TA-21 (OP Aggregate)

chamberlain, kathryn, NMENV HE Sampling Results

From: Roy Bohn [royb@lanl.gov]
Sent: Tuesday, August 29, 2006 7:48 AM
To: chamberlain, kathryn, NMENV
Cc: 'Mark S. Thacker'; 'Roy Bohn'
Subject: FW: Results (HE) attached for Request #s 5642S, 5636S and 5598S

Attachments: 168251.PDF; 167642.PDF; 168095.PDF

168251.PDF (29 KB) 167642.PDF (16 KB) 168095.PDF (15 KB)

Katie,

Attached are the explosive compound analysis for samples collected at sites 21-003-99, 21-024(c), and 21-013(c). These samples were collected from the same locations and depths as the dioxin/furan samples and the data was previously submitted to you. No explosive compounds were detected in any of the samples. Based on this data we are not planning on performing additional sampling for explosive compounds at these sites. Please contact me if you have any questions. Thanks!

Sample	PRS
RE21-06-72611	[redacted]
RE21-06-68643	[redacted]
RE21-06-68292	[redacted]
RE21-06-68293	21-013(c)

10994

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Certificate of Analysis

Company : Los Alamos National Laboratories
Address : PO Box 1663
TA-3, Bldg. 1237, Drop Pt. 03U
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: August 28, 2006

Client Sample ID: RE21-06-68292 21-01366
Sample ID: 168251001
Matrix: Soil
Collect Date: 26-JUL-06 09:46
Receive Date: 01-AUG-06
Collector: Client
Moisture: 4.72%

Project: LANL00600
Client ID: LANL006

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
LC-MS/MS Explosives Federal										
SW846 8321A Modified Explosives by LC-MS/MS										
1,3,5-Trinitrobenzene	U	ND	100	500	ug/kg	2	MAP 08/23/06	0118	553950	1
2,4,6-Trinitrotoluene	U	ND	100	500	ug/kg	2				
2,4-Dinitrotoluene	U	ND	100	500	ug/kg	2				
2,6-Dinitrotoluene	U	ND	100	500	ug/kg	2				
2-Amino-4,6-dinitrotoluene	U	ND	150	500	ug/kg	2				
4-Amino-2,6-dinitrotoluene	U	ND	100	500	ug/kg	2				
HMX	U	ND	150	500	ug/kg	2				
Nitrobenzene	U	ND	150	500	ug/kg	2				
PETN	U	ND	730	1000	ug/kg	2				
RDX	U	ND	100	500	ug/kg	2				
Tetryl	U	ND	100	500	ug/kg	2				
1,3-Dinitrobenzene	U	ND	150	500	ug/kg	2				
3-Nitrotoluene	U	ND	100	500	ug/kg	2				
2-Nitrotoluene	U	ND	100	500	ug/kg	2				
4-Nitrotoluene	U	ND	100	500	ug/kg	2				

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 8330 PREP	SW846 8330 Explosives Extraction in Solids	TXB2	08/07/06	1518	553948

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8321A Modified	

Surrogate/Tracer recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
3,4-Dinitrotoluene	SW846 8321A Modified Explosives by LC-MS/MS	3390	2500	136	(46%-165%)

Notes:
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* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
> Result is greater than value reported

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: August 28, 2006

Client Sample ID: RE21-06-68292
Sample ID: 168251001

Project: LANL00600
Client ID: LANL006

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

A The TIC is a suspected aldol-condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E Organics--Concentration of the target analyte exceeds the instrument calibration range
H Analytical holding time was exceeded
J Value is estimated
N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
h Preparation or preservation holding time was exceeded

The above sample is reported on a dry weight basis except where prohibited by the analytical procedure.
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.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: August 28, 2006

Client Sample ID: RE21-06-68293 21-01362(c)
Sample ID: 168251002
Matrix: Soil
Collect Date: 26-JUL-06 09:58
Receive Date: 01-AUG-06
Collector: Client
Moisture: 7.63%

Project: LANL00600
Client ID: LANL006

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
LC-MS/MS Explosives Federal										
SW846 8321A Modified Explosives by LC-MS/MS										
1,3,5-Trinitrobenzene	U	ND	100	500	ug/kg	2	MAP 08/23/06	0255	553950	1
2,4,6-Trinitrotoluene	U	ND	100	500	ug/kg	2				
2,4-Dinitrotoluene	U	ND	100	500	ug/kg	2				
2,6-Dinitrotoluene	U	ND	100	500	ug/kg	2				
2-Amino-4,6-dinitrotoluene	U	ND	150	500	ug/kg	2				
4-Amino-2,6-dinitrotoluene	U	ND	100	500	ug/kg	2				
HMX	U	ND	150	500	ug/kg	2				
Nitrobenzene	U	ND	150	500	ug/kg	2				
PETN	U	ND	730	1000	ug/kg	2				
RDX	U	ND	100	500	ug/kg	2				
Tetryl	U	ND	100	500	ug/kg	2				
1,3-Dinitrobenzene	U	ND	150	500	ug/kg	2				
3-Nitrotoluene	U	ND	100	500	ug/kg	2				
2-Nitrotoluene	U	ND	100	500	ug/kg	2				
4-Nitrotoluene	U	ND	100	500	ug/kg	2				

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 8330 PREP	SW846 8330 Explosives Extraction in Solids	TXB2	08/07/06	1518	553948

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8321A Modified	

Surrogate/Tracer recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
3,4-Dinitrotoluene	SW846 8321A Modified Explosives by LC-MS/MS	3120	2500	125	(46%-165%)

Notes:
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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: August 28, 2006

Client Sample ID: RE21-06-68293
Sample ID: 168251002

Project: LANL00600
Client ID: LANL006

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

A The TIC is a suspected aldol-condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E Organics--Concentration of the target analyte exceeds the instrument calibration range
H Analytical holding time was exceeded
J Value is estimated
N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
h Preparation or preservation holding time was exceeded

The above sample is reported on a dry weight basis except where prohibited by the analytical procedure.
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.

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Reviewed by

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: August 28, 2006

Client Sample ID:	RE21-06-72611 21-003-99	Project:	LANL00600
Sample ID:	167642001	Client ID:	LANL006
Matrix:	Soil		
Collect Date:	20-JUL-06 15:00		
Receive Date:	22-JUL-06		
Collector:	Client		
Moisture:	5.74%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
LC-MS/MS Explosives Federal										
SW846 8321A Modified Explosives by LC-MS/MS										
1,3,5-Trinitrobenzene	U	ND	100	500	ug/kg	2	MAP 08/22/06	1816	551104	1
2,4,6-Trinitrotoluene	U	ND	100	500	ug/kg	2				
2,4-Dinitrotoluene	U	ND	100	500	ug/kg	2				
2,6-Dinitrotoluene	U	ND	100	500	ug/kg	2				
2-Amino-4,6-dinitrotoluene	U	ND	150	500	ug/kg	2				
4-Amino-2,6-dinitrotoluene	U	ND	100	500	ug/kg	2				
HMX	U	ND	150	500	ug/kg	2				
Nitrobenzene	U	ND	150	500	ug/kg	2				
PETN	U	ND	730	1000	ug/kg	2				
RDX	U	ND	100	500	ug/kg	2				
Tetryl	U	ND	100	500	ug/kg	2				
1,3-Dinitrobenzene	U	ND	150	500	ug/kg	2				
3-Nitrotoluene	U	ND	100	500	ug/kg	2				
2-Nitrotoluene	U	ND	100	500	ug/kg	2				
4-Nitrotoluene	U	ND	100	500	ug/kg	2				

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 8330 PREP	SW846 8330 Explosives Extraction in Solids	TXB2	08/02/06	1240	551103

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8321A Modified	

Surrogate/Tracer recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
3,4-Dinitrotoluene	SW846 8321A Modified Explosives by LC-MS/MS	2720	2500	109	(46%-165%)

Notes:
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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: August 28, 2006

Client Sample ID: RE21-06-72611
Sample ID: 167642001

Project: LANL00600
Client ID: LANL006

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

A The TIC is a suspected aldol-condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E Organics--Concentration of the target analyte exceeds the instrument calibration range
H Analytical holding time was exceeded
J Value is estimated
N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
d 5-day BOD--The 2:1 depletion requirement was not met for this sample
h Preparation or preservation holding time was exceeded

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: August 28, 2006

Client Sample ID: RE21-06-68643 21-024(e)
Sample ID: 168095004
Matrix: Soil
Collect Date: 25-JUL-06 16:18
Receive Date: 28-JUL-06
Collector: Client
Moisture: 3.99%

Project: LANL00600
Client ID: LANL006

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
LC-MS/MS Explosives Federal										
SW846 8321A Modified Explosives by LC-MS/MS										
1,3,5-Trinitrobenzene	U	ND	100	500	ug/kg	2	MAP 08/22/06	2058	553777	1
2,4,6-Trinitrotoluene	U	ND	100	500	ug/kg	2				
2,4-Dinitrotoluene	U	ND	100	500	ug/kg	2				
2,6-Dinitrotoluene	U	ND	100	500	ug/kg	2				
2-Amino-4,6-dinitrotoluene	U	ND	150	500	ug/kg	2				
4-Amino-2,6-dinitrotoluene	U	ND	100	500	ug/kg	2				
HMX	U	ND	150	500	ug/kg	2				
Nitrobenzene	U	ND	150	500	ug/kg	2				
PETN	U	ND	730	1000	ug/kg	2				
RDX	U	ND	100	500	ug/kg	2				
Tetryl	U	ND	100	500	ug/kg	2				
1,3-Dinitrobenzene	U	ND	150	500	ug/kg	2				
3-Nitrotoluene	U	ND	100	500	ug/kg	2				
2-Nitrotoluene	U	ND	100	500	ug/kg	2				
4-Nitrotoluene	U	ND	100	500	ug/kg	2				

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 8330 PREP	SW846 8330 Explosives Extraction in Solids	TXB2	08/02/06	1254	553776

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8321A Modified	

Surrogate/Tracer recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
3,4-Dinitrotoluene	SW846 8321A Modified Explosives by LC-MS/MS	2430	2500	97	(46%-165%)

Notes:
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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: August 28, 2006

Client Sample ID: RE21-06-68643 Project: LANL00600
Sample ID: 168095004 Client ID: LANL006

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

A The TIC is a suspected aldol-condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E Organics--Concentration of the target analyte exceeds the instrument calibration range
H Analytical holding time was exceeded
J Value is estimated
N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
h Preparation or preservation holding time was exceeded

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Reviewed by