results, or the validator qualified the results for similar samples in the same analytical batch as the SD. None of the results are qualified as rejected due to extremely poor accuracy. Of the 50 results, 20 results (all of which are for total metals in soil) are qualified as estimated based on matrix spike, post digestion spike, and/or serial dilution results.

3. Representativeness expresses the degree to which sample data accurately and precisely represent environmental conditions and parameter variations at a sampling location. Representativeness is a qualitative parameter most concerned with the proper design of the sampling program and is also ensured by using the proper analytical procedures. The validator assessed representativeness by examining custody procedures, sample preservation and holding times, the laboratory blanks, and comparable sample results. Sample preservation and holding times met the method requirements, which indicates the results are not affected by sample degradation. The laboratory prepared a method blank with each analytical batch and analyzed calibration blanks throughout each analytical shift. The laboratory blanks show no contamination, which indicates the samples were not affected by laboratory procedures, or the validator qualified the samples associated with the blank that have a concentration similar to that in the blank. This resulted in the qualification of two detects below the reporting limit (i.e., laboratory J values) for cadmium as not detected substantially above the blank concentration (U). No field duplicates were required or collected for this event. A comparison of total metals versus SPLP metals results do not show any apparent outliers.

4. Sensitivity (S) is the capability of a method or instrument to discriminate between measurement responses representing different levels of the parameter of interest. Sensitivity is expressed in terms of the laboratory detection

limits (which are a measure of the concentration an instrument can detect or 'see' in a sample) and the laboratory reporting limits or quantitation limits (which are a measure of the concentration an instrument can accurately measure in a sample). The laboratory method detection limits (MDLs) are confirmed reasonable by detectability check standards (DCS). For all non-detects, the sample detection limits (SDLs) are at or below the decision criteria (i.e., the delineation standards for the site). Additionally, proper analytical procedures were used and calibration results met the method requirements.

5. Completeness (C) is the amount of valid data obtained from a measurement system compared to the amount that was expected and required to meet the project data goals. QAA calculated field completeness at 100% and laboratory completeness at 100%.

6. Comparability (C) is an expression of the confidence with which one data set can be compared to another. The samples were analyzed using standard EPA protocols as specified in the QAPP. The analytical results were reviewed and are classified as Level IV data and are considered comparable to other results similarly generated. Note that results are reported in mg/kg with dry-weight correction for total metals in soils and in mg/L for SPLP metals.

5.0 RECONCILIATION WITH USER REQUIREMENTS

Samples results will be used to define the nature, location, extent, and movement of hazardous wastes and/or hazardous constituents, which are present at or have been released from the site, specifically by comparison of the results to delineation standards and to establish background levels for metals.

5.1 USABILITY OF UNQUALIFIED DATA FOR NONDETECTED RESULTS

The laboratory reported non-detects at the sample detection limit (SDL), which is the method detection limit (MDL) adjusted for sample-specific actions such as dilution, dry-weight correction, or use of a smaller sample aliquot. The MDLs are confirmed reasonable by the analysis of detectability check standards (DCS) and the SDLs for all nondetected results are at or below the decision criteria (i.e., the delineation standards for the site).

5.2 USABILITY OF QUALIFIED DATA

Table 4 shows the qualified data for all samples. No results are qualified as rejected (R) and thus all data is suitable for the intended use. Some results are qualified as not substantially above the blank concentration (U) or as estimated (J or UJ) with a low, high, or indeterminate bias.

Analytes that were not detected substantially above the blank concentration (U) should be considered not present at the reporting limit or SQL. Thus, the reported concentration is replaced with the SQL. Table 4 includes the SQL under the ‘Adjusted Result’ column for U-flagged results.

For data that are estimated, results that are considered biased low (J-) can be used for determining the presence of the analyte and as an indication that the concentration of the analyte exceeds a given criterion. However, the concentration reported may be low. Results that are biased high (J+) can be used for determining the presence of the analyte and as an indication that the concentration of the analyte is less than a given criterion. However, the concentration reported may be high. Similarly, results with an indeterminate bias may be either low or high. Note that none of the SPLP metals data is qualified as estimated and that the site soil samples that are qualified as estimated are above the delineation standard and exceed the standard by a factor of two or more.

TABLE 1
EXIDE TECHNOLOGIES FRISCO RECYCLING CENTER
MARCH 2012 SOIL SAMPLING EVENT

SAMPLE SUMMARY

Lab ID	Client ID	Matrix	Media	Type	Collection Date	Receive Date	QC Batch[1]				
							Total Arsenic	Total Cadmium	Total Lead	SPLP Cadmium	SPLP Lead
600-52584-1	2012-BSA-3A(0-2)	Solid	Site Soil	INV	3/23/12	3/24/12	NA	600-75633	NA	600-75853	NA
600-52584-1	2012-BSA-3A(0-2)	Solid	Site Soil	MD	3/23/12	3/24/12	NA	600-75633	NA	600-75853	NA
600-52584-1	2012-BSA-3A(0-2)	Solid	Site Soil	MS	3/23/12	3/24/12	NA	600-75633	NA	600-75853	NA
600-52584-1	2012-BSA-3A(0-2)	Solid	Site Soil	MSD	3/23/12	3/24/12	NA	600-75633	NA	600-75853	NA
600-52584-2	2012-BSA-1A(0-2)	Solid	Site Soil	INV	3/23/12	3/24/12	NA	NA	600-75633	NA	NA
600-52864-1	2012-BSA-4a (0-1')	Solid	Site Soil	INV	3/29/12	3/30/12	NA	600-76199	600-76199	600-76437	600-76437
600-52864-1	2012-BSA-4a (0-1')	Solid	Site Soil	MD	3/29/12	3/30/12	NA	NA	NA	600-76437	600-76437
600-52864-1	2012-BSA-4a (0-1')	Solid	Site Soil	MS	3/29/12	3/30/12	NA	NA	NA	600-76437	600-76437
600-52864-1	2012-BSA-4a (0-1')	Solid	Site Soil	MSD	3/29/12	3/30/12	NA	NA	NA	600-76437	600-76437
600-52864-2	2012-BSA-4b (0-1')	Solid	Site Soil	INV	3/29/12	3/30/12	NA	600-76199	600-76199	NA	NA
600-52864-2	2012-BSA-4b (0-1')	Solid	Site Soil	MD	3/29/12	3/30/12	NA	600-76199	600-76199	NA	NA
600-52864-2	2012-BSA-4b (0-1')	Solid	Site Soil	MS	3/29/12	3/30/12	NA	600-76199	600-76199	NA	NA
600-52864-2	2012-BSA-4b (0-1')	Solid	Site Soil	MSD	3/29/12	3/30/12	NA	600-76199	600-76199	NA	NA
600-52864-3	2012-BSA-4c (0-1')	Solid	Site Soil	INV	3/29/12	3/30/12	NA	600-76199	600-76199	600-76437	600-76437
600-52864-4	2012-BSA-4d (0-1')	Solid	Site Soil	INV	3/29/12	3/30/12	NA	600-76199	600-76199	600-76437	600-76437
600-52864-5	2012-BSA-4e (0-1')	Solid	Site Soil	INV	3/29/12	3/30/12	NA	600-76199	600-76199	NA	600-76906
600-52864-5	2012-BSA-4e (0-1')	Solid	Site Soil	MD	3/29/12	3/30/12	NA	NA	NA	NA	600-76906
600-52864-5	2012-BSA-4e (0-1')	Solid	Site Soil	MS	3/29/12	3/30/12	NA	NA	NA	NA	600-76906
600-52864-5	2012-BSA-4e (0-1')	Solid	Site Soil	MSD	3/29/12	3/30/12	NA	NA	NA	NA	600-76906
600-52867-1	2012-BG-1	Solid	Background Soil	INV	3/29/12	3/30/12	600-76449	600-76449	600-76449	NA	NA
600-52867-2	2012-BG-2	Solid	Background Soil	INV	3/29/12	3/30/12	600-76449	600-76449	600-76449	NA	NA

Lab ID	Client ID	Matrix	Media	Type	Collection Date	Receive Date	QC Batch[1]				
							Total Arsenic	Total Cadmium	Total Lead	SPLP Cadmium	SPLP Lead
600-52867-3	2012-BG-3	Solid	Background Soil	INV	3/29/12	3/30/12	600-76449	600-76449	600-76449	NA	NA
600-52867-4	2012-BG-7	Solid	Background Soil	INV	3/29/12	3/30/12	600-76449	600-76449	600-76449	NA	NA
600-52867-5	2012-BG-9	Solid	Background Soil	INV	3/29/12	3/30/12	600-76449	600-76449	600-76449	NA	NA
600-52867-6	2012-BG-5	Solid	Background Soil	INV	3/29/12	3/30/12	600-76449	600-76449	600-76449	NA	NA
600-52867-7	2012-BG-4	Solid	Background Soil	INV	3/29/12	3/30/12	600-76449	600-76449	600-76449	NA	NA
600-52867-8	2012-BG-6	Solid	Background Soil	INV	3/29/12	3/30/12	600-76449	600-76449	600-76449	NA	NA
600-52867-9	2012-BG-10	Solid	Background Soil	INV	3/29/12	3/30/12	600-76449	600-76449	600-76449	NA	NA
600-52867-10	2012-BG-8	Solid	Background Soil	INV	3/29/12	3/30/12	600-76449	600-76449	600-76449	NA	NA
600-52867-10	2012-BG-8	Solid	Background Soil	MD	3/29/12	3/30/12	600-76449	600-76449	600-76449	NA	NA
600-52867-10	2012-BG-8	Solid	Background Soil	MS	3/29/12	3/30/12	600-76449	600-76449	600-76449	NA	NA
600-52867-10	2012-BG-8	Solid	Background Soil	MSD	3/29/12	3/30/12	600-76449	600-76449	600-76449	NA	NA

INV - Investigative Sample
NA – Not Analyzed

(1) The following analytical methods were used:

- Total Metals (As, Cd, Pb): SW-846 3050B/6010B
- SPLP Metals (Cd, Pb): SW-846 1312/3010A/6010B

TABLE 2
EXIDE TECHNOLOGIES FRISCO RECYCLING CENTER
MARCH 2012 SOIL SAMPLING EVENT

DATA VALIDATION QUALIFIERS (DVQs)

The DVQ replaces all flags applied by the laboratory.

J	=	Estimated. The analyte was positively identified; however, the reported sample concentration is approximate due to exceedance of one or more QC requirements. Directional bias cannot be determined
J-	=	Estimated low. The analyte was positively identified; however, the reported sample concentration is approximate due to exceedance of one or more QC requirements. The actual value is expected to be lower.
J+	=	Estimated high. The analyte was positively identified; however, the reported sample concentration is approximate due to exceedance of one or more QC requirements. The actual value is expected to be higher.
UJ	=	Estimated. The analyte was not detected above the reporting limit; however, the reporting limit is approximate due to exceedance of one or more QC requirements.
U	=	Blank contamination. The analyte was not detected substantially above the level reported in an associated laboratory and/or field blanks.
R	=	Rejected. The sample result is rejected due to serious QC deficiencies that make it impossible to verify the presence or absence of the analyte.

NOTE: For multiple deficiencies, the reviewer applied the most severe flag. (R>U>J>J-/J+ and R>UJ)

TABLE 3
EXIDE TECHNOLOGIES FRISCO RECYCLING CENTER
MARCH 2012 SOIL SAMPLING EVENT

QC DEFICIENCIES AND DATA QUALIFICATION ACTIONS

Sample					Method		Batch		Date/Time		Analyte		Validation	
Lab ID	**Client ID**	**Type**	**Matrix**	**Prep Type**	**Prep**	**Analy**	**Prep**	**Analy**	**Prep**	**Analy**	**Name**	**Lab Flag**	**QC Deficiency**	**Action**
MATRIX DUPLICATE (MD) PRECISION														
600-52864-1	2012-BSA-4a (0-1')	MD	Solid	Total/NA	Moisture			600-76163		04/01/20 12 16:34	Percent Moisture		Poor MD precision (48 RPD)	None (flagging based on analyte RPD)
600-52864-2	2012-BSA-4b (0-1')	MD	Solid	Total/NA	3050B	6010B	600-76199	600-76214	04/02/20 12 11:53	04/02/20 12 16:43	Cadmium	F	Poor MD precision (83 RPD)	J/UJ to detects/NDs for similar samples (all BSA soils) digested in this batch
600-52864-2	2012-BSA-4b (0-1')	MD	Solid	Total/NA	3050B	6010B	600-76199	600-76214	04/02/20 12 11:53	04/02/20 12 16:43	Lead	F	Poor MD precision (94 RPD)	J/UJ to detects/NDs for similar samples (all BSA soils) digested in this batch
600-52867-10	2012-BG-8	MD	Solid	Total/NA	3050B	6010B	600-76449	600-76526	04/04/20 12 14:49	04/05/20 12 10:13	Cadmium	F	Poor MD precision (difference > +/- 1xRL)	J/UJ to detects/NDs for similar samples (all BG soils) digested in this batch
600-52867-10	2012-BG-8	MD	Solid	Total/NA	3050B	6010B	600-76449	600-76526	04/04/20 12 14:49	04/05/20 12 10:13	Lead	F	Poor MD precision (90 RPD)	J/UJ to detects/NDs for similar samples (all BG soils) digested in this batch
MATRIX SPIKE DUPLICATE (MSD) PRECISION														
600-52864-2	2012-BSA-4b (0-1')	MSD	Solid	Total/NA	3050B	6010B	600-76199	600-76214	04/02/20 12 11:53	04/02/20 12 16:59	Lead	4 N	Poor MSD precision (32 RPD)	J/UJ to detects/NDs for similar samples (all BSA soils) digested in this batch
MATRIX SPIKE (MS/MSD) AND POST-DIGESTION SPIKE (PDS) ACCURACY														
600-52584-1	2012-BSA-3A(0-2)	MS	Solid	Total/NA	3050B	6010B	600-75633	600-75753	03/26/20 12 13:13	03/27/20 12 15:37	Cadmium	4	Extremely low MS recovery (-532%), PDS (NC), SD passes at 7.3%	None (check waived because unspiked sample conc > 4x spike added)
600-52584-1	2012-BSA-3A(0-2)	MSD	Solid	Total/NA	3050B	6010B	600-75633	600-75753	03/26/20 12 13:13	03/27/20 12 15:39	Cadmium	4	Extremely low MSD recovery (-916%), PDS (NC), SD passes at 4.1%	None (check waived because unspiked sample conc > 4x spike added)

Sample					Method		Batch		Date/Time		Analyte		Validation	
Lab ID	**Client ID**	**Type**	**Matrix**	**Prep Type**	**Prep**	**Analy**	**Prep**	**Analy**	**Prep**	**Analy**	**Name**	**Lab Flag**	**QC Deficiency**	**Action**
600-52864-2	2012-BSA-4b (0-1')	MS	Solid	Total/NA	3050B	6010B	600-76199	600-76214	04/02/2012 11:53	04/02/2012 16:47	Lead	4	High MS recovery (1188%), PDS passes at 86%	None (check waived because unspiked sample conc > 4x spike added)
600-52864-2	2012-BSA-4b (0-1')	MSD	Solid	Total/NA	3050B	6010B	600-76199	600-76214	04/02/2012 11:53	04/02/2012 16:59	Lead	4 N	High MSD recovery (1840%), PDS passes at 86%	None (check waived because unspiked sample conc > 4x spike added)
600-52864-2	2012-BSA-4b (0-1')	PDS	Solid	Total/NA	3050B	6010B	600-76199	600-76214	04/02/2012 11:53	04/02/2012	Cadmium	4 N	Low PDS recovery (73%)	None (MS/MSD recoveries pass at 92% and 102%)
600-52867-10	2012-BG-8	MS	Solid	Total/NA	3050B	6010B	600-76449	600-76526	04/04/2012 14:49	04/05/2012 10:16	Lead	N	High MS recovery (226%), PDS passes at 79%	J to detects for similar samples (all BG soils) digested in this batch
600-52867-10	2012-BG-8	MSD	Solid	Total/NA	3050B	6010B	600-76449	600-76526	04/04/2012 14:49	04/05/2012 10:28	Lead	N	High MSD recovery (206%), PDS passes at 79%	J to detects for similar samples (all BG soils) digested in this batch
SERIAL DILUTION (SD) %DIFFERENCE														
600-52864-2	2012-BSA-4b (0-1')	SD	Solid	Total/NA	3050B	6010B	600-76199	600-76214	04/02/2012 11:53	04/02/2012	Cadmium	4 N	SD indicates matrix interference (33 %D)	J/UJ to detects/NDs for similar samples (all BSA soils) digested in this batch
600-52864-2	2012-BSA-4b (0-1')	SD	Solid	Total/NA	3050B	6010B	600-76199	600-76214	04/02/2012 11:53	04/02/2012	Lead	4 N	SD indicates matrix interference (31 %D)	J/UJ to detects/NDs for similar samples (all BSA soils) digested in this batch
600-52867-10	2012-BG-8	SD	Solid	Total/NA	3050B	6010B	600-76449	600-76526	04/04/2012 14:49	04/05/2012 11:03	Lead	F	SD indicates matrix interference (21 %D)	J/UJ to detects/NDs for similar samples (all BG soils) digested in this batch
LABORATORY BLANK CONTAMINATION														
LB 600-76425/1-B		LB	Solid	SPLP West	3010A	6010B	600-76437	600-76509	04/04/2012 11:55	04/05/2012 09:33	Cadmium	J	Laboratory blank contamination (0.000400 J mg/L)	U at RL to Js, J+ to detects <10x blank equivalent concentration for samples digested in the same batch

TABLE 4
EXIDE TECHNOLOGIES FRISCO RECYCLING CENTER
MARCH 2012 SOIL SAMPLING EVENT

QUALIFIED SAMPLE RESULTS

Lab ID	Client ID	Matrix	Prep Type	Analysis Method	Analyte	Result	Flag	SDL	SQL	Delin. Std	Unit	DVQ	Adjusted Result	Comment
600-52864-1	2012-BSA-4a (0-1')	Solid	Total/ NA	6010B	Cadmium	9.80		0.0301	0.293	1.5	mg/Kg	J	none	Poor MD precision (83 RPD); SD indicates matrix interference (33 %D)
600-52864-1	2012-BSA-4a (0-1')	Solid	Total/ NA	6010B	Lead	1510		0.123	0.587	3	mg/Kg	J	none	Poor MSD precision (32 RPD); Poor MD precision (94 RPD); SD indicates matrix interference (31 %D)
600-52864-1	2012-BSA-4a (0-1')	Solid	SPLP West	6010B	Cadmium	0.00180	J b	0.000350	0.00500	0.005	mg/L	U	0.00500	Laboratory blank contamination (0.000400 J mg/L)
600-52864-2	2012-BSA-4b (0-1')	Solid	Total/ NA	6010B	Cadmium	3.26		0.0400	0.390	1.5	mg/Kg	J	none	Poor MD precision (83 RPD); SD indicates matrix interference (33 %D)
600-52864-2	2012-BSA-4b (0-1')	Solid	Total/ NA	6010B	Lead	344		0.163	0.779	3	mg/Kg	J	none	Poor MSD precision (32 RPD); Poor MD precision (94 RPD); SD indicates matrix interference (31 %D)
600-52864-3	2012-BSA-4c (0-1')	Solid	Total/ NA	6010B	Cadmium	16.8		0.0417	0.407	1.5	mg/Kg	J	none	Poor MD precision (83 RPD); SD indicates matrix interference (33 %D)
600-52864-3	2012-BSA-4c (0-1')	Solid	Total/ NA	6010B	Lead	2730		0.171	0.814	3	mg/Kg	J	none	Poor MSD precision (32 RPD); Poor MD precision (94 RPD); SD indicates matrix interference (31 %D)
600-52864-3	2012-BSA-4c (0-1')	Solid	SPLP West	6010B	Cadmium	0.00410	J b	0.000350	0.00500	0.005	mg/L	U	0.00500	Laboratory blank contamination (0.000400 J mg/L)
600-52864-4	2012-BSA-4d (0-1')	Solid	Total/ NA	6010B	Cadmium	16.9		0.0377	0.368	1.5	mg/Kg	J	none	Poor MD precision (83 RPD); SD indicates matrix interference (33 %D)
600-52864-4	2012-BSA-4d (0-1')	Solid	Total/ NA	6010B	Lead	3000		0.154	0.736	3	mg/Kg	J	none	Poor MSD precision (32 RPD); Poor MD precision (94 RPD); SD indicates matrix interference (31 %D)
600-52864-5	2012-BSA-4e (0-1')	Solid	Total/ NA	6010B	Cadmium	6.18		0.0340	0.331	1.5	mg/Kg	J	none	Poor MD precision (83 RPD); SD indicates matrix interference (33 %D)
600-52864-5	2012-BSA-4e (0-1')	Solid	Total/ NA	6010B	Lead	634		0.139	0.662	3	mg/Kg	J	none	Poor MSD precision (32 RPD); Poor MD precision (94 RPD); SD indicates matrix interference (31 %D)
600-52867-1	2012-BG-1	Solid	Total/ NA	6010B	Cadmium	0.0313	U	0.0313	0.305	NA	mg/Kg	UJ	none	Poor MD precision (difference > +/- 1xRL)
600-52867-1	2012-BG-1	Solid	Total/ NA	6010B	Lead	13.2		0.128	0.611	NA	mg/Kg	J	none	High MS recovery (226%), High MSD recovery (206%), PDS passes at 79%; Poor MD precision (90 RPD); SD indicates matrix interference (21%D)
600-52867-2	2012-BG-2	Solid	Total/ NA	6010B	Cadmium	0.0287	U	0.0287	0.280	NA	mg/Kg	UJ	none	Poor MD precision (difference > +/- 1xRL)

Lab ID	Client ID	Matrix	Prep Type	Analysis Method	Analyte	Result	Flag	SDL	SQL	Delin. Std	Unit	DVQ	Adjusted Result	Comment
600-52867-2	2012-BG-2	Solid	Total/ NA	6010B	Lead	13.0		0.117	0.560	NA	mg/Kg	J	none	High MS recovery (226%), High MSD recovery (206%), PDS passes at 79%; Poor MD precision (90 RPD); SD indicates matrix interference (21%D)
600-52867-3	2012-BG-3	Solid	Total/ NA	6010B	Cadmium	0.0301	U	0.0301	0.294	NA	mg/Kg	UJ	none	Poor MD precision (difference > +/- 1xRL)
600-52867-3	2012-BG-3	Solid	Total/ NA	6010B	Lead	11.5		0.123	0.588	NA	mg/Kg	J	none	High MS recovery (226%), High MSD recovery (206%), PDS passes at 79%; Poor MD precision (90 RPD); SD indicates matrix interference (21%D)
600-52867-4	2012-BG-7	Solid	Total/ NA	6010B	Cadmium	0.0310	U	0.0310	0.302	NA	mg/Kg	UJ	none	Poor MD precision (difference > +/- 1xRL)
600-52867-4	2012-BG-7	Solid	Total/ NA	6010B	Lead	14.1		0.127	0.604	NA	mg/Kg	J	none	High MS recovery (226%), High MSD recovery (206%), PDS passes at 79%; Poor MD precision (90 RPD); SD indicates matrix interference (21%D)
600-52867-5	2012-BG-9	Solid	Total/ NA	6010B	Cadmium	8.09		0.0318	0.310	NA	mg/Kg	J	none	Poor MD precision (difference > +/- 1xRL)
600-52867-5	2012-BG-9	Solid	Total/ NA	6010B	Lead	302		0.130	0.620	NA	mg/Kg	J	none	High MS recovery (226%), High MSD recovery (206%), PDS passes at 79%; Poor MD precision (90 RPD); SD indicates matrix interference (21%D)
600-52867-6	2012-BG-5	Solid	Total/ NA	6010B	Cadmium	0.0310	U	0.0310	0.302	NA	mg/Kg	UJ	none	Poor MD precision (difference > +/- 1xRL)
600-52867-6	2012-BG-5	Solid	Total/ NA	6010B	Lead	13.5		0.127	0.604	NA	mg/Kg	J	none	High MS recovery (226%), High MSD recovery (206%), PDS passes at 79%; Poor MD precision (90 RPD); SD indicates matrix interference (21%D)
600-52867-7	2012-BG-4	Solid	Total/ NA	6010B	Cadmium	0.0315	U	0.0315	0.307	NA	mg/Kg	UJ	none	Poor MD precision (difference > +/- 1xRL)
600-52867-7	2012-BG-4	Solid	Total/ NA	6010B	Lead	15.7		0.129	0.614	NA	mg/Kg	J	none	High MS recovery (226%), High MSD recovery (206%), PDS passes at 79%; Poor MD precision (90 RPD); SD indicates matrix interference (21%D)
600-52867-8	2012-BG-6	Solid	Total/ NA	6010B	Cadmium	0.0314	U	0.0314	0.306	NA	mg/Kg	UJ	none	Poor MD precision (difference > +/- 1xRL)
600-52867-8	2012-BG-6	Solid	Total/ NA	6010B	Lead	14.3		0.128	0.612	NA	mg/Kg	J	none	High MS recovery (226%), High MSD recovery (206%), PDS passes at 79%; Poor MD precision (90 RPD); SD indicates matrix interference (21%D)
600-52867-9	2012-BG-10	Solid	Total/ NA	6010B	Cadmium	0.615		0.0311	0.303	NA	mg/Kg	J	none	Poor MD precision (difference > +/- 1xRL)
600-52867-9	2012-BG-10	Solid	Total/ NA	6010B	Lead	67.6		0.127	0.607	NA	mg/Kg	J	none	High MS recovery (226%), High MSD recovery (206%), PDS passes at 79%; Poor MD precision (90 RPD); SD indicates matrix interference (21%D)
600-52867-10	2012-BG-8	Solid	Total/ NA	6010B	Cadmium	0.122	J	0.0316	0.308	NA	mg/Kg	J	none	Poor MD precision (difference > +/- 1xRL); Result is between SDL and SQL

Lab ID	Client ID	Matrix	Prep Type	Analysis Method	Analyte	Result	Flag	SDL	SQL	Delin. Std	Unit	DVQ	Adjusted Result	Comment
600-52867-10	2012-BG-8	Solid	Total/ NA	6010B	Lead	24.0		0.129	0.615	NA	mg/Kg	J	none	High MS recovery (226%), High MSD recovery (206%), PDS passes at 79%; Poor MD precision (90 RPD); SD indicates matrix interference (21%D)

ATTACHMENT A
VALIDATOR'S CHECKLISTS

Data Validation Checklist - General

Client Name: PBW	Project Number/ Manager: 1755/Eric Pastor
Site Name: Exide	QC Level: IV
Laboratory: TestAmerica (Houston)	Laboratory Job No: 600-52584-1, 600-52864-1, 600-52867-1
Reviewer: Taryn Scholz	Date Checked: 5/8/12
Parameters: As/Cd/Pb - SPLP and Total	Methods: SW1312&3010A/ SW3050B/ SW6010B

ITEM	YES	NO	N/A	CRITERIA
Laboratory NELAP accredited?	x			
Signed Narrative included?	x			
No analytical discrepancies noted in narrative?		x		see Narrative Comments
Chain of Custody (COC)/ Sample Receipt				
Date/time of sample collection included?	x			
Sample temp upon receipt 2-6 C?		x		see comment no. 1
Proper containers/preservation?	x			
COCs properly executed and seals used?	x			some minor discrepancies, see comment no. 2
Samples received within 2 days?	x			
No. of samples analyzed agrees with work plan?			x	(Sampling and Analysis Work Plan, Rev Nov 2011) see comment no. 3
Analytical Results				
Field, Laboratory, and Batch ID included?	x			
Date of sample collection/receipt included?	x			
Date of sample preparation/analysis included?	x			
NDs at DL or QL and J-values as needed?	x			NDs at SDL and J-values reported; SDL,MQL (Adj) included in HC and EDD (called MDL and MQL in EDD)
Target analyte list complete?			x	see comment no. 3
RLs acceptable?	x			SDL <= Delineation Std for NDs
MDLs reasonable per DCS?	x			DCS spike within approx 3x MDL and within 3 mos
No sample dilutions required?		x		dilutions only for detects
Prep/Analysis method references included?	x			
Sample matrix included?	x			
Sample result units reported correctly?	x			mg/kg for soils and mg/L for SPLP
Soils/sediments on dry weight?	x			
Holding time to analysis not expired?	x			
Holding time to preparation not expired?	x			
QC Samples				
Lab QC frequency met?	x			1 MB/LCS per 20
Field duplicate frequency met?			x	1/20 for SW, GW
Equipment blank frequency met?		x		1/day/reusable eq type - see comment no. 4
Field blank frequency met?			x	1/day/eq type for VOC (i.e., TPH)
Trip blank frequency met?			x	1/cooler w VOC (i.e., TPH)
MS/MSD or MS/DUP frequency met?	x			1/20 for SW, Sed, GW - also done for soils
Completeness criteria met?	x			
Field Notes				
Agree with custody records?			x	not included
Field instruments calibrated daily?			x	
Well conditions constant before sampling?			x	
Samples filtered? If so, give turbid/size			x	

Definitions: AA - Atomic Absorption; CCV - Continuing Calibration Verification; COI - Compound of Interest; %D - Percent Difference, DL - Detection Limit; DUP - Duplicate; FDUP - Field Duplicate; ICP - Inductively Coupled Plasma; ICV - Initial Calibration Verification; IDL - Instrument Detection Limit; LCS - Laboratory Control Sample; MDL - Method Detection Limit; MS/MSD - Matrix Spike/Matrix Spike Duplicate; QL - Quantitation Limit; %R - Percent Recovery; RL - Reporting Limit; RPD - Relative Percent Difference; RRF - Relative Response Factor; RT - Retention Time; RSD - Relative Standard Deviation; TA - Target Analyte

COMMENTS

Comment no. 1

The samples in work order 600-52864 and 600-52867 were received at 9.0 C. The samples were analyzed for total arsenic, cadmium, and lead, which requires preservation at 4±2 C per Table 3 in the QAPP. However, no preservation is required for metals in solid samples per the analytical method and thus analyte degradation is not suspected and the sample results were not qualified.

Comment no. 2
For sample 600-52584-2, SPLP-lead is requested on the chain-of-custody but results are not reported. This test was canceled based on the total lead result.
SPLP-cadmium was added for samples 600-52864-1,3,4 and SPLP-lead was added for samples 600-52864-1,3,4,5 based on the total metals results.
For samples in work order 600-52867, arsenic is not requested on the chain-of-custody but is reported per the client's request
For sample 600-52867-10, the sampler entered a field ID of 2012-BG-10 on the custody record. The laboratory assigned the correct ID of 2012-BG-8 upon receipt per the sample labels and sampler's instructions.
Comment no. 3
All samples for this event are additional samples not delineated in the work plan - 10 background samples for As/Cd/Pb, 1 sample at BSA-1, 1 sample at BSA-3, and 5 samples at BSA-4 for total/SPLP metals determination determination.
Comment no. 4
No equipment blanks collected with the additional samples for this event

Lab Job No.	Method	Batch/Sample	Narrative Comment	Validator Action
600-52584-1	6010B	-1 MS/D	%R out for Cd but background result > 4x spk added, LCS passes	none - check waived
		-1	SDL for Cd elev due to analyte > linear range	NA, result is detect
		-1 PDS	%R not calculated due to background result > 4x spk added, SD confirms MI (actually passes)	NA
		SPLP	extant sample for PDS/SD	NA
600-52864-1	6010B	76425	Cd >MDL but < MQL in leachate blank, appropriate flags applied	flagged per NFG
		-2 MS/D	%R out for Pb but background result > 4x spk added, LCS passes	none - check waived
		-2 MSD	RPD for Pb above limit due to nonhomogen nature	flagged per NFG
		-2 MD	RPD for Cd, Pb above limit due to nonhomogen nature	flagged per NFG
		-2 PDS	%R for Cd low due to MI	none - MS/MSD passes
		-2 SD	%D for Cd,Pb above limit due to MI	flagged per NFG
		all	sx received at 9.0 C	none - cooling not req'd per method
600-52867-1	6010B	all	sx received at 9.0 C	none - cooling not req'd per method
		-10 MS/D	%R for Pb above limit due to MI, LCS passes	flagged per NFG
		-1 MD	RPD for Cd, Pb above limit due to nonhomogen nature	flagged per NFG
		-1 SD	%D for Pb above limit due to MI	flagged per NFG

Data Validation Checklist: Metals

Client Name: PBW		Project Number/ Manager: 1755/Eric Pastor			
Site Name: Exide		QC Level: IV			
Laboratory: TestAmerica (Houston)		Laboratory Job No: 600-52584-1, 600-52864-1, 600-52867-1			
Reviewer: Taryn Scholz		Date Checked: 5/8/12			
Parameters: As/Cd/Pb - SPLP and Total		Methods: SW1312&3010A/ SW3050B/ SW6010B			
	%PERFORMED/ ITEM	**YES**	**NO**	**N/A**	**CRITERIA**
	Method blank data included in Lab Package?	x			
	Criteria met? (< MDL, ≥ -RL)		x		
100	Criteria met for field blanks? (< MDL)			x	
	QC check samples/LCS data included in lab package?	x			
	All project COCs or TAs included?	x			
100	%R criteria met? (individual and overall)	x			method (75-125%)
	Matrix spike data included in lab package?	x			
100	%R criteria met? (individual and overall)		x		method (75-125%)
	Sample duplicate data included in lab package?	x			
100	RPD criteria met?		x		method (20%), NFG (+/-RL if either ≤5RL)
100	Field dup RPD criteria met? (individual, mean, and overall)			x	20% aq, 35% solid (+/-2RL aq, +/-3RL sol if either ≤5RL)
	Instrument Tune for ICP-MS included in lab package?			x	
NA	Instrument Tune method criteria met? (±5 RSD, ±0.1 amu)			x	
	Initial calibration documentation included in lab package?	x			
	All target analytes included?	x			
	blank/1 std (ICP), blank/ 5 stds (Hg)	x			
100	Corr coeff (r) criteria met? (≥0.995)			x	
	Calibration verification data included in lab package?	x			
	ICB/CCB criteria met? (<MDL, ≥-RL)	x			
	ICV %R criteria met? (ICP 90-110%, Hg 80-120%)	x			
	CCV %R criteria met? (ICP 90-110%, Hg 80-120%)	x			
100	LLCCV %R criteria met? (70-130%)	x			reported for instrument TJA1 but not Thermo6500 - not req'd by method so no further action
	Interference check sample data included (ICP/MS only)?	x			
100	%R criteria met? (80-120%)	x			
	Dilution test data included?	x			
100	Results within 10% original? (if >50xMDL)		x		
	Post digestion spike included?	x			
100	%R criteria met?		x		method (75-125%)
	Internal standard data included in lab package?			x	
NA	Intensities within limits? (min 30-120% of calib std)			x	
10	Analyte quantitation/RLs correct?	x			
	QC parameters calculated correctly?			x	

COMMENTS

SPLP: West (ext fluid #2) pH = 5+/-0.05 (yes)
100 g, 2 L fluid (yes)
18 +/- 2 hrs extraction (yes)
23 +/- 2 C (yes)

Total vs Dissolved - NA

ATTACHMENT B

SUPPLEMENTAL LABORATORY SUBMISSIONS

TESTAMERICA HOUSTON

~~TCLP~~ and Non-Routine Extraction-Non-Volatiles Only

Date: 03-27-12 SPLP Analyst: NR Batch #: 75838

Extraction Fluid #1 ID: N/A pH: N/A Filter Lot #: 903500 1 Temp during rotation: Min: 21 Max: 24

Extraction Fluid #2 ID: SP 844604 pH: 5.02 1N HCL ID: N/A Rotation Time Started/Finished: 3/27 18:45 / 3/28 10:45

Group Number	52584-1	52584-2	LB				
Sample ID	830317	830318	SPLP				
Description	dark brown soil	dark brown soil	SPLP Wet Solution pH 5				
% Solids (If <100% see next page)	100%	100%	0%				
Was Particle Size Reduction Needed?	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No
Sample Wt. & Vol. of DI used for pH (5g/96.5mLs)	N/A	N/A	N/A				
Initial pH of subsample (After 5 min of stirring)							
Is pH <5? If Yes-Use E.F.#1, If No Continue	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No
Amount of 1N HCL added to Sample (3.5mL)	1						
Final pH Reading (After 10 min. @ 50°C and cooled to room temperature)							
Is pH <5? If Yes-Use E.F.#1, If No-Use E.F.#2	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No
Extraction Fluid Used	Circle One #1 / #2	Circle One #1 / #2	Circle One #1 / #2	Circle One #1 / #2	Circle One #1 / #2	Circle One #1 / #2	Circle One #1 / #2
Amount of Sample Solid Phase Used for Extraction (100g)	100	100	N/A				
Volume of Extraction Fluid Needed (Sample Wt x 20)	2000	2000	2000				
Final pH of extract	8.21	6.15	5.09				
Tests in Method Chain	_Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other	_Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other	_Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other	_Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other	_Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other	_Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other	_Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other
Comments on back of page?							

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TESTAMERICA HOUSTON

Date: 04-03-17 SPLP ~~TCLP~~ and Non-Routine Extraction-Non-Volatiles Only

Analyst: VP Batch #: 76425

Extraction Fluid #1 ID: NA pH: NA Filter Lot #: 9035001

Extraction Fluid #2 ID: 84766 pH: 5.02 1N HCL ID: NA

Temp during rotation: Min: 21 Max: 24

Rotation Time Started/Finished: 4/3 18:10 / 4/4 10:10

Group Number	52864-1	52864-3	52864-4	SPLP/LB			
Sample ID	835428	835430	835431				
Description	brown soil	brown soil	brown soil	SPLP Went fluid PH5			
% Solids (If <100% see next page)	100%	100%	100%	0%			
Was Particle Size Reduction Needed?	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No
Sample Wt. & Vol. of DI used for pH (5g/96.5mLs)	NA	NA	NA	NA			
Initial pH of subsample (After 5 min of stirring)							
Is pH <5? If Yes-Use E.F.#1, If No Continue	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No
Amount of 1N HCL added to Sample (3.5mL)							
Final pH Reading (After 10 min. @ 50°C and cooled to room temperature)							
Is pH <5? If Yes-Use E.F.#1, If No-Use E.F.#2	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No
Extraction Fluid Used	Circle One #1 / #2	Circle One #1 / #2	Circle One #1 / #2	Circle One #1 / #2	Circle One #1 / #2	Circle One #1 / #2	Circle One #1 / #2
Amount of Sample Solid Phase Used for Extraction (100g)	100	100	100	0			
Volume of Extraction Fluid Needed (Sample Wt x 20)	2000						
Final pH of extract							
Tests in Method Chain	✓Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other	✓Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other	✓Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other	✓Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other	_Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other	_Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other	_Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other
Comments on back of page?							

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TESTAMERICA HOUSTON

Date: 04-10-12 SPLP ~~TCLP~~ and Non-Routine Extraction-Non-Volatiles Only

Analyst: NR Batch #: 76904

Extraction Fluid #1 ID: HA pH: NR Filter Lot #: 903S001

Extraction Fluid #2 ID: 844668 pH: 5.01 1N HCL ID: NR

Temp during rotation: Min: 21 Max: 24

Rotation Time Started/Finished: 4/10/12 17:00P / 4/11/12 9:00A

Group Number	52574-10	52864-5	LB				
Sample ID	830086	835432					
Description	Med brown soil	dark brown soil	SPLP Wet fluid pH 5				
% Solids (If <100% see next page)	100%	100%	0%				
Was Particle Size Reduction Needed?	Circle One Yes / (No)	Circle One Yes / (No)	Circle One Yes / (No)	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No
Sample Wt. & Vol. of DI used for pH (5g/96.5mLs)	NA	NA	NA				
Initial pH of subsample (After 5 min of stirring)							
Is pH <5? If Yes-Use E.F.#1, If No Continue	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No
Amount of 1N HCL added to Sample (3.5mL)							
Final pH Reading (After 10 min. @ 50°C and cooled to room temperature)							
Is pH <5? If Yes-Use E.F.#1, If No-Use E.F.#2	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No	Circle One Yes / No
Extraction Fluid Used	Circle One #1 / (#2)	Circle One #1 / (#2)	Circle One #1 / (#2)	Circle One #1 / #2	Circle One #1 / #2	Circle One #1 / #2	Circle One #1 / #2
Amount of Sample Solid Phase Used for Extraction (100g)	100g.	100g.	0				
Volume of Extraction Fluid Needed (Sample Wt x 20)	2000						
Final pH of extract							
Tests in Method Chain	_Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other 1312 mw	_Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other 1312 mw	_Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other 1312 mw	_Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other	_Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other	_Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other	_Metals(6010/7470) _SemiVoa (8270C) _Pest (8081A) _Herb (8151A) _Other
Comments on back of page?							

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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Tel: (713)690-4444

TestAmerica Job ID: 600-72907-1
Client Project/Site: Exide Recycling Center, Frisco TX Projec

For:
Pastor, Behling & Wheeler LLC
2201 Double Creek Dr
Suite 4004
Round Rock, Texas 78664

Attn: Mr. Tim Nickels

Authorized for release by:
5/17/2013 4:32:44 PM
Cathy Upton, Data Delivery Analyst
(713)690-4444
cathy.upton@testamericainc.com

Designee for

Sachin Kudchadkar, Project Manager II
sachin.kudchadkar@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Houston
TRRP Data Package Cover Page

Job Number: 600-72907-1
Project Name/Number: Exide Recycling Center, Frisco TX Project

This Data Package consists of:

This signature page, the laboratory review checklist, and the following Reportable Data:

- ☒ R1 Field Chain-of-Custody Form
- ☒ R2 Sample Identification Cross-reference;
- ☒ R3 Test Reports (Analytical Data Sheets) for each environmental sample that includes:
  - a) Items consistent with NELAC Chapter 5
  - b) dilution factors,
  - c) preparation methods,
  - d) cleanup methods, and
  - e) if required for the project, tentatively identified compounds (TICs).
- ☒ R4 Surrogate Recovery Data including:
  - a) Calculated recovery (%R), and
  - b) The laboratory's surrogate QC limits.
- ☒ R5 Test Reports/Summary Forms for Blank Samples;
- ☒ R6 Test Reports/Summary Forms for Laboratory Control Samples (LCSs) including:
  - a) LCS spiking amounts,
  - b) Calculated %R for each analyte, and
  - d) The laboratory's LCS QC limits
- ☒ R7 Test Reports for Matrix Spike/Matrix Spike Duplicates (MS/MSDs) including:
  - a) Samples associated with the MS/MSD clearly identified,
  - b) MS/MSD spiking amounts,
  - c) Concentration of each MS/MSD analyte measured in the parent and spiked sample,
  - d) Calculated %Rs and relative percent differences (RPDs), and
  - e) The laboratory's MS/MSD QC limits
- ☒ R8 Laboratory analytical duplicates (if applicable) recovery and precision, including:
  - a) the amount of analyte measured in the duplicate,
  - b) the calculated RPD, and
  - c) the laboratory's QC limits for analytical duplicates.
- ☒ R9 List of method quantitation limit (MQL) and detectability check sample results for each analyte for each method and matrix;
- ☒ R10 Other problems or anomalies

The exception report for each "No" or "Not Reviewed (NR)" item in the Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under Texas laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm, to the best of my knowledge, that all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Cathy Upton		05/17/2013
Name (printed)	Signature	Date
Data Delivery Analyst		
Official Title (printed)		

Appendix A (cont'd): Laboratory Review Checklist: Reportable Data

Laboratory Name: TestAmerica-Houston	LRC Date: 05/14/13
Project Name: Exide Recycling Center, Frisco TX	Laboratory Job Number: 600-72907
Reviewer Name: TWR	Prep Batch Number(s): 600-105843(W), 105922, 105993(S)- ICP

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
		Chain-of-custody (C-O-C)					
R1	OI	Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?			X		
R2	OI	**Sample and quality control (QC) identification**					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**Test reports**					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?	X				
		Were bulk soil/solid samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, TICs reported?			X		
R4	O	**Surrogate recovery data**					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	OI	**Test reports/summary forms for blank samples**					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	**Laboratory control samples (LCS):**					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?			X		
R7	OI	**Matrix spike (MS) and matrix spike duplicate (MSD) data**					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	**Analytical duplicate data**					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?	X				
R9	OI	**Method quantitation limits (MQLs):**					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	**Other problems/anomalies**					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference affects on the sample results?	X				1
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Appendix A (cont'd): Laboratory Review Checklist: Reportable Data

Laboratory Name: TestAmerica-Houston	LRC Date: 05/14/13
Project Name: Exide Recycling Center, Frisco TX	Laboratory Job Number: 600-72907
Reviewer Name: TWR	Prep Batch Number(s): 600-105843(W), 105922, 105993(S)- ICP

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**Initial calibration (ICAL)**					
		Were response factors and/or relative response factors for each analyte within QC limits?			X		
		Were percent RSDs or correlation coefficient criteria met?			X		
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?			X		
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	**Initial and continuing calibration verification (ICCV and CCV) and continuing calibration**					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	**Mass spectral tuning:**					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	**Internal standards (IS):**					
		Were IS area counts and retention times within the method-required QC limits?			X		
S5	OI	**Raw data (NELAC section 5.5.10)**					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?			X		
S6	O	**Dual column confirmation**					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	**Tentatively identified compounds (TICs):**					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	**Interference Check Sample (ICS) results:**					
		Were percent recoveries within method QC limits?	X				
S9	I	**Serial dilutions, post digestion spikes, and method of standard additions**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	OI	**Method detection limit (MDL) studies**					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	**Proficiency test reports:**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	**Standards documentation**					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	**Compound/analyte identification procedures**					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	**Demonstration of analyst competency (DOC)**					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**Verification/validation documentation for methods (NELAC Chapter 5)**					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory standard operating procedures (SOPs):**					
		Are laboratory SOPs current and on file for each method performed?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
3 NA = Not applicable.
4 NR = Not Reviewed.
5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Appendix A (cont'd): Laboratory Review Checklist: Exception Reports	
Laboratory Name: TestAmerica-Houston	LRC Date: 05/14/13
Project Name: Exide Recycling Center, Frisco TX	Laboratory Job Number: 600-72907
Reviewer Name: TWR	Prep Batch Number(s): 600-105843(W), 105922, 105993(S)- ICP

ER #[1]	DESCRIPTION
1	The lead SDL was elevated in sample 600-72907-4 in order to bring the concentration within the linear range of the instrument.

ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked on the LRC)

Detection Check Standard

Matrix:	Soil
Method:	6010B
Preparation:	3050
Date Analyzed:	3/29/2013
Date Prepared:	3/28/2013
Instrument:	Thermo 6500
TALS Batches:	102868, 102784p
Prep/Reagent Factor =	50
Units:	mg/kg

Analyte	MDL	DCS Spike	Measured Result	MQL
Aluminum	0.299654	0.5	0.98	25
Antimony	0.231553	0.45	0.485	2.5
Arsenic	0.217923	0.5	0.465	1
Barium	0.011322	0.03	0.095	1
Beryllium	0.014513	0.02	0.025	0.25
Boron	0.385535	0.6	0.74	20
Cadmium	0.025642	0.05	0.055	0.25
Calcium	0.86399	1.5	2.825	100
Chromium	0.050606	0.1	0.075	0.5
Cobalt	0.067622	0.1	0.115	0.5
Copper	0.173703	0.5	0.455	0.5
Iron	2.534007	4	3.86	20
Lead	0.104832	0.2	0.22	0.5
Selenium	0.258884	0.5	0.535	2
Manganese	0.038111	0.05	0.045	1.5
Molybdenum	0.136448	0.35	0.32	0.5
Nickel	0.116599	0.15	0.135	1
Silver	0.118848	0.2	0.205	0.5
Sodium	0.885548	2.4	2.08	100
Strontium	0.00252	0.005	0.995	0.25
Thallium	0.276988	0.7	0.595	1.5
Tin	0.08729	0.15	0.155	1
Titanium	0.014529	0.03	0.025	0.5
Vanadium	0.079068	0.15	0.175	0.5
Zinc	0.108432	0.2	0.33	1.5

Detection Check Standard

Matrix:	Water
Method:	200.7/6010
Preparation:	200.7P/3010
Date Analyzed:	3/29/2013
Date Prepared:	3/28/2013
Instrument:	Thermo 6500
TALs Batches:	102868, 102755p
Units:	mg/L

Analyte	MDL	DCS Spike	Measured Result	MQL
Aluminum	0.006	0.02	0.0177	0.5
Antimony	0.0063	0.01	0.0105	0.05
Arsenic	0.0033	0.01	0.0077	0.01
Barium	0.0022	0.005	0.0026	0.02
Beryllium	0.00134	0.002	0.0042	0.005
Boron	0.0077	0.02	0.0193	0.2
Cadmium	0.00073	0.001	0.001	0.005
Calcium	0.022	0.05	0.0583	1
Chromium	0.0016	0.002	0.0037	0.01
Cobalt	0.00063	0.001	0.0012	0.01
Copper	0.0014	0.002	0.0012	0.01
Iron	0.087	0.1	0.1011	0.4
Lithium	0.0024	0.005	0.0043	0.2
Lead	0.0029	0.005	0.005	0.01
Selenium	0.0042	0.01	0.0083	0.04
Manganese	0.00084	0.002	0.002	0.01
Molybdenum	0.0027	0.005	0.0048	0.01
Nickel	0.00179	0.005	0.0043	0.01
Silver	0.0012	0.0025	0.0024	0.01
Sodium	0.02	0.05	0.0465	1
Strontium	0.0005	0.001	0.001	0.005
Thallium	0.0078	0.02	0.0184	0.03
Tin	0.0028	0.005	0.0049	0.01
Titanium	0.0011	0.002	0.0023	0.01
Vanadium	0.0017	0.002	0.0048	0.01
Zinc	0.0022	0.005	0.0065	0.01

Case Narrative

Client: Pastor, Behling & Wheeler LLC
Project/Site: Exide Recycling Center, Frisco TX Projec

TestAmerica Job ID: 600-72907-1

Job ID: 600-72907-1

Laboratory: TestAmerica Houston

Narrative

Job Narrative
600-72907-1

Comments
No additional comments.

Receipt
The samples were received on 5/10/2013 8:34 AM; the samples arrived in good condition, properly preserved and, where required, on ice.
The temperature of the cooler at receipt was 7.8º C.

Method Summary

Client: Pastor, Behling & Wheeler LLC
Project/Site: Exide Recycling Center, Frisco TX Projec

TestAmerica Job ID: 600-72907-1

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL HOU
Moisture	Percent Moisture	EPA	TAL HOU

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Sample Summary

Client: Pastor, Behling & Wheeler LLC
Project/Site: Exide Recycling Center, Frisco TX Projec

TestAmerica Job ID: 600-72907-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
600-72907-1	2013-BG-12 (0-2)	Solid	05/09/13 08:35	05/10/13 08:34
600-72907-2	2013-BG-11 (0-2)	Solid	05/09/13 08:50	05/10/13 08:34
600-72907-3	2013-BG-13 (0-2)	Solid	05/09/13 09:05	05/10/13 08:34
600-72907-4	2013-BG-Equip Blank	Water	05/09/13 09:10	05/10/13 08:34

Client Sample Results

Client: Pastor, Behling & Wheeler LLC
Project/Site: Exide Recycling Center, Frisco TX Projec

TestAmerica Job ID: 600-72907-1

Client Sample ID: 2013-BG-12 (0-2)

Lab Sample ID: 600-72907-1
Date Collected: 05/09/13 08:35
Matrix: Solid
Date Received: 05/10/13 08:34
Percent Solids: 69.1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	27.5		0.696	0.146	mg/Kg	☼	05/10/13 17:37	05/13/13 23:37	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	31		1.0	1.0	%			05/10/13 14:34	1
Percent Solids	69		1.0	1.0	%			05/10/13 14:34	1

Client Sample ID: 2013-BG-11 (0-2)

Lab Sample ID: 600-72907-2
Date Collected: 05/09/13 08:50
Matrix: Solid
Date Received: 05/10/13 08:34
Percent Solids: 87.3

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	20.6		0.573	0.120	mg/Kg	☼	05/10/13 17:37	05/13/13 23:47	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	13		1.0	1.0	%			05/10/13 14:34	1
Percent Solids	87		1.0	1.0	%			05/10/13 14:34	1

Client Sample ID: 2013-BG-13 (0-2)

Lab Sample ID: 600-72907-3
Date Collected: 05/09/13 09:05
Matrix: Solid
Date Received: 05/10/13 08:34
Percent Solids: 68.8

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	18.9		0.726	0.152	mg/Kg	☼	05/13/13 13:37	05/13/13 17:52	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	31		1.0	1.0	%			05/10/13 14:34	1
Percent Solids	69		1.0	1.0	%			05/10/13 14:34	1

Client Sample ID: 2013-BG-Equip Blank

Lab Sample ID: 600-72907-4
Date Collected: 05/09/13 09:10
Matrix: Water
Date Received: 05/10/13 08:34

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.145	U	0.500	0.145	mg/L		05/10/13 08:27	05/13/13 12:06	50

Definitions/Glossary

Client: Pastor, Behling & Wheeler LLC
Project/Site: Exide Recycling Center, Frisco TX Projec

TestAmerica Job ID: 600-72907-1

Qualifiers

Metals

Qualifier	Qualifier Description
U	Analyte was not detected at or above the SDL.

Glossary

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

QC Sample Results

Client: Pastor, Behling & Wheeler LLC
Project/Site: Exide Recycling Center, Frisco TX Projec

TestAmerica Job ID: 600-72907-1

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 600-105843/1-A
Matrix: Water
Analysis Batch: 105971

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 105843

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00290	U	0.0100	0.00290	mg/L		05/10/13 08:27	05/13/13 11:07	1

Lab Sample ID: LCS 600-105843/2-A
Matrix: Water
Analysis Batch: 105971

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 105843

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	1.00	0.9682		mg/L		97	80 - 120

Lab Sample ID: MB 600-105922/1-A
Matrix: Solid
Analysis Batch: 106003

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 105922

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.105	U	0.500	0.105	mg/Kg		05/10/13 17:37	05/13/13 23:02	1

Lab Sample ID: LCSSRM 600-105922/2-A
Matrix: Solid
Analysis Batch: 106003

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 105922

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	76.9	81.54		mg/Kg		106.0	81.3 - 118.7

Lab Sample ID: 600-72907-1 MS
Matrix: Solid
Analysis Batch: 106003

Client Sample ID: 2013-BG-12 (0-2)
Prep Type: Total/NA
Prep Batch: 105922

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	27.5		67.0	103.4		mg/Kg	☼	113	75 - 125

Lab Sample ID: 600-72907-1 MSD
Matrix: Solid
Analysis Batch: 106003

Client Sample ID: 2013-BG-12 (0-2)
Prep Type: Total/NA
Prep Batch: 105922

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	27.5		68.9	93.14		mg/Kg	☼	95	75 - 125	10	20

Lab Sample ID: 600-72907-1 DU
Matrix: Solid
Analysis Batch: 106003

Client Sample ID: 2013-BG-12 (0-2)
Prep Type: Total/NA
Prep Batch: 105922

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Lead	27.5		25.55		mg/Kg	☼	7	20

QC Sample Results

Client: Pastor, Behling & Wheeler LLC
Project/Site: Exide Recycling Center, Frisco TX Projec

TestAmerica Job ID: 600-72907-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: MB 600-105993/1-A
Matrix: Solid
Analysis Batch: 106003

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 105993

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.105	U	0.500	0.105	mg/Kg		05/13/13 13:37	05/13/13 17:47	1

Lab Sample ID: LCSSRM 600-105993/2-A
Matrix: Solid
Analysis Batch: 106003

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 105993

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	76.9	74.18		mg/Kg		96.5	81.3 - 118.7

Unadjusted Detection Limits

Client: Pastor, Behling & Wheeler LLC
Project/Site: Exide Recycling Center, Frisco TX Projec

TestAmerica Job ID: 600-72907-1

Method: 6010B - Metals (ICP)

Analyte	MQL	MDL	Units	Method
Lead	0.500	0.105	mg/Kg	6010B
Lead	0.0100	0.00290	mg/L	6010B

General Chemistry

Analyte	MQL	MDL	Units	Method
Percent Moisture	1.0	1.0	%	Moisture
Percent Solids	1.0	1.0	%	Moisture

QC Association Summary

Client: Pastor, Behling & Wheeler LLC
Project/Site: Exide Recycling Center, Frisco TX Projec

TestAmerica Job ID: 600-72907-1

Metals

Prep Batch: 105843

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-72907-4	2013-BG-Equip Blank	Total/NA	Water	3010A	
LCS 600-105843/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 600-105843/1-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 105922

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-72907-1	2013-BG-12 (0-2)	Total/NA	Solid	3050B	
600-72907-1 DU	2013-BG-12 (0-2)	Total/NA	Solid	3050B	
600-72907-1 MS	2013-BG-12 (0-2)	Total/NA	Solid	3050B	
600-72907-1 MSD	2013-BG-12 (0-2)	Total/NA	Solid	3050B	
600-72907-2	2013-BG-11 (0-2)	Total/NA	Solid	3050B	
LCSSRM 600-105922/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 600-105922/1-A	Method Blank	Total/NA	Solid	3050B	

Analysis Batch: 105971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-72907-4	2013-BG-Equip Blank	Total/NA	Water	6010B	105843
LCS 600-105843/2-A	Lab Control Sample	Total/NA	Water	6010B	105843
MB 600-105843/1-A	Method Blank	Total/NA	Water	6010B	105843

Prep Batch: 105993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-72907-3	2013-BG-13 (0-2)	Total/NA	Solid	3050B	
LCSSRM 600-105993/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 600-105993/1-A	Method Blank	Total/NA	Solid	3050B	

Analysis Batch: 106003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-72907-1	2013-BG-12 (0-2)	Total/NA	Solid	6010B	105922
600-72907-1 DU	2013-BG-12 (0-2)	Total/NA	Solid	6010B	105922
600-72907-1 MS	2013-BG-12 (0-2)	Total/NA	Solid	6010B	105922
600-72907-1 MSD	2013-BG-12 (0-2)	Total/NA	Solid	6010B	105922
600-72907-2	2013-BG-11 (0-2)	Total/NA	Solid	6010B	105922
600-72907-3	2013-BG-13 (0-2)	Total/NA	Solid	6010B	105993
LCSSRM 600-105922/2-A	Lab Control Sample	Total/NA	Solid	6010B	105922
LCSSRM 600-105993/2-A	Lab Control Sample	Total/NA	Solid	6010B	105993
MB 600-105922/1-A	Method Blank	Total/NA	Solid	6010B	105922
MB 600-105993/1-A	Method Blank	Total/NA	Solid	6010B	105993

General Chemistry

Analysis Batch: 105891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-72907-1	2013-BG-12 (0-2)	Total/NA	Solid	Moisture	
600-72907-2	2013-BG-11 (0-2)	Total/NA	Solid	Moisture	
600-72907-3	2013-BG-13 (0-2)	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Pastor, Behling & Wheeler LLC
Project/Site: Exide Recycling Center, Frisco TX Projec

TestAmerica Job ID: 600-72907-1

Client Sample ID: 2013-BG-12 (0-2)

Lab Sample ID: 600-72907-1

Date Collected: 05/09/13 08:35
Matrix: Solid
Date Received: 05/10/13 08:34
Percent Solids: 69.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			105922	05/10/13 17:37	NER	TAL HOU
Total/NA	Analysis	6010B		1	106003	05/13/13 23:37	DCL	TAL HOU
Total/NA	Analysis	Moisture		1	105891	05/10/13 14:34	AS	TAL HOU

Client Sample ID: 2013-BG-11 (0-2)

Lab Sample ID: 600-72907-2

Date Collected: 05/09/13 08:50
Matrix: Solid
Date Received: 05/10/13 08:34
Percent Solids: 87.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			105922	05/10/13 17:37	NER	TAL HOU
Total/NA	Analysis	6010B		1	106003	05/13/13 23:47	DCL	TAL HOU
Total/NA	Analysis	Moisture		1	105891	05/10/13 14:34	AS	TAL HOU

Client Sample ID: 2013-BG-13 (0-2)

Lab Sample ID: 600-72907-3

Date Collected: 05/09/13 09:05
Matrix: Solid
Date Received: 05/10/13 08:34
Percent Solids: 68.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			105993	05/13/13 13:37	NER	TAL HOU
Total/NA	Analysis	6010B		1	106003	05/13/13 17:52	DCL	TAL HOU
Total/NA	Analysis	Moisture		1	105891	05/10/13 14:34	AS	TAL HOU

Client Sample ID: 2013-BG-Equip Blank

Lab Sample ID: 600-72907-4

Date Collected: 05/09/13 09:10
Matrix: Water
Date Received: 05/10/13 08:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			105843	05/10/13 08:27	NER	TAL HOU
Total/NA	Analysis	6010B		50	105971	05/13/13 12:06	DCL	TAL HOU

Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Certification Summary

Client: Pastor, Behling & Wheeler LLC
Project/Site: Exide Recycling Center, Frisco TX Projec

TestAmerica Job ID: 600-72907-1

Laboratory: TestAmerica Houston

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0759	08-04-12 *
Louisiana	NELAP	6	01967	06-30-13
Oklahoma	State Program	6	9503	08-31-13
Texas	NELAP	6	T104704223-10-6-TX	10-31-13
USDA	Federal		P330-08-00217	04-01-14
Utah	NELAP	8	GULF	10-31-13

* Expired certification is currently pending renewal and is considered valid.

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
PBW LLC	Tim Nickels, Will Viene	5-9-13	205013
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 1 of 1
2201 Double Creek Dr, 4004	512-		
City Round Rock	**State** TX	**Zip Code** 78664	**Site Contact**	**Lab Contact**
Project Name and Location (State) Background Sampling - Former Op. Plant	**Carrier/Waybill Number**	
Contract/Purchase Order/Quote No. 1755		

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: Lead	Cesium
2013-BG-12(0-2)	5-9-13	8:35				X	X						X	
2013-BG-11(0-2)	"	8:50				X	X							
2013-BG-13(0-2)	"	9:05				X	X							
2013-BG-Equip Blank	"	9:10		X					X					

Special Instructions/ Conditions of Receipt

600-72907 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☒ Archive For 6 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) TRRP-13

	Date	Time		Date	Time
1. Relinquished By	5/9/13	1415	1. Received By	5/9/13	1415
2. Relinquished By	5/9/13	1700	2. Received By		
3. Relinquished By			3. Received By	05/10/13	0834

Comments

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

Login Sample Receipt Checklist

Client: Pastor, Behling & Wheeler LLC

Job Number: 600-72907-1

Login Number: 72907

List Source: TestAmerica Houston

List Number: 1

Creator: Pulumbarit, Josh

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	7.8
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.	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.	True	

Data Usability Summary
Exide Recycling Center
May 9, 2013 Soil Sampling Event
TestAmerica Laboratories DATA PACKAGE 600-72907-1

Pastor, Behling & Wheeler, LLC reviewed one data package from TestAmerica Laboratories in Houston, Texas for the analysis of the soil samples collected May 9, 2013 from the EPA-approved background study area in Frisco, Texas. Data were reviewed for conformance to the requirements of the guidance document, *Review and Reporting of COC Concentration Data* (RG-366/TRRP-13) and adherence to project objectives. At the time the laboratory data were generated for the project, TestAmerica Laboratories was NELAC-accredited under the Texas Laboratory Accreditation Program for the matrices, analytes and methods of analysis requested on the chain-of-custody documentation.

Intended Use of Data: To provide current data on concentrations of lead in soil.

Analyses requested included:

- Method SW6010B – Metals (ICP)

Data were reviewed and validated as described in *Review and Reporting of COC Concentration Data,* (RG-366/TRRP-13) and the results of the review/validation are discussed in this Data Usability Summary (DUS). The following laboratory submittals and field data were examined:

- the reportable data,
- case narratives, and
- the field notes with respect to field instrument calibrations, filtering procedures, sampling procedures preservation procedures prior to shipping the samples to the laboratory.

The results of supporting quality control (QC) analyses were summarized in the Laboratory Review Checklists (LRCs), Exception Reports, and case narrative, all of which were included in this review.

Introduction

Three (3) soil samples were collected and analyzed for lead. Table 1 lists the sample identifications cross-referenced to the laboratory identifications.

Project Objectives

Project QA/QC objectives were established as the TRRP-13 recommended control limits:

- For organic analytes: percent recoveries between 60% and 140%, relative percent differences (RPD) within 40%, and
- For inorganic analytes: percent recoveries between 70% and 130%, RPD within 30%.

DATA REVIEW / VALIDATION RESULTS

Analytical Results

Soil analytical results for lead are reported corrected for moisture content. None of the sample data were qualified.

Preservation and Holding Times

Samples were evaluated for agreement with the chain-of-custody (COC). Samples were received in appropriate containers in good condition. Paperwork was filled out properly. Sample receipt temperatures were within the acceptance criteria. Samples were preserved in the field as specified in SW-846 Table 2-40(B). Samples were prepared and analyzed within holding times as specified in SW-846 Table 2-40(B).

Calibrations

The LRC indicates the initial calibration and continuing calibration data met SW-846 method requirements for metals.

Blanks

Lead was reported as non-detect (ND) in the equipment blank submitted with the soil samples to the laboratory. The laboratory method blank was within project control limits.

Laboratory Control Samples

Laboratory control sample (LCS) recoveries were within the project control limits for lead.

Matrix Spike/Matrix Spike Duplicates

MS/MSD precision and accuracy results were within the project-defined QC acceptance criteria for lead.

Laboratory Certification

At the time the laboratory data were generated for this project, the laboratory was NELAC accredited under the Texas Laboratory Accreditation Program (TLAP) for the matrices, methods and parameters of analysis requested on the chain-of-custody.

Field Precision

Field duplicate samples were not collected.

Field Procedures

Samples were collected using documented SOPs.

SUMMARY

The analytical data are usable for the purpose of determining current lead concentrations in the soil at the affected property.

Table 1. Cross-Reference Field Sample Identifications and Laboratory Identifications

Field Identification	Laboratory Identification
2013-BG-12 (0-2)	600-72907-1
2013-BG-11 (0-2)	600-72907-2
2013-BG-13 (0-2)	600-72907-3
2013-BG-Equip Blank	600-72907-4

Prepared by: Kate McCarthy, PG Date: May 21, 2013

Attachment 2
Pages from Gibbons (1994)

STATISTICAL METHODS FOR GROUNDWATER MONITORING

Robert D. Gibbons
University of Illinois at Chicago

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allowable, the costly verification stage would not be required. This two-stage procedure is quite similar to the prediction limit approach described by Davis and McNichols (1987).

4.2 NORMAL TOLERANCE LIMITS

Assume that we have available estimates $\bar{x}$ and s of the mean and standard deviation based on n background observations with degrees of freedom $f = n - 1$ from a normal distribution. We require the factor K from the two-sided interval

$$\bar{x} \pm Ks \tag{4.1}$$

which leads to the statement, "At least a proportion P of the normal population is between $\bar{x} - Ks$ and $\bar{x} + Ks$ with confidence $1 - \alpha$." Wald and Wolfowitz (1946) showed that K can be approximated by

$$K \sim ru \tag{4.2}$$

where r is a function of n and P and is determined from the normal distribution

$$\frac{1}{\sqrt{2\pi}} \int_{(1/\sqrt{n})-r}^{(1/\sqrt{n})+r} \exp\left(\frac{-x^2}{2}\right) dx = P \tag{4.3}$$

and u is a function of f and α and is defined as the $(1 - \alpha)100\%$ of the chi-square distribution as

$$u = \sqrt{\frac{f}{\chi^2_{\alpha,f}}} \tag{4.4}$$

By selecting a coverage probability P, (4.3) may be solved for r (since n is known), and by selecting a confidence level P, (4.4) may be solved for u (since $f = n - 1$ is known). Two-sided values of K are provided in Table 4.1 for $n = 4$ to ∞, 95% confidence and 95% and 99% coverage.

For one-sided tolerance limits $\bar{x} + Ks$, we require the factor K which leads to the statement, "At least a proportion P of the normal population is less than $\bar{x} + Ks$ with confidence $1 - \alpha$." Owen (1962) determines K by

$$\Pr\{(\text{noncentral } t \text{ with } \delta = z\sqrt{n}) \leq K\sqrt{n}\} = 1 - \alpha \tag{4.5}$$

where δ is the noncentrality parameter of the noncentral t-distribution with

TABLE 4.1 Factors (K) for Constructing Two-Sided Normal Tolerance Limits ($\bar{x} \pm Ks$) for 95% Confidence and 95% and 99% Coverage

n	95% Coverage	99% Coverage
4	6.370	8.299
5	5.079	6.634
6	4.414	5.775
7	4.007	5.248
8	3.732	4.891
9	3.532	4.631
10	3.379	4.433
11	3.259	4.277
12	3.169	4.150
13	3.081	4.044
14	3.012	3.955
15	2.954	3.878
16	2.903	3.812
17	2.858	3.754
18	2.819	3.702
19	2.784	3.656
20	2.752	3.615
21	2.723	3.577
22	2.697	3.543
23	2.673	3.512
24	2.651	3.483
25	2.631	3.457
30	2.549	3.350
35	2.490	3.272
40	2.445	3.212
50	2.379	3.126
60	2.333	3.066
80	2.272	2.986
100	2.233	2.934
500	2.070	2.721
∞	1.960	2.576

$f = n - 1$ degrees of freedom, and z is defined by

$$\frac{1}{\sqrt{2\pi}} \int_{-\infty}^{z} \exp\left(\frac{-x^2}{2}\right) dx = P \qquad (4.6)$$

One-sided values of K are provided in Table 4.2 for $n = 4$ to ∞, 95% confidence and 95% and 99% coverage.

To illustrate the differences between tolerance and prediction limits, Figure 4.1 displays power curves for a 95% confidence normal prediction

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TABLE 4.2 Factors (K) for Constructing One-Sided Normal Tolerance Limits ($\bar{x} + Ks$) for 95% Confidence and 95% and 99% Coverage

n	95% Coverage	99% Coverage
4	5.144	7.042
5	4.210	5.749
6	3.711	5.065
7	3.401	4.643
8	3.188	4.355
9	3.032	4.144
10	2.911	3.981
11	2.815	3.852
12	2.736	3.747
13	2.670	3.659
14	2.614	3.585
15	2.566	3.520
16	2.523	3.463
17	2.486	3.414
18	2.453	3.370
19	2.423	3.331
20	2.396	3.295
21	2.371	3.262
22	2.350	3.233
23	2.329	3.206
24	2.309	3.181
25	2.292	3.158
30	2.220	3.064
35	2.166	2.994
40	2.126	2.941
50	2.065	2.863
60	2.022	2.807
80	1.965	2.733
100	1.927	2.684
500	1.763	2.475
∞	1.645	2.326

limit for the next $k = 100$ measurements based on a previous sample of $n = 20$, and a corresponding 95% confidence 95% coverage normal tolerance limit and 95% confidence 99% coverage normal tolerance limit. Inspection of Figure 4.1 reveals that the probability of failing at least one of the 100 comparisons by chance alone is much greater for the tolerance limits which have expected failure rates of 1% and 5%, respectively, versus the prediction limit that is designed to include 100% of the next 100 measurements with 95% confidence. Use of these two alternative limits for groundwater detection monitoring is anything but a "matter of personal preference."

Attachment 3
ProUCL Outlier Test Output

Arsenic Outlier Test

	Outlier Tests for Selected Variables
User Selected Options	
From File	WorkSheet.wst
Full Precision	OFF
Test for Suspected Outliers with Dixon test	1
Test for Suspected Outliers with Rosner test	1

Dixon's Outlier Test for C0

Number of data = 10
10% critical value: 0.409
5% critical value: 0.477
1% critical value: 0.597

1. Data Value 14.8 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.435

For 10% significance level, 14.8 is an outlier.
For 5% significance level, 14.8 is not an outlier.
For 1% significance level, 14.8 is not an outlier.

2. Data Value 9.29 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.136

For 10% significance level, 9.29 is not an outlier.
For 5% significance level, 9.29 is not an outlier.
For 1% significance level, 9.29 is not an outlier.

Lead Outlier Test 1

	Outlier Tests for Selected Variables
User Selected Options	
From File	WorkSheet.wst
Full Precision	OFF
Test for Suspected Outliers with Dixon test	1
Test for Suspected Outliers with Rosner test	1

Dixon's Outlier Test for C0

Number of data = 11
10% critical value: 0.517
5% critical value: 0.576
1% critical value: 0.679

1. Data Value 27.5 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.476

For 10% significance level, 27.5 is not an outlier.
For 5% significance level, 27.5 is not an outlier.
For 1% significance level, 27.5 is not an outlier.

2. Data Value 11.5 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.136

For 10% significance level, 11.5 is not an outlier.
For 5% significance level, 11.5 is not an outlier.
For 1% significance level, 11.5 is not an outlier.

Lead Outlier Test 2

	Outlier Tests for Selected Variables
User Selected Options	
From File	WorkSheet.wst
Full Precision	OFF
Test for Suspected Outliers with Dixon test	1
Test for Suspected Outliers with Rosner test	1

Dixon's Outlier Test for C0

Number of data = 12
10% critical value: 0.49
5% critical value: 0.546
1% critical value: 0.642

1. Data Value 67.6 is a Potential Outlier (Upper Tail)?

Test Statistic: 0.799

For 10% significance level, 67.6 is an outlier.
For 5% significance level, 67.6 is an outlier.
For 1% significance level, 67.6 is an outlier.

2. Data Value 11.5 is a Potential Outlier (Lower Tail)?

Test Statistic: 0.106

For 10% significance level, 11.5 is not an outlier.
For 5% significance level, 11.5 is not an outlier.
For 1% significance level, 11.5 is not an outlier.

APPENDIX 9
DEVELOPMENT OF NON-DEFAULT RBELS AND PCLS

Appendix 9
Development of Non-Default RBELs and PCLs

Tier 2 $^{GW}Soil_{Ing}$ PCL Development

In accordance with TRRP Rule §350.75(c)(1), Tier 2 $^{GW}Soil_{Ing}$ PCLs were developed for arsenic, cadmium, lead, and selenium using site-specific pH data and equations provided in TRRP Figure 30 TAC §350.75(b)(1). The TRRP Tier 2 $^{GW}Soil_{Ing}$ PCL calculations for these COCs are presented in Table A9.1. Site-specific pH soil sample results were used to determine water-soil partition coefficient (Kd) values for calculating Tier 2 PCLs in accordance with 30 TAC §350.73(f)(1). Sixty-five soil samples were evaluated for pH, for which the results are presented in Table 4E. The average pH value for soils was 7.5, with corresponding Kd values of 30 L/kg for arsenic, 590 L/kg for cadmium, 1830 L/kg for lead, and 3.1 L/kg for selenium (based on TRRP Figure 30 TAC §350.73(e)(1)(A) for lead in clayey soils and Figure 30 TAC §350.73(f)(1)(C) for the other metals).

TPH Mixture Soil RAL Development

A Tier 1 TPH Mixture RAL was developed in accordance with RG-366/TRRP-27, *Development of Human Health PCLs for Total Petroleum Hydrocarbon Mixtures* (TCEQ, 2010c), to evaluate TPH in surface soil at the Site. The TPH Mixture RAL was calculated for the soil sample analyzed for TPH that exceeded default Tier 1 TPH RALs, 2012-FWFS-9 (4-5) with the most elevated concentration, using TPH TX1006 fractionation data for the sample. The TPH Mixture RAL result is summarized in the table below:

Sample ID	Date Collected	$^{Tot}Soil_{Comb}$ Res 0.5-Acre $RAL_{TPH\ Mixture}$ (mg/kg)	Comments
2012-FWFS-9 (4-5')	4/29/2013	12,500	Protective of GW ($^{GW}Soil_{Ing}$ HQ < 1; HI < 10)

The TPH concentration in soil samples 2012-FWFS-9 (4-5'), 2012-FWFS-9 (4-5'), 2013-STB-6 (0.5-1.1'), and 2013-STB-11 (0.5-1.3') which exceeded default RALs did not exceed the calculated TPH Mixture RAL; therefore, a critical TPH Mixture PCL was not developed.

Based on the TCEQ guidance document RG-366/TRRP-27, if the Hazard Index (HI), which is the sum of the Hazard Quotients (HQ) for the $^{GW}Soil_{Ing}$ pathway, is less than 10 and HQ values are all less than 1, then TPH is protective of the underlying groundwater. For soil sample 2012-FWFS-9 (4-5'), HIs were less than 10 and HQs were less than 1; therefore, TPH is considered protective of groundwater at the Site, and only the $^{Tot}Soil_{Comb}$ (surface soil) PCL is applicable for determining the RAL for TPH. Summary tables of the calculations used for developing TPH Mixture PCLs are provided in this appendix as Tables A9.2 and A9.3. Although the TPH concentration in 2012-FWFS-9 (4-5') exceeds the theoretical soil saturation limit, as noted in Table A9.2, NAPL was not observed in this sample.

Recreational Surface Water PCLs

While surface water at the Site is currently not available for general public contact because of fencing and site security, it may be in the future. In addition, surface water leaves the Site and may impact downstream recreational receptors. As such, and in accordance with TRRP-24, *Determining PCLs for Surface Water and Sediment* (TCEQ, 2007), contact recreation surface water PCLs were used to evaluate the surface water data for human health receptors. TCEQ has developed Tier 1 Contact Recreation Surface Water PCLs (last update March 31, 2006) for receptors that occasionally contact surface water while wading, fishing, and other recreational pursuits. These PCLs were used for COCs for which Contact Recreation Surface Water PCLs were available.

Based on TCEQ comments (TCEQ, 2013e) and because there is not a Contact Recreation PCL for lead, the drinking water standard is used as the surface water PCL for lead to protect exposure to surface water in Stewart Creek and the North Tributary.

Recreational Sediment PCL

Like surface water, sediment may be contacted by trespassers to the site, if the use of the creeks change in the future, or if sediment is transported downstream. The TCEQ developed Tier 1 Sediment PCLs (last update March 31, 2006) for receptors occasionally contacting sediment while wading, fishing, and other recreational pursuits. These values were used in the assessment of sediment data as discussed in Section 7.0 of the APAR.

TABLE A9.1
TIER 2 $^{GW}Soil_{Ing}$ PCL DEVELOPMENT

EQUATIONS		SOURCE
Ksw =	$\frac{Pb}{(Kd * Pb + nw + na * H')}$	Figure 30TAC350.75(b)(1)
$^{GW}Soil$ =	$\frac{^{GW}GW * LDF * L2}{Ksw * L1}$	Figure 30TAC350.75(b)(1)

PARAMETER DESCRIPTIONS	TRRP DEFAULT	VALUES USED	SOURCE
$^{GW}GW_{Class3}$ = Residential and C/I Tier 1 PCL in Class 3 groundwater (mg/L)			TRRP Table of Residential PCLs for groundwater
$^{GW}Soil$ = groundwater protective soil concentration (mg/kg)			calculated below
Kd = soil water partition coefficient			Chemical specific TRRP default for Kd values for metals
Pb = dry soil bulk density	1.67		TRRP default
na = air filled soil porosity	0.21		TRRP default
L1 = thickness of impacted soil zone	site-specific	1	Conservatively assumes impacted soils in contact with saturated zone
L2 = distance from top of impacted soil zone to groundwater	site-specific	1	Conservatively assumes impacted soils in contact with saturated zone
nw = volumetric water content of vadose zone soils (cm3-water/cm3-soil)	0.16		TRRP default
H' = dimensionless Henry's Law Constant			TRRP default
LDF = Lateral/leachate dilution factor	10	10	30 acre source area TRRP default
pH = soil pH		7.5	Average value from soil borings
Soil Type		Clay	Site investigation activities

TIER 2 RESIDENTIAL AND COMMERCIAL/INDUSTRIAL RESULTS SUMMARY

COC	$^{GW}GW_{Ing}$ mg/L	soil type	pH	*Kd* *L/kg*	Pb kg/L	na	nw	H'	*L1*	*L2*	*LDF*	Ksw	Tier 2 $^{GW}Soil_{Ing}$ PCL (mg/Kg)
Lead	1.5E-02	Clay	7.5	1830	1.67	0.21	0.16	0.00E+00	1	1	10	0.00055	**274.51**
Cadmium	5.0E-03	Clay	7.5	590	1.67	0.21	0.16	0.00E+00	1	1	10	0.00169	**29.5**
Arsenic	1.0E-02	Clay	7.5	30	1.67	0.21	0.16	0.00E+00	1	1	10	0.03323	**3.01**
Selenium	5.0E-02	Clay	7.5	3	1.67	0.21	0.16	0.00E+00	1	1	10	0.31291	**1.60**

Notes:
1. For all compounds listed above, the calculated Tier 2 GWSoilIng PCL applies to both residential and commercial/industrial land uses.

TABLE A9.2

TCEQ Texas Risk Reduction Program (TRRP) TPH Calculator (v 1.6a - 8/2011) for TCEQ Method 1006 Data - Input Sheet

Site Information: Former Operating Plant | **Sample ID:** 2012-FWFS-9 (4-5) | **Calculation Date:** June 29, 2013

Calculation by: Name

▼ INPUT ▼

TCEQ Method 1006 Boiling Point Range	i	TCEQ Method 1006 Boiling Point Range Concentrations	Boiling Point Range Molecular Weight[1]	Boiling Point Range Mass Fraction	Mass Fraction / Molecular Wt Ratio	Boiling Point Range Mole Fraction	Theoretical Soil Saturation Limit for TPH NAPL	Test for Theoretical Saturation Limit ($C_{sat,i}$)
		C_i (mg/kg)	MW_i (g/mol)	MF_i (·)	MF_i/MW_i (mol/g)	X_i (·)	$C_{sat,i}$ (mg/kg)	(·)
C_6 Aliphatic	1	5.58 mg/kg	81	1.15E-03	1.42E-05	2.71E-03	5.70E-01 mg/kg	Csat,1 EXCEEDED
>C_6 - C_8 Aliphatic	2	5.30 mg/kg	100	1.10E-03	1.10E-05	2.09E-03	1.62E-01 mg/kg	Csat,2 EXCEEDED
>C_8 - C_{10} Aliphatic	3	67.00 mg/kg	130	1.39E-02	1.07E-04	2.03E-02	6.41E-01 mg/kg	Csat,3 EXCEEDED
>C_{10} - C_{12} Aliphatic	4	856.00 mg/kg	160	1.77E-01	1.11E-03	2.11E-01	3.71E+00 mg/kg	Csat,4 EXCEEDED
>C_{12} - C_{16} Aliphatic	5	999.00 mg/kg	200	2.07E-01	1.03E-03	1.97E-01	1.51E+00 mg/kg	Csat,5 EXCEEDED
>C_{16} - C_{21} Aliphatic	6	1,110.00 mg/kg	270	2.29E-01	8.50E-04	1.62E-01	5.11E-01 mg/kg	Csat,6 EXCEEDED
>C_{21} - C_{35} Aliphatic	7	126.00 mg/kg	270	2.60E-02	9.65E-05	1.84E-02	5.80E-02 mg/kg	Csat,7 EXCEEDED
Transformer mineral oil (aliphatic)			270	-	-	-	-	-
>C_7 - C_8 Aromatic	8	12.80 mg/kg	92	2.65E-03	2.88E-05	5.48E-03	1.20E+00 mg/kg	Csat,8 EXCEEDED
>C_8 - C_{10} Aromatic	9	14.40 mg/kg	120	2.98E-03	2.48E-05	4.73E-03	1.02E+00 mg/kg	Csat,9 EXCEEDED
>C_{10} - C_{12} Aromatic	10	62.90 mg/kg	130	1.30E-02	1.00E-04	1.91E-02	2.45E+00 mg/kg	Csat,10 EXCEEDED
>C_{12} - C_{16} Aromatic	11	684.00 mg/kg	150	1.41E-01	9.43E-04	1.80E-01	1.05E+01 mg/kg	Csat,11 EXCEEDED
>C_{16} - C_{21} Aromatic	12	737.00 mg/kg	190	1.52E-01	8.02E-04	1.53E-01	3.16E+00 mg/kg	Csat,12 EXCEEDED
>C_{21} - C_{35} Aromatic	13	157.00 mg/kg	240	3.25E-02	1.35E-04	2.58E-02	4.28E-02 mg/kg	Csat,13 EXCEEDED
Transformer mineral oil (aromatic)			240	-	-	-	-	-
Sum Aliphatic Fraction:		3,168.88 mg/kg	0.6551					
Sum Aromatic Fraction:		1,668.10 mg/kg	0.3449	= 1.00E+00	= 5.25E-03 mol/g	= 1.00E+00		
SumTotal TPH:		4,836.98 mg/kg	1.0000					

[1] *from* TRRP Table [§350.73(4)]

TCEQ Texas Risk Reduction Program (TRRP) TPH Calculator (v 1.6a - 8/2011) for TCEQ Method 1006 Data - Results

Site Information: Former Operating Plant | **Sample Information:** 2012-FWFS-9 (4-5) | **Calculation Date:** June 29, 2013

TPH NAPL Present?: Theoretical soil saturation limit IS EXCEEDED for one or more TPH fractions - Presence of NAPL is indicated - See TRRP-32 for NAPL management guidance

Mobile NAPL Present?: Presence of Mobile NAPL NOT indicated

Tier 1 $^{Tot}SOIL_{Comb}$	0.5 Acre Residential	30 Acre Residential	0.5 Acre Comm / Ind	30 Acre Comm / Ind
$PCL_{TPH\ Mix}$ =	1.25E+04 mg/kg	1.25E+04 mg/kg	5.26E+04 mg/kg	2.88E+04 mg/kg
Hazard Index (HI) of TPH_{Mix} =	3.38	4.03	3.15	2.81

Tier 1 $^{GW}SOIL_{Ing}$	0.5 Acre Residential	30 Acre Residential	0.5 Acre Comm / Ind	30 Acre Comm / Ind
$PCL_{TPH\ Mix}$ =	1.41E+03 mg/kg	7.00E+02 mg/kg	4.17E+03 mg/kg	2.12E+03 mg/kg
Hazard Index (HI) of TPH_{Mix} =	0.16	0.33	0.06	0.11

Tier 1 $^{GW}SOIL_{Class\ 3}$	0.5 Acre Residential	30 Acre Residential	0.5 Acre Comm / Ind	30 Acre Comm / Ind
$PCL_{TPH\ Mix}$ =	1.41E+05 mg/kg	7.00E+04 mg/kg	4.17E+05 mg/kg	2.12E+05 mg/kg
Hazard Index (HI) of TPH_{Mix} =	0.00	0.00	0.00	0.00

Tier 1 $^{Air}SOIL_{Inh\text{-}V}$	0.5 Acre Residential	30 Acre Residential	0.5 Acre Comm / Ind	30 Acre Comm / Ind
$PCL_{TPH\ Mix}$ =	4.35E+04 mg/kg	2.20E+04 mg/kg	6.22E+04 mg/kg	3.11E+04 mg/kg
Hazard Index (HI) of TPH_{Mix} =	2.37	2.35	2.36	2.36

INSTRUCTIONS

1. Enter site data in yellow boxes on Input Sheet
2. Enter TCEQ Method 1006 concentrations (mg/kg)
3. Results are summarized in boxes to the left
4. Calculation details in (tabbed) spreadsheets

NOTE: PCL precision is two (2) significant digits

5. Print individual *sheets* or *workbook* (all pages)
6. Questions? - Charles D. Stone: (512 239-5825)

Charles.Stone@tceq.texas.gov

Appendix 9 - Calculation of Groundwater Discharge to Surface Water

The following input parameters were used to calculate groundwater discharge to Stewart Creek in the vicinity of the following locations:

- MW-46 and MW-14, where dissolved lead exceeds the ^{SW}RBEL of 0.00268 mg/L based on the most recent groundwater data;
- MW-26, MW-27, MW-29, and MW-46 where dissolved cadmium exceeds the ^{SW}RBEL of 0.000256 mg/L based on the most recent groundwater data.

The input parameters were developed in accordance with TCEQ Guidance Document TRRP-24. TRRP-24 provides the following equation to calculate the groundwater discharge rate to a surface water body (see Table A9.4):

$$\mathbf{Q_{igw} = U_{gw} \times \delta_{pi} \times L_m [yr/3.15 \times 10^7]}$$

Where:

U_{gw} =Darcy groundwater velocity (cm/sec)

U_{gw} = K*i (cm/sec)

K = Site-specific hydraulic conductivity of affected gw-bearing unit (cm/s)

i = Site-specific lateral hydraulic flow gradient of affected groundwater bearing unit (cm/cm)

δ_{pi} = Site-Specific thickness of affected gw (in excess of the ^{sw}RBEL or the ^{SW}ECO) discharging to surface water stream (cm)

L_m = Site-Specific influent width of gw (in excess of the ^{sw}RBEL or the ^{SW}ECO) at the point of discharge to sw (cm)

Hydraulic Conductivity (K) of Affected Groundwater-Bearing Unit

A geometric mean K for wells considered representative for the length of Stewart Creek was calculated to be 8.6E-04, based on previous slug test data collected from MW-14, MW-17, B5N, MW-16S, MW-13, as follows:

Boring/ Well Number	Hydraulic Conductivity K (cm/sec)
MW-14	4.20E-05
MW-17	7.60E-04
B5N	3.8E-03
MW-16S	1.30E-03
MW-13	1.30E-02
Geomean K	**8.6E-04**

Lateral Hydraulic Flow Gradient (i)

The lateral hydraulic flow gradient was calculated at approximately 0.03 ft/ft based on the difference between the January 2014 groundwater elevations in MW-30 and MW-46 in the Stewart Creek area, as depicted on Figure 5A.4.

Thickness of Affected Groundwater Discharging to Surface Water in Excess of ^{SW}RBEL (δ_{pi})

The maximum surface water depth measured on June 4, 2012 was about 0.9 feet near MW-16 (refer to SIR Appendix H, Table H-1, Location 2, Position 1). According to TRRP-24, the thickness of the zone of groundwater discharging to surface water can be assumed to be 1.5 times the depth of the surface water body. Conservatively using the maximum measured surface water thickness of 0.9 feet, the thickness of groundwater contributing to surface water is 1.35 feet. For the purposes of this calculation, the arithmetic mean saturated thickness of 4.4 feet was conservatively used (as obtained from monitoring wells boring logs along Stewart Creek), estimated as follows:

Monitor Well	Saturated Thickness (ft)
MW-14	12
MW-17	8
B5N	4
MW-16S	2
MW-13	2
MW-37	3
MW-38	3.75
MW-39	4.5
MW-40	3
MW-41	3.5
MW-42	2
MW-43	5
Mean Saturated Thickness (ft)	**4.4**

Influent Width of Groundwater in Excess of ^{SW}RBEL at Point of Discharge to Surface Water (L_m)

The ^{SW}RBEL for dissolved lead of 0.00268 mg/L was exceeded at MW-14 and MW-46. The ^{SW}RBEL was not exceeded in the nearest cross gradient wells MW-17 and MW-26. The plume width was assigned at 600 feet based on the conservative assumption that dissolved lead exceeded the ^{SW}RBEL along Stewart Creek at the length between MW-17 and MW-26.

The ^{SW}RBEL for dissolved cadmium of 0.000256 mg/L was exceeded at MW-26, MW-27, MW-29, and MW-46. The ^{SW}RBEL was not exceeded in the nearest cross gradient wells MW-17 and MW-44. It was also noted that there were no dissolved cadmium exceedences of the ^{SW}RBEL in MW-37, MW-38, MW-16, MW-16S, or MW-14 based on the most recent data. The plume width was conservatively assigned at 1600 feet based on the conservative assumption that dissolved cadmium exceeded the ^{SW}RBEL along the length of Stewart Creek between MW-17 and MW-44.

Using the above input parameters, the discharge of affected groundwater to Stewart Creek is 0.0054 cfs. The maximum calculated groundwater discharge of 0.0054 cfs represents about 2.35% of the 7Q2 discharge of 0.23 cfs for Stewart Creek.

Estimation of the 7Q2 discharge of 0.23 cfs is presented in the SIR (PBW, 2012a).

Dilution Factor and Revised ^{SW}GW PCL

Based on the above analyses, a groundwater to surface water dilution factor of 0.15 is appropriate for this site. When applied to the ^{SW}RBELS of 0.00268 mg/L for dissolved lead, and 0.000256 mg/L for dissolved cadmium, this results in ^{SW}GW PCLs of 0.018 mg/L of 0.0017 respectively.

References

Pastor, Behling & Wheeler, LLC (PBW), 2012a. Site Investigation Report for the Exide Frisco Recycling Center, Frisco, Texas. Revision 1, July 12.

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Texas Commission on environmental Quality (TCEQ), Remediation Division, 2007. Determining PCLs for Surface Water and Sediment (TRRP-24). December.

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APPENDIX 9 - ESTIMATION OF SULFATE IMPACT TO SURFACE WATER

There is no current ongoing source of sulfate from FOP operations, and concentrations do not appear to correlate with any specific source area. It is reasonably assumed that any FOP surface water runoff containing sulfates would be prevented from entering Stewart Creek by the floodwall, or would be negligible. Theoretically, any sulfates that may have accumulated onsite may infiltrate into surface and subsurface soils; therefore, sulfates in shallow groundwater discharging to surface water could potentially affect surface water quality. A generalized mass balance calculation demonstrates the potential effect that sulfate levels measured in groundwater in monitoring wells adjacent to Stewart Creek might have on surface water quality. The calculation is based on the following assumptions:

- Groundwater discharge rate= 0.009 cfs, based on the estimation of groundwater to surface water discharge (see Table A9.4).
- Average sulfate concentrations from monitoring wells along the Stewart Creek and the North Tributary to Stewart Creek of 1740 mg/L. This is based on sulfate data collected from monitoring wells B5N, MW-16S, MW-11, MW-14, MW-17, MW-18, MW-24, MW-26, MW-27, MW-29, and MW-31 that are located in close proximity to Stewart Creek.
- Stream flow rate=0.23 cfs. This is based on the 7Q2 stream flow calculated in the SIR (2012a).

The product of the average sulfate concentrations (based on ten data points along Stewart Creek) multiplied by the conservative groundwater discharge, divided by the stream flow rate yields a theoretical concentration of sulfate in surface water of 68 mg/L. The actual measured concentrations in Stewart Creek range between 125 mg/L (upstream sample SW-16), 123 mg/L (midstream sample SW-17), and 127 mg/L (downstream sample SW-21). The maximum sulfate contribution from the FOP (based on the actual sample data) is approximately 4 mg/L. Therefore, the contribution of sulfate from onsite is not anticipated to appreciably impact surface water quality above current ambient conditions.

Monitor Well ID	Sample Date	Concentration (mg/L)
B5N	3/22/2013	946
MW-16S	4/9/2013	1270
MW-11	4/9/2013	281
MW-14	4/9/2013	2560
MW-17	3/22/2013	1510
MW-24	3/18/2013	1640
MW-26	4/9/2013	2480
MW-27	4/9/2013	1530
MW-29	4/9/2013	4260
MW-31	5/13/2013	927
Mean Sulfate Concentration in Stewart Creek Area Wells (mg/L)		**1740**

Groundwater flow rate (cm3/sec); Q_{igw}

$Q_{igw} = U_{gw} \times \delta_{pi} \times L_m[yr/3.15 \times 10^7]$

U_{gw} =Darcy groundwater velocity (cm/sec)

$U_{gw} = K*i$ (cm/sec)

K = Site-specific hydraulic conductivity of affected gw-bearing unit (cm/s)

i = Site-specific lateral hydraulic flow gradient of affected groundwater bearing unit (cm/cm)

δ_{pi} = Site-Specific thickness of affected gw (in excess of the ^{sw}RBEL or the SW_{eco}) discharging to surface water stream (cm).

L_m = Site-Specific influent width of gw (in excess of the ^{sw}RBEL or the SW_{eco}) at the point of discharge to sw (cm)

Q_{igw} Calculation

U_{gw} Calculation

Description	K (cm/sec)	i (cm/cm)	U_{gw} (cm/s)	U_{gw} (cm/yr)	d_{pi} (ft)	d_{pi} (cm)	L_m (ft)	L_m (cm)	yr/31536000s (Constant)	Q_{igw} (cm^3/sec)	Q_{igw} (cfs)
lead	8.6E-04	0.03	2.57E-05	8.11E+02	4.4	134.112	600	18288	3.17098E-08	63.06	**0.0022**
cadmium	8.6E-04	0.03	2.57E-05	8.11E+02	4.4	134.112	1600	48768	3.17098E-08	168.16	**0.0059**

The 7Q2 flow for Stewart Creek (conservative estimate) is 0.23 cfs.
The calculated groundwater discharge for Pb represents about 0.96% of the 7Q2 discharge of 0.23 cfs.
The calculated groundwater discharge for Cd represents about 2.57% of the 7Q2 discharge of 0.23 cfs.

Notes

Geomean K from APAR:

clay avg: 3.00E-06

clayey gravel avg: 1.70E-03

Gravels or Sands Avg: 2.00E-02

Geomean K for wells along Stewart Creek: 8.6E-04 [includes MW-14, MW-17, B5N, MW-16S, MW-13 only; used in calculation above]

Gradient (i) based on MW-30 to MW-46 area (January 2014 elevations)

According to TRRP-24, the thickness of affected groundwater discharging to surface water is 1.5 times the depth of the surface water body (which is 0.9 feet). The mean saturated thickness for wells along Stewart Creek (MW-14, MW-17, B5N, MW-16S, MW-13, MW-37, MW-38, MW-39, MW-40, MW-41, MW-42, MW-43) of 4.4 feet was conservatively used in the calculation.

L_m for lead based on exceedences of surface water PCL in MW-46 and MW-14. The distance is conservatively assumed to be 600 feet (MW-17 to MW-26).

L_m for cadmium based on exceedences of surface water PCL in MW-26, MW-27, MW-29, and MW-46. The distance is conservatively assumed to be 1600 feet (MW-37 to MW-44).

Estimation of Groundwater Discharge for Sulfate in Monitoring Wells Along Stewart Creek

Q_{igw} Calculation

U_{gw} Calculation

Description	K (cm/sec)	i (cm/cm)	U_{gw} (cm/s)	U_{gw} (cm/yr)	d_{pi} (ft)	d_{pi} (cm)	L_m (ft)	L_m (cm)	yr/31536000s (Constant)	Q_{igw} (cm^3/sec)	Q_{igw} (cfs)
sulfate	8.6E-04	0.03	2.57E-05	8.11E+02	4.4	134.112	2400	73152	3.17098E-08	252.23	**0.009**

Notes

Geomean K from APAR:

clay avg: 3.00E-06

clayey gravel avg: 1.70E-03

Gravels or Sands Avg: 2.00E-02

Geomean K for wells along Stewart Creek: 8.6E-04 [includes MW-14, MW-17, B5N, MW-16S, MW-13 only; used in calculation above]

Gradient (i) based on MW-30 to MW-46 area (January 2014 elevations)

According to TRRP-24, the thickness of affected groundwater discharging to surface water is 1.5 times the depth of the surface water body (which is 0.9 feet). The mean saturated zone thickness for wells along Stewart Creek (MW-14, MW-17, B5N, MW-16S, MW-13, MW-37, MW-38, MW-39, MW-40, MW-41, MW-42, MW-43) of 4.4 feet was conservatively used in the calculation.

L_m for sulfate based conservatively on exceedences of surface water criteria along entire extent of Stewart Creek (distance is conservatively assumed to be 2400 feet for calculation purposes east to west FOP boundaries).

Table A9.4

Surface Water Quality Standard Calculations with Site-Specific Hardness

Cadmium		FW Acute	FW Chronic
Cadmium (d)	7440-43-9	$1.136672-(\ln(\text{hardness})(0.041838))$ $(we^{(1.0166\ (\ln(\text{hardness}))-2.4743)})$	$1.101672-(\ln(\text{hardness})(0.041838))$ $(we^{(0.7409\ (\ln(\text{hardness}))-4.719)})$

Hardness		Cadmium Acute (ug/L)	Cadmium Chronic (ug/L)	Acute Calculation Steps			Chronic Calculation Steps		
50	Default	4.37E+00	1.52E-01	3.91E+00	3.98E+00	1.50E+00	3.91E+00	2.90E+00	-1.82E+00
94	Segment 0823	8.08E+00	2.36E-01	4.54E+00	4.62E+00	2.14E+00	4.54E+00	3.37E+00	-1.35E+00
106	Site-specific Hardness	9.08E+00	**2.56E-01**	4.66E+00	4.74E+00	2.27E+00	4.66E+00	3.46E+00	-1.26E+00

Lead		FW Acute	FW Chronic
Lead (d)	7439-92-1	$1.46203-(\ln(\text{hardness})(0.145712))$ $(we^{(1.273(\ln(\text{hardness}))-1.460)})$	$1.46203-(\ln(\text{hardness})(0.145712))$ $(we^{(1.273(\ln(\text{hardness}))-4.705)})$

Hardness		Lead Acute (ug/L)	Lead Chronic (ug/L)	Acute Calculation Steps			Chronic Calculation Steps		
50	Default	3.01E+01	1.17E+00	3.91E+00	4.98E+00	3.52E+00	3.91E+00	4.98E+00	2.75E-01
94	Segment 0823	6.04E+01	2.35E+00	4.54E+00	5.78E+00	4.32E+00	4.54E+00	5.78E+00	1.08E+00
106	Site-specific Hardness	6.88E+01	**2.68E+00**	4.66E+00	5.94E+00	4.48E+00	4.66E+00	5.94E+00	1.23E+00

Segment 0823 is Lake Lewisville

Site Specific Hardness based on 106 mg/L for Lake Lewisville

Acute and chronic aquatic RBEL caulcations based on Texas Surface Water Quality Standards (amended February 12, 2014)

RG-194 (Procedures to Implement the Texas Surface Water Quality Standards, 2012)

SEDIMENT PCL PROTECTIVE OF FISH INGESTION PATHWAY

Risk-Based Exposure Limit for Human Ingestion of Fish Tissue

RBEL for carcinogens (mg/kg) = (RL x BW)/(Sfo x IR)

RBEL for non-carcinogens (mg/kg)) = (HQ x BW x RFDo)/(IR)

where:

			Value	Reference
RL	=	Target Risk Level	1.00E-05	TCEQ TRRP 24, 2007
BW	=	Body Weight (kg)	7.00E+01	TCEQ TRRP 24, 2007
SFo	=	Cancer Slope Factor oral 1/(mg/kg-day)	chemical specific	
HQ	=	Target Hazard Quotient	1.00E+00	TCEQ TRRP 24, 2007
RfDo	=	Reference Dose oral (mg/kg-day)	chemical specific	
IR	=	Ingestion Rate for Fish (kg/day)	1.00E-02	TCEQ TRRP 24, 2007

Compound	SFo	RfDo	carcinogenic RBEL (mg/kg)	noncarcinogenic RBEL (mg/kg)
Arsenic*	1.50E+00	3.00E-04	**4.67E-02**	**2.10E+00**
Cadmium	no tox value	1.00E-03	--	**7.00E+00**
Lead*+	no tox value	no tox value	--	--

CONVERTING RBEL TO SEDIMENT PCL PROTECTIVE OF FISH INGESTION PATHWAY

FishSedPCL = (RBEL x OCsed)/(flipid x BSAF)

where:

OCsed	=	fraction of organic carbon in bottom sediment (unitless)	1.53E-02	Site-specific organic carbon data
flipid	=	fish lipid content (unitless)	7.00E-02	EPA, 1998
BSAF	=	biota-to-sediment accumulation factor (unitless)	chemical-specific	

COMPOUND	BSAF	Reference	FishSedPCL (mg/kg)	FishSedPCL (mg/kg) adjusted for incidental fishery
Cadmium	5.30E-01	Rzymski et al, 2014	2.89E+00	**28.9**

* not on TCEQ's list for bioaccumulation

+ no oral SF or RfD

EPA, 1998. Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities. EPA530-D-98-001A. Solid Waste and Emergency Response. July.

Geometric mean of sediment to fish BSAF values from Rzymski, P., Niedzielski, P., Klimaszyk, P and B. Poniedzialek, 2014. Bioaccumulation of Selected Metals in Bivalves (*Unionidae*) and *Phragmites australis* inhabiting a Municipal Water Reservoir. *Environ. Monit. Asses*. 186:3199-3212.