

TA-41



Risk Reduction & Environmental Stewardship Division
Water Quality & Hydrology Group (RRES-WQH)
PO Box 1663, MS K497
Los Alamos, New Mexico 87545
(505) 665-6085/Fax: (505) 665-9344

Date: January 31, 2003
Refer to: RRES-WQH: 03-027

Mr. Robert Husted
New Mexico Environmental Department
Hazardous Waste Bureau
P.O. Box 26110
Santa Fe, NM 87502



SUBJECT: TECHNICAL AREA (TA)-41 AND TA-43 LOS ALAMOS CANYON ALLUVIAL GROUNDWATER WELLS (LAO-C AND LAO-0.7) VANDILIZATION, REQUEST FOR CLOSURE UNDER WQCC REGULATIONS

Dear Mr. Husted:

On January 16, 2003 the Laboratory's Water Quality and Hydrology Group (RRES-WQH) notified your office of the discovery of an unknown visible oily substance on the equipment from two alluvial groundwater monitoring wells (LAO-C and LAO-0.7) at TA-41 and TA-43 in Los Alamos Canyon. This notification was pursuant to the New Mexico Water Quality Control Commission (NMWQCC) Regulations (20 NMAC 6.2). Enclosed for your review is the 15-Day Release / Discharge Notification (Enclosure 1). The following corrective actions were taken:

- On 01/16/2003 and 01/17/2003, RRES-WQH conducted an initial surveillance evaluation to determine the condition of all monitoring wells in Los Alamos Canyon and Pueblo Canyon. It appears that no additional wells have been tampered with.
- LANL's Hazmat Team conducted a site evaluation of the two wells on 01/17/2003. There were no indications of the presence of volatile materials or other indications of personnel safety issues.
- LANL's Occurrence Reporting Group (PS-7) is conducting an ongoing investigation that began 01/17/2003.
- Swipe samples of the transducers, pumps, and tubing were collected on 01/17/2003 and submitted to General Engineering Laboratories (GEL). GEL conducted analyses for semivolatiles (EPA Method 8270) on 01/18/2003.
- Water samples were also collected from the wells on 01/17/2003 and submitted to GEL for semivolatile analyses (EPA Method 8270). Well water did not appear to have a visible sheen, film, or other observable contamination. Samples were taken at the top and bottom of the water columns. GEL conducted analyses of the samples on 01/21/2003.
- Laboratory organizations are further addressing monitoring well security issues.

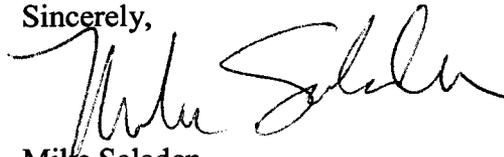


Preliminary analytical results from GEL of samples and swipes taken from transducers, pumps, tubing, and groundwater indicated that there was no contamination (Enclosure 2).

The Laboratory is requesting that NMED closeout its file for this under the NMWQCC Regulations (20 NMAC 6.2).

Please contact Mark Haagenstad at (505) 665-2014 or Mike Alexander at (505) 665-4752 if additional information would be helpful.

Sincerely,



Mike Saladen
Water Quality & Hydrology Group

MS:MH/tml

Enclosures: a/s

Cy: E. Spencer, EPA Region 6, Dallas, TX, w/o enc.
M. Leavitt, NMED/GWQB, Santa Fe, NM, w/enc.
J. Davis, NMED/SWQB, Santa Fe, NM, w/o enc.
J. Parker, NMED/DOE/OB, Santa Fe, NM, w/enc.
J. Young, NMED/HWB, Santa Fe, NM, w/o enc.
G. Turner, DOE/OLASO, w/enc., MS A316
B. Ramsey, RRES-DO, w/o enc., MS J591
K. Hargis, RRES-DO, w/o enc., MS J591
D. Stavert, RRES-EP, w/o enc., MS J591
S. Rae, RRES-WQH, w/enc., MS K497
T. Sandoval, RRES-WQH, w/o enc., MS K497
M. Alexander, RRES-WQH, w/o enc., MS K497
M. Haagenstad, RRES-WQH, w/enc., MS K497
RRES-WQH File, w/enc., MS K497
IM-5, w/enc., MS A150

ENCLOSURE 1

RELEASE / DISCHARGE NOTIFICATION

LOS ALAMOS NATIONAL LABORATORY

Permit Number: .

Calendar Year

2003

NPDES or Operational Spill/Release
ER Spill/Release
Other Spill/Release

Indicate with "X" in appropriate box.

Release ID Number:

117

Responsible Facility/User Group: RRES-WQH

Contact Person: M. Alexander

Pager #: 104-1060

Phone #: 665-4752

Cell Phone #: 699-1336

Release/Discharge Location:

TA: 43

Building: Outside

The potential release of oily substance was discovered in two alluvial monitoring wells (LAO-C at TA-43 and LAO-0.7 at TA-41) in Los Alamos Canyon. Observations were made during change-out of pumps in the alluvial groundwater wells.

If the release/discharge is associated with a NPDES Outfall, Potential Release Site (PRS) or Solid Waste Management Unit (SWMU), indicate the site/unit number and its relationship to the release/discharge:

NPDES Outfall: PRS: SWMU: PRS/SWMU Number: N/A

Indicate with "X" in appropriate box(es).

Relationship of the Discharge to a SWMU or PRS:

No SWMU or PRSs impacted.

Discharge Occurred: Unknown
Date & Time

Discharge Discovered: 1/16/2003 9:00 a.m.
Date & Time

Discharge Stopped: 1/16/2003 9:00 a.m.
Date & Time

Cleanup Started: TBD
Date & Time

Cleanup Completed: TBD
Date & Time

Material(s) Released / Discharged:

The material released to the LAO-C and LAO-0.7 alluvial groundwater monitoring wells has not been confirmed as of 01/16/2003. Contaminant material appears to be an oil based product.

Release/Discharge Mitigation Method:

Well covers were vandalized. Well covers to be replaced. A survey is being conducted to determine if additional wells were vandalized. Additional security measures are under review to prevent re-occurrence.

Weather Conditions:

Sunny, clear.

Duration of Release/ Discharge, in HOURS: TBD

Est. Volume Released/ Discharged, in GAL. TBD

Est. Volume Recovered, in GAL. TBD

Corrective Actions Taken (ie, type of BMPs, etc):

Site investigation conducted by RRES-WQH personnel. Immediate actions include investigation to determine if additional alluvial wells have been vandalized. Sampling to be conducted to determine contaminant(s). Well covers to be replaced and locked.

Nearest Watercourse (Canyon Name)

Los Alamos Canyon

If the release/discharge reached a watercourse, describe the estimated surface area affected, presence of release/discharge now in the watercourse, and the media the release/discharge was detected in:

NA

Depth to Groundwater, in FT, if known:

Distance to Nearest Drinking Water Well, in FT, if known: Well ID#

24-HOUR RELEASE / DISCHARGE NOTIFICATIONS

	Contact Person	Phone	Fax	Date & Time (or Comment)	
EPA:	E. Spencer	214-665-6475	214-665-6490	1/17/2003	FAX
NMED/SWQB:	Bret Lucas	827-2933	827-0160	1/17/2003	FAX
NMED/GWQB:	Curt Frischkorn	827-2918	827-2965	1/17/2003	FAX
NMED/HRMB:	John Young	428-2538	428-2567	1/17/2003	FAX
NMED/DOE-OB:	Steve Yanicak	672-0448	672-0466	1/17/2003	FAX
RRES-WQH:	Mike Saladen	665-6085	665-9344	1/17/2003	FAX
DOE:	Gene Turner	667-5794	505-665-4872	1/17/2003	FAX
OTHER:	Patricia Vadaro-Charles	665-6976	665-6977	1/17/2003	FAX
OTHER:	Roger Hustead	428-2500	428-2567	1/17/2003	8:07 a.m.

Comments: LAO-C alluvial well is ~15000 feet upstream of Otowi Well #4 and 15 feet from surface water. Surface water did not appear to be impacted. LAO-0.7 was 10000 feet upstream of Otowi Well #4 and no surface water flowing in area. San Ildefonso Pueblo was notified on 01/16/2003.

Form Completed By:

7 DAY RELEASE / DISCHARGE ACTIONS

7 Day Notice 7 Day Notice Date: 7 Day Notice By:

Mark "X" when done.

Comments: See Attachment 1 that was FAXed on 01/23/2003 along with the 7 Day Release / Discharge Report.

15 DAY RELEASE / DISCHARGE ACTIONS

15 day Follow-up Due: 15-day Follow-Up By:

Comments: General Engineering Laboratory (GEL) analytical testing from sampling of transducers, tubing, pumps, and groundwater showed no contamination in vandalized LAO-C and LAO-0.7 alluvial groundwater wells. Additional security measures are currently being implemented for other Laboratory wells. See analytical data and cover letter for additional information.

NMED 30 DAY APPROVAL / DISAPPROVAL

NMED 30 Day Response Date:

Comments:

Ralph Erickson, Director
Office of Los Alamos Site Operations
Department of Energy
Los Alamos, New Mexico 87544
(505) 667-5105

Beverly Ramsey, RRES Division Director
University of California
Los Alamos National Laboratory
P.O. Box 1663, MS K491
Los Alamos, New Mexico 87544
(505) 667-4218

Certificate of Analysis

Company : Los Alamos National Labs
 Address : MS K497 ESH-18
 Water Quality & Hydrology
 Los Alamos, New Mexico 87545
 Contact: Billy Turney
 Project: Groundwater

Report Date: January 23, 2003

Page 2 of 4

Client Sample ID: LAO-C, Top
 Sample ID: 73695001

Project: ESHL00701
 Client ID: ESHL001

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Semi-volatile Mass spec Organics Federal											
<i>8270C/3510C App.9 BNA Liquid F</i>											
Butylbenzylphthalate	U	ND	0.680	10.0	ug/L	1					
Chrysene	U	ND	0.500	1.00	ug/L	1					
Di-n-butylphthalate	U	ND	1.00	10.0	ug/L	1					
Di-n-octylphthalate	U	ND	0.870	10.0	ug/L	1					
Dibenzo(a,h)anthracene	U	ND	0.500	1.00	ug/L	1					
Dibenzofuran	U	ND	0.420	10.0	ug/L	1					
Diethylphthalate	U	ND	0.890	10.0	ug/L	1					
Dimethylphthalate	U	ND	0.530	10.0	ug/L	1					
Diphenylamine	U	ND	0.790	10.0	ug/L	1					
Fluoranthene	U	ND	0.500	1.00	ug/L	1					
Fluorene	U	ND	0.500	1.00	ug/L	1					
Hexachlorobenzene	U	ND	0.650	10.0	ug/L	1					
Hexachlorobutadiene	U	ND	0.320	10.0	ug/L	1					
Hexachlorocyclopentadiene	U	ND	1.00	10.0	ug/L	1					
Hexachloroethane	U	ND	0.430	10.0	ug/L	1					
Indeno(1,2,3-cd)pyrene	U	ND	0.500	1.00	ug/L	1					
Isophorone	U	ND	0.590	10.0	ug/L	1					
N-Methyl-N-nitrosomethylamine	U	ND	5.00	10.0	ug/L	1					
N-Nitrosodi-n-propylamine	U	ND	0.750	10.0	ug/L	1					
Naphthalene	U	ND	0.110	1.00	ug/L	1					
Nitrobenzene	U	ND	0.630	10.0	ug/L	1					
Parachlorometa cresol	U	ND	0.690	10.0	ug/L	1					
Pentachlorophenol	U	ND	5.00	10.0	ug/L	1					
Phenanthrene	U	ND	0.500	1.00	ug/L	1					
Phenol	U	ND	0.300	10.0	ug/L	1					
Pyrene	U	ND	0.500	1.00	ug/L	1					
Pyridine	U	ND	5.00	10.0	ug/L	1					
bis(2-Chloroethoxy)methane	U	ND	0.480	10.0	ug/L	1					
bis(2-Chloroethyl) ether	U	ND	1.37	10.0	ug/L	1					
bis(2-Chloroisopropyl)ether	U	ND	0.800	10.0	ug/L	1					
bis(2-Ethylhexyl)phthalate	BJ	2.49	1.30	10.0	ug/L	1					
m,p-Cresols	U	ND	0.590	10.0	ug/L	1					
m-Nitroaniline	U	ND	1.00	10.0	ug/L	1					
o-Cresol	U	ND	0.450	10.0	ug/L	1					
o-Nitroaniline	U	ND	0.640	10.0	ug/L	1					
p-Nitroaniline	U	ND	0.670	10.0	ug/L	1					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
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Certificate of Analysis

Company : Los Alamos National Labs
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 Water Quality & Hydrology
 Los Alamos, New Mexico 87545
 Contact: Billy Turney
 Project: Groundwater

Report Date: January 23, 2003

Page 3 of 4

Client Sample ID: LAO-C, Top
 Sample ID: 73695001

Project: ESHL00701
 Client ID: ESHL001

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
SW846 3510C	3510C-8270C	BNA Appendix 9 Prep Fed		SEK1		01/21/03	2039		228608	
SW846 3005A	ICP-TRACE	SW846 3005A		CWS1		01/21/03	1500		228610	

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 3005/6010B	
2	SW846 8270C	

Surrogate recovery	Test	Recovery%	Acceptable Limits
2,4,6-Tribromophenol	8270C/3510C App.9 BNA Liquid	71%	(27%-126%)
2-Fluorobiphenyl	8270C/3510C App.9 BNA Liquid	58%	(32%-109%)
2-Fluorophenol	8270C/3510C App.9 BNA Liquid	41%	(13%-73%)
Nitrobenzene-d5	8270C/3510C App.9 BNA Liquid	64%	(33%-107%)
Phenol-d5	8270C/3510C App.9 BNA Liquid	29%	(14%-66%)
p-Terphenyl-d14	8270C/3510C App.9 BNA Liquid	73%	(36%-130%)

Notes:

The Qualifiers in this report are defined as follows :

- < Actual result is less than amount reported
- > Actual result is greater than amount reported
- B Analyte found in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration exceeds instrument calibration range
- H Holding time exceeded
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D
- U Indicates the compound was analyzed for but not detected above the detection limit
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier - must be fully described in case narrative and data summary package
- Y QC Samples were not spiked with this compound.

The above sample is reported on an "as received" basis.

Certificate of Analysis

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Water Quality & Hydrology
Los Alamos, New Mexico 87545
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Report Date: January 23, 2003

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Client Sample ID: LAO-C, Top
Sample ID: 73695001

Project: ESHL00701
Client ID: ESHL001

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
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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, Stacy Griffin.

Reviewed by _____

Certificate of Analysis

Company : Los Alamos National Labs
 Address : MS K497 ESH-18
 Water Quality & Hydrology
 Los Alamos, New Mexico 87545
 Contact: Billy Turney
 Project: Groundwater

Report Date: January 23, 2003

Page 1 of 3

Client Sample ID: LAO-C, Bottom
 Sample ID: 73695002
 Matrix: Ground Water
 Collect Date: 17-JAN-03 12:00
 Receive Date: 18-JAN-03
 Collector: Client

Project: ESHL00701
 Client ID: ESHL001

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP											
<i>3005/6010 Silicon/Silica Federal</i>											
Silica		60800	21.2	213	ug/L	1	HSC	01/22/03	0949	228611	1
Semi-volatile Mass spec Organics Federal											
<i>8270C/3510C App.9 BNA Liquid F</i>											
1,2,4-Trichlorobenzene	U	ND	0.710	10.0	ug/L	1	CAK	01/22/03	0003	228609	2
1,2-Dichlorobenzene	U	ND	0.410	10.0	ug/L	1					
1,2-Diphenylhydrazine	U	ND	0.860	10.0	ug/L	1					
1,3-Dichlorobenzene	U	ND	0.410	10.0	ug/L	1					
1,4-Dichlorobenzene	U	ND	0.310	10.0	ug/L	1					
2,4,5-Trichlorophenol	U	ND	0.970	10.0	ug/L	1					
2,4,6-Trichlorophenol	U	ND	0.390	10.0	ug/L	1					
2,4-Dichlorophenol	U	ND	0.470	10.0	ug/L	1					
2,4-Dimethylphenol	U	ND	0.470	10.0	ug/L	1					
2,4-Dinitrophenol	U	ND	5.00	20.0	ug/L	1					
2,4-Dinitrotoluene	U	ND	0.700	10.0	ug/L	1					
2,6-Dinitrotoluene	U	ND	0.500	10.0	ug/L	1					
2-Chloronaphthalene	U	ND	0.400	1.00	ug/L	1					
2-Chlorophenol	U	ND	0.410	10.0	ug/L	1					
2-Methyl-4,6-dinitrophenol	U	ND	1.00	10.0	ug/L	1					
2-Methylnaphthalene	U	ND	0.500	1.00	ug/L	1					
2-Nitrophenol	U	ND	0.590	10.0	ug/L	1					
2-Picoline	U	ND	0.870	10.0	ug/L	1					
3,3'-Dichlorobenzidine	U	ND	0.510	10.0	ug/L	1					
4-Bromophenylphenylether	U	ND	1.22	10.0	ug/L	1					
4-Chloroaniline	U	ND	1.10	10.0	ug/L	1					
4-Chlorophenylphenylether	U	ND	0.840	10.0	ug/L	1					
4-Nitrophenol	U	ND	5.00	10.0	ug/L	1					
Acenaphthene	U	ND	0.500	1.00	ug/L	1					
Acenaphthylene	U	ND	0.500	1.00	ug/L	1					
Aniline	U	ND	1.61	10.0	ug/L	1					
Anthracene	U	ND	0.500	1.00	ug/L	1					
Benzidine	U	ND	5.00	50.0	ug/L	1					
Benzo(a)anthracene	U	ND	0.500	1.00	ug/L	1					
Benzo(a)pyrene	U	ND	0.500	1.00	ug/L	1					
Benzo(b)fluoranthene	U	ND	0.500	1.00	ug/L	1					
Benzo(ghi)perylene	U	ND	0.500	1.00	ug/L	1					
Benzo(k)fluoranthene	U	ND	0.500	1.00	ug/L	1					
Benzoic acid	U	ND	10.0	20.0	ug/L	1					
Benzyl alcohol	U	ND	0.910	10.0	ug/L	1					
Butylbenzylphthalate	U	ND	0.680	10.0	ug/L	1					

Certificate of Analysis

Company : Los Alamos National Labs
 Address : MS K497 ESH-18
 Water Quality & Hydrology
 Los Alamos, New Mexico 87545
 Contact: Billy Turney
 Project: Groundwater

Report Date: January 23, 2003

Page 2 of 3

Client Sample ID: LAO-C, Bottom
 Sample ID: 73695002

Project: ESHL00701
 Client ID: ESHL001

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Semi-volatile Mass spec Organics Federal											
<i>8270C/3510C App.9 BNA Liquid F</i>											
Chrysene	U	ND	0.500	1.00	ug/L	1					
Di-n-butylphthalate	U	ND	1.00	10.0	ug/L	1					
Di-n-octylphthalate	U	ND	0.870	10.0	ug/L	1					
Dibenzo(a,h)anthracene	U	ND	0.500	1.00	ug/L	1					
Dibenzofuran	U	ND	0.420	10.0	ug/L	1					
Diethylphthalate	U	ND	0.890	10.0	ug/L	1					
Dimethylphthalate	U	ND	0.530	10.0	ug/L	1					
Diphenylamine	U	ND	0.790	10.0	ug/L	1					
Fluoranthene	U	ND	0.500	1.00	ug/L	1					
Fluorene	U	ND	0.500	1.00	ug/L	1					
Hexachlorobenzene	U	ND	0.650	10.0	ug/L	1					
Hexachlorobutadiene	U	ND	0.320	10.0	ug/L	1					
Hexachlorocyclopentadiene	U	ND	1.00	10.0	ug/L	1					
Hexachloroethane	U	ND	0.430	10.0	ug/L	1					
Indeno(1,2,3-cd)pyrene	U	ND	0.500	1.00	ug/L	1					
Isophorone	U	ND	0.590	10.0	ug/L	1					
N-Methyl-N-nitrosomethylamine	U	ND	5.00	10.0	ug/L	1					
N-Nitrosodi-n-propylamine	U	ND	0.750	10.0	ug/L	1					
Naphthalene	U	ND	0.110	1.00	ug/L	1					
Nitrobenzene	U	ND	0.630	10.0	ug/L	1					
Parachlorometa cresol	U	ND	0.690	10.0	ug/L	1					
Pentachlorophenol	U	ND	5.00	10.0	ug/L	1					
Phenanthrene	U	ND	0.500	1.00	ug/L	1					
Phenol	U	ND	0.300	10.0	ug/L	1					
Pyrene	U	ND	0.500	1.00	ug/L	1					
Pyridine	U	ND	5.00	10.0	ug/L	1					
bis(2-Chloroethoxy)methane	U	ND	0.480	10.0	ug/L	1					
bis(2-Chloroethyl) ether	U	ND	1.37	10.0	ug/L	1					
bis(2-Chloroisopropyl)ether	U	ND	0.800	10.0	ug/L	1					
bis(2-Ethylhexyl)phthalate	BJ	2.66	1.30	10.0	ug/L	1					
m,p-Cresols	U	ND	0.590	10.0	ug/L	1					
m-Nitroaniline	U	ND	1.00	10.0	ug/L	1					
o-Cresol	U	ND	0.450	10.0	ug/L	1					
o-Nitroaniline	U	ND	0.640	10.0	ug/L	1					
p-Nitroaniline	U	ND	0.670	10.0	ug/L	1					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C-8270C BNA Appendix 9 Prep Fed	SEK1	01/21/03	2039	228608

Certificate of Analysis

Company : Los Alamos National Labs
 Address : MS K497 ESH-18
 Water Quality & Hydrology
 Los Alamos, New Mexico 87545
 Contact: Billy Turney
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Page 3 of 3

Client Sample ID: LAO-C, Bottom
 Sample ID: 73695002
 Project: ESHL00701
 Client ID: ESHL001

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
SW846 3005A	ICP-TRACE	SW846 3005A		CWS1	01/21/03	1500	228610			

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 3005/6010B	
2	SW846 8270C	

Surrogate recovery	Test	Recovery%	Acceptable Limits
2,4,6-Tribromophenol	8270C/3510C App.9 BNA Liquid	0%*	(27%-126%)
2-Fluorobiphenyl	8270C/3510C App.9 BNA Liquid	61%	(32%-109%)
2-Fluorophenol	8270C/3510C App.9 BNA Liquid	0%*	(13%-73%)
Nitrobenzene-d5	8270C/3510C App.9 BNA Liquid	66%	(33%-107%)
Phenol-d5	8270C/3510C App.9 BNA Liquid	0%*	(14%-66%)
p-Terphenyl-d14	8270C/3510C App.9 BNA Liquid	64%	(36%-130%)

Notes:

The Qualifiers in this report are defined as follows :

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- > Actual result is greater than amount reported
- B Analyte found in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration exceeds instrument calibration range
- H Holding time exceeded
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D
- U Indicates the compound was analyzed for but not detected above the detection limit
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier - must be fully described in case narrative and data summary package
- Y QC Samples were not spiked with this compound.

The above sample is reported on an "as received" basis.

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, Stacy Griffin.

Reviewed by _____

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 Address : MS K497 ESH-18
 Water Quality & Hydrology
 Los Alamos, New Mexico 87545
 Contact: Billy Turney
 Project: Groundwater

Report Date: January 23, 2003

Page 1 of 3

Client Sample ID: LAO-0.7, Top 12"
 Sample ID: 73695003
 Matrix: Ground Water
 Collect Date: 17-JAN-03 12:18
 Receive Date: 18-JAN-03
 Collector: Client

Project: ESHL00701
 Client ID: ESHL001

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP											
<i>3005/6010 Silicon/Silica Federal</i>											
Silica		38400	21.2	213	ug/L	1	HSC	01/22/03	0955	228611	1
Semi-volatile Mass spec Organics Federal											
<i>8270C/3510C App.9 BNA Liquid F</i>											
1,2,4-Trichlorobenzene	U	ND	0.710	10.0	ug/L	1	CAK	01/22/03	0022	228609	2
1,2-Dichlorobenzene	U	ND	0.410	10.0	ug/L	1					
1,2-Diphenylhydrazine	U	ND	0.860	10.0	ug/L	1					
1,3-Dichlorobenzene	U	ND	0.410	10.0	ug/L	1					
1,4-Dichlorobenzene	U	ND	0.310	10.0	ug/L	1					
2,4,5-Trichlorophenol	U	ND	0.970	10.0	ug/L	1					
2,4,6-Trichlorophenol	U	ND	0.390	10.0	ug/L	1					
2,4-Dichlorophenol	U	ND	0.470	10.0	ug/L	1					
2,4-Dimethylphenol	U	ND	0.470	10.0	ug/L	1					
2,4-Dinitrophenol	U	ND	5.00	20.0	ug/L	1					
2,4-Dinitrotoluene	U	ND	0.700	10.0	ug/L	1					
2,6-Dinitrotoluene	U	ND	0.500	10.0	ug/L	1					
2-Chloronaphthalene	U	ND	0.400	1.00	ug/L	1					
2-Chlorophenol	U	ND	0.410	10.0	ug/L	1					
2-Methyl-4,6-dinitrophenol	U	ND	1.00	10.0	ug/L	1					
2-Methylnaphthalene	U	ND	0.500	1.00	ug/L	1					
2-Nitrophenol	U	ND	0.590	10.0	ug/L	1					
2-Picoline	U	ND	0.870	10.0	ug/L	1					
3,3'-Dichlorobenzidine	U	ND	0.510	10.0	ug/L	1					
4-Bromophenylphenylether	U	ND	1.22	10.0	ug/L	1					
4-Chloroaniline	U	ND	1.10	10.0	ug/L	1					
4-Chlorophenylphenylether	U	ND	0.840	10.0	ug/L	1					
4-Nitrophenol	U	ND	5.00	10.0	ug/L	1					
Acenaphthene	U	ND	0.500	1.00	ug/L	1					
Acenaphthylene	U	ND	0.500	1.00	ug/L	1					
Aniline	U	ND	1.61	10.0	ug/L	1					
Anthracene	U	ND	0.500	1.00	ug/L	1					
Benzidine	U	ND	5.00	50.0	ug/L	1					
Benzo(a)anthracene	U	ND	0.500	1.00	ug/L	1					
Benzo(a)pyrene	U	ND	0.500	1.00	ug/L	1					
Benzo(b)fluoranthene	U	ND	0.500	1.00	ug/L	1					
Benzo(ghi)perylene	U	ND	0.500	1.00	ug/L	1					
Benzo(k)fluoranthene	U	ND	0.500	1.00	ug/L	1					
Benzoic acid	U	ND	10.0	20.0	ug/L	1					
Benzyl alcohol	U	ND	0.910	10.0	ug/L	1					
Butylbenzylphthalate	U	ND	0.680	10.0	ug/L	1					

Certificate of Analysis

Company : Los Alamos National Labs
 Address : MS K497 ESH-18
 Water Quality & Hydrology
 Los Alamos, New Mexico 87545
 Contact: Billy Turney
 Project: Groundwater

Report Date: January 23, 2003

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Client Sample ID: LAO-0.7, Top 12"
 Sample ID: 73695003

Project: ESHL00701
 Client ID: ESHL001

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Semi-volatile Mass spec Organics Federal											
<i>8270C/3510C App.9 BNA Liquid F</i>											
Chrysene	U	ND	0.500	1.00	ug/L	1					
Di-n-butylphthalate	U	ND	1.00	10.0	ug/L	1					
Di-n-octylphthalate	U	ND	0.870	10.0	ug/L	1					
Dibenzo(a,h)anthracene	U	ND	0.500	1.00	ug/L	1					
Dibenzofuran	U	ND	0.420	10.0	ug/L	1					
Diethylphthalate	U	ND	0.890	10.0	ug/L	1					
Dimethylphthalate	U	ND	0.530	10.0	ug/L	1					
Diphenylamine	U	ND	0.790	10.0	ug/L	1					
Fluoranthene	U	ND	0.500	1.00	ug/L	1					
Fluorene	U	ND	0.500	1.00	ug/L	1					
Hexachlorobenzene	U	ND	0.650	10.0	ug/L	1					
Hexachlorobutadiene	U	ND	0.320	10.0	ug/L	1					
Hexachlorocyclopentadiene	U	ND	1.00	10.0	ug/L	1					
Hexachloroethane	U	ND	0.430	10.0	ug/L	1					
Indeno(1,2,3-cd)pyrene	U	ND	0.500	1.00	ug/L	1					
Isophorone	U	ND	0.590	10.0	ug/L	1					
N-Methyl-N-nitrosomethylamine	U	ND	5.00	10.0	ug/L	1					
N-Nitrosodi-n-propylamine	U	ND	0.750	10.0	ug/L	1					
Naphthalene	U	ND	0.110	1.00	ug/L	1					
Nitrobenzene	U	ND	0.630	10.0	ug/L	1					
Parachlorometa cresol	U	ND	0.690	10.0	ug/L	1					
Pentachlorophenol	U	ND	5.00	10.0	ug/L	1					
Phenanthrene	U	ND	0.500	1.00	ug/L	1					
Phenol	U	ND	0.300	10.0	ug/L	1					
Pyrene	U	ND	0.500	1.00	ug/L	1					
Pyridine	U	ND	5.00	10.0	ug/L	1					
bis(2-Chloroethoxy)methane	U	ND	0.480	10.0	ug/L	1					
bis(2-Chloroethyl) ether	U	ND	1.37	10.0	ug/L	1					
bis(2-Chloroisopropyl)ether	U	ND	0.800	10.0	ug/L	1					
bis(2-Ethylhexyl)phthalate	BJ	2.43	1.30	10.0	ug/L	1					
m,p-Cresols	U	ND	0.590	10.0	ug/L	1					
m-Nitroaniline	U	ND	1.00	10.0	ug/L	1					
o-Cresol	U	ND	0.450	10.0	ug/L	1					
o-Nitroaniline	U	ND	0.640	10.0	ug/L	1					
p-Nitroaniline	U	ND	0.670	10.0	ug/L	1					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C-8270C BNA Appendix 9 Prep Fed	SEK1	01/21/03	2039	228608

Certificate of Analysis

Company : Los Alamos National Labs
 Address : MS K497 ESH-18
 Water Quality & Hydrology
 Los Alamos, New Mexico 87545
 Contact: Billy Turney
 Project: Groundwater

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Client Sample ID: LAO-0.7, Top 12" Project: ESHL00701
 Sample ID: 73695003 Client ID: ESHL001

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
SW846 3005A	ICP-TRACE	SW846 3005A		CWS1	01/21/03	1500	228610			

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 3005/6010B	
2	SW846 8270C	

Surrogate recovery	Test	Recovery %	Acceptable Limits
2,4,6-Tribromophenol	8270C/3510C App.9 BNA Liquid	66%	(27%-126%)
2-Fluorobiphenyl	8270C/3510C App.9 BNA Liquid	62%	(32%-109%)
2-Fluorophenol	8270C/3510C App.9 BNA Liquid	38%	(13%-73%)
Nitrobenzene-d5	8270C/3510C App.9 BNA Liquid	69%	(33%-107%)
Phenol-d5	8270C/3510C App.9 BNA Liquid	26%	(14%-66%)
p-Terphenyl-d14	8270C/3510C App.9 BNA Liquid	69%	(36%-130%)

Notes:

The Qualifiers in this report are defined as follows :

- < Actual result is less than amount reported
- > Actual result is greater than amount reported
- B Analyte found in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration exceeds instrument calibration range
- H Holding time exceeded
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D
- U Indicates the compound was analyzed for but not detected above the detection limit
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier - must be fully described in case narrative and data summary package
- Y QC Samples were not spiked with this compound.

The above sample is reported on an "as received" basis.

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, Stacy Griffin.

Reviewed by _____

Certificate of Analysis

Company : Los Alamos National Labs
 Address : MS K497 ESH-18
 Water Quality & Hydrology
 Los Alamos, New Mexico 87545
 Contact: Billy Turney
 Project: Groundwater

Report Date: January 23, 2003

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Client Sample ID: LAO-0.7, Bottom
 Sample ID: 73695004
 Matrix: Ground Water
 Collect Date: 17-JAN-03 12:28
 Receive Date: 18-JAN-03
 Collector: Client

Project: ESHL00701
 Client ID: ESHL001

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP											
<i>3005/6010 Silicon/Silica Federal</i>											
Silica		85100	21.2	213	ug/L	1	HSC	01/22/03	1001	228611	1
Semi-volatile Mass spec Organics Federal											
<i>8270C/3510C App.9 BNA Liquid F</i>											
1,2,4-Trichlorobenzene	U	ND	0.710	10.0	ug/L	1	CAK	01/22/03	0042	228609	2
1,2-Dichlorobenzene	U	ND	0.410	10.0	ug/L	1					
1,2-Diphenylhydrazine	U	ND	0.860	10.0	ug/L	1					
1,3-Dichlorobenzene	U	ND	0.410	10.0	ug/L	1					
1,4-Dichlorobenzene	U	ND	0.310	10.0	ug/L	1					
2,4,5-Trichlorophenol	U	ND	0.970	10.0	ug/L	1					
2,4,6-Trichlorophenol	U	ND	0.390	10.0	ug/L	1					
2,4-Dichlorophenol	U	ND	0.470	10.0	ug/L	1					
2,4-Dimethylphenol	U	ND	0.470	10.0	ug/L	1					
2,4-Dinitrophenol	U	ND	5.00	20.0	ug/L	1					
2,4-Dinitrotoluene	U	ND	0.700	10.0	ug/L	1					
2,6-Dinitrotoluene	U	ND	0.500	10.0	ug/L	1					
2-Chloronaphthalene	U	ND	0.400	1.00	ug/L	1					
2-Chlorophenol	U	ND	0.410	10.0	ug/L	1					
2-Methyl-4,6-dinitrophenol	U	ND	1.00	10.0	ug/L	1					
2-Methylnaphthalene	U	ND	0.500	1.00	ug/L	1					
2-Nitrophenol	U	ND	0.590	10.0	ug/L	1					
2-Picoline	U	ND	0.870	10.0	ug/L	1					
3,3'-Dichlorobenzidine	U	ND	0.510	10.0	ug/L	1					
4-Bromophenylphenylether	U	ND	1.22	10.0	ug/L	1					
4-Chloroaniline	U	ND	1.10	10.0	ug/L	1					
4-Chlorophenylphenylether	U	ND	0.840	10.0	ug/L	1					
4-Nitrophenol	U	ND	5.00	10.0	ug/L	1					
Acenaphthene	U	ND	0.500	1.00	ug/L	1					
Acenaphthylene	U	ND	0.500	1.00	ug/L	1					
Aniline	U	ND	1.61	10.0	ug/L	1					
Anthracene	U	ND	0.500	1.00	ug/L	1					
Benzidine	U	ND	5.00	50.0	ug/L	1					
Benzo(a)anthracene	U	ND	0.500	1.00	ug/L	1					
Benzo(a)pyrene	U	ND	0.500	1.00	ug/L	1					
Benzo(b)fluoranthene	U	ND	0.500	1.00	ug/L	1					
Benzo(ghi)perylene	U	ND	0.500	1.00	ug/L	1					
Benzo(k)fluoranthene	U	ND	0.500	1.00	ug/L	1					
Benzoic acid	U	ND	10.0	20.0	ug/L	1					
Benzyl alcohol	U	ND	0.910	10.0	ug/L	1					
Butylbenzylphthalate	U	ND	0.680	10.0	ug/L	1					

Certificate of Analysis

Company : Los Alamos National Labs
 Address : MS K497 ESH-18
 Water Quality & Hydrology
 Los Alamos, New Mexico 87545
 Contact: Billy Turney
 Project: Groundwater

Report Date: January 23, 2003

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Client Sample ID: LAO-0.7, Bottom
 Sample ID: 73695004

Project: ESHL00701
 Client ID: ESHL001

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Semi-volatile Mass spec Organics Federal											
<i>8270C/3510C App.9 BNA Liquid F</i>											
Chrysene	U	ND	0.500	1.00	ug/L	1					
Di-n-butylphthalate	U	ND	1.00	10.0	ug/L	1					
Di-n-octylphthalate	U	ND	0.870	10.0	ug/L	1					
Dibenzo(a,h)anthracene	U	ND	0.500	1.00	ug/L	1					
Dibenzofuran	U	ND	0.420	10.0	ug/L	1					
Diethylphthalate	U	ND	0.890	10.0	ug/L	1					
Dimethylphthalate	U	ND	0.530	10.0	ug/L	1					
Diphenylamine	U	ND	0.790	10.0	ug/L	1					
Fluoranthene	U	ND	0.500	1.00	ug/L	1					
Fluorene	U	ND	0.500	1.00	ug/L	1					
Hexachlorobenzene	U	ND	0.650	10.0	ug/L	1					
Hexachlorobutadiene	U	ND	0.320	10.0	ug/L	1					
Hexachlorocyclopentadiene	U	ND	1.00	10.0	ug/L	1					
Hexachloroethane	U	ND	0.430	10.0	ug/L	1					
Indeno(1,2,3-cd)pyrene	U	ND	0.500	1.00	ug/L	1					
Isophorone	U	ND	0.590	10.0	ug/L	1					
N-Methyl-N-nitrosomethylamine	U	ND	5.00	10.0	ug/L	1					
N-Nitrosodi-n-propylamine	U	ND	0.750	10.0	ug/L	1					
Naphthalene	U	ND	0.110	1.00	ug/L	1					
Nitrobenzene	U	ND	0.630	10.0	ug/L	1					
Parachlorometa cresol	U	ND	0.690	10.0	ug/L	1					
Pentachlorophenol	U	ND	5.00	10.0	ug/L	1					
Phenanthrene	U	ND	0.500	1.00	ug/L	1					
Phenol	U	ND	0.300	10.0	ug/L	1					
Pyrene	U	ND	0.500	1.00	ug/L	1					
Pyridine	U	ND	5.00	10.0	ug/L	1					
bis(2-Chloroethoxy)methane	U	ND	0.480	10.0	ug/L	1					
bis(2-Chloroethyl) ether	U	ND	1.37	10.0	ug/L	1					
bis(2-Chloroisopropyl)ether	U	ND	0.800	10.0	ug/L	1					
bis(2-Ethylhexyl)phthalate	BJ	3.08	1.30	10.0	ug/L	1					
m,p-Cresols	U	ND	0.590	10.0	ug/L	1					
m-Nitroaniline	U	ND	1.00	10.0	ug/L	1					
o-Cresol	U	ND	0.450	10.0	ug/L	1					
o-Nitroaniline	U	ND	0.640	10.0	ug/L	1					
p-Nitroaniline	U	ND	0.670	10.0	ug/L	1					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	3510C-8270C BNA Appendix 9 Prep Fed	SEK1	01/21/03	2039	228608

Certificate of Analysis

Company : Los Alamos National Labs
 Address : MS K497 ESH-18
 Water Quality & Hydrology
 Los Alamos, New Mexico 87545
 Contact: Billy Turney
 Project: Groundwater

Report Date: January 23, 2003

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Client Sample ID: LAO-0.7, Bottom Project: ESHL00701
 Sample ID: 73695004 Client ID: ESHL001

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
SW846 3005A	ICP-TRACE	SW846 3005A		CWS1	01/21/03	1500	228610			

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 3005/6010B	
2	SW846 8270C	

Surrogate recovery	Test	Recovery%	Acceptable Limits
2,4,6-Tribromophenol	8270C/3510C App.9 BNA Liquid	0%*	(27%-126%)
2-Fluorobiphenyl	8270C/3510C App.9 BNA Liquid	63%	(32%-109%)
2-Fluorophenol	8270C/3510C App.9 BNA Liquid	1%*	(13%-73%)
Nitrobenzene-d5	8270C/3510C App.9 BNA Liquid	70%	(33%-107%)
Phenol-d5	8270C/3510C App.9 BNA Liquid	0%*	(14%-66%)
p-Terphenyl-d14	8270C/3510C App.9 BNA Liquid	65%	(36%-130%)

Notes:

The Qualifiers in this report are defined as follows :

- < Actual result is less than amount reported
- > Actual result is greater than amount reported
- B Analyte found in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration exceeds instrument calibration range
- H Holding time exceeded
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D
- U Indicates the compound was analyzed for but not detected above the detection limit
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier - must be fully described in case narrative and data summary package
- Y QC Samples were not spiked with this compound.

The above sample is reported on an "as received" basis.

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, Stacy Griffin.

Reviewed by _____

Certificate of Analysis

Company : Los Alamos National Labs
 Address : MS K497 ESH-18
 Water Quality & Hydrology
 Los Alamos, New Mexico 87545
 Contact: Billy Turney
 Project: SWIPE Samples

Report Date: January 23, 2003

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Client Sample ID: LAO-0.7 Transducer Swipe Project: ESHL00303
 Sample ID: 73645001 Client ID: ESHL001
 Matrix: Swipe
 Collect Date: 17-JAN-03 15:00
 Receive Date: 18-JAN-03
 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Semi-volatile Mass spec Organics Federal											
<i>8270C BNA Filter Federal</i>											
1,2,4-Trichlorobenzene	U	ND	0.380	10.0	ug/Filter	1	JWF	01/20/03	1554	228266	1
1,2-Dichlorobenzene	U	ND	0.300	10.0	ug/Filter	1					
1,3-Dichlorobenzene	U	ND	0.340	10.0	ug/Filter	1					
1,4-Dichlorobenzene	U	ND	0.470	10.0	ug/Filter	1					
2,4,5-Trichlorophenol	U	ND	0.520	10.0	ug/Filter	1					
2,4,6-Trichlorophenol	U	ND	0.820	10.0	ug/Filter	1					
2,4-Dichlorophenol	U	ND	0.620	10.0	ug/Filter	1					
2,4-Dimethylphenol	U	ND	5.00	10.0	ug/Filter	1					
2,4-Dinitrophenol	U	ND	5.00	20.0	ug/Filter	1					
2,4-Dinitrotoluene	U	ND	0.760	10.0	ug/Filter	1					
2,6-Dinitrotoluene	U	ND	1.00	10.0	ug/Filter	1					
2-Chloronaphthalene	U	ND	0.410	1.00	ug/Filter	1					
2-Chlorophenol	U	ND	0.460	10.0	ug/Filter	1					
2-Methyl-4,6-dinitrophenol	U	ND	5.00	10.0	ug/Filter	1					
2-Methylnaphthalene	U	ND	0.500	1.00	ug/Filter	1					
2-Nitrophenol	U	ND	0.510	10.0	ug/Filter	1					
3,3'-Dichlorobenzidine	U	ND	5.00	10.0	ug/Filter	1					
4-Bromophenylphenylether	U	ND	1.02	10.0	ug/Filter	1					
4-Chloroaniline	U	ND	5.00	10.0	ug/Filter	1					
4-Chlorophenylphenylether	U	ND	0.590	10.0	ug/Filter	1					
4-Nitrophenol	U	ND	5.00	10.0	ug/Filter	1					
Acenaphthene	U	ND	0.240	1.00	ug/Filter	1					
Acenaphthylene	U	ND	0.500	1.00	ug/Filter	1					
Anthracene	U	ND	0.500	1.00	ug/Filter	1					
Benzo(a)anthracene	U	ND	0.500	1.00	ug/Filter	1					
Benzo(a)pyrene	U	ND	0.500	1.00	ug/Filter	1					
Benzo(b)fluoranthene	U	ND	0.500	1.00	ug/Filter	1					
Benzo(ghi)perylene	U	ND	0.500	1.00	ug/Filter	1					
Benzo(k)fluoranthene	U	ND	0.500	1.00	ug/Filter	1					
Benzoic acid	U	ND	1.00	20.0	ug/Filter	1					
Benzyl alcohol	U	ND	5.00	10.0	ug/Filter	1					
Butylbenzylphthalate	J	2.26	0.860	10.0	ug/Filter	1					
Carbazole	U	ND	0.500	10.0	ug/Filter	1					
Chrysene	U	ND	0.500	1.00	ug/Filter	1					
Di-n-butylphthalate	J	1.49	0.720	10.0	ug/Filter	1					
Di-n-octylphthalate	U	ND	0.910	10.0	ug/Filter	1					
Dibenzo(a,h)anthracene	U	ND	0.500	1.00	ug/Filter	1					
Dibenzofuran	U	ND	0.510	10.0	ug/Filter	1					

Certificate of Analysis

Company : Los Alamos National Labs
 Address : MS K497 ESH-18
 Water Quality & Hydrology
 Los Alamos, New Mexico 87545
 Contact: Billy Turney
 Project: SWIPE Samples

Report Date: January 23, 2003

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Client Sample ID: LAO-0.7 Transducer Swipe Project: ESHL00303
 Sample ID: 73645001 Client ID: ESHL001

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Semi-volatile Mass spec Organics Federal										
<i>8270C BNA Filter Federal</i>										
Diethylphthalate	J	1.05	0.530	10.0	ug/Filter	1				
Dimethylphthalate	J	0.984	0.550	10.0	ug/Filter	1				
Diphenylamine	U	ND	0.670	10.0	ug/Filter	1				
Fluoranthene	U	ND	0.500	1.00	ug/Filter	1				
Fluorene	U	ND	0.120	1.00	ug/Filter	1				
Hexachlorobenzene	U	ND	0.600	10.0	ug/Filter	1				
Hexachlorobutadiene	U	ND	0.380	10.0	ug/Filter	1				
Hexachlorocyclopentadiene	U	ND	5.00	10.0	ug/Filter	1				
Hexachloroethane	U	ND	0.660	10.0	ug/Filter	1				
Indeno(1,2,3-cd)pyrene	U	ND	0.500	1.00	ug/Filter	1				
Isophorone	U	ND	0.480	10.0	ug/Filter	1				
N-Nitrosodi-n-propylamine	U	ND	0.680	10.0	ug/Filter	1				
Naphthalene	U	ND	0.500	1.00	ug/Filter	1				
Nitrobenzene	U	ND	0.610	10.0	ug/Filter	1				
Parachlorometa cresol	U	ND	5.00	10.0	ug/Filter	1				
Pentachlorophenol	U	ND	5.00	10.0	ug/Filter	1				
Phenanthrene	U	ND	0.500	1.00	ug/Filter	1				
Phenol	U	ND	0.380	10.0	ug/Filter	1				
Pyrene	U	ND	0.500	1.00	ug/Filter	1				
bis(2-Chloroethoxy)methane	U	ND	0.370	10.0	ug/Filter	1				
bis(2-Chloroethyl) ether	U	ND	1.12	10.0	ug/Filter	1				
bis(2-Chloroisopropyl)ether	U	ND	0.330	10.0	ug/Filter	1				
bis(2-Ethylhexyl)phthalate	BJ	4.39	0.900	10.0	ug/Filter	1				
m,p-Cresols	U	ND	1.00	10.0	ug/Filter	1				
m-Nitroaniline	U	ND	5.00	10.0	ug/Filter	1				
o-Cresol	U	ND	0.780	10.0	ug/Filter	1				
o-Nitroaniline	U	ND	5.00	10.0	ug/Filter	1				
p-Nitroaniline	U	ND	1.11	10.0	ug/Filter	1				

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3550B	3550B BNA Filter Prep-8270C Analysis	GMS	01/19/03	1225	228265

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8270C	

Surrogate recovery	Test	Recovery %	Acceptable Limits
2,4,6-Tribromophenol	8270C BNA Filter Federal	52%	(23%-111%)

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Company : Los Alamos National Labs
Address : MS K497 ESH-18
Water Quality & Hydrology
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Client Sample ID: LAO-0.7 Transducer Swipe Project: ESHL00303
Sample ID: 73645001 Client ID: ESHL001

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
2-Fluorobiphenyl	8270C	BNA Filter Federal		8% *		(21%-104%)					
2-Fluorophenol	8270C	BNA Filter Federal		0% *		(22%-93%)					
Nitrobenzene-d5	8270C	BNA Filter Federal		0% *		(24%-97%)					
Phenol-d5	8270C	BNA Filter Federal		4% *		(22%-99%)					
p-Terphenyl-d14	8270C	BNA Filter Federal		85%		(30%-133%)					

Notes:

The Qualifiers in this report are defined as follows :

- < Actual result is less than amount reported
- > Actual result is greater than amount reported
- B Analyte found in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration exceeds instrument calibration range
- H Holding time exceeded
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D
- U Indicates the compound was analyzed for but not detected above the detection limit
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier - must be fully described in case narrative and data summary package
- Y QC Samples were not spiked with this compound.

The above sample is reported on an "as received" basis.

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, Stacy Griffin.

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Certificate of Analysis

Company : Los Alamos National Labs
 Address : MS K497 ESH-18
 Water Quality & Hydrology
 Los Alamos, New Mexico 87545
 Contact: Billy Turney
 Project: SWIPE Samples

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Client Sample ID: LAO-0.7 Pump Swipe
 Sample ID: 73645002
 Matrix: Swipe
 Collect Date: 17-JAN-03 15:00
 Receive Date: 18-JAN-03
 Collector: Client

Project: ESHL00303
 Client ID: ESHL001

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Semi-volatile Mass spec Organics Federal											
<i>8270C BNA Filter Federal</i>											
1,2,4-Trichlorobenzene	U	ND	0.380	10.0	ug/Filter	1	JWF	01/20/03	1402	228266	1
1,2-Dichlorobenzene	U	ND	0.300	10.0	ug/Filter	1					
1,3-Dichlorobenzene	U	ND	0.340	10.0	ug/Filter	1					
1,4-Dichlorobenzene	U	ND	0.470	10.0	ug/Filter	1					
2,4,5-Trichlorophenol	U	ND	0.520	10.0	ug/Filter	1					
2,4,6-Trichlorophenol	U	ND	0.820	10.0	ug/Filter	1					
2,4-Dichlorophenol	U	ND	0.620	10.0	ug/Filter	1					
2,4-Dimethylphenol	U	ND	5.00	10.0	ug/Filter	1					
2,4-Dinitrophenol	U	ND	5.00	20.0	ug/Filter	1					
2,4-Dinitrotoluene	U	ND	0.760	10.0	ug/Filter	1					
2,6-Dinitrotoluene	U	ND	1.00	10.0	ug/Filter	1					
2-Chloronaphthalene	U	ND	0.410	1.00	ug/Filter	1					
2-Chlorophenol	U	ND	0.460	10.0	ug/Filter	1					
2-Methyl-4,6-dinitrophenol	U	ND	5.00	10.0	ug/Filter	1					
2-Methylnaphthalene	U	ND	0.500	1.00	ug/Filter	1					
2-Nitrophenol	U	ND	0.510	10.0	ug/Filter	1					
3,3'-Dichlorobenzidine	U	ND	5.00	10.0	ug/Filter	1					
4-Bromophenylphenylether	U	ND	1.02	10.0	ug/Filter	1					
4-Chloroaniline	U	ND	5.00	10.0	ug/Filter	1					
4-Chlorophenylphenylether	U	ND	0.590	10.0	ug/Filter	1					
4-Nitrophenol	U	ND	5.00	10.0	ug/Filter	1					
Acenaphthene	U	ND	0.240	1.00	ug/Filter	1					
Acenaphthylene	U	ND	0.500	1.00	ug/Filter	1					
Anthracene	U	ND	0.500	1.00	ug/Filter	1					
Benzo(a)anthracene	U	ND	0.500	1.00	ug/Filter	1					
Benzo(a)pyrene	U	ND	0.500	1.00	ug/Filter	1					
Benzo(b)fluoranthene	U	ND	0.500	1.00	ug/Filter	1					
Benzo(ghi)perylene	U	ND	0.500	1.00	ug/Filter	1					
Benzo(k)fluoranthene	U	ND	0.500	1.00	ug/Filter	1					
Benzoic acid	U	ND	1.00	20.0	ug/Filter	1					
Benzyl alcohol	U	ND	5.00	10.0	ug/Filter	1					
Butylbenzylphthalate	U	ND	0.860	10.0	ug/Filter	1					
Carbazole	U	ND	0.500	10.0	ug/Filter	1					
Chrysene	U	ND	0.500	1.00	ug/Filter	1					
Di-n-butylphthalate	U	ND	0.720	10.0	ug/Filter	1					
Di-n-octylphthalate	U	ND	0.910	10.0	ug/Filter	1					
Dibenzo(a,h)anthracene	U	ND	0.500	1.00	ug/Filter	1					
Dibenzofuran	U	ND	0.510	10.0	ug/Filter	1					
Diethylphthalate	J	1.34	0.530	10.0	ug/Filter	1					

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Client Sample ID: LAO-0.7 Pump Swipe
 Sample ID: 73645002

Project: ESHL00303
 Client ID: ESHL001

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Semi-volatile Mass spec Organics Federal											
<i>8270C BNA Filter Federal</i>											
Dimethylphthalate	J	2.94	0.550	10.0	ug/Filter	1					
Diphenylamine	U	ND	0.670	10.0	ug/Filter	1					
Fluoranthene	U	ND	0.500	1.00	ug/Filter	1					
Fluorene	U	ND	0.120	1.00	ug/Filter	1					
Hexachlorobenzene	U	ND	0.600	10.0	ug/Filter	1					
Hexachlorobutadiene	U	ND	0.380	10.0	ug/Filter	1					
Hexachlorocyclopentadiene	U	ND	5.00	10.0	ug/Filter	1					
Hexachloroethane	U	ND	0.660	10.0	ug/Filter	1					
Indeno(1,2,3-cd)pyrene	U	ND	0.500	1.00	ug/Filter	1					
Isophorone	U	ND	0.480	10.0	ug/Filter	1					
N-Nitrosodi-n-propylamine	U	ND	0.680	10.0	ug/Filter	1					
Naphthalene	U	ND	0.500	1.00	ug/Filter	1					
Nitrobenzene	U	ND	0.610	10.0	ug/Filter	1					
Parachlorometa cresol	U	ND	5.00	10.0	ug/Filter	1					
Pentachlorophenol	U	ND	5.00	10.0	ug/Filter	1					
Phenanthrene	U	ND	0.500	1.00	ug/Filter	1					
Phenol	J	0.729	0.380	10.0	ug/Filter	1					
Pyrene	U	ND	0.500	1.00	ug/Filter	1					
bis(2-Chloroethoxy)methane	U	ND	0.370	10.0	ug/Filter	1					
bis(2-Chloroethyl) ether	U	ND	1.12	10.0	ug/Filter	1					
bis(2-Chloroisopropyl)ether	U	ND	0.330	10.0	ug/Filter	1					
bis(2-Ethylhexyl)phthalate	BJ	4.20	0.900	10.0	ug/Filter	1					
m,p-Cresols	U	ND	1.00	10.0	ug/Filter	1					
m-Nitroaniline	U	ND	5.00	10.0	ug/Filter	1					
o-Cresol	U	ND	0.780	10.0	ug/Filter	1					
o-Nitroaniline	U	ND	5.00	10.0	ug/Filter	1					
p-Nitroaniline	U	ND	1.11	10.0	ug/Filter	1					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3550B	3550B BNA Filter Prep-8270C Analysis	GMS	01/19/03	1225	228265

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8270C	

Surrogate recovery	Test	Recovery%	Acceptable Limits
2,4,6-Tribromophenol	8270C BNA Filter Federal	58%	(23%-111%)
2-Fluorobiphenyl	8270C BNA Filter Federal	55%	(21%-104%)

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Client Sample ID: LAO-0.7 Pump Swipe
Sample ID: 73645002

Project: ESHL00303
Client ID: ESHL001

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
2-Fluorophenol	8270C	BNA Filter Federal		52%		(22%-93%)				
Nitrobenzene-d5	8270C	BNA Filter Federal		58%		(24%-97%)				
Phenol-d5	8270C	BNA Filter Federal		55%		(22%-99%)				
p-Terphenyl-d14	8270C	BNA Filter Federal		60%		(30%-133%)				

Notes:

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- B Analyte found in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration exceeds instrument calibration range
- H Holding time exceeded
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D
- U Indicates the compound was analyzed for but not detected above the detection limit
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier - must be fully described in case narrative and data summary package
- Y QC Samples were not spiked with this compound.

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Company : Los Alamos National Labs
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 Los Alamos, New Mexico 87545
 Contact: Billy Turney
 Project: SWIPE Samples

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Client Sample ID: LAO-C Transducer Swipe Project: ESHL00303
 Sample ID: 73645003 Client ID: ESHL001
 Matrix: Swipe
 Collect Date: 17-JAN-03 15:00
 Receive Date: 18-JAN-03
 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Semi-volatile Mass spec Organics Federal										
<i>8270C BNA Filter Federal</i>										
1,2,4-Trichlorobenzene	U	ND	0.380	10.0	ug/Filter	1	JWF 01/20/03	1340	228266	1
1,2-Dichlorobenzene	U	ND	0.300	10.0	ug/Filter	1				
1,3-Dichlorobenzene	U	ND	0.340	10.0	ug/Filter	1				
1,4-Dichlorobenzene	U	ND	0.470	10.0	ug/Filter	1				
2,4,5-Trichlorophenol	U	ND	0.520	10.0	ug/Filter	1				
2,4,6-Trichlorophenol	U	ND	0.820	10.0	ug/Filter	1				
2,4-Dichlorophenol	U	ND	0.620	10.0	ug/Filter	1				
2,4-Dimethylphenol	U	ND	5.00	10.0	ug/Filter	1				
2,4-Dinitrophenol	U	ND	5.00	20.0	ug/Filter	1				
2,4-Dinitrotoluene	U	ND	0.760	10.0	ug/Filter	1				
2,6-Dinitrotoluene	U	ND	1.00	10.0	ug/Filter	1				
2-Chloronaphthalene	U	ND	0.410	1.00	ug/Filter	1				
2-Chlorophenol	U	ND	0.460	10.0	ug/Filter	1				
2-Methyl-4,6-dinitrophenol	U	ND	5.00	10.0	ug/Filter	1				
2-Methylnaphthalene	U	ND	0.500	1.00	ug/Filter	1				
2-Nitrophenol	U	ND	0.510	10.0	ug/Filter	1				
3,3'-Dichlorobenzidine	U	ND	5.00	10.0	ug/Filter	1				
4-Bromophenylphenylether	U	ND	1.02	10.0	ug/Filter	1				
4-Chloroaniline	U	ND	5.00	10.0	ug/Filter	1				
4-Chlorophenylphenylether	U	ND	0.590	10.0	ug/Filter	1				
4-Nitrophenol	U	ND	5.00	10.0	ug/Filter	1				
Acenaphthene	U	ND	0.240	1.00	ug/Filter	1				
Acenaphthylene	U	ND	0.500	1.00	ug/Filter	1				
Anthracene	U	ND	0.500	1.00	ug/Filter	1				
Benzo(a)anthracene	U	ND	0.500	1.00	ug/Filter	1				
Benzo(a)pyrene	U	ND	0.500	1.00	ug/Filter	1				
Benzo(b)fluoranthene	U	ND	0.500	1.00	ug/Filter	1				
Benzo(ghi)perylene	U	ND	0.500	1.00	ug/Filter	1				
Benzo(k)fluoranthene	U	ND	0.500	1.00	ug/Filter	1				
Benzoic acid	U	ND	1.00	20.0	ug/Filter	1				
Benzyl alcohol	U	ND	5.00	10.0	ug/Filter	1				
Butylbenzylphthalate	J	2.35	0.860	10.0	ug/Filter	1				
Carbazole	U	ND	0.500	10.0	ug/Filter	1				
Chrysene	U	ND	0.500	1.00	ug/Filter	1				
Di-n-butylphthalate	J	1.95	0.720	10.0	ug/Filter	1				
Di-n-octylphthalate	U	ND	0.910	10.0	ug/Filter	1				
Dibenzo(a,h)anthracene	U	ND	0.500	1.00	ug/Filter	1				
Dibenzofuran	U	ND	0.510	10.0	ug/Filter	1				
Diethylphthalate	J	2.08	0.530	10.0	ug/Filter	1				

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 Los Alamos, New Mexico 87545
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Client Sample ID: LAO-C Transducer Swipe Project: ESHL00303
 Sample ID: 73645003 Client ID: ESHL001

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Semi-volatile Mass spec Organics Federal											
<i>8270C BNA Filter Federal</i>											
Dimethylphthalate	J	3.09	0.550	10.0	ug/Filter	1					
Diphenylamine	U	ND	0.670	10.0	ug/Filter	1					
Fluoranthene	U	ND	0.500	1.00	ug/Filter	1					
Fluorene	U	ND	0.120	1.00	ug/Filter	1					
Hexachlorobenzene	U	ND	0.600	10.0	ug/Filter	1					
Hexachlorobutadiene	U	ND	0.380	10.0	ug/Filter	1					
Hexachlorocyclopentadiene	U	ND	5.00	10.0	ug/Filter	1					
Hexachloroethane	U	ND	0.660	10.0	ug/Filter	1					
Indeno(1,2,3-cd)pyrene	U	ND	0.500	1.00	ug/Filter	1					
Isophorone	U	ND	0.480	10.0	ug/Filter	1					
N-Nitrosodi-n-propylamine	U	ND	0.680	10.0	ug/Filter	1					
Naphthalene	U	ND	0.500	1.00	ug/Filter	1					
Nitrobenzene	U	ND	0.610	10.0	ug/Filter	1					
Parachlorometa cresol	U	ND	5.00	10.0	ug/Filter	1					
Pentachlorophenol	U	ND	5.00	10.0	ug/Filter	1					
Phenanthrene	U	ND	0.500	1.00	ug/Filter	1					
Phenol	J	1.02	0.380	10.0	ug/Filter	1					
Pyrene	U	ND	0.500	1.00	ug/Filter	1					
bis(2-Chloroethoxy)methane	U	ND	0.370	10.0	ug/Filter	1					
bis(2-Chloroethyl) ether	U	ND	1.12	10.0	ug/Filter	1					
bis(2-Chloroisopropyl)ether	U	ND	0.330	10.0	ug/Filter	1					
bis(2-Ethylhexyl)phthalate	BJ	4.86	0.900	10.0	ug/Filter	1					
m,p-Cresols	U	ND	1.00	10.0	ug/Filter	1					
m-Nitroaniline	U	ND	5.00	10.0	ug/Filter	1					
o-Cresol	U	ND	0.780	10.0	ug/Filter	1					
o-Nitroaniline	U	ND	5.00	10.0	ug/Filter	1					
p-Nitroaniline	U	ND	1.11	10.0	ug/Filter	1					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3550B	3550B BNA Filter Prep-8270C Analysis	GMS	01/19/03	1225	228265

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8270C	

Surrogate recovery	Test	Recovery%	Acceptable Limits
2,4,6-Tribromophenol	8270C BNA Filter Federal	72%	(23%-111%)
2-Fluorobiphenyl	8270C BNA Filter Federal	50%	(21%-104%)

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Company : Los Alamos National Labs
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Contact: Billy Turney
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Client Sample ID: LAO-C Transducer Swipe Project: ESHL00303
Sample ID: 73645003 Client ID: ESHL001

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
2-Fluorophenol		8270C BNA Filter Federal		45%		(22%-93%)				
Nitrobenzene-d5		8270C BNA Filter Federal		49%		(24%-97%)				
Phenol-d5		8270C BNA Filter Federal		49%		(22%-99%)				
p-Terphenyl-d14		8270C BNA Filter Federal		89%		(30%-133%)				

Notes:

The Qualifiers in this report are defined as follows :

- < Actual result is less than amount reported
- > Actual result is greater than amount reported
- B Analyte found in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration exceeds instrument calibration range
- H Holding time exceeded
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D
- U Indicates the compound was analyzed for but not detected above the detection limit
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier - must be fully described in case narrative and data summary package
- Y QC Samples were not spiked with this compound.

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Certificate of Analysis

Company : Los Alamos National Labs
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 Water Quality & Hydrology
 Los Alamos, New Mexico 87545
 Contact: Billy Turney
 Project: SWIPE Samples

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Client Sample ID: LAO-C Pump Swipe Project: ESHL00303
 Sample ID: 73645004 Client ID: ESHL001
 Matrix: Swipe
 Collect Date: 17-JAN-03 15:00
 Receive Date: 18-JAN-03
 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Semi-volatile Mass spec Organics Federal											
<i>8270C BNA Filter Federal</i>											
1,2,4-Trichlorobenzene	U	ND	0.380	10.0	ug/Filter	1	JWF	01/20/03	1424	228266	1
1,2-Dichlorobenzene	U	ND	0.300	10.0	ug/Filter	1					
1,3-Dichlorobenzene	U	ND	0.340	10.0	ug/Filter	1					
1,4-Dichlorobenzene	U	ND	0.470	10.0	ug/Filter	1					
2,4,5-Trichlorophenol	U	ND	0.520	10.0	ug/Filter	1					
2,4,6-Trichlorophenol	U	ND	0.820	10.0	ug/Filter	1					
2,4-Dichlorophenol	U	ND	0.620	10.0	ug/Filter	1					
2,4-Dimethylphenol	U	ND	5.00	10.0	ug/Filter	1					
2,4-Dinitrophenol	U	ND	5.00	20.0	ug/Filter	1					
2,4-Dinitrotoluene	U	ND	0.760	10.0	ug/Filter	1					
2,6-Dinitrotoluene	U	ND	1.00	10.0	ug/Filter	1					
2-Chloronaphthalene	U	ND	0.410	1.00	ug/Filter	1					
2-Chlorophenol	U	ND	0.460	10.0	ug/Filter	1					
2-Methyl-4,6-dinitrophenol	U	ND	5.00	10.0	ug/Filter	1					
2-Methylnaphthalene	U	ND	0.500	1.00	ug/Filter	1					
2-Nitrophenol	U	ND	0.510	10.0	ug/Filter	1					
3,3'-Dichlorobenzidine	U	ND	5.00	10.0	ug/Filter	1					
4-Bromophenylphenylether	U	ND	1.02	10.0	ug/Filter	1					
4-Chloroaniline	U	ND	5.00	10.0	ug/Filter	1					
4-Chlorophenylphenylether	U	ND	0.590	10.0	ug/Filter	1					
4-Nitrophenol	U	ND	5.00	10.0	ug/Filter	1					
Acenaphthene	U	ND	0.240	1.00	ug/Filter	1					
Acenaphthylene	U	ND	0.500	1.00	ug/Filter	1					
Anthracene	U	ND	0.500	1.00	ug/Filter	1					
Benzo(a)anthracene	U	ND	0.500	1.00	ug/Filter	1					
Benzo(a)pyrene	U	ND	0.500	1.00	ug/Filter	1					
Benzo(b)fluoranthene	U	ND	0.500	1.00	ug/Filter	1					
Benzo(ghi)perylene	U	ND	0.500	1.00	ug/Filter	1					
Benzo(k)fluoranthene	U	ND	0.500	1.00	ug/Filter	1					
Benzoic acid	U	ND	1.00	20.0	ug/Filter	1					
Benzyl alcohol	U	ND	5.00	10.0	ug/Filter	1					
Butylbenzylphthalate	U	ND	0.860	10.0	ug/Filter	1					
Carbazole	U	ND	0.500	10.0	ug/Filter	1					
Chrysene	U	ND	0.500	1.00	ug/Filter	1					
Di-n-butylphthalate	J	1.10	0.720	10.0	ug/Filter	1					
Di-n-octylphthalate	U	ND	0.910	10.0	ug/Filter	1					
Dibenzo(a,h)anthracene	U	ND	0.500	1.00	ug/Filter	1					
Dibenzofuran	U	ND	0.510	10.0	ug/Filter	1					
Diethylphthalate	J	1.40	0.530	10.0	ug/Filter	1					

Certificate of Analysis

Company : Los Alamos National Labs
 Address : MS K497 ESH-18
 Water Quality & Hydrology
 Los Alamos, New Mexico 87545
 Contact: Billy Turney
 Project: SWIPE Samples

Report Date: January 23, 2003

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Client Sample ID: LAO-C Pump Swipe
 Sample ID: 73645004

Project: ESHL00303
 Client ID: ESHL001

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Semi-volatile Mass spec Organics Federal											
<i>8270C BNA Filter Federal</i>											
Dimethylphthalate	J	3.60	0.550	10.0	ug/Filter	1					
Diphenylamine	U	ND	0.670	10.0	ug/Filter	1					
Fluoranthene	U	ND	0.500	1.00	ug/Filter	1					
Fluorene	U	ND	0.120	1.00	ug/Filter	1					
Hexachlorobenzene	U	ND	0.600	10.0	ug/Filter	1					
Hexachlorobutadiene	U	ND	0.380	10.0	ug/Filter	1					
Hexachlorocyclopentadiene	U	ND	5.00	10.0	ug/Filter	1					
Hexachloroethane	U	ND	0.660	10.0	ug/Filter	1					
Indeno(1,2,3-cd)pyrene	U	ND	0.500	1.00	ug/Filter	1					
Isophorone	U	ND	0.480	10.0	ug/Filter	1					
N-Nitrosodi-n-propylamine	U	ND	0.680	10.0	ug/Filter	1					
Naphthalene	U	ND	0.500	1.00	ug/Filter	1					
Nitrobenzene	U	ND	0.610	10.0	ug/Filter	1					
Parachlorometa cresol	U	ND	5.00	10.0	ug/Filter	1					
Pentachlorophenol	U	ND	5.00	10.0	ug/Filter	1					
Phenanthrene	U	ND	0.500	1.00	ug/Filter	1					
Phenol	J	0.963	0.380	10.0	ug/Filter	1					
Pyrene	U	ND	0.500	1.00	ug/Filter	1					
bis(2-Chloroethoxy)methane	U	ND	0.370	10.0	ug/Filter	1					
bis(2-Chloroethyl) ether	U	ND	1.12	10.0	ug/Filter	1					
bis(2-Chloroisopropyl)ether	U	ND	0.330	10.0	ug/Filter	1					
bis(2-Ethylhexyl)phthalate	BJ	7.01	0.900	10.0	ug/Filter	1					
m,p-Cresols	U	ND	1.00	10.0	ug/Filter	1					
m-Nitroaniline	U	ND	5.00	10.0	ug/Filter	1					
o-Cresol	U	ND	0.780	10.0	ug/Filter	1					
o-Nitroaniline	U	ND	5.00	10.0	ug/Filter	1					
p-Nitroaniline	U	ND	1.11	10.0	ug/Filter	1					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3550B	3550B BNA Filter Prep-8270C Analysis	GMS	01/19/03	1225	228265

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8270C	

Surrogate recovery	Test	Recovery%	Acceptable Limits
2,4,6-Tribromophenol	8270C BNA Filter Federal	63%	(23%-111%)
2-Fluorobiphenyl	8270C BNA Filter Federal	53%	(21%-104%)

Certificate of Analysis

Company : Los Alamos National Labs
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Contact: Billy Turney
Project: SWIPE Samples

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Client Sample ID: LAO-C Pump Swipe
Sample ID: 73645004

Project: ESHL00303
Client ID: ESHL001

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
2-Fluorophenol	8270C	BNA Filter Federal		51%		(22%-93%)				
Nitrobenzene-d5	8270C	BNA Filter Federal		57%		(24%-97%)				
Phenol-d5	8270C	BNA Filter Federal		54%		(22%-99%)				
p-Terphenyl-d14	8270C	BNA Filter Federal		68%		(30%-133%)				

Notes:

The Qualifiers in this report are defined as follows :

- < Actual result is less than amount reported
- > Actual result is greater than amount reported
- B Analyte found in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration exceeds instrument calibration range
- H Holding time exceeded
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D
- U Indicates the compound was analyzed for but not detected above the detection limit
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier - must be fully described in case narrative and data summary package
- Y QC Samples were not spiked with this compound.

The above sample is reported on an "as received" basis.

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, Stacy Griffin.

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Certificate of Analysis

Company : Los Alamos National Labs
 Address : MS K497 ESH-18
 Water Quality & Hydrology
 Los Alamos, New Mexico 87545
 Contact: Billy Turney
 Project: SWIPE Samples

Report Date: January 23, 2003

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Client Sample ID: LAO-C/LAO-0.7 Tubing Swip Project: ESHL00303
 Sample ID: 73645005 Client ID: ESHL001
 Matrix: Swipe
 Collect Date: 17-JAN-03 15:00
 Receive Date: 18-JAN-03
 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Semi-volatile Mass spec Organics Federal											
<i>8270C BNA Filter Federal</i>											
1,2,4-Trichlorobenzene	U	ND	0.380	10.0	ug/Filter	1	JWF	01/20/03	1446	228266	1
1,2-Dichlorobenzene	U	ND	0.300	10.0	ug/Filter	1					
1,3-Dichlorobenzene	U	ND	0.340	10.0	ug/Filter	1					
1,4-Dichlorobenzene	U	ND	0.470	10.0	ug/Filter	1					
2,4,5-Trichlorophenol	U	ND	0.520	10.0	ug/Filter	1					
2,4,6-Trichlorophenol	U	ND	0.820	10.0	ug/Filter	1					
2,4-Dichlorophenol	U	ND	0.620	10.0	ug/Filter	1					
2,4-Dimethylphenol	U	ND	5.00	10.0	ug/Filter	1					
2,4-Dinitrophenol	U	ND	5.00	20.0	ug/Filter	1					
2,4-Dinitrotoluene	U	ND	0.760	10.0	ug/Filter	1					
2,6-Dinitrotoluene	U	ND	1.00	10.0	ug/Filter	1					
2-Chloronaphthalene	U	ND	0.410	1.00	ug/Filter	1					
2-Chlorophenol	U	ND	0.460	10.0	ug/Filter	1					
2-Methyl-4,6-dinitrophenol	U	ND	5.00	10.0	ug/Filter	1					
2-Methylnaphthalene	U	ND	0.500	1.00	ug/Filter	1					
2-Nitrophenol	U	ND	0.510	10.0	ug/Filter	1					
3,3'-Dichlorobenzidine	U	ND	5.00	10.0	ug/Filter	1					
4-Bromophenylphenylether	U	ND	1.02	10.0	ug/Filter	1					
4-Chloroaniline	U	ND	5.00	10.0	ug/Filter	1					
4-Chlorophenylphenylether	U	ND	0.590	10.0	ug/Filter	1					
4-Nitrophenol	U	ND	5.00	10.0	ug/Filter	1					
Acenaphthene	U	ND	0.240	1.00	ug/Filter	1					
Acenaphthylene	U	ND	0.500	1.00	ug/Filter	1					
Anthracene	U	ND	0.500	1.00	ug/Filter	1					
Benzo(a)anthracene	U	ND	0.500	1.00	ug/Filter	1					
Benzo(a)pyrene	U	ND	0.500	1.00	ug/Filter	1					
Benzo(b)fluoranthene	U	ND	0.500	1.00	ug/Filter	1					
Benzo(ghi)perylene	U	ND	0.500	1.00	ug/Filter	1					
Benzo(k)fluoranthene	U	ND	0.500	1.00	ug/Filter	1					
Benzoic acid	U	ND	1.00	20.0	ug/Filter	1					
Benzyl alcohol	U	ND	5.00	10.0	ug/Filter	1					
Butylbenzylphthalate	U	ND	0.860	10.0	ug/Filter	1					
Carbazole	U	ND	0.500	10.0	ug/Filter	1					
Chrysene	U	ND	0.500	1.00	ug/Filter	1					
Di-n-butylphthalate	J	0.911	0.720	10.0	ug/Filter	1					
Di-n-octylphthalate	U	ND	0.910	10.0	ug/Filter	1					
Dibenzo(a,h)anthracene	U	ND	0.500	1.00	ug/Filter	1					
Dibenzofuran	U	ND	0.510	10.0	ug/Filter	1					
Diethylphthalate	J	2.60	0.530	10.0	ug/Filter	1					

Certificate of Analysis

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 Contact: Billy Turney
 Project: SWIPE Samples

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Client Sample ID: LAO-C/LAO-0.7 Tubing Swip Project: ESHL00303
 Sample ID: 73645005 Client ID: ESHL001

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Semi-volatile Mass spec Organics Federal											
<i>8270C BNA Filter Federal</i>											
Dimethylphthalate	J	4.08	0.550	10.0	ug/Filter	1					
Diphenylamine	U	ND	0.670	10.0	ug/Filter	1					
Fluoranthene	U	ND	0.500	1.00	ug/Filter	1					
Fluorene	U	ND	0.120	1.00	ug/Filter	1					
Hexachlorobenzene	U	ND	0.600	10.0	ug/Filter	1					
Hexachlorobutadiene	U	ND	0.380	10.0	ug/Filter	1					
Hexachlorocyclopentadiene	U	ND	5.00	10.0	ug/Filter	1					
Hexachloroethane	U	ND	0.660	10.0	ug/Filter	1					
Indeno(1,2,3-cd)pyrene	U	ND	0.500	1.00	ug/Filter	1					
Isophorone	U	ND	0.480	10.0	ug/Filter	1					
N-Nitrosodi--n-propylamine	U	ND	0.680	10.0	ug/Filter	1					
Naphthalene	U	ND	0.500	1.00	ug/Filter	1					
Nitrobenzene	U	ND	0.610	10.0	ug/Filter	1					
Parachlorometa cresol	U	ND	5.00	10.0	ug/Filter	1					
Pentachlorophenol	U	ND	5.00	10.0	ug/Filter	1					
Phenanthrene	U	ND	0.500	1.00	ug/Filter	1					
Phenol	J	1.36	0.380	10.0	ug/Filter	1					
Pyrene	U	ND	0.500	1.00	ug/Filter	1					
bis(2-Chloroethoxy)methane	U	ND	0.370	10.0	ug/Filter	1					
bis(2-Chloroethyl) ether	U	ND	1.12	10.0	ug/Filter	1					
bis(2-Chloroisopropyl)ether	U	ND	0.330	10.0	ug/Filter	1					
bis(2-Ethylhexyl)phthalate	BJ	4.42	0.900	10.0	ug/Filter	1					
m,p-Cresols	U	ND	1.00	10.0	ug/Filter	1					
m-Nitroaniline	U	ND	5.00	10.0	ug/Filter	1					
o-Cresol	U	ND	0.780	10.0	ug/Filter	1					
o-Nitroaniline	U	ND	5.00	10.0	ug/Filter	1					
p-Nitroaniline	U	ND	1.11	10.0	ug/Filter	1					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3550B	3550B BNA Filter Prep-8270C Analysis	GMS	01/19/03	1225	228265

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8270C	

Surrogate recovery	Test	Recovery%	Acceptable Limits
2,4,6-Tribromophenol	8270C BNA Filter Federal	68%	(23%-111%)
2-Fluorobiphenyl	8270C BNA Filter Federal	54%	(21%-104%)

Certificate of Analysis

Company : Los Alamos National Labs
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Los Alamos, New Mexico 87545
Contact: Billy Turney
Project: SWIPE Samples

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Client Sample ID: LAO-C/LAO-0.7 Tubing Swip Project: ESHL00303
Sample ID: 73645005 Client ID: ESHL001

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
2-Fluorophenol		8270C BNA Filter Federal		51%		(22%-93%)				
Nitrobenzene-d5		8270C BNA Filter Federal		58%		(24%-97%)				
Phenol-d5		8270C BNA Filter Federal		54%		(22%-99%)				
p-Terphenyl-d14		8270C BNA Filter Federal		73%		(30%-133%)				

Notes:

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- < Actual result is less than amount reported
- > Actual result is greater than amount reported
- B Analyte found in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration exceeds instrument calibration range
- H Holding time exceeded
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D
- U Indicates the compound was analyzed for but not detected above the detection limit
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier - must be fully described in case narrative and data summary package
- Y QC Samples were not spiked with this compound.

The above sample is reported on an "as received" basis.

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Certificate of Analysis

Company : Los Alamos National Labs
 Address : MS K497 ESH-18
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 Los Alamos, New Mexico 87545
 Contact: Billy Turney
 Project: SWIPE Samples

Report Date: January 23, 2003

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Client Sample ID: Well-B Swipe
 Sample ID: 73645006
 Matrix: Swipe
 Collect Date: 17-JAN-03 15:00
 Receive Date: 18-JAN-03
 Collector: Client

Project: ESHL00303
 Client ID: ESHL001

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Semi-volatile Mass spec Organics Federal										
<i>8270C BNA Filter Federal</i>										
1,2,4-Trichlorobenzene	U	ND	0.380	10.0	ug/Filter	1	JWF 01/20/03	1509	228266	1
1,2-Dichlorobenzene	U	ND	0.300	10.0	ug/Filter	1				
1,3-Dichlorobenzene	U	ND	0.340	10.0	ug/Filter	1				
1,4-Dichlorobenzene	U	ND	0.470	10.0	ug/Filter	1				
2,4,5-Trichlorophenol	U	ND	0.520	10.0	ug/Filter	1				
2,4,6-Trichlorophenol	U	ND	0.820	10.0	ug/Filter	1				
2,4-Dichlorophenol	U	ND	0.620	10.0	ug/Filter	1				
2,4-Dimethylphenol	U	ND	5.00	10.0	ug/Filter	1				
2,4-Dinitrophenol	U	ND	5.00	20.0	ug/Filter	1				
2,4-Dinitrotoluene	U	ND	0.760	10.0	ug/Filter	1				
2,6-Dinitrotoluene	U	ND	1.00	10.0	ug/Filter	1				
2-Chloronaphthalene	U	ND	0.410	1.00	ug/Filter	1				
2-Chlorophenol	U	ND	0.460	10.0	ug/Filter	1				
2-Methyl-4,6-dinitrophenol	U	ND	5.00	10.0	ug/Filter	1				
2-Methylnaphthalene	U	ND	0.500	1.00	ug/Filter	1				
2-Nitrophenol	U	ND	0.510	10.0	ug/Filter	1				
3,3'-Dichlorobenzidine	U	ND	5.00	10.0	ug/Filter	1				
4-Bromophenylphenylether	U	ND	1.02	10.0	ug/Filter	1				
4-Chloroaniline	U	ND	5.00	10.0	ug/Filter	1				
4-Chlorophenylphenylether	U	ND	0.590	10.0	ug/Filter	1				
4-Nitrophenol	U	ND	5.00	10.0	ug/Filter	1				
Acenaphthene	U	ND	0.240	1.00	ug/Filter	1				
Acenaphthylene	U	ND	0.500	1.00	ug/Filter	1				
Anthracene	U	ND	0.500	1.00	ug/Filter	1				
Benzo(a)anthracene	U	ND	0.500	1.00	ug/Filter	1				
Benzo(a)pyrene	U	ND	0.500	1.00	ug/Filter	1				
Benzo(b)fluoranthene	U	ND	0.500	1.00	ug/Filter	1				
Benzo(ghi)perylene	U	ND	0.500	1.00	ug/Filter	1				
Benzo(k)fluoranthene	U	ND	0.500	1.00	ug/Filter	1				
Benzoic acid	U	ND	1.00	20.0	ug/Filter	1				
Benzyl alcohol	U	ND	5.00	10.0	ug/Filter	1				
Butylbenzylphthalate	J	1.96	0.860	10.0	ug/Filter	1				
Carbazole	U	ND	0.500	10.0	ug/Filter	1				
Chrysene	U	ND	0.500	1.00	ug/Filter	1				
Di-n-butylphthalate	J	1.67	0.720	10.0	ug/Filter	1				
Di-n-octylphthalate	U	ND	0.910	10.0	ug/Filter	1				
Dibenzo(a,h)anthracene	U	ND	0.500	1.00	ug/Filter	1				
Dibenzofuran	U	ND	0.510	10.0	ug/Filter	1				
Diethylphthalate	J	1.13	0.530	10.0	ug/Filter	1				

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 Los Alamos, New Mexico 87545
 Contact: Billy Turney
 Project: SWIPE Samples

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Client Sample ID: Well-B Swipe Project: ESHL00303
 Sample ID: 73645006 Client ID: ESHL001

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Semi-volatile Mass spec Organics Federal										
<i>8270C BNA Filter Federal</i>										
Dimethylphthalate	U	ND	0.550	10.0	ug/Filter	1				
Diphenylamine	U	ND	0.670	10.0	ug/Filter	1				
Fluoranthene	U	ND	0.500	1.00	ug/Filter	1				
Fluorene	U	ND	0.120	1.00	ug/Filter	1				
Hexachlorobenzene	U	ND	0.600	10.0	ug/Filter	1				
Hexachlorobutadiene	U	ND	0.380	10.0	ug/Filter	1				
Hexachlorocyclopentadiene	U	ND	5.00	10.0	ug/Filter	1				
Hexachloroethane	U	ND	0.660	10.0	ug/Filter	1				
Indeno(1,2,3-cd)pyrene	U	ND	0.500	1.00	ug/Filter	1				
Isophorone	U	ND	0.480	10.0	ug/Filter	1				
N-Nitrosodi--n-propylamine	U	ND	0.680	10.0	ug/Filter	1				
Naphthalene	U	ND	0.500	1.00	ug/Filter	1				
Nitrobenzene	U	ND	0.610	10.0	ug/Filter	1				
Parachlorometa cresol	U	ND	5.00	10.0	ug/Filter	1				
Pentachlorophenol	U	ND	5.00	10.0	ug/Filter	1				
Phenanthrene	U	ND	0.500	1.00	ug/Filter	1				
Phenol	U	ND	0.380	10.0	ug/Filter	1				
Pyrene	U	ND	0.500	1.00	ug/Filter	1				
bis(2-Chloroethoxy)methane	U	ND	0.370	10.0	ug/Filter	1				
bis(2-Chloroethyl) ether	U	ND	1.12	10.0	ug/Filter	1				
bis(2-Chloroisopropyl)ether	U	ND	0.330	10.0	ug/Filter	1				
bis(2-Ethylhexyl)phthalate	BJ	3.83	0.900	10.0	ug/Filter	1				
m,p-Cresols	U	ND	1.00	10.0	ug/Filter	1				
m-Nitroaniline	U	ND	5.00	10.0	ug/Filter	1				
o-Cresol	U	ND	0.780	10.0	ug/Filter	1				
o-Nitroaniline	U	ND	5.00	10.0	ug/Filter	1				
p-Nitroaniline	U	ND	1.11	10.0	ug/Filter	1				

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3550B	3550B BNA Filter Prep-8270C Analysis	GMS	01/19/03	1225	228265

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8270C	

Surrogate recovery	Test	Recovery%	Acceptable Limits
2,4,6-Tribromophenol	8270C BNA Filter Federal	77%	(23%-111%)
2-Fluorobiphenyl	8270C BNA Filter Federal	63%	(21%-104%)

Certificate of Analysis

Company : Los Alamos National Labs
Address : MS K497 ESH-18
Water Quality & Hydrology
Los Alamos, New Mexico 87545
Contact: Billy Turney
Project: SWIPE Samples

Report Date: January 23, 2003

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Client Sample ID: Well-B Swipe
Sample ID: 73645006

Project: ESHL00303
Client ID: ESHL001

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
2-Fluorophenol	8270C	BNA Filter Federal		60%		(22%-93%)				
Nitrobenzene-d5	8270C	BNA Filter Federal		64%		(24%-97%)				
Phenol-d5	8270C	BNA Filter Federal		63%		(22%-99%)				
p-Terphenyl-d14	8270C	BNA Filter Federal		79%		(30%-133%)				

Notes:

The Qualifiers in this report are defined as follows :

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- > Actual result is greater than amount reported
- B Analyte found in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration exceeds instrument calibration range
- H Holding time exceeded
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D
- U Indicates the compound was analyzed for but not detected above the detection limit
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier - must be fully described in case narrative and data summary package
- Y QC Samples were not spiked with this compound.

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ENCLOSURE 2

Certificate of Analysis

Company : Los Alamos National Labs
 Address : MS K497 ESH-18
 Water Quality & Hydrology
 Los Alamos, New Mexico 87545
 Contact: Billy Turney
 Project: Groundwater

Report Date: January 23, 2003

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Client Sample ID:	LAO-C, Top	Project:	ESHL00701
Sample ID:	73695001	Client ID:	ESHL001
Matrix:	Ground Water		
Collect Date:	17-JAN-03 11:51		
Receive Date:	18-JAN-03		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP											
<i>3005/6010 Silicon/Silica Federal</i>											
Silica		29200	21.2	213	ug/L	1	HSC	01/22/03	0937	228611	1
Semi-volatile Mass spec Organics Federal											
<i>8270C/3510C App.9 BNA Liquid F</i>											
1,2,4-Trichlorobenzene	U	ND	0.710	10.0	ug/L	1	CAK	01/21/03	2343	228609	2
1,2-Dichlorobenzene	U	ND	0.410	10.0	ug/L	1					
1,2-Diphenylhydrazine	U	ND	0.860	10.0	ug/L	1					
1,3-Dichlorobenzene	U	ND	0.410	10.0	ug/L	1					
1,4-Dichlorobenzene	U	ND	0.310	10.0	ug/L	1					
2,4,5-Trichlorophenol	U	ND	0.970	10.0	ug/L	1					
2,4,6-Trichlorophenol	U	ND	0.390	10.0	ug/L	1					
2,4-Dichlorophenol	U	ND	0.470	10.0	ug/L	1					
2,4-Dimethylphenol	U	ND	0.470	10.0	ug/L	1					
2,4-Dinitrophenol	U	ND	5.00	20.0	ug/L	1					
2,4-Dinitrotoluene	U	ND	0.700	10.0	ug/L	1					
2,6-Dinitrotoluene	U	ND	0.500	10.0	ug/L	1					
2-Chloronaphthalene	U	ND	0.400	1.00	ug/L	1					
2-Chlorophenol	U	ND	0.410	10.0	ug/L	1					
2-Methyl-4,6-dinitrophenol	U	ND	1.00	10.0	ug/L	1					
2-Methylnaphthalene	U	ND	0.500	1.00	ug/L	1					
2-Nitrophenol	U	ND	0.590	10.0	ug/L	1					
2-Picoline	U	ND	0.870	10.0	ug/L	1					
3,3'-Dichlorobenzidine	U	ND	0.510	10.0	ug/L	1					
4-Bromophenylphenylether	U	ND	1.22	10.0	ug/L	1					
4-Chloroaniline	U	ND	1.10	10.0	ug/L	1					
4-Chlorophenylphenylether	U	ND	0.840	10.0	ug/L	1					
4-Nitrophenol	U	ND	5.00	10.0	ug/L	1					
Acenaphthene	U	ND	0.500	1.00	ug/L	1					
Acenaphthylene	U	ND	0.500	1.00	ug/L	1					
Aniline	U	ND	1.61	10.0	ug/L	1					
Anthracene	U	ND	0.500	1.00	ug/L	1					
Benzidine	U	ND	5.00	50.0	ug/L	1					
Benzo(a)anthracene	U	ND	0.500	1.00	ug/L	1					
Benzo(a)pyrene	U	ND	0.500	1.00	ug/L	1					
Benzo(b)fluoranthene	U	ND	0.500	1.00	ug/L	1					
Benzo(ghi)perylene	U	ND	0.500	1.00	ug/L	1					
Benzo(k)fluoranthene	U	ND	0.500	1.00	ug/L	1					
Benzoic acid	U	ND	10.0	20.0	ug/L	1					
Benzyl alcohol	U	ND	0.910	10.0	ug/L	1					