



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 377TH AIR BASE WING (AFMC)

RECEIVED

OCT 20 2014



NMED
Hazardous Waste Bureau

OCT 14 2014

Colonel Tom D. Miller
377 ABW/CC
2000 Wyoming Blvd SE
Kirtland AFB, NM 87117-5606

Mr. John E. Kieling
Chief, Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6313

Dear Mr. Kieling

In accordance with the requirements of Section 6.1.8 of the *Hazardous Waste Treatment Facility Operating Permit, EPA ID No. NM9570024423, issued to the United States Air Force for The Open Detonation Unit located at Kirtland Air Force Base, Bernalillo County, New Mexico*, Kirtland Air Force Base (KAFB) is self-reporting a release of potentially hazardous contaminants into the environment within the installation which occurred sometime between 15 and 17 July 2014.

On 5 September 2014, the Department of Energy/National Nuclear Security Administration (NNSA) notified KAFB by voicemail and email that approximately six cubic feet of sand containing potentially hazardous waste constituents (Cadmium and Chromium) had been disposed of in the KAFB Construction & Demolition Debris (C&D) Landfill sometime between 15 and 17 July 2014. The Night Note provided by NNSA detailing this event (Attachment 1) indicates that the sand originated from trenches in the basement of Building 840, a facility formerly used by NNSA for plating operations. These trenches were being excavated by a Sandia National Laboratories (SNL) contractor as part of a renovation to support changing SNL mission requirements. According to the Night Note, it was not evident that contaminated sand had been excavated and disposed of until several weeks after the disposal when SNL was addressing an employee exposure concern based upon analytical results of samples taken from materials excavated from the trenches. Upon review of the analyses, SNL officials determined the samples exceeded Maximum Contaminant Levels for Cadmium and Chromium.

On 8 September 2014, KAFB contacted NNSA and requested they provide their sampling analyses (Attachment 2) to the installation's Environmental Management Section. Upon review, the Air Force determined the sand should be classified as a hazardous waste subject to controls under the Resource Conservation and Recovery Act (RCRA). Since the KAFB C&D Landfill is not a permitted Treatment Storage and Disposal Facility, it cannot accept RCRA hazardous waste for disposal.

KAFB4162



Due to the delay between SNL's disposal action and NNSA's subsequent notification to KAFB, KAFB has yet to identify, locate, and remove the contaminated sand from the C&D Landfill. Landfill operational records indicate that the sand was likely used as cover material on the date it was received into the facility. Records do not indicate where on the landfill tipping face the sand would have been distributed as cover on the dates in question.

KAFB is currently investigating this incident to prevent future similar incidents from occurring.

If you have any questions or need further information about the incident, please contact Mr. John S. Pike at (505) 846-8546 or john.pike@us.af.mil.



TOM D. MILLER, Colonel, USAF
Commander

Attachments:

1. SNL Night Note – September 5, 2014
2. SNL Analytical Results

cc:

Mr. Tom Blaine, NMED Director of Environmental Health
Mr. David Rast, DOE/NNSA
Mr. Geoffrey Beausoliel, Manager, Sandia Field Office
Mr. J. Barry Shupe, AFNWC/JAE
Ms. Cynthia Wimberley, DOE/NNSA Legal Council
AFCEC/CZC

Night Note – September 5, 2014

Title: Hazardous Waste Management

Subject: Hazardous Waste Solid Waste Management (Reference Night Note from 8-7-14)

Organization: SNL/NM

Information Issue: During the rehabilitation of a facility hazardous waste constituents were found in the sand in the basement Building 840 in Technical Area 1 at Sandia New Mexico. It was recently determined that some sand containing hazardous constituents had been sent to a landfill not permitted to accept this material.

Context: Building 840 in Technical Area 1 at Sandia New Mexico is a former industrial facility that previously housed machine shops and plating operations. This facility is being renovated to support changing mission needs. Equipment that will be placed in the lab requires floor strength of at least 5,000 pounds the current floor did not meet this specification and required replacement. As part of the renovations Sandia found trenches that had been filled with sand, when plating operations were relocated in 1961. At that time, the mechanical equipment was removed and the trenches were filled with sand and capped with concrete for stability. On July 16, 2014 the construction contractor noticed sand that was discolored sand and had an unusual odor. Work was paused and the discolored sand was tested and found to contain high concentration of RCRA metals (**cadmium, chromium**, copper, zinc, nickel, and sulfates among others).

During a detailed evaluation of the timeline of events on September 3rd for an employee exposure concern, it became evident for the first time that some of the discolored sand had been removed from the second trench and disposed, with a much larger volume of the clean sand, as construction material at the Kirtland Air Force Base (KAFB) landfill before it was determined that the discolored sand contained elevated levels of metals. A maximum of 6 cubic feet of the discolored sand was disposed at KAFB's landfill, probably at some time between July 15 and July 17, as part of a load of approximately 2 cubic yards (54 cubic feet) of sand.

Significance: Sandia recognized as part of the event evaluation that sand containing hazardous constituents had been sent to a landfill not permitted to accept this material.

Path forward: Kirtland Air Force Base Environmental Management has been verbally notified and will be included on the distribution of this note. Sandia Field Office will ask that SFO and KAFB officials jointly notify the New Mexico Environmental Department in accordance with the KAFB permit requirements.

CONTRACT LABORATORY ANALYSIS REQUEST AND CHAIN OF CUSTODY

Internal Lab

Page 1 of 1

Batch No. <i>N/A</i> <i>BLDG 840/905</i>		SMO Use		AR/COC 615631	
Project Name: <i>840-Floor Trench</i>		Date Samples Shipped: <i>7/18/14</i>		SMO Authorization: <i>[Signature]</i>	
Project/Task Manager: <i>Nick Durand</i>		Carrier/Waybill No.: <i>221838</i>		SMO Contact Phone: <i>Wendy Palencia 844-3132</i>	
Project/Task Number: <i>55242/2-01 02-01</i>		Lab Contact: <i>Edie Kent</i>		Send Report to SMO: <i>Rita Kavanaugh/505.284.2553</i>	
Service Order: <i>CF415-14</i>		Lab Destination: <i>GEL</i>		<input checked="" type="checkbox"/> Waste Characterization <input type="checkbox"/> RMMA <input type="checkbox"/> Released by CDC No. <input type="checkbox"/> 4° Celsius	
Tech Area: <i>1</i>		Contract No.: <i>1303873</i>		Bill to: Sandia National Laboratories (Accounts Payable)	
Building: <i>840</i> Room: <i>165</i>		Operational Site: <i>353048</i>		P.O. Box 5800, MS-0154 Albuquerque, NM 87185-0154	

Sample No.	Fraction	Sample Location Detail	Depth (ft)	Date/Time Collected	Sample Matrix	Container		Preservative	Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
						Type	Volume					
096284	-001	Bldg 840 Room 165 Floor Trench	N/A	7/17/14 11:30	Solid	Glass	250ml	N/A	GRAB	Sample	SVOC	
096284	-002	Bldg 840 Room 165 Floor Trench	N/A	7/17/14 11:30	Solid	HDPE	<i>1 Liter</i> 500ml	N/A	GRAB	Sample	TAL Metals / Anion 9056	<i>354494 001</i> <i>Total (n)</i> <i>RK</i> <i>8-12-14</i>

Last Chain: <input type="checkbox"/> Yes		Sample Tracking SMO Use		Special Instructions/QC Requirements:		Conditions on Receipt
Validation Req'd: <input type="checkbox"/> Yes		Date Entered: <i>7-23-14</i>		EDD <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Background: <input type="checkbox"/> Yes		Entered by: <i>RK</i>		Turnaround Time <input type="checkbox"/> 7 Day <input type="checkbox"/> 15 Day <input type="checkbox"/> 30 Day		
Confirmatory: <input type="checkbox"/> Yes		QC initials: <i>WJP</i>		Negotiated TAT <input checked="" type="checkbox"/> 3 Day		
Sample Team Members	Name	Signature	Init.	Company/Organization/Phone/Cell	Sample Disposal <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal by Lab	Lab Use
	Justin Kirby	<i>[Signature]</i>	<i>JK</i>	AMS / 048781 / 284-9778	Return Samples By:	
					Comments:	

1. Relinquished by <i>[Signature]</i>	Org. <i>48781</i> Date <i>7/17/14</i> Time <i>1328</i>	3. Relinquished by	Org.	Date	Time
1. Received by <i>[Signature]</i>	Org. <i>4142</i> Date <i>7/17/14</i> Time <i>1328</i>	3. Received by	Org.	Date	Time
2. Relinquished by <i>[Signature]</i>	Org. <i>4142</i> Date <i>7/18/14</i> Time <i>0715</i>	4. Relinquished by	Org.	Date	Time
2. Received by <i>[Signature]</i>	Org.	Date	Time	4. Received by	Org. Date Time

*Prior confirmation with SMO required for 7 and 15 day TAT

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis Report for

SNLS004 Sandia National Laboratories (1303873)

Client SDG: 353048 GEL Work Order: 353048

The Qualifiers in this report are defined as follows:

* Recovery or %RPD not within acceptance limits and/or spike amount not compatible with the sample or the duplicate RPD's are not applicable where the concentration falls below the effective PQL.

** Indicates analyte is a surrogate compound.

B The analyte was found in the blank above the effective MDL.

J Estimated value, the analyte concentration fell above the effective MDL and below the effective PQL

N Results associated with a spike analysis that was outside control limits.

U Analyzed for but undetected

U The analyte was analyzed for but not detected below this concentration. For Organic and Inorganic analytes the result is less than the effective MDL. For radiochemical analytes the result is less than the MDA

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Edith Kent.

Edith M Kent

Reviewed by _____

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: July 24, 2014

Company : Sandia National Laboratories
Address : MS-0756, Org. 06765, Bldg. 823/Rm. 4276
1515 Eubank SE
Albuquerque, New Mexico 87123
Contact: Ms. Pamela M. Puissant
Project: Level C Data Package w/out EDD

Client Sample ID: 096284-001
Sample ID: 353048001
Matrix: SOLID
Collect Date: 17-JUL-14 11:30
Receive Date: 19-JUL-14
Collector: Client

Project: SNLS00213
Client ID: SNLS004

Client Desc.: Bldg 840 Room 165 Floor Trench
Vol. Recv.:

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Semi-Volatile-GC/MS											
8270D/3541 BNA Soil Automated Soxhlet "As Received"											
1,1'-Biphenyl	NU	ND	998	3330	ug/kg	10	JLD1	07/23/14	1555	1404944	1
1,2,4-Trichlorobenzene	NU	ND	998	3330	ug/kg	10					
1,4-Dioxane	NU	ND	998	3330	ug/kg	10					
2,4,5-Trichlorophenol	NU	ND	998	3330	ug/kg	10					
2,4,6-Trichlorophenol	NU	ND	998	3330	ug/kg	10					
2,4-Dichlorophenol	NU	ND	998	3330	ug/kg	10					
2,4-Dimethylphenol	NU	ND	998	3330	ug/kg	10					
2,4-Dinitrophenol	NU	ND	998	6660	ug/kg	10					
2,4-Dinitrotoluene	NU	ND	998	3330	ug/kg	10					
2,6-Dinitrotoluene	NU	ND	998	3330	ug/kg	10					
2-Chloronaphthalene	*NU	ND	99.8	333	ug/kg	10					
2-Chlorophenol	NU	ND	998	3330	ug/kg	10					
2-Methyl-4,6-dinitrophenol	NU	ND	998	3330	ug/kg	10					
2-Methylnaphthalene	*NU	ND	99.8	333	ug/kg	10					
2-Nitrophenol	NU	ND	998	3330	ug/kg	10					
3,3'-Dichlorobenzidine	NU	ND	998	3330	ug/kg	10					
4-Bromophenylphenylether	NU	ND	998	3330	ug/kg	10					
4-Chloro-3-methylphenol	NU	ND	1330	3330	ug/kg	10					
4-Chloroaniline	NU	ND	998	3330	ug/kg	10					
4-Chlorophenylphenylether	NU	ND	998	3330	ug/kg	10					
4-Nitrophenol	NU	ND	998	3330	ug/kg	10					
Acenaphthene	*NU	ND	99.8	333	ug/kg	10					
Acenaphthylene	*NU	ND	99.8	333	ug/kg	10					
Acetophenone	NU	ND	998	3330	ug/kg	10					
Anthracene	*NU	ND	99.8	333	ug/kg	10					
Atrazine	NU	ND	1330	3330	ug/kg	10					
Benzaldehyde	NU	ND	998	3330	ug/kg	10					
Benzo(a)anthracene	*JN	126	99.8	333	ug/kg	10					
Benzo(a)pyrene	*NU	ND	99.8	333	ug/kg	10					
Benzo(b)fluoranthene	*JN	160	99.8	333	ug/kg	10					
Benzo(ghi)perylene	NU	ND	99.8	333	ug/kg	10					
Benzo(k)fluoranthene	*NU	ND	99.8	333	ug/kg	10					
Butylbenzylphthalate	NU	ND	998	3330	ug/kg	10					
Caprolactam	NU	ND	998	3330	ug/kg	10					
Carbazole	*NU	ND	99.8	333	ug/kg	10					
Chrysene	*JN	126	99.8	333	ug/kg	10					

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Address : MS-0756, Org. 06765, Bldg. 823/Rm. 4276
1515 Eubank SE
Albuquerque, New Mexico 87123
Contact: Ms. Pamela M. Puissant
Project: Level C Data Package w/out EDD

Client Sample ID: 096284-001
Sample ID: 353048001

Project: SNLS00213
Client ID: SNLS004

Client Desc.: Bldg 840 Room 165 Floor Trench
Vol. Recv.:

Semi-Volatile-GC/MS

8270D/3541 BNA Soil Automated Soxhlet "As Received"

Di-n-butylphthalate	NU	ND	998	3330	ug/kg	10
Di-n-octylphthalate	NU	ND	998	3330	ug/kg	10
Dibenzo(a,h)anthracene	NU	ND	99.8	333	ug/kg	10
Dibenzofuran	NU	ND	998	3330	ug/kg	10
Diethylphthalate	NU	ND	998	3330	ug/kg	10
Dimethylphthalate	NU	ND	998	3330	ug/kg	10
Diphenylamine	NU	ND	998	3330	ug/kg	10
Fluoranthene	*JN	246	99.8	333	ug/kg	10
Fluorene	*NU	ND	99.8	333	ug/kg	10
Hexachlorobenzene	NU	ND	998	3330	ug/kg	10
Hexachlorobutadiene	NU	ND	998	3330	ug/kg	10
Hexachlorocyclopentadiene	NU	ND	998	3330	ug/kg	10
Hexachloroethane	NU	ND	998	3330	ug/kg	10
Indeno(1,2,3-cd)pyrene	NU	ND	99.8	333	ug/kg	10
Isophorone	NU	ND	998	3330	ug/kg	10
N-Nitrosodipropylamine	NU	ND	998	3330	ug/kg	10
Naphthalene	*JN	130	99.8	333	ug/kg	10
Nitrobenzene	NU	ND	998	3330	ug/kg	10
Pentachlorophenol	NU	ND	998	3330	ug/kg	10
Phenanthrene	*N	606	99.8	333	ug/kg	10
Phenol	NU	ND	998	3330	ug/kg	10
Pyrene	*JN	176	99.8	333	ug/kg	10
bis(2-Chloro-1-methylethyl)ether	NU	ND	998	3330	ug/kg	10
bis(2-Chloroethoxy)methane	NU	ND	998	3330	ug/kg	10
bis(2-Chloroethyl) ether	NU	ND	998	3330	ug/kg	10
bis(2-Ethylhexyl)phthalate		13100	998	3330	ug/kg	10
m,p-Cresols	NU	ND	998	3330	ug/kg	10
m-Nitroaniline	NU	ND	998	3330	ug/kg	10
o-Cresol	NU	ND	998	3330	ug/kg	10
o-Nitroaniline	NU	ND	1100	3330	ug/kg	10
p-Nitroaniline	NU	ND	998	3330	ug/kg	10

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3541	Prep Method 3541 8270D BNA for Soil	SXW3	07/21/14	1743	1404941

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1515 Eubank SE
Albuquerque, New Mexico 87123
Contact: Ms. Pamela M. Puissant
Project: Level C Data Package w/out EDD

Client Sample ID: 096284-001

Sample ID: 353048001

Project: SNLS00213

Client ID: SNLS004

Client Desc.: Bldg 840 Room 165 Floor Trench

Vol. Recv.:

The following Analytical Methods were performed:

Method	Description	Analyst Comments			
1	SW846 3541/8270D				
Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
2-Fluorobiphenyl	8270D/3541 BNA Soil Automated Soxhlet "As Received"	1470 ug/kg	1660	88.6	(25%-100%)
Nitrobenzene-d5	8270D/3541 BNA Soil Automated Soxhlet "As Received"	1310 ug/kg	1660	78.8	(21%-103%)
p-Terphenyl-d14	8270D/3541 BNA Soil Automated Soxhlet "As Received"	1980 ug/kg	1660	119	(31%-124%)
2,4,6-Tribromophenol	8270D/3541 BNA Soil Automated Soxhlet "As Received"	3440 ug/kg	3330	103	(20%-122%)
2-Fluorophenol	8270D/3541 BNA Soil Automated Soxhlet "As Received"	2630 ug/kg	3330	79.1	(23%-107%)
Phenol-d5	8270D/3541 BNA Soil Automated Soxhlet "As Received"	2520 ug/kg	3330	75.7	(25%-108%)

Notes:

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 Address : MS-0756, Org. 06765, Bldg. 823/Rm. 4276
 1515 Eubank SE
 Albuquerque, New Mexico 87123
 Contact: Ms. Pamela M. Puissant
 Project: Level C Data Package w/out EDD

Client Sample ID: 096284-002	Project: SNLS00213
Sample ID: 353048002	Client ID: SNLS004
Matrix: SOLID	
Collect Date: 17-JUL-14 11:30	
Receive Date: 19-JUL-14	Client Desc.: Bldg 840 Room 165 Floor Trench
Collector: Client	Vol. Recv.:

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography											
SW846 9056A Anions "As Received"											
Bromide	J	1.68	0.670	2.00	mg/kg	1	RXB5	07/22/14	2352	1405377	1
Fluoride	N	12.3	1.65	5.00	mg/kg	5	RXB5	07/23/14	0125	1405377	2
Chloride		983	67.0	200	mg/kg	100	RXB5	07/23/14	0400	1405377	3
Sulfate		8400	133	400	mg/kg	100					
Mercury Analysis-CVAA											
7471 Cold Vapor Hg in Solid "As Received"											
Mercury	*N	0.289	0.00388	0.0116	mg/kg	1	MTM1	07/22/14	1252	1404938	4
Metals Analysis-ICP											
6010 TAL Metals, solid "As Received"											
Aluminum	N	1060	6.40	18.8	mg/kg	1	HSC	07/23/14	1806	1405131	5
Antimony	U	ND	0.311	0.942	mg/kg	1					
Arsenic	BJ	2.44	0.471	2.82	mg/kg	1					
Barium	N	28.3	0.0942	0.471	mg/kg	1					
Beryllium	J	0.120	0.0942	0.471	mg/kg	1					
Calcium	*	4710	7.53	23.5	mg/kg	1					
Chromium	N	110	0.141	0.471	mg/kg	1					
Cobalt	*	15.0	0.141	0.471	mg/kg	1					
Iron	*	5940	7.53	23.5	mg/kg	1					
Magnesium	N	731	8.00	28.2	mg/kg	1					
Silver	*N	48.2	0.0942	0.471	mg/kg	1					
Sodium	N	1750	6.59	23.5	mg/kg	1					
Vanadium	*	9.55	0.0942	0.471	mg/kg	1					
Manganese	N	100	0.188	0.942	mg/kg	1	HSC	07/24/14	1053	1405131	6
Potassium	N	661	6.03	23.5	mg/kg	1					
Copper	*	6270	2.82	9.42	mg/kg	10	HSC	07/24/14	1132	1405131	7
Lead	N	30.6	3.11	9.42	mg/kg	10					
Selenium	NU	ND	4.71	28.2	mg/kg	10					
Thallium	U	ND	4.71	18.8	mg/kg	10					
Cadmium		822	9.42	47.1	mg/kg	100	HSC	07/24/14	1147	1405131	8
Nickel	*	20200	14.1	47.1	mg/kg	100					
Zinc		3110	37.7	94.2	mg/kg	100					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	846 3050BS PREP	JXOI	07/21/14	2200	1405130

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Address : MS-0756, Org. 06765, Bldg. 823/Rm. 4276
1515 Eubank SE
Albuquerque, New Mexico 87123
Contact: Ms. Pamela M. Puissant
Project: Level C Data Package w/out EDD

Client Sample ID: 096284-002
Sample ID: 353048002

Project: SNLS00213
Client ID: SNLS004

Client Desc.: Bldg 840 Room 165 Floor Trench
Vol. Recv.:

SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	07/21/14	1717	1404933
SW846 9056A	SW846 9056A Total Anions in Soil	RXB5	07/22/14	1200	1405376

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 9056A	
3	SW846 9056A	
4	SW846 7471A	
5	SW846 3050B/6010B	
6	SW846 3050B/6010B	
7	SW846 3050B/6010B	
8	SW846 3050B/6010B	

Notes:

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QC Summary

Report Date: July 24, 2014

Page 1 of 22

Sandia National Laboratories
MS-0756, Org. 06765, Bldg. 823/Rm. 4276
1515 Eubank SE
Albuquerque, New Mexico

Contact: Ms. Pamela M. Puissant

Workorder: 353048

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	1405377										
QC1203132437	353048002	DUP									
Bromide	J	1.68	J	1.70	mg/kg	1.30 ^		(+/-2.00)	RXB5	07/23/14	00:23
Chloride		983		894	mg/kg	9.54 ^		(+/-200)		07/23/14	04:31
Fluoride	N	12.3		10.8	mg/kg	13.2 ^		(+/-5.00)		07/23/14	01:56
Sulfate		8400		7600	mg/kg	9.97		(0%-20%)		07/23/14	04:31
QC1203132439	LCS										
Bromide	12.5			12.7	mg/kg		102	(80%-120%)		07/22/14	23:21
Chloride	50.0			48.7	mg/kg		97.5	(80%-120%)			
Fluoride	25.0			25.1	mg/kg		100	(80%-120%)			
Sulfate	100			101	mg/kg		101	(80%-120%)			
QC1203132436	MB										
Bromide			U	ND	mg/kg					07/22/14	22:51
Chloride			U	ND	mg/kg						
Fluoride			U	ND	mg/kg						
Sulfate			U	ND	mg/kg						
QC1203132438	353048002	MS									
Bromide	12.5	J	1.68	15.6	mg/kg		111	(75%-125%)		07/23/14	00:54
Chloride	50.0		983	872	mg/kg		N/A	(75%-125%)		07/23/14	05:02
Fluoride	25.0	N	12.3	27.7	mg/kg		61.6*	(75%-125%)		07/23/14	02:27
Sulfate	100		8400	6630	mg/kg		N/A	(75%-125%)		07/23/14	05:02
Metals Analysis-ICP											
Batch	1405131										
QC1203131839	353048002	DUP									
Aluminum	N	1060		1240	mg/kg	15.8		(0%-20%)	HSC	07/23/14	18:09

GEL LABORATORIES LLC

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QC Summary

Workorder: 353048

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1405131										
Antimony	U	ND	U	ND	mg/kg	N/A			HSC	07/23/14	18:09
Arsenic	BJ	2.44	B	3.66	mg/kg	40.0 ^		(+/-2.86)			
Barium	N	28.3		33.5	mg/kg	17.0		(0%-20%)			
Beryllium	J	0.120	J	0.168	mg/kg	33.6 ^		(+/-0.477)			
Cadmium		822		696	mg/kg	16.7		(0%-20%)		07/24/14	11:51
Calcium	*	4710	*	6990	mg/kg	39.1*		(0%-20%)		07/23/14	18:09
Chromium	N	110		98.5	mg/kg	10.7		(0%-20%)			
Cobalt	*	15.0	*	11.5	mg/kg	26.5*		(0%-20%)			
Copper	*	6270	*	5040	mg/kg	21.8*		(0%-20%)		07/24/14	11:36
Iron	*	5940	*	7290	mg/kg	20.5*		(0%-20%)		07/23/14	18:09
Lead	N	30.6		30.6	mg/kg	0.0731 ^		(+/-9.54)		07/24/14	11:36
Magnesium	N	731		738	mg/kg	0.932		(0%-20%)		07/23/14	18:09
Manganese	N	100		121	mg/kg	19.2		(0%-20%)		07/24/14	10:56
Nickel	*	20200	*	15600	mg/kg	25.9*		(0%-20%)		07/24/14	11:51
Potassium	N	661		783	mg/kg	17.0		(0%-20%)		07/24/14	10:56
Selenium	NU	ND	J	9.64	mg/kg	200				07/24/14	11:36
Silver	*N	48.2	*	29.7	mg/kg	47.4*		(0%-20%)		07/23/14	18:09
Sodium	N	1750		1680	mg/kg	3.70		(0%-20%)			
Thallium	U	ND	U	ND	mg/kg	N/A				07/24/14	11:36
Vanadium	*	9.55	*	13.9	mg/kg	37.2*		(0%-20%)		07/23/14	18:09
Zinc		3110		3360	mg/kg	7.48		(0%-20%)		07/24/14	11:51

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1405131										
QC1203131838	LCS										
Aluminum	8590			6190	mg/kg		72	(45%-154%)	HSC	07/23/14	18:02
Antimony	164			196	mg/kg		120	(33%-167%)			
Arsenic	136		B	145	mg/kg		107	(83%-118%)			
Barium	287			287	mg/kg		99.9	(83%-118%)			
Beryllium	137			148	mg/kg		108	(84%-116%)			
Cadmium	84.2			89.2	mg/kg		106	(84%-116%)		07/24/14	10:50
Calcium	6060			6440	mg/kg		106	(83%-117%)		07/23/14	18:02
Chromium	166			177	mg/kg		107	(82%-118%)			
Cobalt	86.1			91.4	mg/kg		106	(85%-115%)			
Copper	185			206	mg/kg		111	(84%-117%)		07/24/14	10:50
Iron	12400			13200	mg/kg		107	(51%-149%)		07/23/14	18:02
Lead	119			121	mg/kg		102	(83%-117%)		07/24/14	10:50
Magnesium	2890			2780	mg/kg		96.1	(75%-125%)		07/23/14	18:02
Manganese	307			317	mg/kg		103	(83%-117%)		07/24/14	10:50
Nickel	157			172	mg/kg		109	(84%-116%)			
Potassium	2750			2390	mg/kg		87	(69%-131%)			
Selenium	43.1			42.6	mg/kg		98.9	(78%-122%)			
Silver	54.7			54.2	mg/kg		99.2	(66%-134%)		07/23/14	18:02
Sodium	499			514	mg/kg		103	(74%-126%)			
Thallium	145			147	mg/kg		102	(82%-119%)		07/24/14	10:50
Vanadium	137			151	mg/kg		111	(80%-120%)		07/23/14	18:02
Zinc	204			216	mg/kg		106	(82%-118%)		07/24/14	10:50

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch 1405131											
QC1203131837	MB										
Aluminum			U	ND	mg/kg				HSC	07/23/14	17:59
Antimony			U	ND	mg/kg						
Arsenic			J	0.617	mg/kg						
Barium			U	ND	mg/kg						
Beryllium			U	ND	mg/kg						
Cadmium			U	ND	mg/kg					07/24/14	10:48
Calcium			U	ND	mg/kg					07/23/14	17:59
Chromium			U	ND	mg/kg						
Cobalt			U	ND	mg/kg						
Copper			U	ND	mg/kg					07/24/14	10:48
Iron			U	ND	mg/kg					07/23/14	17:59
Lead			U	ND	mg/kg					07/24/14	10:48
Magnesium			U	ND	mg/kg					07/23/14	17:59
Manganese			U	ND	mg/kg					07/24/14	10:48
Nickel			U	ND	mg/kg						
Potassium			U	ND	mg/kg						
Selenium			U	ND	mg/kg						
Silver			U	ND	mg/kg					07/23/14	17:59
Sodium			U	ND	mg/kg						
Thallium			U	ND	mg/kg					07/24/14	10:48
Vanadium			U	ND	mg/kg					07/23/14	17:59

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1405131										
Zinc			U	ND	mg/kg				HSC	07/24/14	10:48
QC1203131840 353048002 MS											
Aluminum	491	N	1060	N	2300	mg/kg	253 *	(75%-125%)		07/23/14	18:12
Antimony	49.1	U	ND		45.5	mg/kg	92.1	(75%-125%)			
Arsenic	49.1	BJ	2.44	B	56.8	mg/kg	111	(75%-125%)			
Barium	49.1	N	28.3	N	103	mg/kg	152 *	(75%-125%)			
Beryllium	49.1	J	0.120		50.6	mg/kg	103	(75%-125%)			
Cadmium	49.1		822		2350	mg/kg	N/A	(75%-125%)		07/24/14	11:55
Calcium	491	*	4710		8530	mg/kg	N/A	(75%-125%)		07/23/14	18:12
Chromium	49.1	N	110	N	273	mg/kg	334 *	(75%-125%)			
Cobalt	49.1	*	15.0		76.3	mg/kg	125	(75%-125%)			
Copper	49.1	*	6270		15000	mg/kg	N/A	(75%-125%)		07/24/14	11:40
Iron	491	*	5940		13800	mg/kg	N/A	(75%-125%)		07/23/14	18:12
Lead	49.1	N	30.6	N	128	mg/kg	198 *	(75%-125%)		07/24/14	11:40
Magnesium	491	N	731	N	1530	mg/kg	162 *	(75%-125%)		07/23/14	18:12
Manganese	49.1	N	100	N	191	mg/kg	185 *	(75%-125%)		07/24/14	10:59
Nickel	49.1	*	20200		45600	mg/kg	N/A	(75%-125%)		07/24/14	11:55
Potassium	491	N	661	N	1480	mg/kg	167 *	(75%-125%)		07/24/14	10:59
Selenium	49.1	NU	ND	JN	13.6	mg/kg	27.6 *	(75%-125%)		07/24/14	11:40
Silver	49.1	*N	48.2	N	146	mg/kg	199 *	(75%-125%)		07/23/14	18:12
Sodium	491	N	1750	N	3290	mg/kg	313 *	(75%-125%)			
Thallium	49.1	U	ND		40.7	mg/kg	82.8	(75%-125%)		07/24/14	11:40

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1405131										
Vanadium	49.1	*	9.55	64.4	mg/kg		112	(75%-125%)	HSC	07/23/14	18:12
Zinc	49.1		3110	6480	mg/kg		N/A	(75%-125%)		07/24/14	11:55
QC1203134720 353048002 PS											
Aluminum	5000	N	11200	15600	ug/L		87.3	(75%-125%)		07/24/14	13:52
Barium	500	N	300	848	ug/L		110	(75%-125%)			
Chromium	500	N	1160	1750	ug/L		117	(75%-125%)			
Lead	500	N	32.5	552	ug/L		104	(75%-125%)		07/24/14	14:28
Magnesium	5000	N	7770	13500	ug/L		114	(75%-125%)		07/24/14	13:52
Manganese	500	N	1060	1610	ug/L		109	(75%-125%)		07/24/14	14:25
Potassium	5000	N	7020	11700	ug/L		93.6	(75%-125%)			
Selenium	500	NU	ND	563	ug/L		113	(75%-125%)		07/24/14	14:28
Silver	500	*N	512	997	ug/L		97.1	(75%-125%)		07/24/14	13:52
Sodium	5000	N	18600	22700	ug/L		83.5	(75%-125%)			
QC1203131842 353048002 SDILT											
Aluminum		N	11200	2330	ug/L	3.82		(0%-10%)		07/23/14	18:16
Antimony		U	ND	ND	ug/L	N/A		(0%-10%)			
Arsenic		BJ	25.9	BJ	ug/L	71.1		(0%-10%)			
Barium		N	300	61.5	ug/L	2.42		(0%-10%)			
Beryllium		J	1.27	U	ug/L	N/A		(0%-10%)			
Cadmium			87.3	17.4	ug/L	.313		(0%-10%)		07/24/14	11:58
Calcium		*	50000	10100	ug/L	1.21		(0%-10%)		07/23/14	18:16
Chromium		N	1160	237	ug/L	1.75		(0%-10%)			
Cobalt		*	159	33.6	ug/L	5.49		(0%-10%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-Mercury											
Batch	1404938										
Mercury		*N	4.99	0.842	ug/L	15.6		(0%-10%)		07/22/14	12:57
Semi-Volatile-GC/MS											
Batch	1404944										
QC1203131339	LCS										
1,1'-Biphenyl	1670			970	ug/kg		58.2	(42%-100%)	JLD1	07/23/14	13:57
1,2,4-Trichlorobenzene	1670			958	ug/kg		57.5	(37%-98%)			
1,4-Dioxane	1670			516	ug/kg		31	(29%-80%)			
2,3,5-Trichlorophenol	1670			999	ug/kg		60	(41%-103%)			
2,4,6-Trichlorophenol	1670			973	ug/kg		58.4	(36%-98%)			
2,4-Dichlorophenol	1670			1000	ug/kg		60.1	(35%-110%)			
2,4-Dimethylphenol	1670			1010	ug/kg		60.9	(35%-102%)			
2,4-Dinitrophenol	1670			846	ug/kg		50.8	(22%-83%)			
2,4-Dinitrotoluene	1670			1090	ug/kg		65.2	(43%-109%)			
2,6-Dinitrotoluene	1670			1010	ug/kg		60.5	(41%-103%)			
2-Chloronaphthalene	1670			976	ug/kg		58.6	(39%-101%)			
2-Chlorophenol	1670			998	ug/kg		60	(38%-100%)			
2-Methyl-4,6-dinitrophenol	1670			894	ug/kg		53.7	(33%-103%)			
2-Methylnaphthalene	1670			967	ug/kg		58.1	(36%-107%)			
2-Nitrophenol	1670			967	ug/kg		58.1	(35%-106%)			
3,3'-Dichlorobenzidine	1670			899	ug/kg		54	(32%-111%)			
4-Bromophenylphenylether	1670			988	ug/kg		59.3	(42%-110%)			
4-Chloro-3-methylphenol	1670			1110	ug/kg		66.5	(35%-104%)			
4-Chloroaniline	1670			902	ug/kg		54.2	(32%-106%)			
4-Chlorophenylphenylether	1670			1040	ug/kg		62.5	(41%-104%)			

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Semi-Volatile-GC/MS									
Batch	1404944								
4-Nitrophenol	1670		930	ug/kg		55.9	(23%-114%)	JLD1	07/23/14 13:57
Acenaphthene	1670		946	ug/kg		56.8	(36%-105%)		
Acenaphthylene	1670		991	ug/kg		59.5	(38%-103%)		
Acetophenone	1670		957	ug/kg		57.5	(37%-104%)		
Anthracene	1670		1040	ug/kg		62.7	(43%-104%)		
Atrazine	1670		1220	ug/kg		73.2	(32%-104%)		
Benzaldehyde	1670		939	ug/kg		56.4	(10%-130%)		
Benzo(a)anthracene	1670		1020	ug/kg		61.6	(46%-108%)		
Benzo(a)pyrene	1670		1060	ug/kg		63.6	(45%-109%)		
Benzo(b)fluoranthene	1670		1060	ug/kg		63.8	(42%-111%)		
Benzo(ghi)perylene	1670		1080	ug/kg		64.6	(43%-115%)		
Benzo(k)fluoranthene	1670		1080	ug/kg		65	(43%-103%)		
Butylbenzylphthalate	1670		1110	ug/kg		66.8	(37%-107%)		
Caprolactam	1670		1190	ug/kg		71.7	(39%-114%)		
Carbazole	1670		1210	ug/kg		72.5	(53%-118%)		
Chrysene	1670		1040	ug/kg		62.2	(47%-107%)		
Di-n-butylphthalate	1670		1120	ug/kg		67.5	(46%-112%)		
Di-n-octylphthalate	1670		1150	ug/kg		68.8	(41%-110%)		
Dibenzo(a,h)anthracene	1670		1180	ug/kg		70.8	(39%-128%)		
Dibenzofuran	1670		991	ug/kg		59.5	(38%-104%)		
Diethylphthalate	1670		1100	ug/kg		66.1	(42%-109%)		

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS										
Batch	1404944									
Dimethylphthalate	1670		1030	ug/kg		61.8	(41%-105%)			
Diphenylamine	1670		958	ug/kg		57.5	(40%-101%)	JLD1	07/23/14	13:57
Fluoranthene	1670		1140	ug/kg		68.3	(44%-106%)			
Fluorene	1670		1010	ug/kg		60.8	(39%-102%)			
Hexachlorobenzene	1670		1030	ug/kg		62	(41%-108%)			
Hexachlorobutadiene	1670		1090	ug/kg		65.7	(32%-104%)			
Hexachlorocyclopentadiene	1670		844	ug/kg		50.7	(24%-84%)			
Hexachloroethane	1670		1060	ug/kg		63.6	(34%-98%)			
Indeno(1,2,3-cd)pyrene	1670		1120	ug/kg		67.3	(45%-115%)			
Isophorone	1670		1030	ug/kg		61.9	(36%-98%)			
N-Nitrosodipropylamine	1670		1030	ug/kg		61.8	(34%-106%)			
Naphthalene	1670		942	ug/kg		56.6	(38%-106%)			
Nitrobenzene	1670		958	ug/kg		57.6	(35%-99%)			
Pentachlorophenol	1670		1020	ug/kg		61.5	(31%-93%)			
Phenanthrene	1670		1020	ug/kg		61.2	(43%-105%)			
Phenol	1670		985	ug/kg		59.1	(38%-98%)			
Pyrene	1670		1010	ug/kg		60.9	(33%-99%)			
bis(2-Chloro-1-methylethyl)ether	1670		992	ug/kg		59.6	(27%-109%)			
bis(2-Chloroethoxy)methane	1670		977	ug/kg		58.7	(37%-98%)			
bis(2-Chloroethyl) ether	1670		934	ug/kg		56.1	(35%-96%)			
bis(2-Ethylhexyl)phthalate	1670		1080	ug/kg		65	(41%-104%)			
m,p-Cresols	1670		1150	ug/kg		69.2	(39%-115%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1404944										
m-Nitroaniline	1670			1000	ug/kg		60.2	(32%-113%)			
o-Cresol	1670			1060	ug/kg		63.6	(37%-97%)	JLD1	07/23/14	13:57
o-Nitroaniline	1670			1010	ug/kg		60.9	(34%-116%)			
p-Nitroaniline	1670			1290	ug/kg		77.6	(35%-150%)			
**2,4,6-Tribromophenol	3330			2380	ug/kg		71.6	(20%-122%)			
**2-Fluorobiphenyl	1670			1020	ug/kg		61.1	(25%-100%)			
**2-Fluorophenol	3330			2170	ug/kg		65.1	(23%-107%)			
**Nitrobenzene-d5	1670			1010	ug/kg		60.5	(21%-103%)			
**Phenol-d5	3330			2190	ug/kg		65.7	(25%-108%)			
**p-Terphenyl-d14	1670			1170	ug/kg		70.1	(31%-124%)			
QC1203131338	MB										
1,1'-Biphenyl			U	ND	ug/kg					07/23/14	14:27
1,2,4-Trichlorobenzene			U	ND	ug/kg						
1,4-Dioxane			U	ND	ug/kg						
2,4,5-Trichlorophenol			U	ND	ug/kg						
2,4,6-Trichlorophenol			U	ND	ug/kg						
2,4-Dichlorophenol			U	ND	ug/kg						
2,4-Dimethylphenol			U	ND	ug/kg						
2,4-Dinitrophenol			U	ND	ug/kg						
2,4-Dinitrotoluene			U	ND	ug/kg						
2,6-Dinitrotoluene			U	ND	ug/kg						
2-Chloronaphthalene			U	ND	ug/kg						
2-Chlorophenol			U	ND	ug/kg						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1404944										
2-Methyl-4,6-dinitrophenol			U	ND	ug/kg				JLD1	07/23/14	14:27
2-Methylnaphthalene			U	ND	ug/kg						
2-Nitrophenol			U	ND	ug/kg						
3,3'-Dichlorobenzidine			U	ND	ug/kg						
4-Bromophenylphenylether			U	ND	ug/kg						
4-Chloro-3-methylphenol			U	ND	ug/kg						
4-Chloroaniline			U	ND	ug/kg						
4-Chlorophenylphenylether			U	ND	ug/kg						
4-Nitrophenol			U	ND	ug/kg						
Acenaphthene			U	ND	ug/kg						
Acenaphthylene			U	ND	ug/kg						
Acetophenone			U	ND	ug/kg						
Anthracene			U	ND	ug/kg						
Atrazine			U	ND	ug/kg						
Benzaldehyde			U	ND	ug/kg						
Benzo(a)anthracene			U	ND	ug/kg						
Benzo(a)pyrene			U	ND	ug/kg						
Benzo(b)fluoranthene			U	ND	ug/kg						
Benzo(ghi)perylene			U	ND	ug/kg						
Benzo(k)fluoranthene			U	ND	ug/kg						
Butylbenzylphthalate			U	ND	ug/kg						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch 1404944											
Caprolactam			U	ND	ug/kg						
Carbazole			U	ND	ug/kg				JLD1	07/23/14	14:27
Chrysene			U	ND	ug/kg						
Di-n-butylphthalate			U	ND	ug/kg						
Di-n-octylphthalate			U	ND	ug/kg						
Dibenzo(a,h)anthracene			U	ND	ug/kg						
Dibenzofuran			U	ND	ug/kg						
Diethylphthalate			U	ND	ug/kg						
Dimethylphthalate			U	ND	ug/kg						
Diphenylamine			U	ND	ug/kg						
Fluoranthene			U	ND	ug/kg						
Fluorene			U	ND	ug/kg						
Hexachlorobenzene			U	ND	ug/kg						
Hexachlorobutadiene			U	ND	ug/kg						
Hexachlorocyclopentadiene			U	ND	ug/kg						
Hexachloroethane			U	ND	ug/kg						
Indeno(1,2,3-cd)pyrene			U	ND	ug/kg						
Isophorone			U	ND	ug/kg						
N-Nitrosodipropylamine			U	ND	ug/kg						
Naphthalene			U	ND	ug/kg						
Nitrobenzene			U	ND	ug/kg						
Pentachlorophenol			U	ND	ug/kg						

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1404944										
Phenanthrene			U	ND	ug/kg						
Phenol			U	ND	ug/kg				JLD1	07/23/14	14:27
Pyrene			U	ND	ug/kg						
bis(2-Chloro-1-methylethyl)ether			U	ND	ug/kg						
bis(2-Chloroethoxy)methane			U	ND	ug/kg						
bis(2-Chloroethyl) ether			U	ND	ug/kg						
bis(2-Ethylhexyl)phthalate			U	ND	ug/kg						
m,p-Cresols			U	ND	ug/kg						
m-Nitroaniline			U	ND	ug/kg						
o-Cresol			U	ND	ug/kg						
o-Nitroaniline			U	ND	ug/kg						
p-Nitroaniline			U	ND	ug/kg						
**2,4,6-Tribromophenol	3330			2470	ug/kg		74.2	(20%-122%)			
**2-Fluorobiphenyl	1660			1130	ug/kg		68	(25%-100%)			
**2-Fluorophenol	3330			2390	ug/kg		71.9	(23%-107%)			
**Nitrobenzene-d5	1660			1170	ug/kg		70.3	(21%-103%)			
**Phenol-d5	3330			2360	ug/kg		71	(25%-108%)			
**p-Terphenyl-d14	1660			1450	ug/kg		87.3	(31%-124%)			
QC1203131340 353048001 MS											
1,1'-Biphenyl	1660	NU	ND NU	ND	ug/kg		0*	(27%-111%)		07/23/14	16:24
1,2,4-Trichlorobenzene	1660	NU	ND NU	ND	ug/kg		0*	(25%-102%)			
1,4-Dioxane	1660	NU	ND NU	ND	ug/kg		0*	(10%-150%)			
2,4,5-Trichlorophenol	1660	NU	ND NU	ND	ug/kg		0*	(38%-109%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1404944										
2,4,6-Trichlorophenol	1660	NU	ND NU	ND	ug/kg		0*	(32%-103%)	JLD1	07/23/14	16:24
2,4-Dichlorophenol	1660	NU	ND NU	ND	ug/kg		0*	(31%-103%)			
2,4-Dimethylphenol	1660	NU	ND NU	ND	ug/kg		0*	(30%-109%)			
2,4-Dinitrophenol	1660	NU	ND NU	ND	ug/kg		0*	(19%-101%)			
2,4-Dinitrotoluene	1660	NU	ND NU	ND	ug/kg		0*	(36%-115%)			
2,6-Dinitrotoluene	1660	NU	ND NU	ND	ug/kg		0*	(36%-107%)			
2-Chloronaphthalene	1660	*NU	ND JN	326	ug/kg		19.6*	(27%-109%)			
2-Chlorophenol	1660	NU	ND NU	ND	ug/kg		0*	(28%-108%)			
2-Methyl-4,6-dinitrophenol	1660	NU	ND NU	ND	ug/kg		0*	(14%-116%)			
2-Methylnaphthalene	1660	*NU	ND JN	316	ug/kg		19*	(23%-107%)			
2-Nitrophenol	1660	NU	ND NU	ND	ug/kg		0*	(24%-106%)			
3,3'-Dichlorobenzidine	1660	NU	ND NU	ND	ug/kg		0*	(28%-105%)			
4-Bromophenylphenylether	1660	NU	ND NU	ND	ug/kg		0*	(37%-112%)			
4-Chloro-3-methylphenol	1660	NU	ND NU	ND	ug/kg		0*	(32%-112%)			
4-Chloroaniline	1660	NU	ND NU	ND	ug/kg		0*	(27%-100%)			
4-Chlorophenylphenylether	1660	NU	ND NU	ND	ug/kg		0*	(37%-110%)			
4-Nitrophenol	1660	NU	ND NU	ND	ug/kg		0*	(12%-128%)			
Acenaphthene	1660	*NU	ND N	339	ug/kg		20.4*	(28%-102%)			
Acenaphthylene	1660	*NU	ND N	446	ug/kg		26.8*	(32%-103%)			
Acetophenone	1660	NU	ND NU	ND	ug/kg		0*	(27%-110%)			
Anthracene	1660	*NU	ND N	356	ug/kg		21.4*	(36%-104%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1404944										
Atrazine	1660	NU	ND NU	ND	ug/kg		0*	(28%-107%)			
Benzaldehyde	1660	NU	ND NU	ND	ug/kg		0*	(17%-101%)	JLD1	07/23/14	16:24
Benzo(a)anthracene	1660	*JN	126 JN	216	ug/kg		5.4*	(27%-120%)			
Benzo(a)pyrene	1660	*NU	ND JN	123	ug/kg		7.4*	(31%-116%)			
Benzo(b)fluoranthene	1660	*JN	160 JN	156	ug/kg		0*	(30%-119%)			
Benzo(ghi)perylene	1660	NU	ND NU	ND	ug/kg		0*	(30%-109%)			
Benzo(k)fluoranthene	1660	*NU	ND JN	143	ug/kg		8.6*	(31%-125%)			
Butylbenzylphthalate	1660	NU	ND NU	ND	ug/kg		0*	(33%-121%)			
Caprolactam	1660	NU	ND NU	ND	ug/kg		0*	(29%-126%)			
Carbazole	1660	*NU	ND	699	ug/kg		42	(40%-133%)			
Chrysene	1660	*JN	126 JN	210	ug/kg		5*	(33%-114%)			
Di-n-butylphthalate	1660	NU	ND NU	ND	ug/kg		0*	(42%-119%)			
Di-n-octylphthalate	1660	NU	ND NU	ND	ug/kg		0*	(36%-115%)			
Dibenzo(a,h)anthracene	1660	NU	ND NU	ND	ug/kg		0*	(26%-128%)			
Dibenzofuran	1660	NU	ND NU	ND	ug/kg		0*	(28%-117%)			
Diethylphthalate	1660	NU	ND NU	ND	ug/kg		0*	(40%-113%)			
Dimethylphthalate	1660	NU	ND NU	ND	ug/kg		0*	(38%-110%)			
Diphenylamine	1660	NU	ND NU	ND	ug/kg		0*	(34%-111%)			
Fluoranthene	1660	*JN	246 N	359	ug/kg		6.8*	(32%-115%)			
Fluorene	1660	*NU	ND N	363	ug/kg		21.8*	(30%-115%)			
Hexachlorobenzene	1660	NU	ND NU	ND	ug/kg		0*	(34%-111%)			
Hexachlorobutadiene	1660	NU	ND NU	ND	ug/kg		0*	(24%-105%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1404944										
Hexachlorocyclopentadiene	1660	NU	ND NU	ND	ug/kg		0*	(12%-106%)			
Hexachloroethane	1660	NU	ND NU	ND	ug/kg		0*	(24%-102%)	JLD1	07/23/14	16:24
Indeno(1,2,3-cd)pyrene	1660	NU	ND NU	ND	ug/kg		0*	(29%-117%)			
Isophorone	1660	NU	ND NU	ND	ug/kg		0*	(24%-108%)			
N-Nitrosodipropylamine	1660	NU	ND NU	ND	ug/kg		0*	(23%-117%)			
Naphthalene	1660	*JN	130 N	356	ug/kg		13.6*	(21%-107%)			
Nitrobenzene	1660	NU	ND NU	ND	ug/kg		0*	(25%-104%)			
Pentachlorophenol	1660	NU	ND NU	ND	ug/kg		0*	(22%-108%)			
Phenanthrene	1660	*N	606 N	516	ug/kg		0*	(28%-119%)			
Phenol	1660	NU	ND NU	ND	ug/kg		0*	(28%-108%)			
Pyrene	1660	*JN	176 JN	323	ug/kg		8.8*	(25%-119%)			
bis(2-Chloro-1-methylethyl)ether	1660	NU	ND NU	ND	ug/kg		0*	(25%-105%)			
bis(2-Chloroethoxy)methane	1660	NU	ND NU	ND	ug/kg		0*	(27%-104%)			
bis(2-Chloroethyl) ether	1660	NU	ND NU	ND	ug/kg		0*	(25%-102%)			
bis(2-Ethylhexyl)phthalate	1660		13100 U	ND	ug/kg		N/A	(33%-124%)			
m,p-Cresols	1660	NU	ND NU	ND	ug/kg		0*	(32%-123%)			
m-Nitroaniline	1660	NU	ND NU	ND	ug/kg		0*	(31%-110%)			
o-Cresol	1660	NU	ND NU	ND	ug/kg		0*	(27%-105%)			
o-Nitroaniline	1660	NU	ND NU	ND	ug/kg		0*	(37%-114%)			
p-Nitroaniline	1660	NU	ND NU	ND	ug/kg		0*	(36%-141%)			
**2,4,6-Tribromophenol	3330		3440	1130	ug/kg		34.1	(20%-122%)			
**2-Fluorobiphenyl	1660		1470	326	ug/kg		19.6*	(25%-100%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch 1404944											
**2-Fluorophenol	3330	2630		1120	ug/kg		33.8	(23%-107%)			
**Nitrobenzene-d5	1660	1310		449	ug/kg		27	(21%-103%)	JLD1	07/23/14	16:24
**Phenol-d5	3330	2520		1150	ug/kg		34.6	(25%-108%)			
**p-Terphenyl-d14	1660	1980		176	ug/kg		10.6*	(31%-124%)			
QC1203131341 353048001 MSD											
1,1'-Biphenyl	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)		07/23/14	16:54
1,2,4-Trichlorobenzene	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
1,4-Dioxane	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
2,4,5-Trichlorophenol	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
2,4,6-Trichlorophenol	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
2,4-Dichlorophenol	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
2,4-Dimethylphenol	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
2,4-Dinitrophenol	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
2,4-Dinitrotoluene	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
2,6-Dinitrotoluene	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
2-Chloronaphthalene	1660	*NU	ND *JN	136	ug/kg	82.0*	8.2*	(0%-30%)			
2-Chlorophenol	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
2-Methyl-4,6-dinitrophenol	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
2-Methylnaphthalene	1660	*NU	ND *JN	143	ug/kg	75.3*	8.6*	(0%-30%)			
2-Nitrophenol	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
3,3'-Dichlorobenzidine	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
4-Bromophenylphenylether	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
4-Chloro-3-methylphenol	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1404944										
4-Chloroaniline	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)	JLD1	07/23/14	16:54
4-Chlorophenylphenylether	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
4-Nitrophenol	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
Acenaphthene	1660	*NU	ND *JN	146	ug/kg	79.4*	8.8*	(0%-30%)			
Acenaphthylene	1660	*NU	ND *JN	226	ug/kg	65.3*	13.6*	(0%-30%)			
Acetophenone	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
Anthracene	1660	*NU	ND *JN	123	ug/kg	97.2*	7.4*	(0%-30%)			
Atrazine	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
Benzaldehyde	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
Benzo(a)anthracene	1660	*JN	126 *NU	ND	ug/kg	200*	0*	(0%-30%)			
Benzo(a)pyrene	1660	*NU	ND *NU	ND	ug/kg	200*	0*	(0%-30%)			
Benzo(b)fluoranthene	1660	*JN	160 *NU	ND	ug/kg	200*	0*	(0%-30%)			
Benzo(ghi)perylene	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
Benzo(k)fluoranthene	1660	*NU	ND *NU	ND	ug/kg	200*	0*	(0%-30%)			
Butylbenzylphthalate	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
Caprolactam	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
Carbazole	1660	*NU	ND *N	426	ug/kg	48.5*	25.6*	(0%-30%)			
Chrysene	1660	*JN	126 *NU	ND	ug/kg	200*	0*	(0%-30%)			
Di-n-butylphthalate	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
Di-n-octylphthalate	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
Dibenzo(a,h)anthracene	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1404944										
Dibenzofuran	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
Diethylphthalate	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)	JLD1	07/23/14	16:54
Dimethylphthalate	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
Diphenylamine	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
Fluoranthene	1660	*JN	246 *JN	103	ug/kg	111*	0*	(0%-30%)			
Fluorene	1660	*NU	ND *JN	146	ug/kg	84.9*	8.8*	(0%-30%)			
Hexachlorobenzene	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
Hexachlorobutadiene	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
Hexachlorocyclopentadiene	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
Hexachloroethane	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
Indeno(1,2,3-cd)pyrene	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
Isophorone	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
N-Nitrosodipropylamine	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
Naphthalene	1660	*JN	130 *JN	193	ug/kg	59.4*	3.8*	(0%-30%)			
Nitrobenzene	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
Pentachlorophenol	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
Phenanthrene	1660	*N	606 *JN	226	ug/kg	78.0*	0*	(0%-30%)			
Phenol	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
Pyrene	1660	*JN	176 *JN	113	ug/kg	96.2*	0*	(0%-30%)			
bis(2-Chloro-1-methylethyl)ether	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
bis(2-Chloroethoxy)methane	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
bis(2-Chloroethyl) ether	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch	1404944										
bis(2-Ethylhexyl)phthalate	1660	13100	U	ND	ug/kg	N/A	N/A	(0%-30%)			
m,p-Cresols	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)	JLD1	07/23/14	16:54
m-Nitroaniline	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
o-Cresol	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
o-Nitroaniline	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
p-Nitroaniline	1660	NU	ND NU	ND	ug/kg	N/A	0*	(0%-30%)			
**2,4,6-Tribromophenol	3330	3440		689	ug/kg		20.7	(20%-122%)			
**2-Fluorobiphenyl	1660	1470		143	ug/kg		8.6*	(25%-100%)			
**2-Fluorophenol	3330	2630		1020	ug/kg		30.5	(23%-107%)			
**Nitrobenzene-d5	1660	1310		340	ug/kg		20.4*	(21%-103%)			
**Phenol-d5	3330	2520		1140	ug/kg		34.1	(25%-108%)			
**p-Terphenyl-d14	1660	1980		33.3	ug/kg		2*	(31%-124%)			

Notes:

- * Recovery or %RPD not within acceptance limits and/or spike amount not compatible with the sample or the duplicate RPD's are not applicable where the concentration falls below the effective PQL.
- ** Indicates analyte is a surrogate compound.
- < For less than value for Flashpoint
- B The analyte was found in the blank above the effective MDL.
- H Analytical holding time was exceeded
- J Estimated value, the analyte concentration fell above the effective MDL and below the effective PQL
- N Results associated with a spike analysis that was outside control limits.
- P The response between the confirmation column and the primary column is >40%D
- U The analyte was analyzed for but not detected below this concentration. For Organic and Inorganic analytes the result is less than the effective MDL. For radiochemical analytes the result is less than the MDA
- X Presumptive evidence that the analyte is not present. Please see narrative for further information.
- X Presumptive evidence that the analyte is not present. Please see narrative for further information.
- Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
- Z The percent difference is greater than 70%.

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Paramname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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d The 2:1 depletion requirement was not met for this sample

h Prep holding time exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

DATA EXCEPTION REPORT			
Mo.Day Yr. 22-JUL-14	Division: Industrial	Quality Criteria: Specifications	Type: Process
Instrument Type: MERCURY	Test / Method: SW846 7471A	Matrix Type: Solid	Client Code: LANL, LLNL, OLAB, SNLS,
Batch ID: 1404938	Sample Numbers: See Below		
Potentially affected work order(s)(SDG): 353048			
Application Issues: Failed Recovery for MS/PS Failed RPD for DUP			
Specification and Requirements		DER Disposition:	
Exception Description:			
1. Failed Recovery for MS/PS: QC 1203131325(096284-002)MS,1203131331(096284-002)PS 2. Failed RPD for DUP: QC 1203131324(096284-002)DUP		1. The matrix spike recovery failed outside of the control limits for mercury. The post spike failed outside the required control limits for all analytes. This verifies the presence of a matrix interference. 2. The sample duplicate % RPD failed outside the control limits for mercury due to possible sample non-homogeneity and/or matrix interference.	

Originator's Name:
Monifa Basdeo 23-JUL-14

Data Validator/Group Leader:
Nik-Cole Elmore 23-JUL-14

DATA EXCEPTION REPORT			
Mo. Day Yr. 24-JUL-14	Division: Industrial	Quality Criteria: Specifications	Type: Process
Instrument Type: SEMIVOA GC/MS	Test / Method: SW846 3541/8270D	Matrix Type: Solid	Client Code: DAVE, SNLS, SUBR
Batch ID: 1404944	Sample Numbers: See Below		
Potentially affected work order(s)(SDG): 352258,352439,353048			
Application Issues: Failed Recovery for MS/PS Failed RPD for MS/MSD, or PS/PSD Failed Yield for Surrogates Failed Recovery for MSD/PSD			
Specification and Requirements Exception Description:		DER Disposition:	
1. The MS(1203131340(096284-001)) and MSD(1203131341(096284-001)) displayed multiple surrogate, spike, and RPD recovery failures. Please see the QC Summary for specific recovery values.		1. As the MS(1203131340) and MSD(1203131341) displayed similar percent recoveries, the failures were attributed to matrix interference. The data were reported.	

Originator's Name:
Jennifer Dunagan Jones 24-JUL-14

Data Validator/Group Leader:
Cameron Bearden 24-JUL-14

DATA EXCEPTION REPORT			
Mo. Day Yr. 24-JUL-14	Division: Industrial	Quality Criteria: Specifications	Type: Process
Instrument Type: ICP	Test / Method: SW846 3050B/6010B	Matrix Type: Solid	Client Code: SNLS
Batch ID: 1405131	Sample Numbers: See Below		
Potentially affected work order(s)(SDG): 353048			
Application Issues: Failed Recovery for MS/PS Failed RPD for DUP			
Specification and Requirements Exception Description:		DER Disposition:	
<p>1. Failed Recovery for MS/PS: QC 1203131840(096284-002)MS</p> <p>2. Failed RPD for DUP: QC 1203131839(096284-002)DUP</p>		<p>1. The matrix spike recovery failed outside of the control limits for aluminum, barium, chromium, magnesium, silver, sodium, manganese, potassium, lead and selenium. The post spike passed the required control limits for all analytes. This verifies the absence of a matrix interference.</p> <p>2. The sample and sample duplicate % RPD failed outside the control limits for calcium, cobalt, iron, silver, vanadium, copper and nickel due to possible sample non-homogeneity and/or matrix interference.</p>	

Originator's Name:
Helen Camello 24-JUL-14

Data Validator/Group Leader:
Louise Smith 24-JUL-14

CONTRACT LABORATORY ANALYSIS REQUEST AND CHAIN OF CUSTODY

Internal Lab

Batch No. N/A

SMO Use

AR/COC **615631**

Project Name: <u>840- Floor Trench</u>	Date Samples Shipped: <u>7/18/14</u>	SMO Authorization: <u>[Signature]</u>	<input checked="" type="checkbox"/> Waste Characterization
Project/Task Manager: <u>Nick Durand</u>	Carrier/Waybill No.: <u>221838</u>	SMO Contact Phone: <u>[Signature]</u>	<input type="checkbox"/> RMMA
Project/Task Number: <u>55242/2.01</u>	Lab Contact: <u>Edie Kerit</u>	Wendy Palencia 844-3132	<input type="checkbox"/> Released by COC No. <input type="checkbox"/> 4° Celsius
Service Order: <u>CF415-14</u>	Lab Destination: <u>GEL</u>	Send Report to SMO: <u>Rita Kavanaugh/505.284.2553</u>	
	Contract No.: <u>1303873</u>		

Tech Area: 1

Building: 840 Room: 165 Operational Site: Albuquerque, NM 87185-0154 353048

Sample No.	Fraction	Sample Location Detail	Depth (ft)	Date/Time Collected	Sample Matrix	Container		Preservative	Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
						Type	Volume					
096284	-001	Bldg 840 Room 165 Floor Trench	N/A	7/17/14 11:30	Solid	Glass	250ml	N/A	GRAB	Sample	SVOC	001
096284	-002	Bldg 840 Room 165 Floor Trench	N/A	7/17/14 11:30	Solid	HDPE	<u>1 LITER</u> 500ml	N/A	GRAB	Sample	TAL Metals / Anion 9056	002

Last Chain: <input type="checkbox"/> Yes	Sample Tracking	SMO Use	Special Instructions/QC Requirements:	Conditions on Receipt
Validation Req'd: <input type="checkbox"/> Yes	Date Entered:		EDD <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Background: <input type="checkbox"/> Yes	Entered by:		Turnaround Time <input checked="" type="checkbox"/> 7 Day* <input type="checkbox"/> 15 Day* <input type="checkbox"/> 30 Day	
Confirmatory: <input type="checkbox"/> Yes	QC inits.:		Negotiated TAT <input checked="" type="checkbox"/> <u>3 Day</u>	
Sample Team Members Name: Justin Kirby Signature: <u>[Signature]</u> Init.: <u>JK</u> Company/Organization/Phone/Cell: <u>AMS / 048781 / 284-9778</u>	Sample Disposal <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal by Lab		Return Samples By:	
	Comments:			

1. Relinquished by <u>[Signature]</u> Org. <u>48781</u> Date <u>7/17/14</u> Time <u>1328</u>	3. Relinquished by	Org.	Date	Time
1. Received by <u>[Signature]</u> Org. <u>4142</u> Date <u>7/17/14</u> Time <u>1328</u>	3. Received by	Org.	Date	Time
2. Relinquished by <u>[Signature]</u> Org. <u>4142</u> Date <u>7/18/14</u> Time <u>0715</u>	4. Relinquished by	Org.	Date	Time
2. Received by <u>[Signature]</u> Org. <u>601</u> Date <u>7-19-14</u> Time <u>0840</u>	4. Received by	Org.	Date	Time

*Prior confirmation with SMO required for 7 and 15 day TAT



SAMPLE RECEIPT & REVIEW FORM

Client:	<i>SANDIA</i>	SDG/AR/COC/Work Order:	<i>615631</i>
Received By:	<i>MF</i>	Date Received:	<i>7-19-14</i>
Suspected Hazard Information	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.	
COC/Samples marked as radioactive?	<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts):	<i>0</i>
Classified Radioactive II or III by RSO?	<input checked="" type="checkbox"/>	If yes, Were swipes taken of sample containers < action levels?	
COC/Samples marked containing PCBs?	<input checked="" type="checkbox"/>		
Package, COC, and/or Samples marked as beryllium or asbestos containing?	<input checked="" type="checkbox"/>	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.	
Shipped as a DOT Hazardous?	<input checked="" type="checkbox"/>	Hazard Class Shipped:	UN#:
Samples identified as Foreign Soil?	<input checked="" type="checkbox"/>		

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Preservation Method: Ice bag <u>Blue ice</u> Dry ice None Other (describe) <i>3°C</i> *all temperatures are recorded in Celsius
2a Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Temperature Device Serial #: <i>130532776</i> Secondary Temperature Device Serial # (If Applicable):
3 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4 Sample containers intact and sealed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample ID's, containers affected and observed pH: If Preservation added Lot#:
6 VOA vials free of headspace (defined as < 6mm bubble)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample ID's and containers affected:
7 Are Encore containers present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(If yes, immediately deliver to Volatiles laboratory)
8 Samples received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ID's and tests affected:
9 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample ID's affected:
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample ID's affected:
12 Are sample containers identifiable as GEL provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
14 Carrier and tracking number.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: <u>FedEx Air</u> FedEx Ground UPS Field Services Courier Other <i>6132 7368 6396</i>

Comments (Use Continuation Form if needed):

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis Report for

SNLS004 Sandia National Laboratories (1303873)

Client SDG: 354494 GEL Work Order: 354494

The Qualifiers in this report are defined as follows:

* Recovery or %RPD not within acceptance limits and/or spike amount not compatible with the sample or the duplicate RPD's are not applicable where the concentration falls below the effective PQL.

** Indicates analyte is a surrogate compound.

B The analyte was found in the blank above the effective MDL.

H Analytical holding time was exceeded

J Estimated value, the analyte concentration fell above the effective MDL and below the effective PQL

h Prep holding time exceeded

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Edith Kent.



Reviewed by _____

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: August 14, 2014

Company : Sandia National Laboratories
Address : MS-0756, Org. 06765, Bldg. 823/Rm. 4276
1515 Eubank SE
Albuquerque, New Mexico 87123
Contact: Ms. Pamela M. Puissant
Project: Level C Data Package w/out EDD

Client Sample ID: 096284-R02
Sample ID: 354494001
Matrix: SOLID
Collect Date: 17-JUL-14 11:30
Receive Date: 19-JUL-14
Collector: Client

Project: SNLS00213
Client ID: SNLS004

Client Desc.: Bldg 840 Room 165 Floor Trench
Vol. Recv.:

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Flow Injection Analysis											
SW9012B Cyanide, Total "As Received"											
Cyanide, Total	BHh	23000	373	1120	mg/kg	5000	AXH3	08/14/14	1039	1411104	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010C Distillation	SW846 9010C Prep	AXH3	08/13/14	1442	1411103

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9012B	

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: August 14, 2014

Page 1 of 1

Sandia National Laboratories
MS-0756, Org. 06765, Bldg. 823/Rm. 4276
1515 Eubank SE

Albuquerque, New Mexico

Contact: Ms. Pamela M. Puissant

Workorder: 354494

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Flow Injection Analysis											
Batch	1411104										
QC1203147092	354494001	DUP									
Cyanide, Total		BHh	23000	BHh	21700	mg/kg	5.68	(0%-30%)	AXH3	08/14/14	10:40
QC1203147094	LCS										
Cyanide, Total	90.6			B	82.9	mg/kg		(68%-140%)		08/14/14	10:38
QC1203147091	MB										
Cyanide, Total				J	0.0985	mg/kg				08/14/14	10:37
QC1203147093	354494001	MS									
Cyanide, Total	4.39	Final	23000	BHh	30000	mg/kg		N/A (55%-125%)		08/14/14	10:41

Notes:

Recovery or %RPD not within acceptance limits and/or spike amount not compatible with the sample or the duplicate RPD's are not applicable where the concentration falls below the effective PQL.

** Indicates analyte is a surrogate compound.

< For less than value for Flashpoint

B The analyte was found in the blank above the effective MDL.

H Analytical holding time was exceeded

J Estimated value, the analyte concentration fell above the effective MDL and below the effective PQL

N Results associated with a spike analysis that was outside control limits.

U The analyte was analyzed for but not detected below this concentration. For Organic and Inorganic analytes the result is less than the effective MDL. For radiochemical analytes the result is less than the MDA

X Presumptive evidence that the analyte is not present. Please see narrative for further information.

Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.

d The 2:1 depletion requirement was not met for this sample

h Prep holding time exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

DATA EXCEPTION REPORT

Mo. Day Yr. 14-AUG-14	Division: Industrial	Quality Criteria: Specifications	Type: Process
Instrument Type: LACHAT Flow Injection Analyzer	Test / Method: SW846 9012B	Matrix Type: Solid	Client Code: SNLS
Batch ID: 1411104	Sample Numbers: See Below		
Potentially affected work order(s)(SDG): 354494			
Application Issues: Sample Analyzed out of Holding Sample Logged out of Holding			
Specification and Requirements		DER Disposition:	
Exception Description:			
<p>1. Sample Analyzed out of Holding: QC 1203147092(096284-R02)DUP, 1203147093(096284-R02)MS</p> <p>2. Sample Logged out of Holding: 354494 001 QC 1203147092(096284-R02)DUP, 1203147093(096284-R02)MS</p>		<p>* 1/2. The samples from this sample group were logged in for this analysis outside of the method specified holding time.</p>	

Originator's Name:
Aubrey Kingsbury 14-AUG-14

Data Validator/Group Leader:
Kristen Parson 14-AUG-14