Rocky Flats Environmental Technology Site

CHEMICAL CHARACTERIZATION PACKAGE

800 AREA TYPE 1 CLUSTER CLOSURE PROJECT

REVISION 1

February 20, 2001

Prepared by: _____
Industrial Hygiene

Prepared by: _____ 2/20/01
Environmental Compliance

Reviewed by: _____
Quality Assurance

Reviewed by: _____ 2/21/01
RISS Facility Characterization Coordinator

Approved by: _____ 2/23/01
Closure Project Facility Manager

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ADMIN RECORD
B800-A-000015

CHEMICAL CHARACTERIZATION PACKAGE

BUILDING(s): 800 AREA, TYPE 1 BUILDINGS (864, 830, 885, T883D, B863, and Tank 020, 021, and 026 Slabs)

* This characterization package was prepared in accordance with MAN-077-DDCP, D&D Characterization Protocols, and MAN-127-PDSP, Pre-Demolition Survey Plan for D&D Facilities.
* PDSP Data Quality Objectives were used to develop this characterization package.

Instructions:

1. Verify characterization activities are on the Plan-of-the-Day (POD).
2. Perform a Pre-Evolution Brief and/or Job Task Brief in accordance with the Site Conduct of Operations Manual.
3. Verify personnel have appropriate training for the applicable tasks they will be performing.
4. Comply with RWP requirements, if applicable.
5. Comply with JHA and facility PPE requirements, as applicable.
6. Inform the Facility Manager, or designee prior to starting characterization activities.
7. Follow applicable characterization and sampling procedures.
8. Notify Wackenhut Security (x2444) and the Shift Supervisor (x2914), and verify appropriate safety precautions/requirements are followed prior to accessing facility roofs.
9. Coordination with the Environmental Restoration Program organization will be required to further characterize underneath facility foundations and slabs prior to removal.
10. Collect and maintain all characterization paperwork in the Project File(s), and all electronic data in the appropriate D&D RISS subdirectory.

ASBESTOS		
Sample Location	**Estimated Number of Samples**	**Sample location and justification/rational**
T883D	8	Ceiling tile, drywall and floor tiles may contain asbestos.
863	0	No suspect materials.
830	0	No suspect materials.
885	3	Piping insulation may contain asbestos.
Tank 020, 021 & 026 Slabs	0	No suspect materials.
864	20	Floor tile, TSI, base cove, plaster, transite panels, drywall, roof, exterior texture finish, caulk may contain asbestos.
Total Samples:	31	The exact sample numbers and locations cannot be determined until a comprehensive, invasive inspection is performed in accordance with 40 CFR Part 763, Subpart E. Sample locations will be specified on sample maps during characterization efforts. Samples will be obtained in accordance with PRC-653-ACPR, Asbestos Characterization Procedure and 40 CFR 763.

BERYLLIUM		
Sample Location	**Number of Samples (smears)**	**Sample location and justification/rational**
T883D, 863, 830, 885, 864	25-biased (5 per building)	There is no documented supporting data or process history that proves beryllium was not used or stored in these buildings. Therefore, five biased samples from each of the five building will be obtained. Buildings have similar history and can be treated as one area.
Tank 020, 021 & 026 Slabs	0	All three tank slabs are exterior of the building 883 and 865 and exposed to weather year round. No reason to suspect contamination on outdoor tank slab.
Total Samples:	25	Samples will be obtained at locations specified on sample map(s) in accordance with PRO-536-BCPR, Beryllium Characterization Procedure. Biased sample locations will correspond with the most probable areas of dust accumulation (including beryllium dust), assuming airborne deposition.

LEAD		
Sample Location	**Number of Samples**	**Sample location and justification/rational**
800 Area Cluster, all locations	0	Lead sampling is not required in the 800 Area Cluster. All paint will remain a part of the infrastructure during demolition and therefore does not require sampling per Environmental Waste Compliance Guidance No. 27, Lead Based Paint (LBP) and LBP Debris Disposal. Sampling for lead for IH requirements will be at the discretion of the demolition contractor.
Total Samples:	0	

RCRA/CERCLA CONSTITIUENTS		
Sample Location	**Number of Samples**	**Sample location and justification/rational**
B863	0	This is a metal building with electrical breakers. The site historical information indicates that this building never contained hazardous waste or materials and visual observation revealed no evidence of spills or stains; therefore, there is no need to sample this building for RCRA/CERCLA constituents.
T883D	0	This is a small metal bathroom trailer. This building has never contained hazardous waste or materials and visual observation revealed no evidence of spills or stains; therefore, there is no need to sample this building for RCRA/CERCLA constituents.
B830	16 total 6 discrete locations	This building has historically stored waste materials; however, no information exists to say whether hazardous wastes and or chemicals were stored. A walkdown of the building shows evidence of spills of an oily type substance. Therefore, sampling requirements are as follows: sixteen samples with one that is the duplicate as required by QA/QC procedures, for each set of three samples. Sample for TCLP metals (6 real and 2 duplicate samples) and VOAs (6 real and 2 duplicate samples) (Number of samples based on 10% sampling of building floor, with a biased sample at the spill locations).
B885	24 total 9 discrete locations	This building is located on IHSS 800-177. It was used as a 90-day and satellite accumulation area for hazardous waste. The building was also used for the storage of paints and solvents. The Historical Release Report (HRR) also states that inadvertent dumping of radioactive oil sludge into an open top dumpster occurred at 885. In addition, the HRR stated the building has a floor drain, although visual inspection could not locate the drain. Therefore, sampling requirements are as follows: Twenty-four samples, with one that is

3

		floor drain, although visual inspection could not locate the drain. Therefore, sampling requirements are as follows: Twenty-four samples, with one that is the duplicate as required by QA/QC procedures, for each set of three samples. Sample for TCLP metals (9 real and 3 duplicate samples) and VOAs (9 real and 3 duplicate samples) (Number of samples based on 10% random sampling of building floor). If a floor drain is located, two additional samples will be taken from the drain, one for TCLP metals and one for VOAs.
B864	0	This is a concrete reinforced building, that historical information shows never stored hazardous waste or materials. According to conversations with guards, hazardous materials were passed through this building for transportation to B881, but there is no history of a spill within the building. Therefore, there is no need to sample this building for RCRA/CERCLA constituents.
Tank 020, 021, and 026 Slabs	0	The slab for Tank 026 does not require chemical characterization. The tank held liquid carbon dioxide. There has not been a spill or release onto this slab. The slab for Tanks 020 and 021 sits in PAC 800-1200, which was a release of corrosive and depleted uranium material. The concrete pad will not be characteristic for corrosivity, by definition, therefore there is no need for additional sampling.
Total Samples:	40	Samples will be obtained at locations specified on sample map(s) in accordance with PRO-488-BLCR, Bulk Solids and Liquids Characterization Procedure. The 10% sampling is consistent with SW 826 sampling protocol.

PCBs		
Sample Location	**Number of Samples**	**Sample location and justification/rational**
B863	0	Metal building constructed in 1982. Use of PCBs was banned in 1978, therefore no sampling required.
T883D	0	Metal building constructed in 1984. Use of PCBs was banned in 1978, therefore no sampling required.
B830	4 3 discrete locations	Visual observation of the building shows evidence of oil like substance being spilled (2 areas). Therefore, sampling requirements are as follows: 4 core samples, 2 biased at the spill locations, 1 duplicate, and 1 sample located next to one of the spill locations.
B885	4 3 discrete locations	Visual observation of the building shows evidence of oil like substance being spilled (2 areas). Therefore, sampling requirements are as follows: 4 core samples, 2 biased at the spill locations, 1 duplicate, and 1 sample located next to one of the spill locations A portion of the concrete floor is painted. However, the rubble will be considered PCB Bulk Product waste and disposed off-site in accordance with 40 CFR 761.
B864	0	The rubble will be considered PCB Bulk Product waste and disposed off-site in accordance with 40 CFR 761.
Tank 020, 021, and 026 Slabs	0	Materials containing PCBs were never used or stored on these pads. Therefore, no sampling for PCBs will be conducted.
Total Samples:	8	Samples will be obtained at locations specified on sample map(s) in accordance with PRO-487-MPCR, Metals and PCB Characterization Procedure.

* PCB ballasts, fluorescent light bulbs, potential mercury switches in thermostats, and mercury vapor light bulbs shall be removed prior to demolition.

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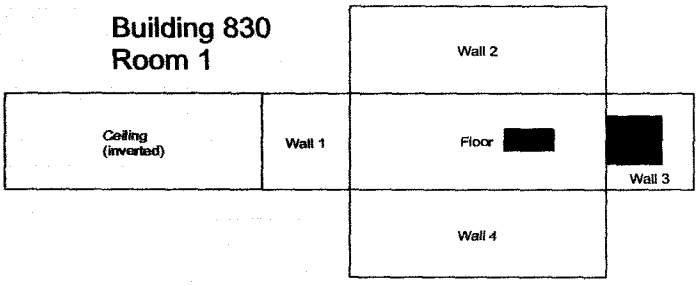
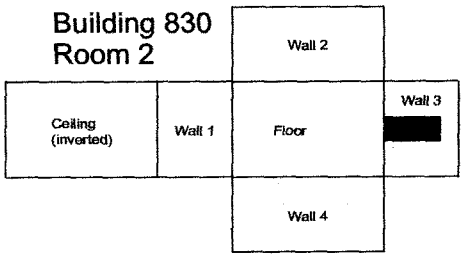
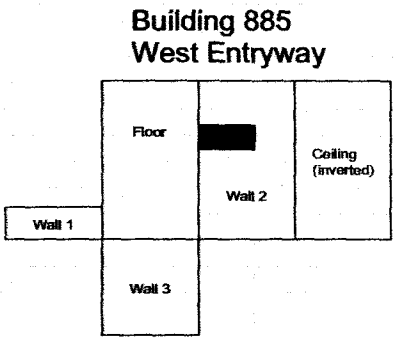
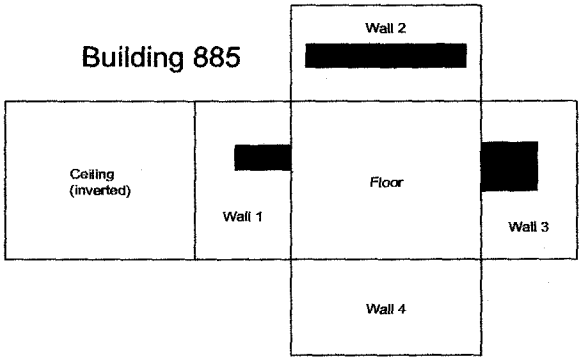
PRE-DEMOLITION SURVEY FOR 800 AREA CLUSTER

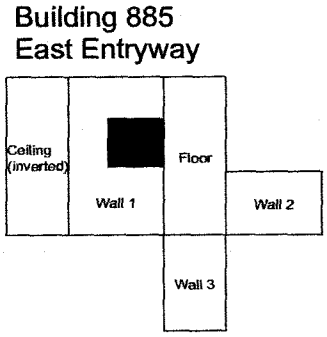
Survey Area: A **Survey Unit: 800-A-001** **Classification: N/A**
Building: 830, 863, 864, 885, T883D
Survey Unit Description: Interior Surfaces
Total Area: 1163 sq. m. **Total Floor Area: 221 sq. m.**

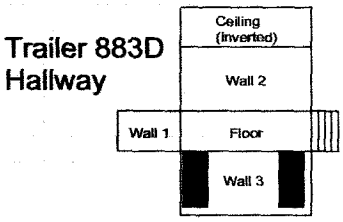


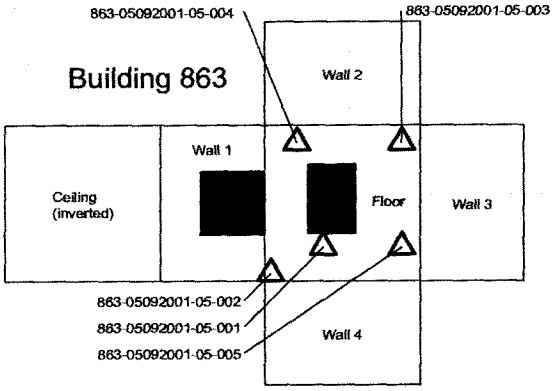


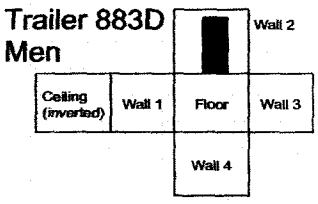


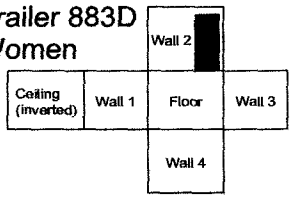












SURVEY MAP LEGEND

- Asbestos Sample Location
- Beryllium Sample Location
- Lead Sample Location
- RCRA/CERCLA Sample Location
- PCBS Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

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N

0 FEET 30
0 METERS 10
1 inch = 24 feet 1 grid sq. = 1 sq. m.

U.S. Department of Energy
Rocky Flats Environmental Technology Site

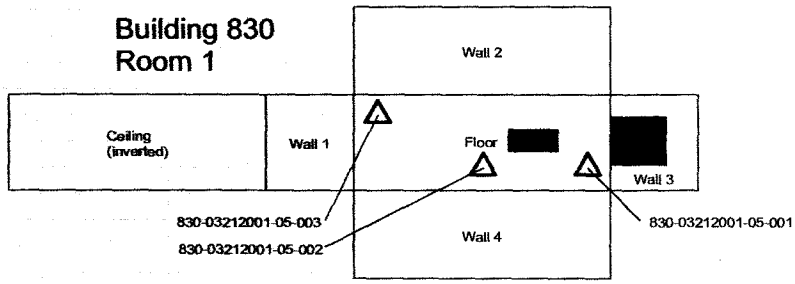
Prepared by: GIS Dept. 303-966-7701 Prepared for:
DynCorp
THE ART OF TECHNOLOGY
KAISER HILL

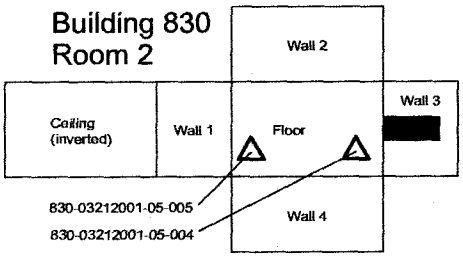
MAP ID: fy2001/01-0007 May 30, 2001

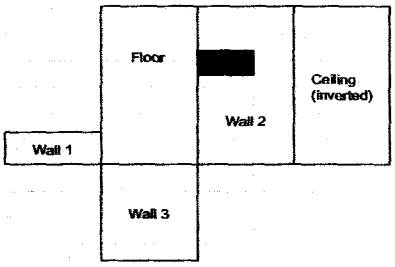
5

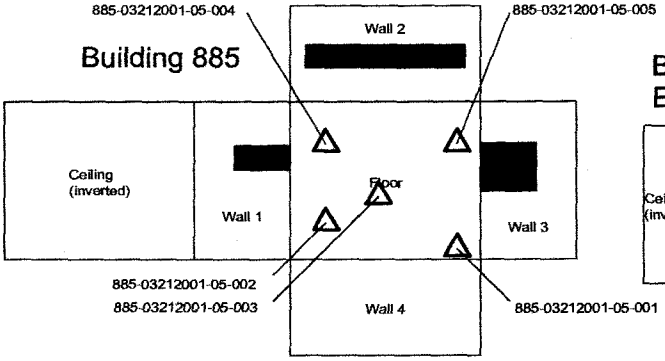
[redacted]E-DEMOLITION SURVEY FOR 800 AREA CL[redacted]ER

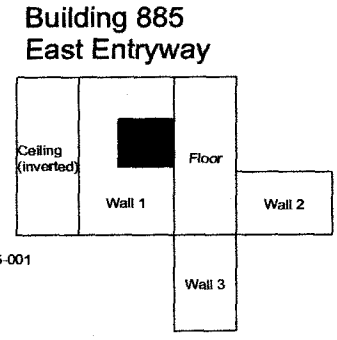
Survey Area: A **Survey Unit: 800-A-001** **Classification: N/A**
Building: 830, 863, 864, 885, T883D
Survey Unit Description: Interior Surfaces
Total Area: 1163 sq. m. **Total Floor Area: 221 sq. m.**

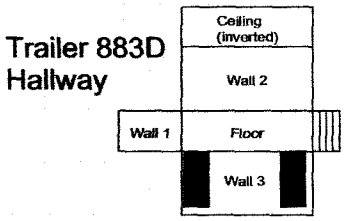


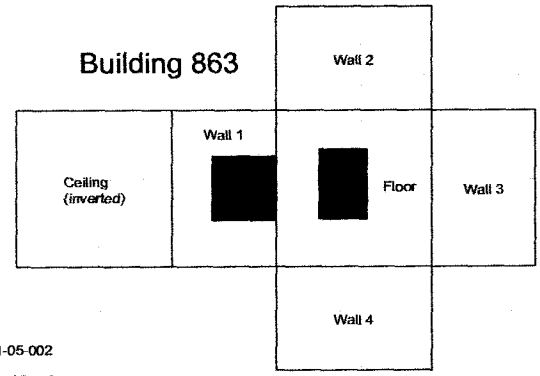


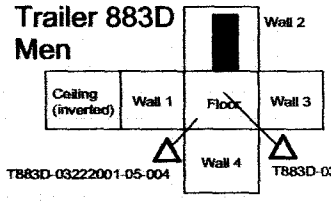


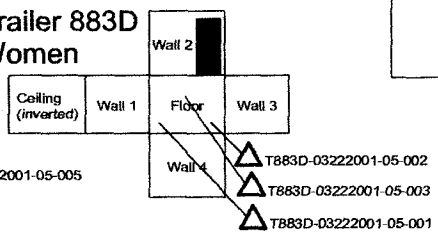












SURVEY MAP LEGEND

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- Lead Sample Location
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N

- Open/Inaccessible Area
- Area in Another Survey Unit

0 FEET 30
0 METERS 10
1 inch = 24 feet 1 grid sq. = 1 sq. m.

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707 Prepared for:
DynCorp
THE ART OF TECHNOLOGY
KAISER HILL

MAP ID: fy2001/01-0807 May 30, 2001

PRE-DEMOLITION SURVEY FOR 800 AREA CLUSTER

Survey Area: A **Survey Unit: 800-A-001** **Classification: N/A**
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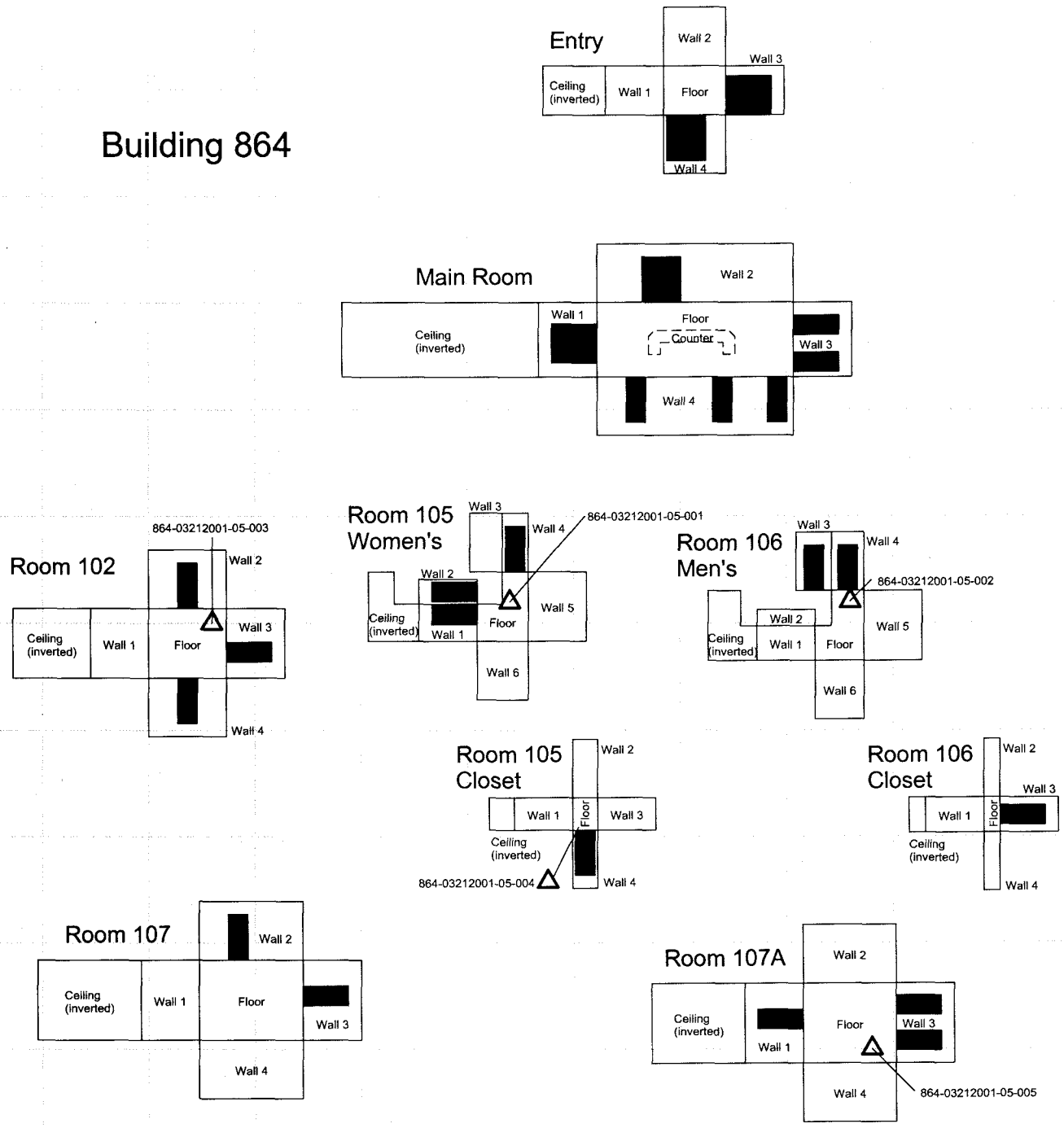
Building 864



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Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707 Prepared for:

DynCorp
THE ART OF TECHNOLOGY

KAISER HILL

MAP ID: fy2001/01-0607 May 30, 2001

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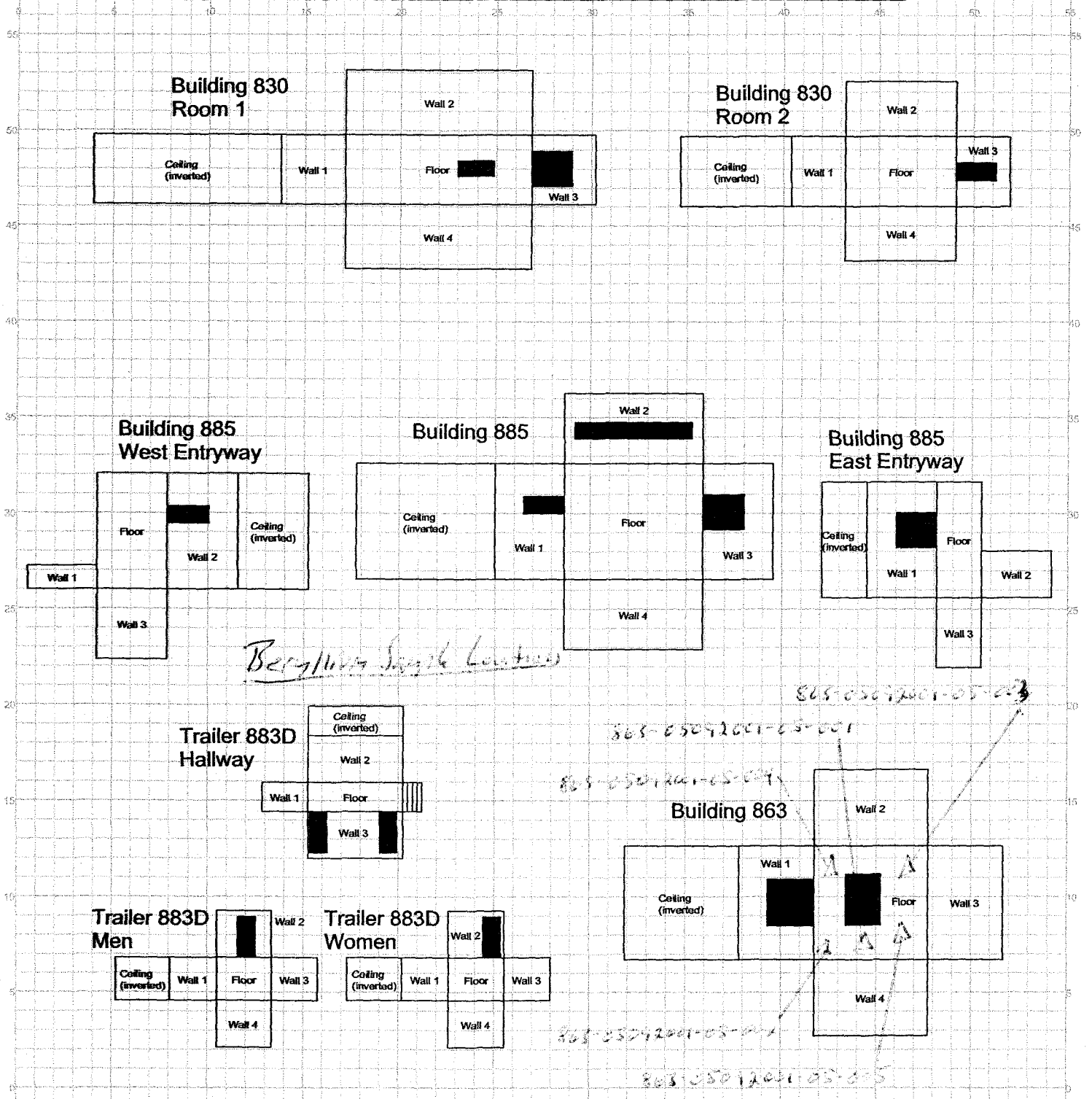

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U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-770 Prepared for:

DynCorp
THE ART OF TECHNOLOGY

KAISER-HILL COMPANY

MAP ID: fy2001/01-0182

January 25, 2001

PRE-DEMOLITION SURVEY FOR 800 AREA CLUSTER

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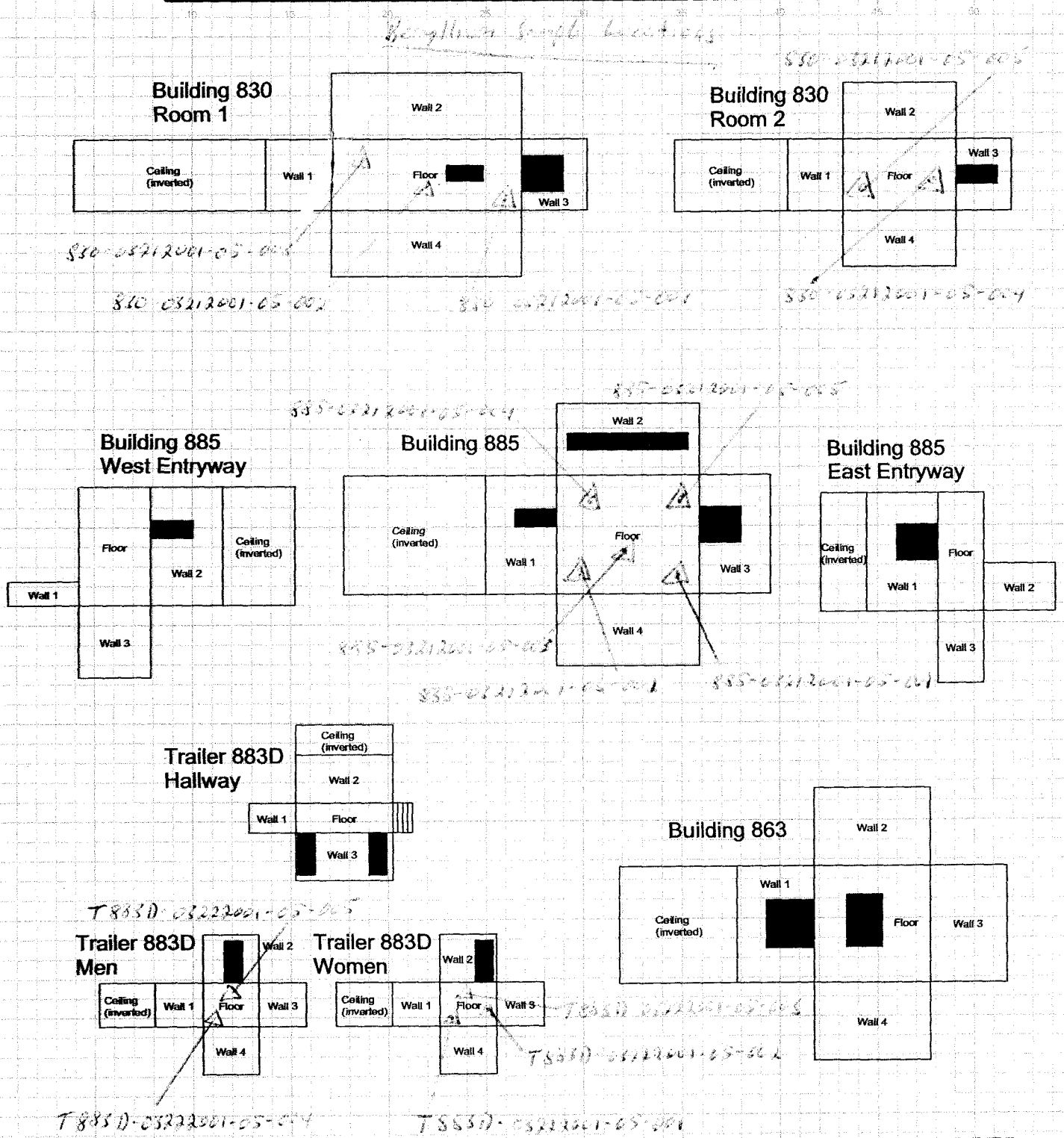

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Open/Inaccessible Area

Area in Another Survey Unit

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U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7700 Prepared for:

DynCorp
THE ART OF TECHNOLOGY

KAISER-HILL

MAP ID: fy2001/01-0182

January 25, 2001

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PRE-DEMOLITION SURVEY FOR 800 AREA CLUSTER

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Building: 830, 863, 864, 885, T883D
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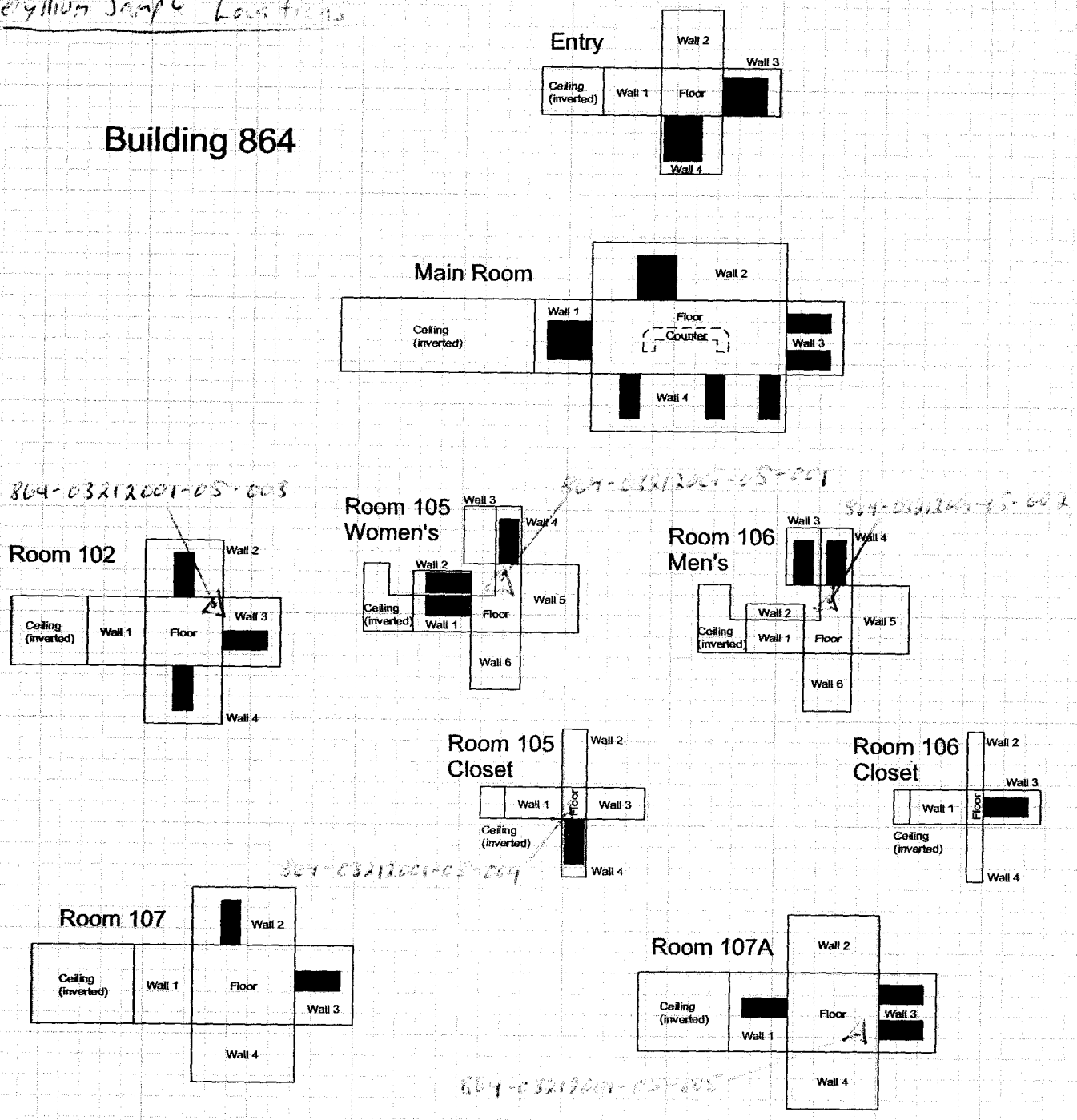
Beryllium Sample Locations

Building 864



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U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7700 Prepared for:
DynCorp
THE ART OF TECHNOLOGY
KAISER-HILL

MAP ID: fy2001/01-0182 January 25, 2001

10

Johns Manville

Johns Manville Corporation
10100 W. Ute Avenue (80127)
P.O. Box 625005
Littleton, CO 80162-5005
303 978 2000

COVER PAGE

March 29, 2001

Rocky Flats Environmental Technology Site
Ms. Shelly Johnsen
P.O. Box 464, Building 881
Golden, CO 80402-0464

Laboratory Report ID: 01032807
Laboratory Name: JMTC IH Analytical Laboratory
Laboratory Code: JMANS
Subcontract Number: 800188SX6
RIN: 01D0633
Requestor: Andre Gonzalez
P.O./Charge Code: EED10720

Dear Ms. Johnsen:

The Johns Manville Technical Center (JMTC) has performed the following analytical services as requested. The results are calculated based upon the information supplied on the submission form. All laboratory data has been filed and are available upon request.
The JMTC IH Analytical Laboratory is accredited by the American Industrial Hygiene Association (AIHA) in the industrial hygiene program (Certificate No. 056) and participates in the AIHA ELPAT program.
If you have any questions, please call (303) 978-2584.

Scope of Work:

Requested Analysis	Bottle Number(s)	Customer Number(s)	Laboratory ID Number	Line Item Code	Sample Matrix
Beryllium	01D0633-001.001	864-03212001-05-001	01032807-001	NR01A001	WIPE
Beryllium	01D0633-002.001	864-03212001-05-002	01032807-002	NR01A001	WIPE
Beryllium	01D0633-003.001	864-03212001-05-003	01032807-003	NR01A001	WIPE
Beryllium	01D0633-004.001	864-03212001-05-004	01032807-004	NR01A001	WIPE
Beryllium	01D0633-005.001	864-03212001-05-005	01032807-005	NR01A001	WIPE
Beryllium	01D0633-006.001	885-03212001-05-001	01032807-006	NR01A001	WIPE
Beryllium	01D0633-007.001	885-03212001-05-002	01032807-007	NR01A001	WIPE
Beryllium	01D0633-008.001	885-03212001-05-003	01032807-008	NR01A001	WIPE
Beryllium	01D0633-009.001	885-03212001-05-004	01032807-009	NR01A001	WIPE
Beryllium	01D0633-010.001	885-03212001-05-005	01032807-010	NR01A001	WIPE
Beryllium	01D0633-011.001	830-03212001-05-001	01032807-011	NR01A001	WIPE
Beryllium	01D0633-012.001	830-03212001-05-002	01032807-012	NR01A001	WIPE
Beryllium	01D0633-013.001	830-03212001-05-003	01032807-013	NR01A001	WIPE
Beryllium	01D0633-014.001	830-03212001-05-004	01032807-014	NR01A001	WIPE
Beryllium	01D0633-015.001	830-03212001-05-005	01032807-015	NR01A001	WIPE
Beryllium	01D0633-016.001	T883D03222001-05-001	01032807-016	NR01A001	WIPE
Beryllium	01D0633-017.001	T883D03222001-05-002	01032807-017	NR01A001	WIPE
Beryllium	01D0633-018.001	T883D03222001-05-003	01032807-018	NR01A001	WIPE
Beryllium	01D0633-019.001	T883D03222001-05-004	01032807-019	NR01A001	WIPE
Beryllium	01D0633-020.001	T883D03222001-05-005	01032807-020	NR01A001	WIPE

Comments: No problem were encountered with sample receiving and sample analysis

March 29, 2001

Laboratory Report ID:	01032807
Laboratory Name:	JMTC IH Analytical Laboratory
Laboratory Code:	JMANS
Subcontract Number:	800188SX6
RIN:	01D0633
Requestor:	Andre Gonzalez
P.O./Charge Code:	EED10720

I certify that this sample data package is in compliance with SOW requirements, both technically and for completeness, other than the conditions detailed above. Release of the data contained in this hard-copy sample package and the computer-readable EDD, as applicable, submitted on diskette or by modem, has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Scott A. Steiner
Industrial Hygiene Project Manager

Date

12

March 29, 2001

Laboratory Report ID: 01032807
Laboratory Name: JMTC IH Analytical Laboratory
Laboratory Code: JMANS
Subcontract Number: 800188SX6
RIN: 01D0633
Requestor: Andre Gonzalez
P.O./Charge Code: EED10720

QUICK RESULTS SUMMARY

Line Item Code: NR01A001
Sample Matrix: WIPE
Analytical Method: OSHA ID-125G

Reporting Limit: 0.1 µg
Date Received: 03/28/01
Date Analyzed: 03/29/01

Customer Number	Laboratory ID Number	Requested Analysis	CONCENTRATION Backup	Main	Total	T	Q	Constituent ID
864-03212001-05-001	01032807-001	Beryllium			< 0.1 µg	TR1	U	7440-41-7
864-03212001-05-002	01032807-002	Beryllium			< 0.1 µg	TR1	U	7440-41-7
864-03212001-05-003	01032807-003	Beryllium			< 0.1 µg	TR1	U	7440-41-7
864-03212001-05-004	01032807-004	Beryllium			< 0.1 µg	TR1	U	7440-41-7
864-03212001-05-005	01032807-005	Beryllium			< 0.1 µg	TR1	U	7440-41-7
885-03212001-05-001	01032807-006	Beryllium			< 0.1 µg	TR1	U	7440-41-7
885-03212001-05-002	01032807-007	Beryllium			< 0.1 µg	TR1	U	7440-41-7
885-03212001-05-003	01032807-008	Beryllium			< 0.1 µg	TR1	U	7440-41-7
885-03212001-05-004	01032807-009	Beryllium			< 0.1 µg	TR1	U	7440-41-7
885-03212001-05-005	01032807-010	Beryllium			< 0.1 µg	TR1	U	7440-41-7
830-03212001-05-001	01032807-011	Beryllium			< 0.1 µg	TR1	U	7440-41-7
830-03212001-05-002	01032807-012	Beryllium			< 0.1 µg	TR1	U	7440-41-7
830-03212001-05-003	01032807-013	Beryllium			< 0.1 µg	TR1	U	7440-41-7
830-03212001-05-004	01032807-014	Beryllium			< 0.1 µg	TR1	U	7440-41-7
830-03212001-05-005	01032807-015	Beryllium			< 0.1 µg	TR1	U	7440-41-7
T883D03222001-05-001	01032807-016	Beryllium			< 0.1 µg	TR1	U	7440-41-7
T883D03222001-05-002	01032807-017	Beryllium			< 0.1 µg	TR1	U	7440-41-7
T883D03222001-05-003	01032807-018	Beryllium			< 0.1 µg	TR1	U	7440-41-7
T883D03222001-05-004	01032807-019	Beryllium			< 0.1 µg	TR1	U	7440-41-7
T883D03222001-05-005	01032807-020	Beryllium			< 0.1 µg	TR1	U	7440-41-7

Johns Manville

Johns Manville Corporation
10100 West Ute Avenue (80127)
P.O. Box 625005
Littleton, CO 80162-5005
Tel: (303) 978-3724

COVER PAGE

May 17, 2001

Shelly Johnsen
Rocky Flats Environmental Technology Site
P.O. Box 464, Bldg. 881
Golden, CO 80402-0464

Laboratory Report ID	01051504
Laboratory Name:	Johns Manville IH Lab
Subcontract Number:	KH800188
RIN:	01D0802
Requestor:	Andre Gonzalez
P.O./Charge Code:	EED10720

Dear Ms. Johnsen:

The Johns Manville Industrial Hygiene Laboratory has performed the following analytical testing services as requested. The results were calculated based upon the information supplied on the submission form. All laboratory data have been filed and are available upon request. The Johns Manville Laboratory is accredited by the American Industrial Hygiene association (AIHA) in the industrial hygiene program (Certificate #056), and participates in the AIHA ELPAT program.
If you have any questions, please call (303) 978-2584.

I certify that this electronic image, and all hardcopies produced from this image, accurately represents the data and is in compliance with the RFETS specific requirements, both technically and for completeness, other than the conditions detailed above or in the sample data package narrative. Release, by submission through email, the data contained in this electronic image and the computer-readable EDD (as applicable), has been authorized by the laboratory Manager or the Manager's designee.

Sincerely,

Marilyn Andrews
Manager of Analytical Services
May 17, 2001

14

May 17, 2001

Laboratory Report ID: 01051504
Laboratory Name: Johns Manville IH Lab
Subcontract Number: KH800188
RIN: 01D0802
Requestor: Andre Gonzalez
P.O./Charge Code: EED10720

Scope of Work:

Bottle Number(s)	Customer Number(s)	Laboratory ID Number(s)	Line Item Code	Sample Matrix	Instrument Run
01D0802-001.001	863-05092001-05-001	01051504-001	NR01A001	WIPE	QU010516-B
01D0802-002.001	863-05092001-05-002	01051504-002	NR01A001	WIPE	QU010516-B
01D0802-003.001	863-05092001-05-003	01051504-003	NR01A001	WIPE	QU010516-B
01D0802-004.001	863-05092001-05-004	01051504-004	NR01A001	WIPE	QU010516-B
01D0802-005.001	863-05092001-05-005	01051504-005	NR01A001	WIPE	QU010516-B

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Commodore Advanced Sciences RFETS	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST 01051504 Due: 5/23/01	C.O.C. # 01D0802#001 Page 1 of 1

Sampler(s) ANDRE GONZALEZ (time/date)	Contact/Requester JOHNSEN, SHELLY	Telephone No. 6401
RIN 01D0802	Sampling Origin 863	Purchase Order/Charge Code EED10720
Project Title B863 BE SMEARS	Logbook No. N/A	Ice Chest No. N/A Temp.
To (Lab) Johns Manville	Method of Shipment FEDERAL EXPRESS	Bill of Lading/Air Bill No. 4533-2127-3859
Protocol	Related COC (if any)	PRE 010509-00116-003

POSSIBLE SAMPLE HAZARDS/REMARKS
Are acid preserved samples DOT hazardous per 40 CFR Part 136.3 Table II? YES or NO
Are other known hazardous substances present? YES or NO
** ** **

SCREENING REQUIRED ☐

SPECIAL INSTRUCTIONS Hold Time

Bottle No.	Customer Number	Matrix	Date	Time	Location	Container (size/type/quantity)	Sample Analysis	Preservative ; Packing
01D0802-001.001	863-05092001-05-001	FILTER	05/09/2001	7:00 AM	863	1-FILTER / N/A /1	NR01A001 (Beryllium Filter Analysis) [Routine]	N/A None
01D0802-002.001	863-05092001-05-002	FILTER	05/09/2001	7:00 AM	863	1-FILTER / N/A /1	NR01A001 (Beryllium Filter Analysis) [Routine]	N/A None
01D0802-003.001	863-05092001-05-003	FILTER	05/09/2001	7:00 AM	863	1-FILTER / N/A /1	NR01A001 (Beryllium Filter Analysis) [Routine]	N/A None
01D0802-004.001	863-05092001-05-004	FILTER	05/09/2001	7:00 AM	863	1-FILTER / N/A /1	NR01A001 (Beryllium Filter Analysis) [Routine]	N/A None
01D0802-005.001	863-05092001-05-005	FILTER	05/09/2001	7:00 AM	863	1-FILTER / N/A /1	NR01A001 (Beryllium Filter Analysis) [Routine]	N/A None
					JKC 5/14/01			

Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time
R. Miller	5-14-01 / 1500	Fed EX		Fed-ex		J. Slate	5/15/01 10:30

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., returned to customer, disposed of per lab procedure, used in analytical process)	Disposed By	Date/Time

NARRATIVE

The laboratory did not encounter any problems or questions associated with the receipt of samples into the laboratory. All samples identified on the Chain-of-Custody (COC) form were received and accepted in good condition with tamper-resistant seals intact. (1.d, 4.b, 4.e)

Whatman 4 or Whatman 41 swipe samples were submitted in this project and analyzed for the identification and quantitation of beryllium in accordance with Line Item Code (LIC), NR01A001. The methodology does not define any required specific holding times for the compound on the sampling media. Results of the sample analyses were generated and reported by the specified turn-around time (TAT). (4.f, 5.6, 5.f, 6.b.7)

The laboratory preparation of samples in this project was performed following laboratory Standard Operating Procedure (SOP), IH M-1.02, Revision N. Additional references to the preparation technique of this sample type are addressed in EPA Method, 3015A and CEM Application Procedure, MS-9. The samples were prepared using the CEM Microwave Sample Preparation System, Model MDS 2000. The instrumental sample analysis for these samples follows SOP, IH M-1.04, Revision N, which covers the analytical procedure outlined in OSHA method, ID-125G. Start-up and calibration of the Inductively Coupled Plasma-Atomic Emission Spectroscopy (ICP-AES) instrument are performed following manufacturer's instructions and are addressed in SOP, IH M-1.03, Revision N. (5.a)

Results of all calibration verifications (initial and continuing), method blanks (calibration and matrix), Laboratory Control Samples (LCSs), Laboratory Control Sample Duplicates (LCDs) and internal QA/QC program monitoring standards for this analytical batch are within acceptable limits as specified in Statement of Work (SOW) modules, GR01-B.3 and NR01-A. (5.c, 5.d.2, 5.d.3, 6.b.2-6)

The internal quality control procedures for statistical monitoring of analytical data to ensure the production of quality results with continuing high validity are addressed in the JMTC IH Laboratory Quality Assurance Manual, Section 10.0. Results of all method-specific QC assessments for this analytical batch are within acceptable limits in accordance with SOW modules, GR01-B.3 and NR01-A. (5.c, 6.b.1)

The Instrument Detection Limit (IDL) has been determined to be 0.00028 mg/ml using the ICP-AES instrument, Perkin Elmer - Optima model 3000DV. Method Detection Limit (MDL) determinations are performed in accordance with the EPA Method contained in 40 CFR Part 136, Appendix B. The MDL for beryllium on the Whatman swipe matrix by ICP-AES has been determined to be 0.012 mg/swipe. These values meet the required detection limits for SOW module, NR01-A. (5.d.1) The sample batch did not require any sample re-analyses due to dilutions or any anomalies. (5.d) The qualifiers used for the results page are "U" for non-detect and "J" for levels greater than the MDL, but less than the Reporting Limit.

The JMTC IH Analytical Laboratory is accredited by the American Industrial Hygiene Association (AIHA) in the industrial hygiene program (Certificate N. 056) and continues to rate proficient within the Proficiency Analytical Testing (PAT) program. This program is designed for laboratories involved in analyzing samples taken in the workplace environment. The JMTC IH Analytical Laboratory is also accredited in the Environmental Lead Laboratory Accreditation Program (ELLAP), which is recognized by the EPA National Lead Laboratory Accreditation Program (NLLAP). This program accredits and monitors performance of laboratories testing for lead in environmental samples such as paint, soil, dust wipes and air. (5.a)

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May 17, 2001

Laboratory Report ID 01051504
Laboratory Name: Johns Manville IH Lab
Subcontract Number: KH800188
RIN: 01D0802
Requestor: Andre Gonzalez
P.O./Charge Code: EED10720

QUICK RESULTS SUMMARY

Customer Number	Laboratory ID Number	Requested Analysis	Reporting Limit	CONCENTRATION Back Section	Front Section	Total	Q	Air Vol or Time	Air Concentration
863-05092001-05-001	01051504-001	Beryllium	0.1 ug			< 0.1 ug	U		
863-05092001-05-002	01051504-002	Beryllium	0.1 ug			< 0.1 ug	U		
863-05092001-05-003	01051504-003	Beryllium	0.1 ug			< 0.1 ug	J		
863-05092001-05-004	01051504-004	Beryllium	0.1 ug			< 0.1 ug	U		
863-05092001-05-005	01051504-005	Beryllium	0.1 ug			< 0.1 ug	U		

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May 17, 2001

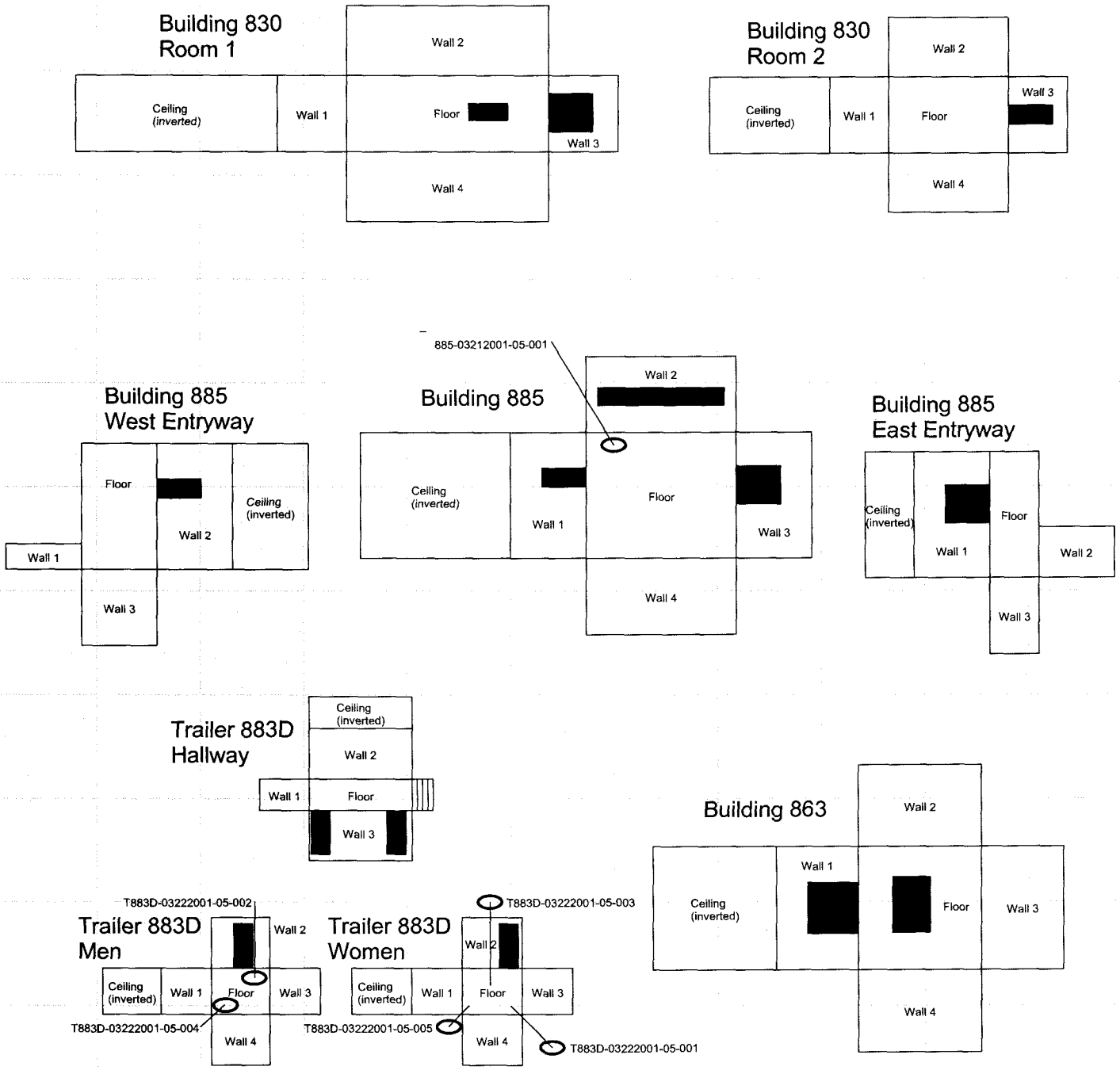
Laboratory Report ID 01051504
Laboratory Name: Johns Manville IH Lab
Subcontract Number: KH800188
RIN: 01D0802
Requestor: Andre Gonzalez
P.O./Charge Code: EED10720

QC RESULTS SUMMARY

QC Parameter	QC Item Type	Compound	Expected Recovery	Actual Recovery	Percent Recovery	QC Sample ID	Date Analyzed	Instrument Run
Preparation Blank	PB1	Beryllium	< 0.1 µg	<0.1 µg	N/A		5/16/01	QU010516-B
Matrix Blank	MB1	Beryllium	< 0.1 µg	<0.1 µg	N/A		5/16/01	QU010516-B
Matrix Blank Spike	MS1	Beryllium	5.0 µg	5.17 µg	103.4		5/16/01	QU010516-B
Laboratory Control Sample	LC1	Beryllium	10.0 µg	9.90 µg	99	QC01050310	5/16/01	QU010516-B
Laboratory Control Duplicate	LC1a	Beryllium	10.0 µg	10.0 µg	100	QC01050310	5/16/01	QU010516-B

PRE-DEMOLITION SURVEY FOR 800 AREA CLUSTER

Survey Area: A **Survey Unit: 800-A-001** **Classification: N/A**
Building: 830, 863, 864, 885, T883D
Survey Unit Description: Interior Surfaces
Total Area: 1163 sq. m. **Total Floor Area: 221 sq. m.**



SURVEY MAP LEGEND

- Asbestos Sample Location
- Beryllium Sample Location
- Lead Sample Location
- RCRA/CERCLA Sample Location
- PCBS Sample Location

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- Open/Inaccessible Area
- Area in Another Survey Unit

N

0 FEET 30
0 METERS 10

1 inch = 24 feet 1 grid sq. = 1 sq. m.

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707 Prepared for:

DynCorp
THE ART OF TECHNOLOGY

KAISER HILL

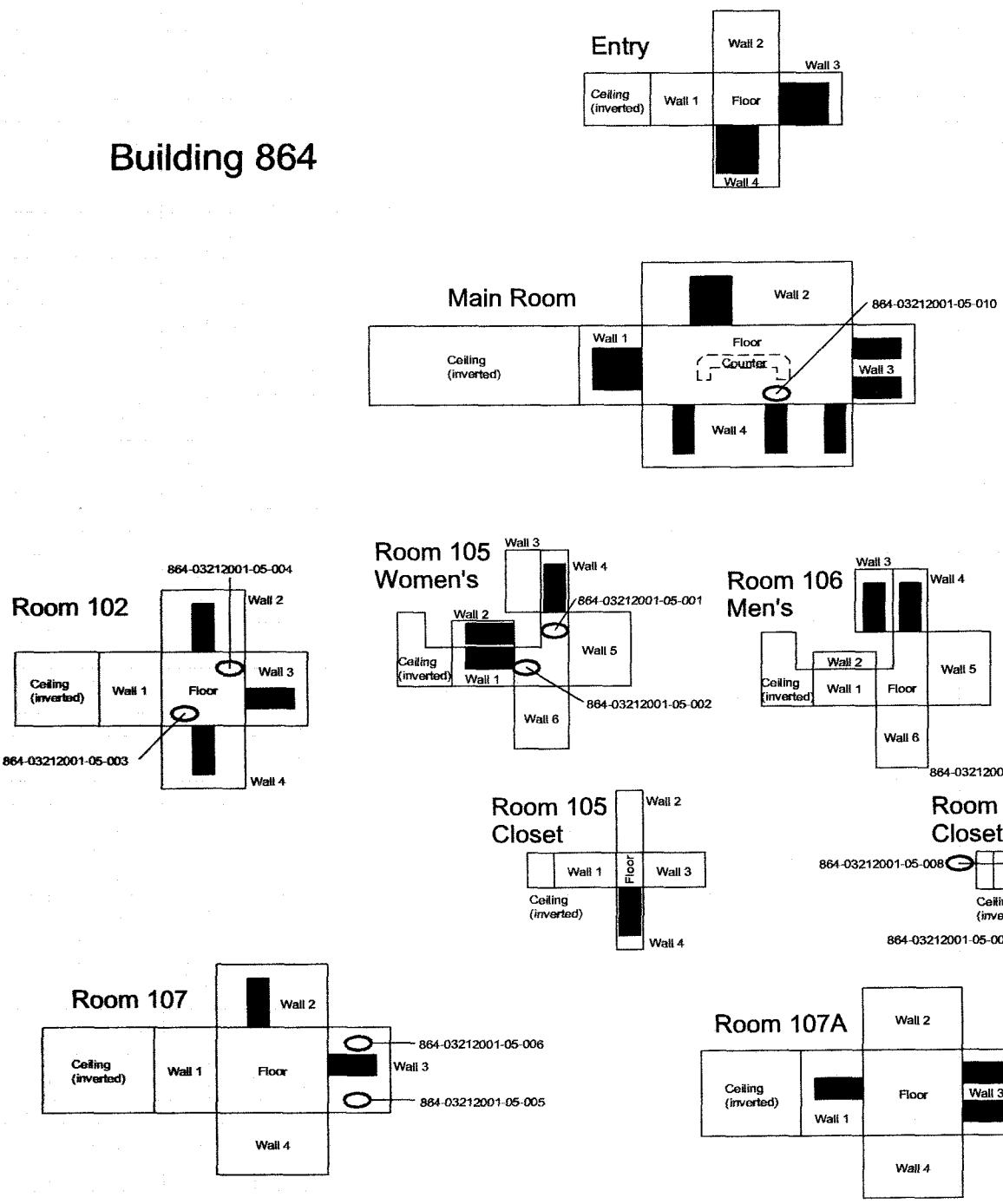
MAP ID: fy2001/01-0607 May 30, 2001

20

E-DEMOLITION SURVEY FOR 800 AREA CLU R

Survey Area: A **Survey Unit: 800-A-001** **Classification: N/A**
Building: 830, 863, 864, 885, T883D
Survey Unit Description: Interior Surfaces
Total Area: 1163 sq. m. **Total Floor Area: 221 sq. m.**

Building 864



SURVEY MAP LEGEND

- Asbestos Sample Location
- Beryllium Sample Location
- Lead Sample Location
- RCRA/CERCLA Sample Location
- PCBS Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

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N

0 FEET 30
0 METERS 10

1 inch = 24 feet 1 grid sq. = 1 sq. m.

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Rocky Flats Environmental Technology Site

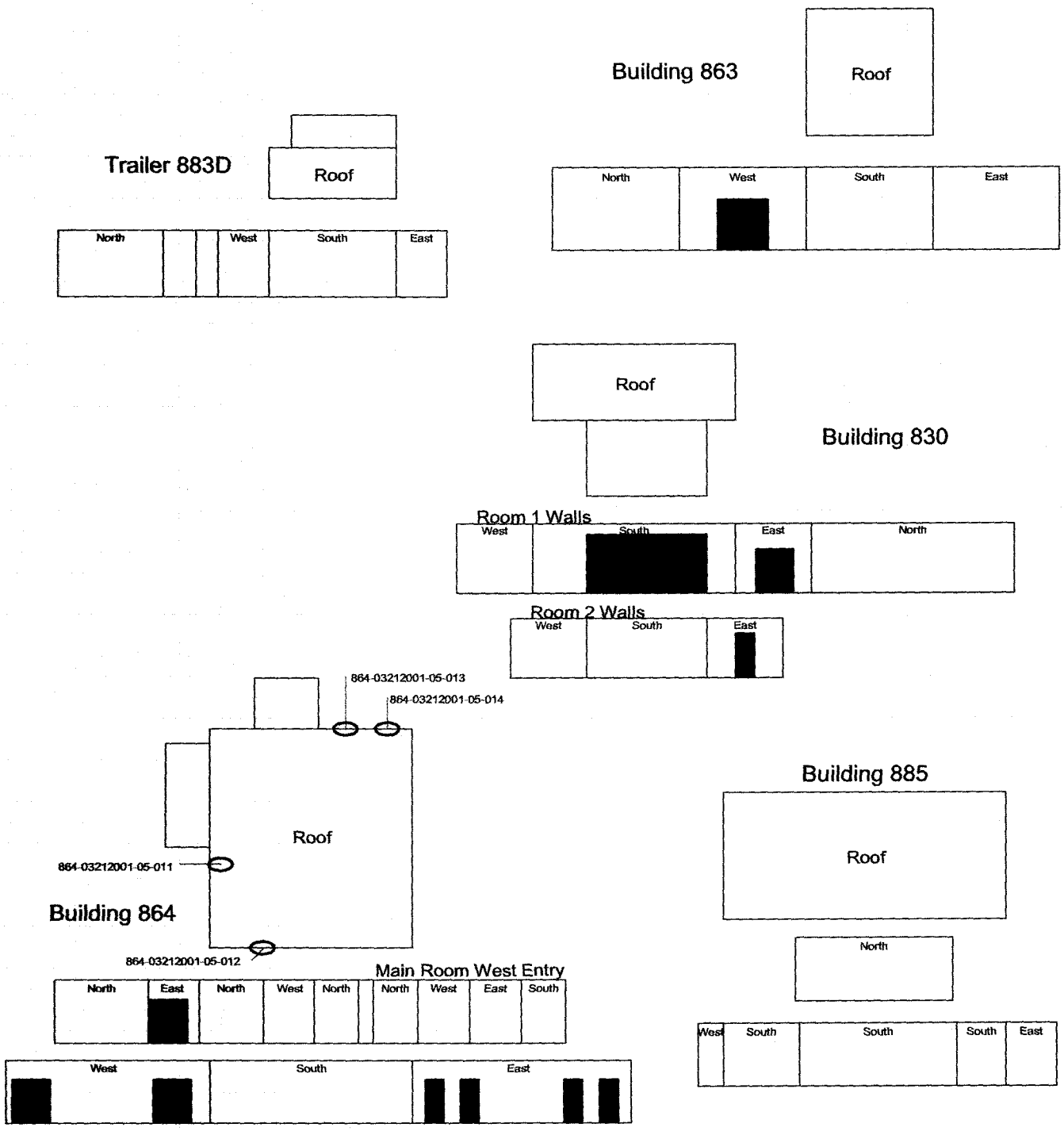
Prepared by: GIS Dept. 303-966-7700 Prepared for:
DynCorp
THE ART OF TECHNOLOGY
KAISER HILL

MAP ID: fv2001/01-0807 May 30, 2001

21

E-DEMOLITION SURVEY FOR 800 AREA CL ER

Survey Area: B **Survey Unit: 800-B-002** **Classification: N/A**
Building: 830, 863, 864, 885, T883D
Survey Unit Description: Exterior Surfaces
Total Area: 797 sq. m. **Total Floor Area: 0 sq. m.**



SURVEY MAP LEGEND

- Asbestos Sample Location
- Beryllium Sample Location
- Lead Sample Location
- RCRA/CERCLA Sample Location
- PCBS Sample Location

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N

- Open/Inaccessible Area
- Area in Another Survey Unit

0 FEET 30
0 METERS 10
1 inch = 24 feet 1 grid sq. = 1 sq. m.

U.S. Department of Energy
Rocky Flats Environmental Technology Site

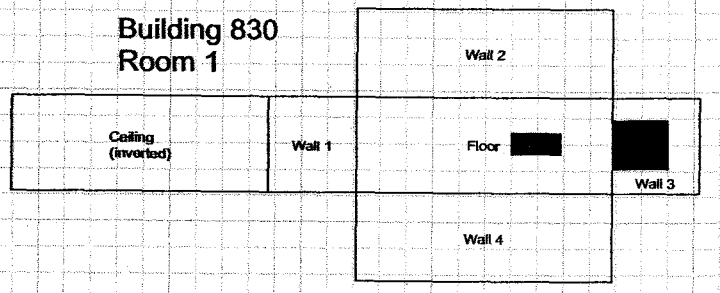
Prepared by: GIS Dept. 303-966-770 Prepared for:
DynCorp
THE ART OF TECHNOLOGY
KAISER HILL

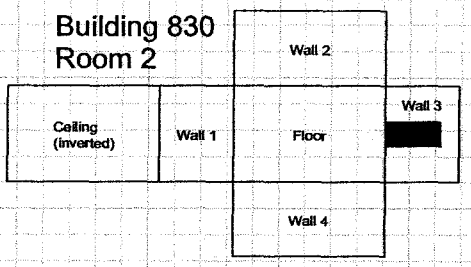
MAP ID: fy2001/01-0807 May 30, 2001

22

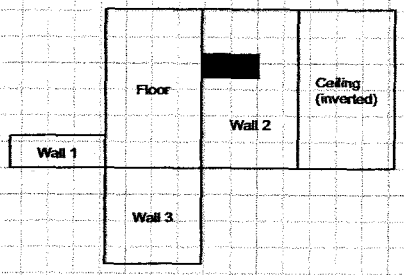
PRE-DEMOLITION SURVEY FOR 800 AREA CLUSTER

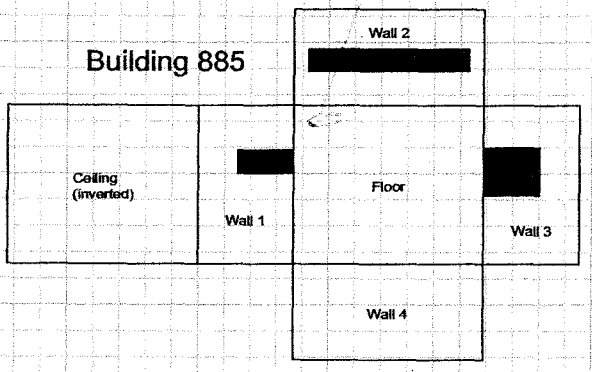
Survey Area: A **Survey Unit: 800-A-001** **Classification: N/A**
Building: 830, 863, 864, 885, T883D
Survey Unit Description: Interior Surfaces
Total Area: 1163 sq. m. **Total Floor Area: 221 sq. m.**

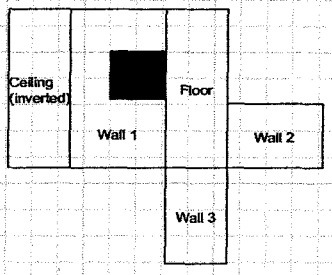


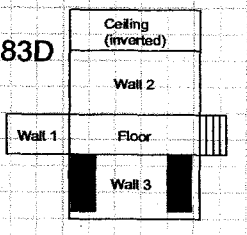


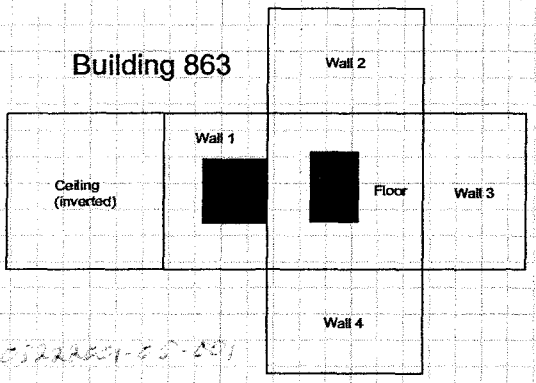
Asbestos Sample Location





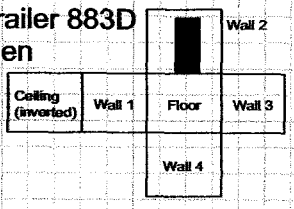


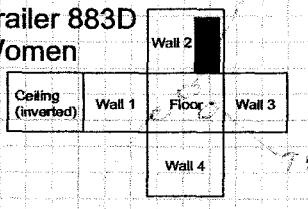




T883D-05222001-05-002

T883D-05222001-05-003





T883D-05222001-05-001

T883D-05222001-05-004

T883D-05222001-05-005

SURVEY MAP LEGEND

- (#) Asbestos Sample Location
- (#) Beryllium Sample Location
- [#] Lead Sample Location
- (#) RCRA/CERCLA Sample Location
- (#) PCBS Sample Location

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- Open/Inaccessible Area
- Area in Another Survey Unit

N

0 FEET 30
0 METERS 10

1 inch = 24 feet 1 grid sq. = 1 sq. m.

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7700 Prepared for:

DynCorp
THE ART OF TECHNOLOGY

KAISER-HILL COMPANY

MAP ID: fy2001/01-0182 January 25, 2001

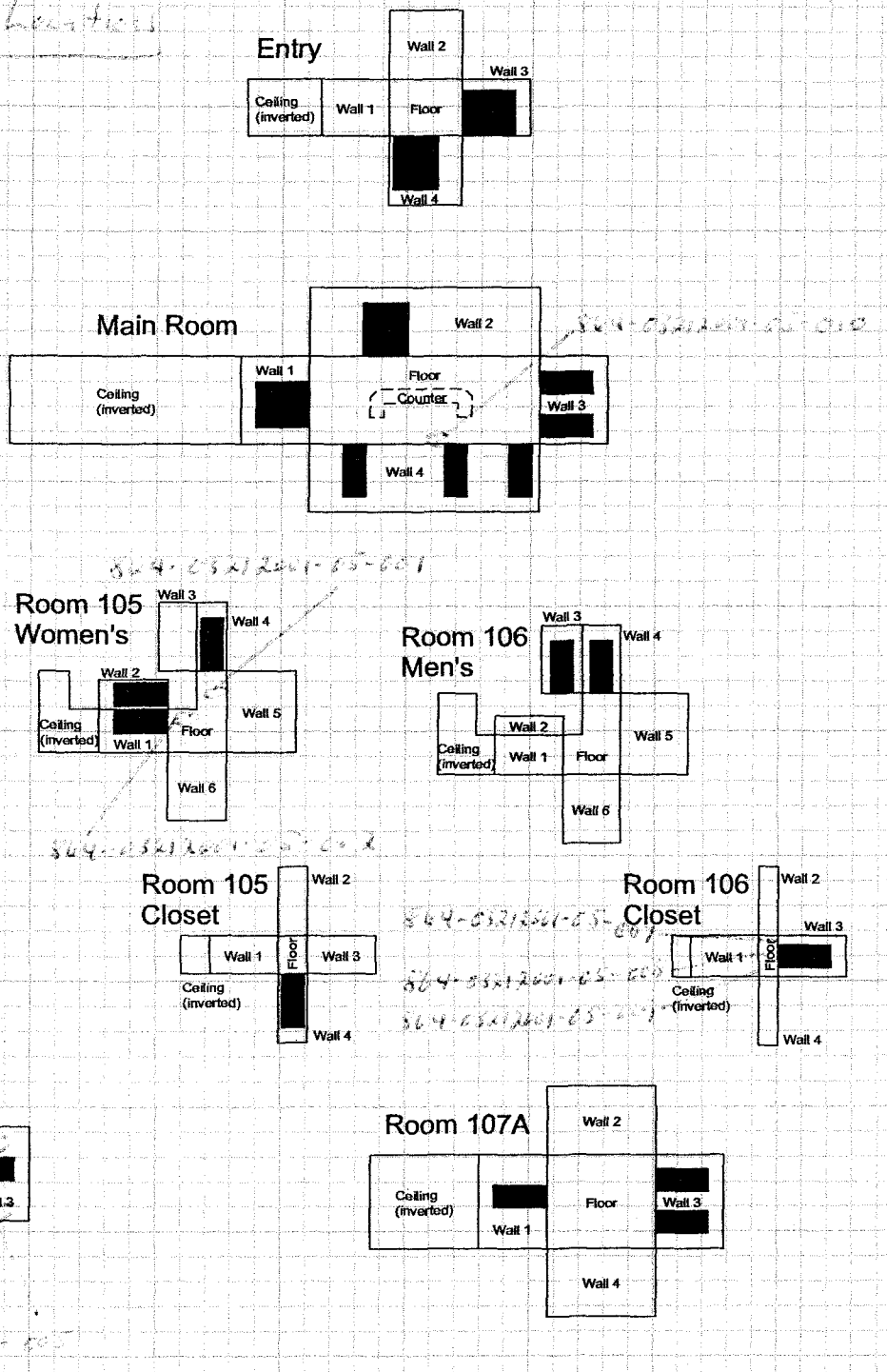
23

PRE-DEMOLITION SURVEY FOR 800 AREA CLUSTER

Survey Area: A **Survey Unit: 800-A-001** **Classification: N/A**
Building: 830, 863, 864, 885, T883D
Survey Unit Description: Interior Surfaces
Total Area: 1163 sq. m. **Total Floor Area: 221 sq. m.**

Asbestos Sample Locations

Building 864



SURVEY MAP LEGEND

- (#) Asbestos Sample Location
- (#) Beryllium Sample Location
- [#] Lead Sample Location
- (#) RCRA/CERCLA Sample Location
- (#) PCBS Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

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N

0 FEET 30
0 METERS 10

1 inch = 24 feet 1 grid sq. = 1 sq. m.

U.S. Department of Energy
Rocky Flats Environmental Technology Site

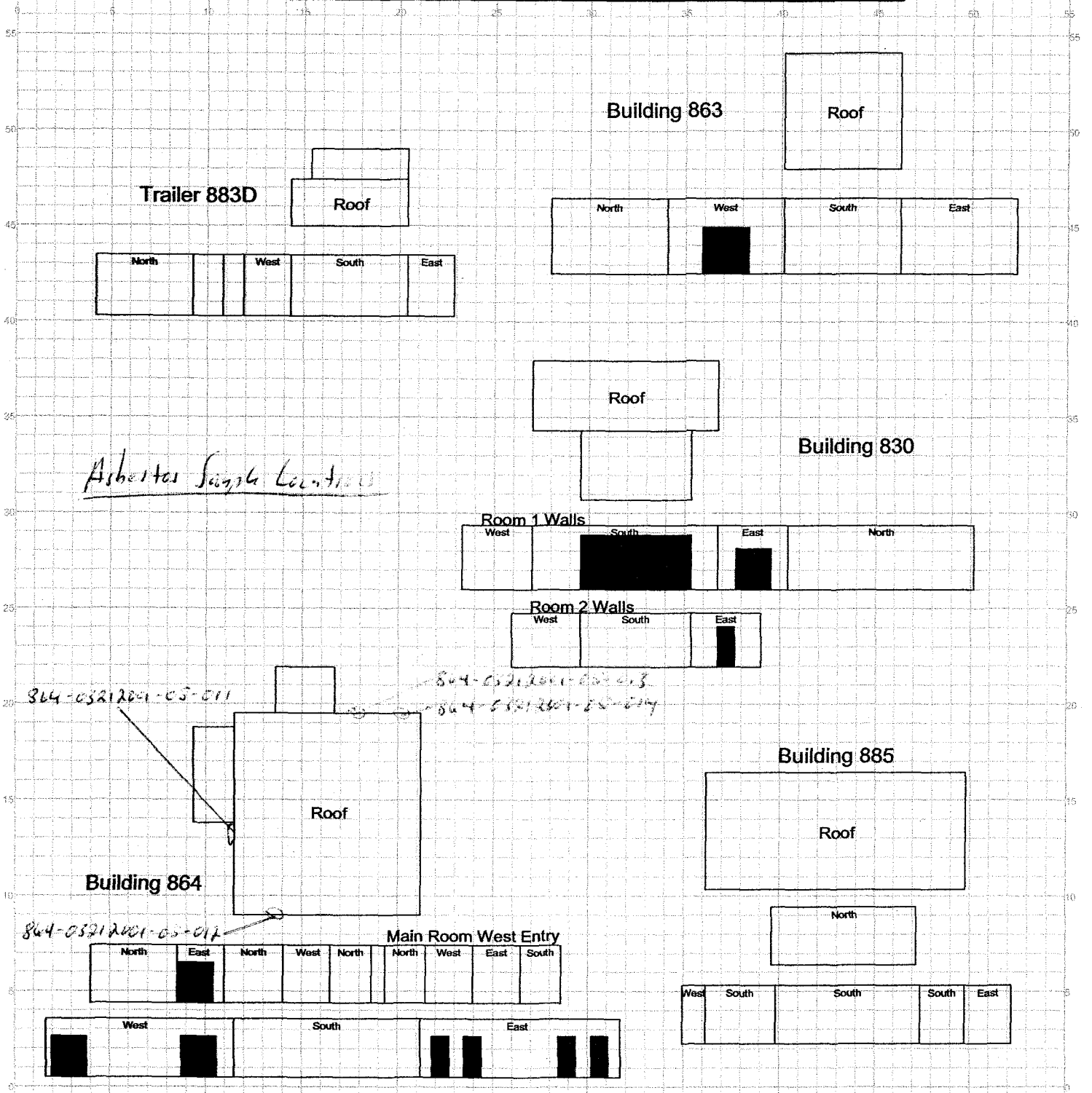
Prepared by: GIS Dept. 303-966-7700 Prepared for:
DynCorp
THE ART OF TECHNOLOGY
KAISER-HILL COMPANY

MAP ID: fy2001/01-0182 January 25, 2001

29

PRE-DEMOLITION SURVEY FOR 800 AREA CLUSTER

Survey Area: B **Survey Unit: 800-B-002** **Classification: N/A**
Building: 830, 863, 864, 885, T883D
Survey Unit Description: Exterior Surfaces
Total Area: 797 sq. m. **Total Floor Area: 0 sq. m.**



SURVEY MAP LEGEND

- Asbestos Sample Location
- Beryllium Sample Location
- Lead Sample Location
- RCRA/CERCLA Sample Location
- PCBS Sample Location

Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&ET, nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights.

- Open/Inaccessible Area
- Area in Another Survey Unit

N

0 FEET 30
0 METERS 10
1 inch = 24 feet 1 grid sq. = 1 sq. m.

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7701 Prepared for:
DynCorp
THE ART OF TECHNOLOGY
KAISER-HILL COMPANY

MAP ID: fy2001/01-0182 January 25, 2001

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RESERVOIRS ENVIRONMENTAL SERVICES, INC.

NVLAP Accredited Laboratory #1896 TDH 30-0136

TABLE I. PLM BULK ANALYSIS, PERCENTAGE COMPOSITION BY VOLUME

RES Job Number: RES 76203-1
Client: Kaiser-Hill Analytical Services Division
Client Project: On-Site Samples Analysis-01D0635
Date Samples Received: March 27, 2001
Analysis Type: PLM Short Report, Bulk
Turnaround: 24 Hour

Client Sample Number	Lab ID Number	Layer	Physical Description	Portion of Total Sample (%)	ASBESTOS CONTENT BY LAYER: Mineral	ASBESTOS CONTENT BY LAYER: Visual Estimate (%)	Non-Asbestos Fibrous Components (%)	Non-Fibrous Components (%)
864-03212001-05-001	EM 534224	A	Yellow mastic	7		ND	0	100
		B	White/tan tile	93		ND	0	100
864-03212001-05-002	EM 534225	A	Gray paint	5		ND	0	100
		B	Yellow mastic	7		ND	0	100
		C	White/tan tile	88		ND	0	100
864-03212001-05-003	EM 534226	A	Yellow mastic	5		ND	0	100
		B	Blue/multicolored tile	95		ND	0	100
864-03212001-05-004	EM 534227	A	Yellow mastic	3		ND	0	100
		B	Blue/multicolored tile	97		ND	0	100
864-03212001-05-005	EM 534228	A	White/blue paint	8		ND	0	100
		B	White mud	10	Chrysotile	4	0	96
		C	White tape	12		ND	98	2
		D	White/tan drywall	70	Trem-Act	TR	15	85
864-03212001-05-006	EM 534229	A	White/blue paint	5		ND	0	100
		B	Tan mud	10	Chrysotile	3	0	97
		C	White tape	15		ND	98	2
		D	White/tan drywall	70	Trem-Act	TR	15	85

ND = None Detected
TR = Trace, < 1% Visual Estimate
Trem-Act = Tremolite-Actinolite
Point Count Trace = Observed but not countable under protocol, < 0.25%

Analyst: PDL

Data QA

RESERVOIRS ENVIRONMENTAL SERVICES, INC.

NVLAP Accredited Laboratory #1896 TDH 30-0136

TABLE I. PLM BULK ANALYSIS, PERCENTAGE COMPOSITION BY VOLUME

RES Job Number: RES 76203-1
Client: Kaiser-Hill Analytical Services Division
Client Project: On-Site Samples Analysis-01D0635
Date Samples Received: March 27, 2001
Analysis Type: PLM Short Report, Bulk
Turnaround: 24 Hour

Client Sample Number	Lab ID Number	Layer	Physical Description	Portion of Total Sample (%)	ASBESTOS CONTENT BY LAYER: Mineral	ASBESTOS CONTENT BY LAYER: Visual Estimate (%)	Non-Asbestos Fibrous Components (%)	Non-Fibrous Components (%)
864-03212001-05-007	EM 534230	A	White paint	5		ND	0	100
		B	White fibrous woven material	10		ND	98	2
		C	White fibrous plaster	85	Chrysotile	7	0	75
					Amosite	18		
864-03212001-05-008	EM 534231	A	White/green paint	10		ND	0	100
		B	White fibrous woven material	10		ND	98	2
		C	Black fibrous material	35	Chrysotile	65	10	25
		D	Tan fibrous material	45	Chrysotile	5	90	5
864-03212001-05-009	EM 534232	A	White/green paint	10		ND	0	100
		B	White fibrous woven material	15		ND	98	2
		C	White fibrous plaster	75	Chrysotile	7	0	75
					Amosite	18		
864-03212001-05-010	EM 534233	A	Tan mastic	7	Trem-Act	TR	3	97
		B	Brown cove	93		ND	0	100
864-03212001-05-011	EM 534234	A	Tan granular paint	100		ND	0	100
864-03212001-05-012	EM 534235	A	Tan granular paint	100		ND	0	100
864-03212001-05-013	EM 534236	A	Tan/multicolored paint	100		ND	10	90
864-03212001-05-014	EM 534237	A	White resinous material	100		ND	0	100

ND = None Detected
TR = Trace, < 1% Visual Estimate
Trem-Act = Tremolite-Actinolite
Point Count Trace = Observed but not countable under protocol, < 0.25%

Data QA

RESERVOIRS ENVIRONMENTAL SERVICES, INC.

NVLAP Accredited Laboratory #1896 TDH 30-0136

TABLE I. PLM BULK ANALYSIS, PERCENTAGE COMPOSITION BY VOLUME

RES Job Number: RES 76203-1
Client: Kaiser-Hill Analytical Services Division
Client Project: On-Site Samples Analysis-01D0635
Date Samples Received: March 27, 2001
Analysis Type: PLM Short Report, Bulk
Turnaround: 24 Hour

Client Sample Number	Lab ID Number	Layer	Physical Description	Portion of Total Sample (%)	ASBESTOS CONTENT BY LAYER: Mineral	ASBESTOS CONTENT BY LAYER: Visual Estimate (%)	Non-Asbestos Fibrous Components (%)	Non-Fibrous Components (%)
885-03212001-05-001	EM 534238	A	White fibrous woven material	5		ND	98	2
		B	White fibrous plaster	95	Chrysotile	7	0	75
					Amosite	18		
T883D-03222001-05-001	EM 534239	A	White linoleum	100		ND	30	70
T883D-03222001-05-002	EM 534240	A	Tan wood w/tan mastic	3		ND	90	10
		B	White linoleum	97		ND	20	80
T883D-03222001-05-003	EM 534241	A	Tan mastic	40	Trem-Act	TR	3	97
		B	Brown cove	60		ND	0	100
T883D-03222001-05-004	EM 534242	A	Tan mastic	5	Trem-Act	TR	3	97
		B	Brown cove	95		ND	0	100
T883D-03222001-05-005	EM 534243	A	White linoleum	100		ND	20	80

ND = None Detected
TR = Trace, < 1% Visual Estimate
Trem-Act = Tremolite-Actinolite
Point Count Trace = Observed but not countable under protocol, < 0.25%

Data QA

Page 1 of 2

RESERVOIRS ENVIRONMENTAL SERVICES, INC.

1827 GRANT STREET
DENVER, CO 80203

Phone: (303) 830-1986 Fax: (303) 863-9196 WATS: 1-800-678-7374
PAGER: ONCALL Pager available at Lab. Alternate Pagers: PLM/TEM 509-2187 PCM/Metals 509-2098 (AFTER HOURS USE ONLY)

RESI Job #: RES 76203
Due Date: 3/28
Due Time: 12:00

SAMPLES SUBMITTED BY:
Company: Raisen Hill
Address:
Contact: Chuck Hoelzel Phone: Fax: Pager:
Contact: Phone: Fax: Pager:
Project Number and/or P.O. #: 01000685
Project Description/Location: On site Sample Analysis ~~864-03212001-05-00~~

INVOICE TO: (IF DIFFERENT)

ASBESTOS LABORATORY HOURS: Weekdays: 7 am - 7 pm
Saturdays: 8 am - 6 pm
Saturday Turnaround Time at the discretion of analysts on Duty.
PCM/PLM ___ 2 Hour RUSH X 24 hour ___ 3-5 weekdays
Advance notice required to guarantee turnaround.
Prior Notice REQUIRED for TEM 6 Hour RUSH
TEM ___ 6 Hour RUSH ___ 24 hour ___ 3-5 weekdays
3-5 weekday turnaround subject to lab volume, we will notify you if delays are expected.
Additional fees may apply for TEM analysis after laboratory hours or PLM analysis on weekends. Samples will be analyzed during laboratory hours unless after-hours service is authorized.

METALS LABORATORY HOURS: Weekdays: 8 am - 5 pm
AA ___ SPECIAL RUSH ___ 24 Hour ___ 3-5 Day
RCRA 8 ___ SPECIAL RUSH ___ 5 Day ___ 10 Day
TCLP ___ SPECIAL RUSH ___ 5 Day ___ 10 Day
Prior Notice REQUIRED for SPECIAL RUSH AA, RCRA or TCLP
RCRA and TCLP SPECIAL RUSH is 3 Day Turnaround

ANALYTICAL METHOD

AIR	☐	PCM 7400A, 7400B, OSHA
	☐	TEM AHERA, Level II, 7402, +/-
	☐	SEM
	☐	XRD Total, Respirable
	☐	AA / ICP _____ Metal ____ RCRA 8
	☐	Dust Total, Respirable
BULK:	☒	PLM Short report, Long report, Point Count
	☐	TEM +/-, Quant, Semi-quant
	☐	SEM +/-
	☐	XRD Quartz, Other _____
	☐	AA / ICP _____ Metal ____ RCRA 8
		Paint, Soil, Dust, Wipe, TCLP
WATER	☐	TEM Drinking, Waste Water
	☐	AA Water _____ Metal ____ RCRA 8
		Drinking, Waste Water
OTHER	☐	Specify _____

Special Instructions:

	Client Sample Number	Volume	EM #
1.	864-03212001-05-001		534724
2.	002		25
3.	003		26
4.	004		27
5.	005		28
6.	006		29
7.	007		30
8.	008		31
9.	009		32
10.	010		33
11.	011		34
12.	012		35
13.	013		36
14.	014		37
15.	885-03212001-05-001		38

Number of samples received: 20 (Use as many additional sheets as needed.)

NOTE: If the package has sustained substantial damage or the custody seal is broken, stop and contact project manager and shipper. RESI will analyze incoming samples based upon information received with those samples. RESI is not responsible for errors or omissions in calculations resulting from the inaccuracy of original data. Turnaround times are based upon times of receipt by Laboratory. Call Laboratory for number of samples guaranteed in short turnaround.

Relinquished By: _____ Date/Time: _____

Laboratory Use Only
Received By: _____ Date/Time: 3/27 - 6:00pm
Cooler: _____ Condition of package/custody seal upon receipt: _____
RESULTS: Contact: _____ Page: _____ Email: _____ Fax: _____ Date: _____ Time: _____ Initials: _____
Results Sent To: _____
RESULTS: Authorization By/Time: _____
Analytical Method/Turnaround: _____
Results Due: _____ Results Out: _____

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Page 2 of 2

RESERVOIRS ENVIRONMENTAL SERVICES, INC.

1827 GRANT STREET
DENVER, CO 80203

RESI Job #: 76203

Due Date: _____
Due Time: _____

Phone: (303) 830-1986 Fax: (303) 863-9196 WATS: 1-800-678-7374
PAGER: ONCALL Pager available at Lab. Alternate Pagers: PLM/TEM 509-2187 PCM/Metals 509-2098 (AFTER HOURS USE ONLY)

SAMPLES SUBMITTED BY:
Company:
Address:
Contact: Phone: Fax: Pager:
Contact: Phone: Fax: Pager:
Project Number and/or P.O. #:
Project Description/Location:

INVOICE TO: (IF DIFFERENT)

ASBESTOS LABORATORY HOURS: Weekdays: 7 am - 7 pm
Saturdays: 8 am - 5 pm
Saturday Turnaround Time at the discretion of analysts on Duty.
PCM/PLM ___ 2 Hour RUSH ___ 24 hour ___ 3-5 weekdays
Advance notice required to guarantee turnaround.
Prior Notice REQUIRED for TEM 6 Hour RUSH
TEM ___ 6 Hour RUSH ___ 24 hour ___ 3-5 weekdays
3-5 weekday turnaround subject to lab volume, we will notify you if delays are expected.
Additional fees may apply for TEM analysis after laboratory hours or PLM analysis on weekends. Samples will be analyzed during laboratory hours unless after-hours service is authorized.

METALS LABORATORY HOURS: Weekdays: 8 am - 5 pm
AA ___ SPECIAL RUSH ___ 24 Hour ___ 3-5 Day
RCRA 8 ___ SPECIAL RUSH ___ 5 Day ___ 10 Day
TCLP ___ SPECIAL RUSH ___ 5 Day ___ 10 Day
Prior Notice REQUIRED for SPECIAL RUSH AA, RCRA or TCLP
RCRA and TCLP SPECIAL RUSH is 3 Day Turnaround

ANALYTICAL METHOD

AIR	☐	PCM 7400A, 7400B, OSHA
	☐	TEM AHERA, Level II, 7402, +/-
	☐	SEM
	☐	XRD Total, Respirable
	☐	AA / ICP _____ Metal ___ RCRA 8
	☐	Dust Total, Respirable
BULK:	☐	PLM Short report, Long report, Point Count
	☐	TEM +/-, Quant, Semi-quant
	☐	SEM +/-
	☐	XRD Quartz, Other _____
	☐	AA / ICP _____ Metal ___ RCRA 8
		Paint, Soil, Dust, Wipe, TCLP
WATER	☐	TEM Drinking, Waste Water
	☐	AA Water _____ Metal ___ RCRA 8
		Drinking, Waste Water
OTHER	☐	Specify _____

Special Instructions:

	Client Sample Number	Volume	EM #
1.	T883D-03222001-05-001		39
2.	002		40
3.	003		41
4.	004		42
5.	005		43
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			

Number of samples received: 20 (Use as many additional sheets as needed.)

NOTE: If the package has sustained substantial damage or the custody seal is broken, stop and contact project manager and shipper. RESI will analyze incoming samples based upon information received with those samples. RESI is not responsible for errors or omissions in calculations resulting from the inaccuracy of original data. Turnaround times are based upon times of receipt by Laboratory. Call Laboratory for number of samples guaranteed in short turnaround.

Relinquished By: _____ Date/Time: _____

Laboratory Use Only
Received By: _____ Date/Time: _____
Condition of package/Seals are intact: _____
RESULTS: Contact _____ Fax _____ Phone _____ Fax _____ Date _____ Time _____ Initial _____
SELTS: Authorization By/Time: _____
Analytical Method/Turnaround: _____
Results Due: _____ Results Out: _____

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FP F 3791.32 (7/95)
Formerly RF-47530

Rocky Flats Environmental Technology Site

Golden, CO 80402-0464

Safety and Hygiene Chain of Custody Record and Analysis Request

01D0635

[redacted]

Page 1 of 2

Name of Originator: A. Gonzalez Title: IH Bldg/Ext: 116/ x6727 Date: 3/27/01

SAMPLE NUMBER Bldg/Y/M/D/P#/S#	ANALYZE FOR	VOLUME liters	SAMPLE TIME/	MEDIA	P A B	Personal Area Bulk	REMARKS	Lab Number
86 03212001-05-001	Asbestos				B		IH02B00[redacted]1 (PLM)	
1-03212001-05-002								
864-03212001-05-003								
864-03212001-05-004								
864-03212001-05-005								
864-03212001-05-006								
864-03212001-05-007								
864-03212001-05-008		Samples disposed of in 881 waste-PAL						
864-03212001-05-009								
864-03212001-05-010								
864-03212001-05-011								
864-03212001-05-012								
864-03212001-05-013								
864-03212001-05-014								
885-03212001-05-001								
T883D-03222001-05-001								

Relinquished by	Received by	Time/Date	Relinquished by	Received by	Time/Date
[signature]	[signature]	1055 3-27-01			
Relinquished by	Received by	Time/Date	Relinquished by	Received by	Time/Date
Relinquished by	Received by	Time/Date	Relinquished by	Received by	Time/Date
Relinquished by	Received by	Time/Date	Relinquished by	Received by	Time/Date

Report and Billing Instruction

- Kaiser-Hill ☒ Verbal To: A. Gonzalez
- RMRS ☐ Fax To: 6678
- SSOC ☐ Report To: A. Gonzalez
- DynCorp ☐ Bill To: KH
- WSI ☐ P.O.#/Release: EED10720
- Lab: Reservoir

Analysis Request

Industrial Hygiene Sample: ☐ Standard Service ☐ Rush ☐ Other

Asbestos Samples: ☒ Standard Service ☐ 24 Rush ☐ 2 Rush ☐ Other

Seal# (Release #)

Condition of Seal: ☐ Broken ☐ Unbroken

Signature:

Comments:

White - Return to Originator Yellow - Lab Copy Green - Sample Custodian Blue - Originator

116, 37

Kim Nguyen

SS03

Data Quality Assessment Report

Rocky Flats Environmental Technology Site

RIN Number	Analytical Method/PSA Line Item	Review Level
01D0606 (Lot: 0104L550)	PCBs by SW-846 Method 8082/SS03B006	Validation (RF#: 001305)

Analytical Laboratory	Assessment Performed by	Number of Samples/ Matrix.
Lionville Laboratory Inc.	TechLaw, Inc.	4/solid/B006

Sample Numbers: 01D0606-001.005, 01D0606-002.001, 01D0606-003.001, 01D0606-004.001

Quality Control Element	Reviewed	Non-Compliance Identified
General (Cover Page, Table of Contents, DRC Checklist, Narrative)	Y	N
Chain of Custody	Y	N
Holding Times	Y	N
Sample Preservation	Y	N
Surrogate Recovery	Y	Comment 1
MS/MSD Recovery	Y	Comment 2
Sample Results	Y	N
Calibration	Y	Comment 3
Analytical Sequence (CLP)	NA	NA
Florisil Cartridge Check (CLP)	NA	NA
Gel Permeation Chromatography (CLP)	NA	NA
Blanks	Y	N
Sample Preparation	Y	N
Other QC	Y	N

Y Item was reviewed or non-compliance was identified
N Item was not reviewed or non-compliance was not identified
N/A Item is not applicable to the Line Item

RECEIVED
JUN 28 2001

ENTERED

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Data Quality Assessment Report

Rocky Flats Environmental Technology Site

Data Assessment results are classified as either Action Items or Comments. Action Items are technical non-compliances that result in qualification of analytical results. Data may be qualified as valid (V), estimated (J), presumptively estimated (NJ), estimated at an elevated level of detection (UJ), or rejected (R). Multiple qualifiers may be associated with any given data point based on the number of problems identified, however, the assigned qualifier is based upon the following hierarchy: R, UJ, NJ, J, V. All data points that are not qualified based upon action items in this report are considered valid (V). Comments are technical non-compliances or contractual non-compliances that do not result in qualification of data.

Action Items:

None.

Comments:

1. The recoveries of the surrogates tetrachloro-m-xylene and decachlorobiphenyl were reported as zero percent for samples 01D0606-003.001 and 01D0606-004.001. No action was taken, as these samples were analyzed at dilutions of 20x and 10x, respectively. The surrogate compounds are considered to be diluted outside the calibration range. **[142]**

2. Matrix spike/matrix spike duplicates were not provided in the data package. The laboratory did provide a laboratory control sample and all recoveries were within criteria. No action was necessary.

3. Although positive results for Aroclor-1254 were reported in all the samples, the laboratory only provided continuing calibrations for Aroclor-1016 and Aroclor-1260. No action was taken.

Verification/Validation Signature Amy O Butler Date: 06-25-01

Reviewer Signature RWF Date: 6-25-01
(*Validation Only*)

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1D
PESTICID RGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

01D0606-001.005

Lab Name: Lionville Labs, Inc. Work Order: 11830001001

Client: K-H RIN#01D0606

Matrix: SOLID

Lab Sample ID: 0104L550-001

Sample wt/vol: 29.3 (g/mL) G

Lab File ID: 05010111.21

Level: (low/med) LOW

Date Received: 04/18/01

% Moisture: not dec. 5 dec.

Date Extracted: 04/19/01

Extraction: (SepF/Cont/Sonc) N/A

Date Analyzed: 05/02/01

GPC Cleanup: (Y/N) N pH: 7.0

Dilution Factor: 1.00

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		
12674-11-2------	Aroclor-1016	36	U
11104-28-2------	Aroclor-1221	72	U
11141-16-5------	Aroclor-1232	36	U
53469-21-9------	Aroclor-1242	36	U
12672-29-6------	Aroclor-1248	36	U
11097-69-1------	Aroclor-1254	250	
11096-82-5------	Aroclor-1260	36	U

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AB
06-21-01

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1D

PESTICIDE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

01D0606-002.001

Lab Name: Lionville Labs, Inc. Work Order: 11830001001

Client: K-H RIN#01D0606

Matrix: SOLID

Lab Sample ID: 0104L550-003

Sample wt/vol: 33.2 (g/mL) G

Lab File ID: 05010111.22

Level: (low/med) LOW

Date Received: 04/18/01

% Moisture: not dec. 4 dec.

Date Extracted: 04/19/01

Extraction: (SepF/Cont/Sonc) N/A

Date Analyzed: 05/02/01

GPC Cleanup: (Y/N) N pH: 7.0

Dilution Factor: 1.00

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		
12674-11-2	Aroclor-1016	31	U
11104-28-2	Aroclor-1221	63	U
11141-16-5	Aroclor-1232	31	U
53469-21-9	Aroclor-1242	31	U
12672-29-6	Aroclor-1248	31	U
11097-69-1	Aroclor-1254	29	J
11096-82-5	Aroclor-1260	31	U

Flags/qlcl

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AB
06-21-01

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1D
PESTICI[illegible]ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

01D0606-003.001

Lab Name: Lionville Labs, Inc. Work Order: 11830001001

Client: K-H RIN#01D0606

Matrix: SOLID

Lab Sample ID: 0104L550-005

Sample wt/vol: 30.9 (g/mL) G

Lab File ID: 05010111.23

Level: (low/med) LOW

Date Received: 04/18/01

% Moisture: not dec. 8 dec.

Date Extracted: 04/19/01

Extraction: (SepF/Cont/Sonc) N/A

Date Analyzed: 05/02/01

GPC Cleanup: (Y/N) N pH: 7.0

Dilution Factor: 20.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

142

CAS NO.	COMPOUND		
12674-11-2	Aroclor-1016	710	U
11104-28-2	Aroclor-1221	1400	U
11141-16-5	Aroclor-1232	710	U
53469-21-9	Aroclor-1242	710	U
12672-29-6	Aroclor-1248	710	U
11097-69-1	Aroclor-1254	1400	
11096-82-5	Aroclor-1260	710	U

Hgstulo..

FORM 1 PEST 12/88 Rev.

AB
06-21-01

36

36

1D

PESTICIDE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

01D0606-004.001

Lab Name: Lionville Labs, Inc. Work Order: 11830001001

Client: K-H RIN#01D0606

Matrix: SOLID

Lab Sample ID: 0104L550-007

Sample wt/vol: 32.6 (g/mL) G

Lab File ID: 05010111.24

Level: (low/med) LOW

Date Received: 04/18/01

% Moisture: not dec. 9 dec.

Date Extracted: 04/19/01

Extraction: (SepF/Cont/Sonc) N/A

Date Analyzed: 05/02/01

GPC Cleanup: (Y/N) N pH: 7.0

Dilution Factor: 10.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

142

CAS NO.	COMPOUND			
12674-11-2	Aroclor-1016	340	U	
11104-28-2	Aroclor-1221	680	U	
11141-16-5	Aroclor-1232	340	U	
53469-21-9	Aroclor-1242	340	U	
12672-29-6	Aroclor-1248	340	U	
11097-69-1	Aroclor-1254	470		
11096-82-5	Aroclor-1260	340	U	

FORM 1 PEST 12/88 Rev.

AB
06-21-01

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TechLaw

HOLDING TIMES

Method #: 8082-PCB S503B006

Client & Batch #: Rocky · 01D0606

Validation /Date: Amy Ballow 06-21-01

Review/Date: [illegible]

Include samples, dilutions & reanalyses

#	SAMPLE NUMBER (per COC)	(If Applicable) COC# = Form1 Y/N	(If Applicable) *SAMPLE PRE-SERVED Y/N	TEMP. 4°C (±2°C) Y/N	CONC. LEVEL/ MATRIX	DATE COLLECTED	Extractables DATE EXTRACTED	DATE ANALYZED	Extractables EXT. DATE - COLL. DATE	Extractables ANAL. DATE - EXT. DATE	ANAL. DATE - COLL. DATE	Action Taken Aromatic J(+) UJ(U)	Action Taken J ALL	Action Taken J (+) R (U)	COMMENTS ANY PROBLEMS ESP. WITH SHIPPING, RECEIPT & SAMPLING CONDITION
1	~~003~~ 0001.005	Y	NA	Y	L/S	04-05-01	04-19-01	05-02-01	14 ✓	14 ✓		None			5.2 °C ✓ w/in criteria
2	002.001	↓	↓	↓	↓	↓	↓	↓	↓	↓		↓			
3	003.001	↓	↓	↓	↓	↓	↓	↓	↓	↓		↓			
4	004.001	↓	↓	↓	↓	↓	↓	↓	↓	↓		↓			Okay
5															
6															
7															
8															
9															
10															
11															
12															
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21															
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23															
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25															

For all worksheets: (1) If a particular category is "Not Applicable," denote with N/A (2) Calculation checks performed by validators.

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INITIAL CALIBRATION

Include samples, dilutions, reanalyses, spikes & blanks

INITIAL CALIBRATION	DATE CALIBRATED	INSTRUMENT ID/GC COLUMN	RSD ≤ 20 % Y/N	1ST ORD. CORR. COEF. (r) or r^2 ≥ 0.99 Y/N	2ND ORD. VALUES TRACEABLE Y/N	CALCULATIONS CHECKS: 1 CF PER I-CAL STD.	CALCULATIONS CHECKS: MIN 1 AVG. CF & %RSD	CALCULATIONS CHECKS: MIN. 1 CORR. COEFFICIENT	COMMENTS & COMPOUNDS FAILING CRITERIA
I-CAL 1: AR1016 1260 1254	050201 -050101	11/12 DB608 RTX-1701	1) ✓ ✓ ✓ ✓ ✓ ✓	2) —	3) —	Not reproduced ✓		—	Okay ✓
Associated samples:									
I-CAL 2:			4)	5)	6)				
Associated samples:									
I-CAL 3:			7)	8)	9)				
Associated samples:									
I-CAL 4:			10)	11)	12)				
Associated samples:									
I-CAL 5:			13)	14)	15)				
Associated samples:									Single pt 1221 1232 1242 1248
I-CAL 6:			16)	17)	18)				
Associated samples:									

CONTINUING CALIBRATION

Include samples, dilutions, reanalyses, spikes & blanks

CONTINUING CALIBRATION	DATE & TIME CALIBRATED	INSTRUMENT ID / GC COLUMN	%Ds 15 % Y/N	OCL. PEST % BRK-DOWN < 20% Y/N	CALCULATIONS CHECKS MIN. 1 DAILY CF	MIN. 1 %D	MIN. 1 % BRK-DOWN	COMMENTS & COMPOUNDS FAILING CRITERIA
C-CAL 1: AR1660	05-02-01 ~~1700~~/0706	11/12 DB-608 RTX-1701	1) ✓ ✓	2) 0%	✓	✓	0%	Usepk hts. No AR1254 Cont.
Associated samples:								
C-CAL 2:			3)	4)				
Associated samples:								
C-CAL 3:			5)	6)				
Associated samples:								
C-CAL 4:			7)	8)				
Associated samples:								
C-CAL 5:			9)	10)				
Associated samples:								
C-CAL 6:			11)	12)				
Associated samples:								

BLANKS

Include method, trip, equipment & field blanks

BLANK NUMBER & TYPE (Method, Trip, Equipment, Field)	EXTRACTABLES DATE EXTRACTED	DATE ANALYZED	CORRECT MATRIX & LEVEL Y/N	FREQ-UENCY MET Y/N	ENTER BLANK CONAMINANTS FOLLOWED BY CONCENTRATION	COMMENTS
BLK #/TYPE PBLKXK -MB1	04-19-01	05-02-01 0803	L/S ✓	✓	No hits ✓	Okay
Associated samples: All						
BLK #/TYPE						
Associated samples:						
BLK #/TYPE						
Associated samples:						
BLK #/TYPE						
Associated samples:						
BLK #/TYPE						
Associated samples:						
BLK #/TYPE						
Associated samples:						

TechLaw

SURROGATES & INTERNAL STANDARDS

Include samples, dilutions, reanalyses, spikes & blanks which do not met criteria.

#	SAMPLE NUMBER (Include sample number if limits not met)	SURROGATES			INTERNAL STDS.		SURR & IS	SURROGATES OUTSIDE QC LIMITS*	INTERNAL STANDARDS OUTSIDE QC LIMITS*	ACTIONS/ COMMENTS
		RECOVERIES WITHIN LIMITS Y/N	IF NOT, RE-EXT./ RE-ANAL Y/N	RE-EXT/ RE-ANAL WITHIN LIMITS Y/N	AREAS WITHIN LIMITS MET Y/N	NA R.T.S. WITHIN LIMITS Y/N	CALC OK			
1	-003.001 (+20)	Diluted out						None - All Okay		Surr. diluted out.
2	-004.001 (×10)							No Action		
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
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*Indicate whether surrogate recovery (or internal standard area) was above or below QC limits. Use for extremely low surrogate recoveries (<10%) or internal standard areas(<2x the lower limit).

SPIKES, LFBs, & LCS's

Include matrix spikes & laboratory fortified blanks which do not met spiking criteria.

TYPE OF SPIKE (Circle One) & ID NUMBER	DATE & TIME ANALYZED	FREQUENCY CRITERIA MET Y/N	SPIKED AT CORRECT LEVEL Y/N	CALC. & TRANS. OK Y/N	LIST SPIKING COMPOUNDS OUTSIDE PERCENT RECOVERY CRITERIA (Followed by percent recovery)	LIST MS/MSD SPIKING COMPOUNDS OUTSIDE RPD CRITERIA (Followed by RPD)	ACTIONS/COMMENTS
LFB/~~MS/MSD~~/LCS# - MB1 AR-1254	05-02-01 0851/0939	✓	✓	✓	Okay ✓		
Associated samples: All							NG MS/MSD ✓
LFB/MS/MSD/LCS#							
Associated samples:							
LFB/MS/MSD/LCS#							
Associated samples:							
LFB/MS/MSD/LCS#							
Associated samples:							
LFB/MS/MSD/LCS#							
Associated samples:							
LFB/MS/MSD/LCS#							
Associated samples:							

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COMPOUND IDENTIFICATION, QUANTITATION & MDLS

Include samples, dilutions, reanalyses & blanks

#	SAMPLE NUMBER (Include if problems exist)	ID CRITERIA		COMMENTS & COMPOUNDS FAILING ID CRITERIA	CALC. CHECKS		TRANS-CRIPTION ERRORS Y/N	ACTIONS/COMMENTS
		1ST COL. RT IN WINDOW Y/N	2ND COL. RT IN WINDOW Y/N		MDLS CORRECT Y/N	CHECK 1-3 HIT(S) PER SAMPLE		
1	-001.005	✓	✓	-AR1254	✓	✓	✓	Okay
2	-002.001	✓	✓		✓	✓	✓	
3	-003.001 x20	✓	✓		✓	✓	✓	
4	-004.001	✓	✓		✓	✓	✓	
5	MB1	✓	✓		✓	✓	✓	
6								
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For all worksheets: (1) If a particular category is "Not Applicable," denote with N/A (2) Calculation checks performed by validators.

TechLaw

SYSTEM PERFORMANCE, DATA COMPLETENESS & ADDITIONAL QC

Include samples for which problems exist.

SYSTEM PERFORMANCE			DATA COMPLETENESS	
#	SAMPLE NUMBER	IDENTIFY FACTORS THAT INDICATE SYSTEM PERFORMANCE PROBLEMS (e.g., Baseline Shifts, Large Air Peaks, I.S. Area Changes, etc.)	SAMPLE NUMBER	OTHER MISSING DATA (including Mass Spectra)
		No AR1254 - C-Cal		

Include field duplicates.

ADDITIONAL, QC		
FIELD DUPLICATE SAMPLE NUMBERS	LIST COMPOUNDS WITH RPDs OUTSIDE RPD CRITERIA (followed by RPD)	ACTION/COMMENTS

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SS08
Data Quality Assessment Report
Rocky Flats Environmental Technology Site

Kim Mayer
116, Pg 37

RIN Number	Analytical Method/PSA Line Item	Review Level
01D0606 (Lot 0104L550)	TCLP Metals including mercury/SS08 C006	Complete Verification

Analytical Laboratory	Assessment Performed by	Number of Samples/ Matrix.
Recra LabNet	TechLaw, Inc.	12/solid/C006

Sample Numbers: 01D0606-001.006, 01D0606-002.002, 01D0606-003.002, 01D0606-004.002, 01D0606-005.004, 01D0606-006.004, 01D0606-007.004, 01D0606-008.004, 01D0606-009.004 01D0606-010.004, 01D0606-011.004, 01D0606-012.004

Quality Control Item	Reviewed (Y or N)	Non-Compliance Identified
General (Cover Page, Table of Contents, DRC Checklist, General SDP Requirements Narrative)	Y	N
Chain of Custody, Preservation, and Holdings	Y	N
Sample Results	Y	N
Calibration Verification, CRDL Standard	Y	Action Items 1,2
Verification and Preparation Blanks	Y	Action Items 3,4
Interference Check Sample	Y	N
Matrix Spike	Y	N
Duplicates	Y	N
Laboratory Control Sample	Y	N
Standard Additions	N	N
ICP Serial Dilution	Y	Action Item 5
Instrument Detection Limits	Y	N
Other: Interelement Correction Factors, Linear Range Studies, Preparation Logs, Instrument Run Log	N	N
Preparation and Instrument RAW Data	N	N
Standards	N	N
EDD	Y	N

Y Item was reviewed or non-compliance was identified
N Item was not reviewed or non-compliance was not identified
N/A Item is not applicable to the Line Item

Data Assessment results are classified as either Action Items or Comments. Action Items are technical non-compliances that result in qualification of analytical results. Data may be qualified as valid (V), estimated (J), presumptively estimated (NJ), estimated at an elevated level of detection (UJ), or rejected (R). Multiple qualifiers may be associated with any given data point based on the number of problems identified, however, the assigned qualifier is based upon the following hierarchy: R, UJ, NJ, J, V. All data points that are not qualified based upon action items in this report are considered valid (V). Comments are technical non-compliances or contractual non-compliances that do not result in qualification of data.

Action Items:

1. The following sample results exceeded the CCV QC limits of 90-110%, with a %R greater than 110%. Detected sample results are estimated (J):
   - Potassium in all twelve samples. **[104]**
2. The following sample results exceeded the CRDL QC criteria of 80-120%, with a %R greater than 120%. Sample results less than 3X the RDL are estimated (J):
   - Arsenic in samples 01D0606-003.002, 01D0606-007.004, and 01D0606-009.004
   - Thallium in sample 01D0606-001.006. **[105]**
3. The following samples results are qualified as estimated (UJ) because the calibration and/or preparatory blanks exceeded the IDL, and sample results were less than 5X the blank concentration:
   - Aluminum, and beryllium in all twelve samples
   - Molybdenum in samples 01D0606-001.006, 01D0606-002.002, 01D0606-003.002, 01D0606-005.004, 01D0606-007.004, 01D0606-008.004, 01D0606-009.004, 01D0606-010.004, and 01D0606-011.004
   - Zinc in samples 01D0606-001.006, 01D0606-002.002, 01D0606-003.002, 01D0606-007.004, 01D0606-008.004, 01D0606-009.004, and 01D0606-012.004
   - Antimony in samples 01D0606-003.002, 01D0606-004.002, 01D0606-007.004, and 01D0606-010.004
   - Arsenic in samples 01D0606-003.002, 01D0606-007.004, and 01D0606-009.004
   - Manganese in samples 01D0606-003.003, 01D0606-007.004, and 01D0606-011.004
   - Magnesium in samples 01D0606-001.006, and 01D0606-012.004
   - Lithium in samples 01D0606-009.004, and 01D0606-011.004. **[107]**
4. The following sample results are qualified as estimated (J) because of negative bias as indicated in the blanks:
   - Copper, nickel, and tin in all twelve samples
   - Cobalt in all twelve samples except 01D0606-010.004. **[107]**

5. The following sample results are qualified as estimated (J) because the ICP serial dilution %D exceeded the criteria of 10%, and the initial sample result was greater than 50X IDL:

   - Potassium in all samples. **[117]**

Comments:

None

Verification/Validation Signature _____ Date: 5/30/01

Reviewer Signature _____ Date: _____
(*Validation Only*)

SS08

Data Quality Assessment Report

Rocky Flats Environmental Technology Site

RIN Number	Analytical Method/PSA Line Item	Review Level
01D0606 (Lab ID 0104L550)	TCLP Volatile Organics by Method 8260/SS08 C010	Complete Verification

Analytical Laboratory	Assessment Performed by	Number of Samples/ Matrix.
RECRA LabNet	TechLaw, Inc.	12/solid/C010

Sample Numbers: 01D0606-001.006, 01D0606-002.002, 01D0606-003.002, 01D0606-004.002, 01D0606-005.004, 01D0606-006.044, 01D0606-007.004, 01D0606-008.004, 01D0606-009.004 01D0606-010.004, 01D0606-011.004, 01D0606-012.004

Quality Control Element	Reviewed	Non-Compliance Identified
General (Cover Page, Table of Contents, DRC Checklist, Narrative)	Y	N
Chain of Custody	Y	N
Holding Times	Y	Action Item 1
Sample Preservation	Y	N
Surrogate Recovery	Y	N
Matrix Spike/Matrix Spike Duplicate	Y	N
Instrument Performance Check	Y	N
Internal Standards	Y	N
Sample Results	Y	N
Tentatively Identified Compounds	N	N
Calibration	Y	N
Quality Control Check Samples	Y	N
Blanks	Y	N
Other QC	Y	N

Y Item was reviewed or non-compliance was identified
N Item was not reviewed or non-compliance was not identified
N/A Item is not applicable to the Line Item

Data Quality Assessment Report

Rocky Flats Environmental Technology Site

Data Assessment results are classified as either Action Items or Comments. Action Items are technical non-compliances that result in qualification of analytical results. Data may be qualified as valid (V), estimated (J), presumptively estimated (NJ), estimated at an elevated level of detection (UJ), or rejected (R). Multiple qualifiers may be associated with any given data point based on the number of problems identified, however, the assigned qualifier is based upon the following hierarchy: R, UJ, NJ, J, V. All data points that are not qualified based upon action items in this report are considered valid (V). Comments are technical non-compliances or contractual non-compliances that do not result in qualification of data.

Action Items:

1. Two samples were extracted beyond the recommended 14-day holding time for soil samples, but were extracted and analyzed within 28 days. As a result the following sample results are qualified as estimated (J/UJ):

- All compounds in samples 01D0606-011.004, and 01D0606-012.004. **[701]**

Comments:

None

Verification/Validation Signature _____ Date: 5/30/01

Reviewer Signature _____ Date: _____

(*Validation Only*)

SS03

Data Quality Assessment Report

Rocky Flats Environmental Technology Site

RIN Number	Analytical Method/PSA Line Item	Review Level
01D0621 (Lab ID:0104L551)	PCBs by SW-846 Method 8082 SS03/B006	Complete Verification

Analytical Laboratory	Assessment Performed by	Number of Samples/ Matrix.
Recra LabNet, Lionville	TechLaw, Inc.	4/solid/B006

Sample Numbers: 01D0621-001.005, 01D0621-002.001, 01D0621-003.001, 01D0621-004.001

Quality Control Element	Reviewed	Non-Compliance Identified
General (Cover Page, Table of Contents, DRC Checklist, Narrative)	Y	N
Chain of Custody	Y	N
Holding Times	Y	N
Sample Preservation	Y	N
Surrogate Recovery	Y	N
MS/MSD Recovery	Y	Comment 1
Sample Results	Y	N
Calibration	Y	N
Analytical Sequence (CLP)	NA	NA
Florisil Cartridge Check (CLP)	NA	NA
Gel Permeation Chromatography (CLP)	NA	NA
Blanks	Y	N
Sample Preparation	Y	N
Other QC	Y	N

Y Item was reviewed or non-compliance was identified
N Item was not reviewed or non-compliance was not identified
N/A Item is not applicable to the Line Item

Data Quality Assessment Report

Rocky Flats Environmental Technology Site

Data Assessment results are classified as either Action Items or Comments. Action Items are technical non-compliances that result in qualification of analytical results. Data may be qualified as valid (V), estimated (J), presumptively estimated (NJ), estimated at an elevated level of detection (UJ), or rejected (R). Multiple qualifiers may be associated with any given data point based on the number of problems identified, however, the assigned qualifier is based upon the following hierarchy: R, UJ, NJ, J, V. All data points that are not qualified based upon action items in this report are considered valid (V). Comments are technical non-compliances or contractual non-compliances that do not result in qualification of data.

Action Items:

None

Comments:

1. MS/MSD analyses were not performed on these samples. No action is taken as organics data are not qualified using MS/MSD data and the LCS recoveries for Aroclor 1016 and 1260 were within QC limits.

Verification/Validation Signature _____ Date: 5/24/01

Reviewer Signature _____ Date: _____
(*Validation Only*)

SS08

Data Quality Assessment Report

Rocky Flats Environmental Technology Site

RIN Number	Analytical Method/PSA Line Item	Review Level
01D0621 (Lab ID 0104L551)	TCLP Volatile Organics by Method 8260/SS08 C010	Complete Verification

Analytical Laboratory	Assessment Performed by	Number of Samples/ Matrix.
RECRA LabNet	TechLaw, Inc.	8/solid/C010

Sample Numbers: 01D0621-001.006, 01D0621-002.002, 01D0621-003.002, 01D0621-004.002, 01D0621-005.004, 01D0621-006.004, 01D0621-007.004, 01D0621-008.004

Quality Control Element	Reviewed	Non-Compliance Identified
General (Cover Page, Table of Contents, DRC Checklist, Narrative)	Y	N
Chain of Custody	Y	N
Holding Times	Y	Action Item 1
Sample Preservation	Y	N
Surrogate Recovery	Y	N
Matrix Spike/Matrix Spike Duplicate	Y	N
Instrument Performance Check	Y	N
Internal Standards	Y	N
Sample Results	Y	N
Tentatively Identified Compounds	N	N
Calibration	Y	N
Quality Control Check Samples	Y	N
Blanks	Y	N
Other QC	Y	N

Y Item was reviewed or non-compliance was identified
N Item was not reviewed or non-compliance was not identified
N/A Item is not applicable to the Line Item

Data Quality Assessment Report

Rocky Flats Environmental Technology Site

Data Assessment results are classified as either Action Items or Comments. Action Items are technical non-compliances that result in qualification of analytical results. Data may be qualified as valid (V), estimated (J), presumptively estimated (NJ), estimated at an elevated level of detection (UJ), or rejected (R). Multiple qualifiers may be associated with any given data point based on the number of problems identified, however, the assigned qualifier is based upon the following hierarchy: R, UJ, NJ, J, V. All data points that are not qualified based upon action items in this report are considered valid (V). Comments are technical non-compliances or contractual non-compliances that do not result in qualification of data.

Action Items:

1. All eight samples were extracted beyond the recommended 14-day holding time for soil samples, but were extracted and analyzed within 28 days. As a result the following sample results are qualified as estimated (J/UJ):

- All compounds in all nine samples. **[701]**

Comments:

None

Verification/Validation Signature _____ Date: 5/24/01

Reviewer Signature _____ Date: _____

(*Validation Only*)

SS08
Data Quality Assessment Report
Rocky Flats Environmental Technology Site

RIN Number	Analytical Method/PSA Line Item	Review Level
01D0621 (Lot 0104L551)	TCLP Metals including mercury/SS08 C006	Complete Verification

Analytical Laboratory	Assessment Performed by	Number of Samples/ Matrix.
Recra LabNet	TechLaw, Inc.	8/solid/C006

Sample Numbers: 01D0621-001.006, 01D0621-002.002, 01D0621-003.002, 01D0621-004.002, 01D0621-005.004, 01D0621-006.004, 01D0621-007.004, 01D0621-008.004

Quality Control Item	Reviewed (Y or N)	Non-Compliance Identified
General (Cover Page, Table of Contents, DRC Checklist, General SDP Requirements Narrative)	Y	N
Chain of Custody, Preservation, and Holdings	Y	N
Sample Results	Y	N
Calibration Verification, CRDL Standard	Y	Action Items 1,2
Verification and Preparation Blanks	Y	Action Items 3,4
Interference Check Sample	Y	N
Matrix Spike	Y	N
Duplicates	Y	N
Laboratory Control Sample	Y	N
Standard Additions	N	N
ICP Serial Dilution	Y	Action Item 5
Instrument Detection Limits	Y	N
Other: Interelement Correction Factors, Linear Range Studies, Preparation Logs, Instrument Run Log	N	N
Preparation and Instrument RAW Data	N	N
Standards	N	N
EDD	Y	N

Y Item was reviewed or non-compliance was identified
N Item was not reviewed or non-compliance was not identified
N/A Item is not applicable to the Line Item

Data Assessment results are classified as either Action Items or Comments. Action Items are technical non-compliances that result in qualification of analytical results. Data may be qualified as valid (V), estimated (J), presumptively estimated (NJ), estimated at an elevated level of detection (UJ), or rejected (R). Multiple qualifiers may be associated with any given data point based on the number of problems identified, however, the assigned qualifier is based upon the following hierarchy: R, UJ, NJ, J, V. All data points that are not qualified based upon action items in this report are considered valid (V). Comments are technical non-compliances or contractual non-compliances that do not result in qualification of data.

Action Items:

1. The following sample results exceeded the CCV QC limits of 90-110%, with a %R greater than 110%. Detected sample results are estimated (J):
   - Potassium in all eight samples. **[104]**
2. The following sample results exceeded the CRDL QC criteria of 80-120%, with a %R greater than 120%. Sample results less than 3X the RDL are estimated (J):
   - Arsenic in sample 01D0621-007.004. **[105]**
3. The following samples results are qualified as estimated (UJ) because the calibration and/or preparatory blanks exceeded the IDL, and sample results were less than 5X the blank concentration:
   - Aluminum, and beryllium in all eight samples
   - Molybdenum in samples 01D0621-001.006, 01D0621-002.002, 01D0621-003.002, 01D0621-004.002, and 01D0621-007.004
   - Zinc in samples 01D0621-001.006, 01D0621-007.004, and 01D0621-008.004
   - Antimony in samples 01D0621-002.002, 01D0621-003.002, 01D0621-004.002, 01D0621-005.004, 01D0621-006.004, 01D0621-007.004, and 01D0621-008.004
   - Arsenic in sample 01D0621-007.004
   - Magnesium in samples 01D0621-002.002, 01D0621-006.004, 01D0621-007.004, and 01D0621-008.004
   - Manganese in samples 01D0621-003.002, 01D0621-004.002, 01D0621-005.004, and 01D0621-006.004
   - Lithium in samples 01D0621-002.002, 01D0621-004.002, and 01D0621-007.004. **[107]**
4. The following sample results are qualified as estimated (J) because of negative bias as indicated in the blanks:
   - Copper, cobalt, nickel, and tin in all eight samples. **[107]**
5. The following sample results are qualified as estimated (J) because the ICP serial dilution %D exceeded the criteria of 10%, and the initial sample result was greater than 50X IDL:
   - Potassium in all samples. **[117]**

Comments:

None

Verification/Validation Signature _____ Date: 5/30/01

Reviewer Signature _____ Date: _____
(Validation Only)

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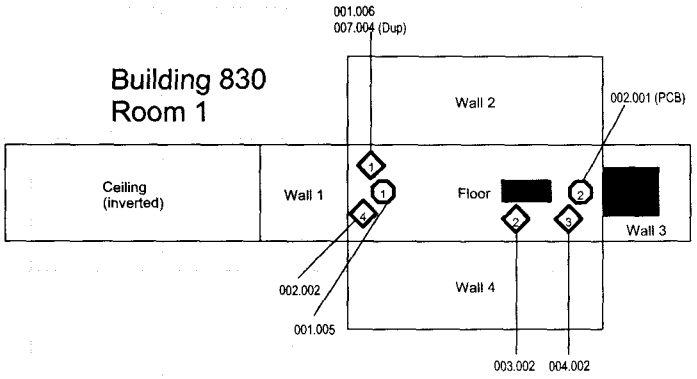
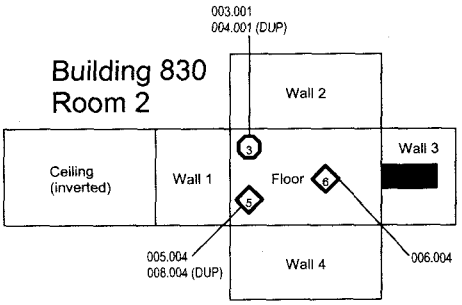
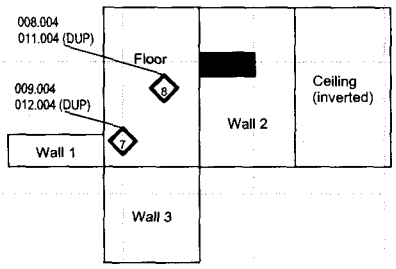
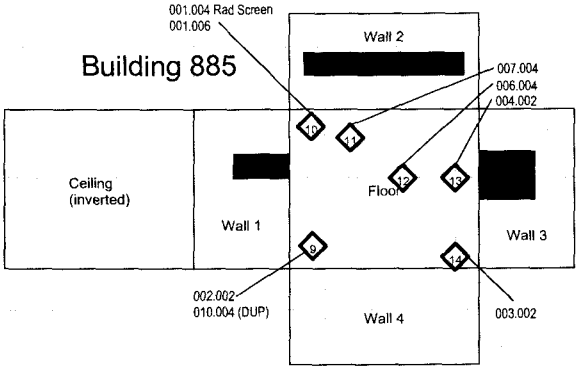
PRE-DEMOLITION SURVEY FOR 800 AREA CLUSTER

Survey Area: A **Survey Unit: 800-A-001** **Classification: N/A**
Building: 830, 863, 864, 885, T883D
Survey Unit Description: Interior Surfaces
Total Area: 1163 sq. m. **Total Floor Area: 221 sq. m.**

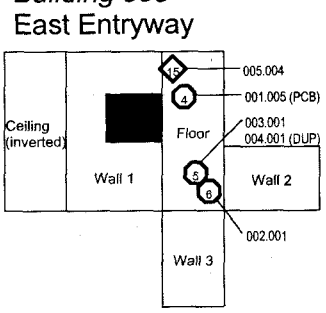


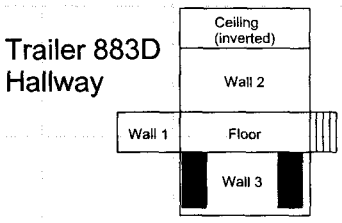


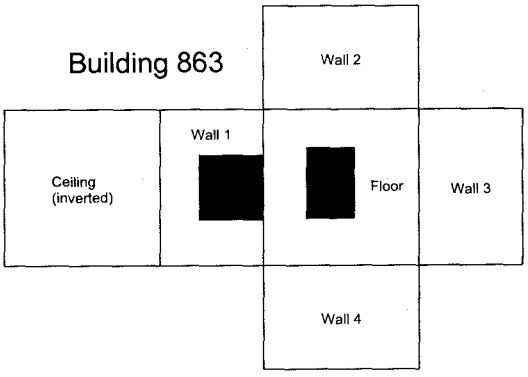


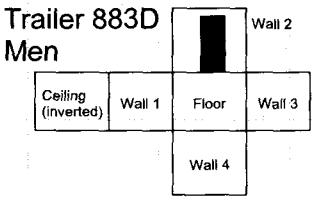


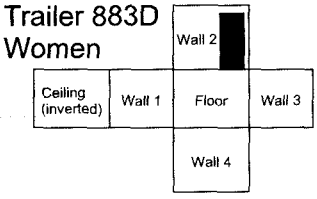
Bias RCRA/VOA sample to floor drain if found.











SURVEY MAP LEGEND

- Asbestos Sample Location
- Beryllium Sample Location
- Lead Sample Location
- RCRA/CERCLA Sample Location
- PCBS Sample Location

Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&ET, nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights.

- Open/Inaccessible Area
- Area in Another Survey Unit

N

0 FEET 30
0 METERS 10

1 inch = 24 feet 1 grid sq. = 1 sq. m.

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707 Prepared for:
DynCorp THE ART OF TECHNOLOGY
KAISER HILL

MAP ID: fy2001/01-0607 May 30, 2001

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☐ Property ☐ Waste ■ Sample

COPY

RELEASE EVALUATION FORM

Release Evaluation No. 010402-00116-001 **EXTENDED:** NO **EXPIRES:** N/A **Charge No.:** N/A

PART I **SENDER/CUSTODIAN**
ACKNOWLEDGEMENT

Description of Property/Waste/Sample To Be Released/Transferred: Concrete core samples from B830 and B885. Sample numbers are included as a an attachment to this release evaluation.

Current Location: B881

Destination: Lionville Laboratory, Inc., 208 Welsh Pool Rd., Lionville, PA 19341

New Recipient/Custodian: Same as above

History/Process Knowledge: These samples came from areas that are located outside the PA. After consultation with B830 and B885 WSRIC and Historical Release Report, these areas have contained RMA's. However, these areas are not expected to contain residual radioactive contamination and have never been posted as a RBA/CA. The soil underneath each facility is contained in an IHSS, but the IHSS is not resulted from radiological contaminants and is not of concern for contamination potential. The samples are being sent for RCRA and PCB analysis.

1) By signing below, I certify information provided in Part I of this release evaluation to be true and accurate.
2) By signing below, I agree to comply with the specific requirements noted in Part II of this release evaluation.

[redacted] Date: 4/16/01 Ext: 7106

PART II **RADIOLOGICAL ENGINEERING**

SPECIFIC REQUIREMENTS AND/OR COMMENTS:

1.) The RCT shall perform contamination surveys (alpha) at the sample location prior to sampling to verify that the sample location is free of removable and total surface activity. Upon conclusion of each sample collection, the RCT shall also conduct contamination surveys of the core sample outer surfaces for removable surface activity. Surveys shall be conducted in accordance with RSP 7.01.
2.) The RCT shall perform a contamination survey on the exterior portion of each sample container in accordance with RSP 7.01 and RSP 9.01.
3.) ACCEPTANCE CRITERIA SHALL BE LESS THAN 20 DPM/100 CM^2 (ALPHA REMOVABLE) AND 100 DPM/100 CM^2 (TOTAL ALPHA). Copies of all surveys shall be provided to the cognizant Radiological Engineer for evaluation.
4.) Alpha only surveys are required for this sample collection evolution. B830 and B885 have been evaluated per TBD 00162 and approved for alpha only surveys by Central Radiological Engineering in Memo JMB-002-01. A copy of the memo is included as a part of this release evaluation.
5.) ASD Sampling Team shall select one location in each facility (total of two locations) to evaluate with a DOT Rad Screen. Location selection shall be random in nature, and will be considered representative of each concrete slab as a whole. All results shall be less than 2 nCi/g to meet DOT shipment criteria.
6.) If applicable, CASI shall ensure compliance with the acceptance criteria and shall retain copies of all applicable documents required by this release evaluation. CASI shall ensure copy of this release evaluation will be available for auditing purposes.
7.) Radiological Engineer: Review the radiological surveys and DOT Rad Screen results. If documentation is below required limits, process release evaluation to indicate shipment as DOT non-rad.

The samples specified in Part 1 of this release evaluation are being provided with authorization for transport as non-radioactive materials in accordance with Department of Transportation (49 CFR) regulation. This authorization for shipment does not constitute an unrestricted release.

Lionville Laboratory operates under Rad. License # 37-19378 that expires on April 30, 2001.

[redacted] Date: 4/16/01 Ext: 3050

APPROVAL FOR TRANSFER/SHIPMENT

COPY

[redacted] Date: 04/16/01 Ext: 5909

RSFORMS-09.01-01

PROPERTY/WASTE RELEASE EVALUATION SIGNATURE REQUIREMENTS

Release Evaluation #: 010402-00116-001

Release Evaluation for Waste:

A Release Evaluation for Waste requires an evaluation and unrestricted release approval signature. The evaluation signature is by the Radiological Engineer (RE) providing the methods or criteria for unrestricted release (i.e., survey requirements, analytical requirements, no survey required, etc.). The unrestricted release approval signature for a Release Evaluation for Waste shall be a RE authorized to provide unrestricted release approval. In addition, the evaluation and unrestricted release approval signatures shall not be the same RE. The intent of this provision is to provide peer review of the evaluation and method of unrestricted release. It is important the RE take the peer review process seriously and not become a "rubber stamp" for their fellow engineer.

Release Evaluation for Property:

A Release Evaluation for Property requires an evaluation and unrestricted release approval signature. For a Release Evaluation for Property, the evaluation and unrestricted release signature may be the same RE. In the past, only one signature was required for property for which a RE could provide an unrestricted release on the basis of process knowledge/history.

Release Evaluation for Samples:

Samples are any waste or material that is being shipped to an off-site facility for analysis. Samples that may be provided with an unrestricted release using process knowledge/history or standard contamination survey techniques may be authorized for shipment to an off-site facility using the signatory requirements specified for property. Samples which cannot be provided with an unrestricted release using process knowledge/history or standard contamination survey techniques shall be authorized for shipment from the Site using the methodology specified for waste, i.e., second signature being provided by a RE authorized to perform peer review and approval for shipment.

The approval for transfer/shipment section of a Sample Release Evaluation (SRE) shall be revised as noted below for samples which cannot be provide with an unrestricted release.

"The samples specified in Part 1 of this release evaluation are being provided with authorization for transport as non-radioactive materials in accordance with Department of Transportation (49 CFR) regulation. This authorization for shipment does not constitute an unrestricted release."

Additional Documentation:

Number of lines per section may be modified or additional pages attached to ensure adequate documentation of information necessary to perform release evaluation.

Additional pages or attachments to a release evaluation shall have the evaluation number, Page __ of __, initials of Radiological Engineer signing approval for transfer/shipment and date.

COPY

page 3 of 18

REN# 01QAD2-00116-001

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg.	EBERLINE	Mfg.	NE	Mfg.	NA
Model	SAC 4	Model	ELECTRA	Model	NA
Serial #	961	Serial #	1237	Serial #	NA
Cal Due	4/30/01	Cal Due	6/5/01	Cal Due	NA
Bkg	0 cpmα	Bkg	4 cpmα	Bkg	NA cpmα
Efficiency	33.00 %	Efficiency	21.24 %	Efficiency	NA %
MDA	20 dpmα	MDA	57 dpmα	MDA	NA dpmα

Mfg.	EBERLINE	Mfg.	NE	Mfg.	NA
Model	BC 4	Model	ELECTRA	Model	NA
Serial #	868	Serial #	1237	Serial #	NA
Cal Due	7/12/01	Cal Due	6/5/01	Cal Due	NA
Bkg	38 cpmβ	Bkg	613 cpmβ	Bkg	NA cpmβ
Efficiency	25.00 %	Efficiency	32.12 %	Efficiency	NA %
MDA	200 dpmβ	MDA	367 dpmβ	MDA	NA dpmβ

Survey Type: ALPHA/BETA CONTAMINATION
Building: B 830
Location: FLOOR
Purpose: PRE JOB SURVEY

RWP #: NA

Date: 4/3/01 Time: 13:00

[redacted]

PRN/REN # : 010402-00116-001
Comments: PRE JOB SURVEY FOR CONCRETE CORE SAMPLEING PROJECT IN BUILDING 830. FOUND NO ELEVATED READING ABOVE MDA.

SURVEY RESULTS

Swipe #	LOCATION	ALPHA Swipe dpm/100cm2	ALPHA Direct dpm/100cm2	ALPHA Wipe dpm/wipe	BETA Swipe dpm/100cm2	BETA Direct dpm/100cm2	BETA Wipe dpm/wipe
1	RCRA # 1	< 20	< 57	NA	< 200	< 367	NA
2	RCRA # 2	< 20	< 57	NA	< 200	< 367	NA
3	RCRA # 3	< 20	< 57	NA	< 200	< 367	NA
4	RCRA # 4	< 20	< 57	NA	< 200	< 367	NA
5	RCRA # 5	< 20	< 57	NA	< 200	< 367	NA
6	RCRA # 6	< 20	< 57	NA	< 200	< 367	NA
7	PCB #1	< 20	< 57	NA	< 200	< 367	NA
8	PCB # 2	< 20	< 57	NA	< 200	< 367	NA
9	PCB # 3	< 20	< 57	NA	< 200	< 367	NA
10	NA	NA	NA	NA	NA	NA	NA
11	NA	NA	NA	NA	NA	NA	NA
12	NA	NA	NA	NA	NA	NA	NA
13	NA	NA	NA	NA	NA	NA	NA
14	NA	NA	NA	NA	NA	NA	NA
15	NA	NA	NA	NA	NA	NA	NA
16	NA	NA	NA	NA	NA	NA	NA
17	NA	NA	NA	NA	NA	NA	NA
18	NA	NA	NA	NA	NA	NA	NA
19	NA	NA	NA	NA	NA	NA	NA
20	NA	NA	NA	NA	NA	NA	NA

Date Reviewed: 4-5-01 **RS Supervision:** [redacted]

(12)

RS FORMS 07.02-01

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

Drawing Showing Survey Points

COPY

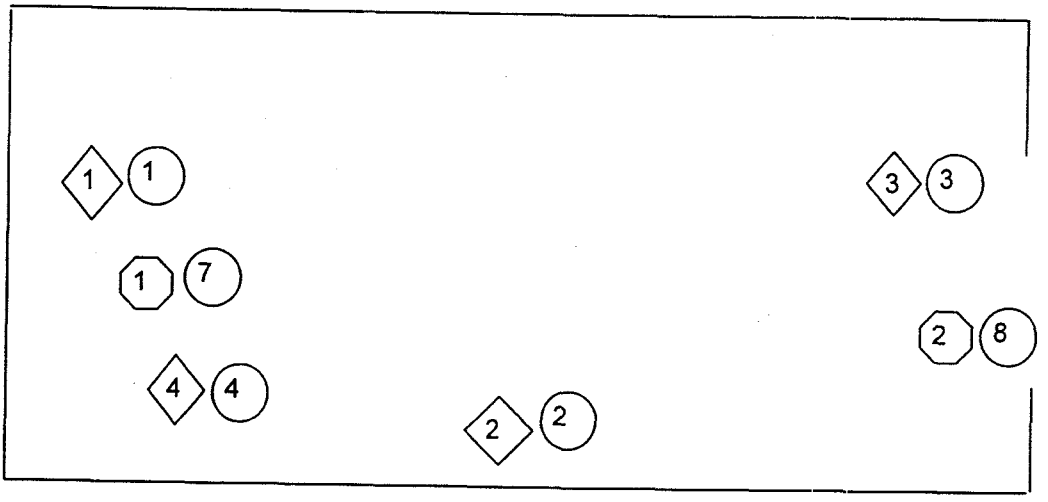
PRE JOB SURVEY OF FLOOR AREA IN BUILDING 830

(#) = SMEARS

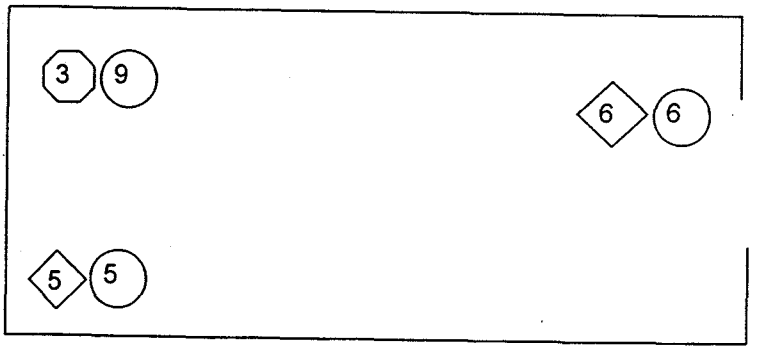
◇# = RCRA

⬡# = PCB

NORTH



ROOM # 1



ROOM # 2

BY P. MILLER AND D. MAYFIELD.
DATE 4/3/01

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RS FORMS 07.02-01

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg.	EBERLINE	Mfg.	NE	Mfg.	NA
Model	SAC 4	Model	ELECTRA	Model	NA
Serial #	961	Serial #	1244	Serial #	NA
Cal Due	4/30/01	Cal Due	5/1/01	Cal Due	NA
Bkg	0 cpmα	Bkg	2 cpmα	Bkg	NA cpmα
Efficiency	33.00 %	Efficiency	21.68 %	Efficiency	NA %
MDA	20 dpmα	MDA	43 dpmα	MDA	NA dpmα

Mfg.	EBERLINE	Mfg.	NE	Mfg.	NA
Model	BC 4	Model	ELECTRA	Model	NA
Serial #	868	Serial #	1244	Serial #	NA
Cal Due	7/12/01	Cal Due	5/1/01	Cal Due	NA
Bkg	38 cpmβ	Bkg	613 cpmβ	Bkg	NA cpmβ
Efficiency	25.00 %	Efficiency	31.55 %	Efficiency	NA %
MDA	200 dpmβ	MDA	373 dpmβ	MDA	NA dpmβ

Survey Type: ALPHA/BETA CONTAMINATION

Building: B 885

Location: FLOOR

Purpose: PRE JOB SURVEY

RWP #: NA

Date: 4/3/01 Time: 13:00

[redacted]

PRN/REN # : 010402-00116-001

Comments: PRE JOB SURVEY FOR CONCRETE CORE SAMPLEING PROJECT IN BUILDING 885. FOUND NO ELEVATED READING ABOVE MDA.

SURVEY RESULTS

Swipe	LOCATION	ALPHA Swipe	ALPHA Direct	ALPHA Wipe	BETA Swipe	BETA Direct	BETA Wipe
#		dpm/100cm2	dpm/100cm2	dpm/wipe	dpm/100cm2	dpm/100cm2	dpm/wipe
1	RCRA # 7	< 20	< 43	NA	< 200	< 373	NA
2	RCRA # 8	< 20	< 43	NA	< 200	< 373	NA
3	RCRA # 9	< 20	< 43	NA	< 200	< 373	NA
4	RCRA # 10	< 20	< 43	NA	< 200	< 373	NA
5	RCRA # 11	< 20	< 43	NA	< 200	< 373	NA
6	RCRA # 12	< 20	< 43	NA	< 200	< 373	NA
7	RCRA # 13	< 20	< 43	NA	< 200	< 373	NA
8	RCRA # 14	< 20	< 43	NA	< 200	< 373	NA
9	RCRA # 15	< 20	< 43	NA	< 200	< 373	NA
10	PCB # 4	< 20	< 43	NA	< 200	< 373	NA
11	PCB # 5	< 20	< 43	NA	< 200	< 373	NA
12	PCB # 6	< 20	< 43	NA	< 200	< 373	NA
13	NA	NA	NA	NA	NA	NA	NA
14	NA	NA	NA	NA	NA	NA	NA
15	NA	NA	NA	NA	NA	NA	NA
16	NA	NA	NA	NA	NA	NA	NA
17	NA	NA	NA	NA	NA	NA	NA
18	NA	NA	NA	NA	NA	NA	NA
19	NA	NA	NA	NA	NA	NA	NA
20	NA	NA	NA	NA	NA	NA	NA

Date Reviewed: 4-5-01 **RS Supervision:** [redacted]

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RS FORMS 07.02-01

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

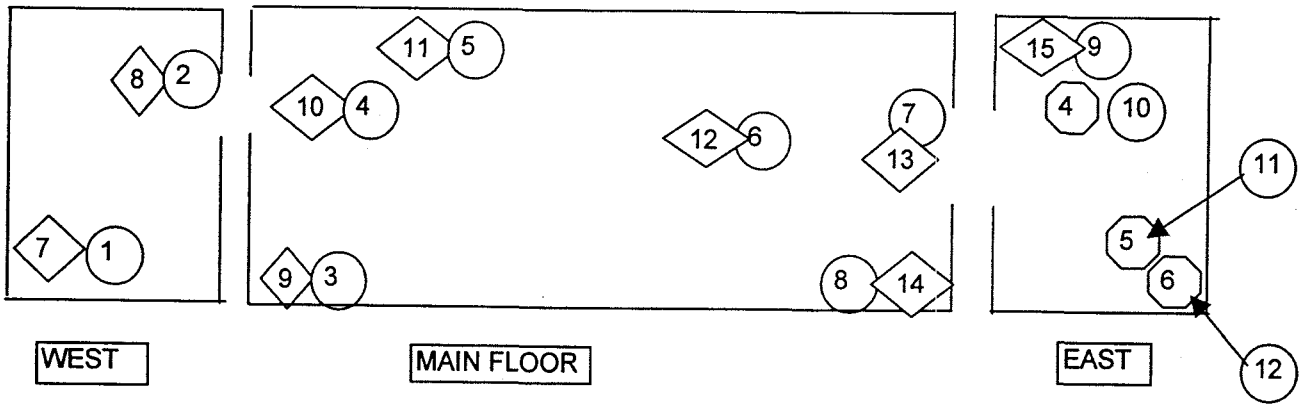
Drawing Showing Survey Points

PRE JOB SURVEY OF FLOOR AREA IN BUILDING 885

(#) = SMEARS

◇# = RCRA

⬡# = PCB



BY P. MILLER
AND D. MAYFIELD.
DATE 4/3/01

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RS FORMS 07.02-01

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg.	EBERLINE	Mfg.	NE	Mfg.	NA
Model	SAC 4	Model	ELECTRA	Model	NA
Serial #	961	Serial #	1244	Serial #	NA
Cal Due	4/30/01	Cal Due	5/1/01	Cal Due	NA
Bkg	0 cpmα	Bkg	5 cpmα	Bkg	NA cpmα
Efficiency	33.00 %	Efficiency	21.68 %	Efficiency	NA %
MDA	20 dpmα	MDA	60 dpmα	MDA	NA dpmα

Mfg.	EBERLINE	Mfg.	NE	Mfg.	NA
Model	BC 4	Model	ELECTRA	Model	NA
Serial #	868	Serial #	1244	Serial #	NA
Cal Due	7/12/01	Cal Due	5/1/01	Cal Due	NA
Bkg	38.1 cpmβ	Bkg	570 cpmβ	Bkg	NA cpmβ
Efficiency	25.00 %	Efficiency	31.55 %	Efficiency	NA %
MDA	200 dpmβ	MDA	360 dpmβ	MDA	NA dpmβ

Survey Type: ALPHA/BETA CONTAMINATION
Building: 885
Location: FLOOR
Purpose: Pre and Post job for core sample project.

RWP #: NA

Date: 4/5/01 Time: 9:30

[redacted]

PRN/REN # : 010402-00116-001
Comments: Core samples (DOT RAD screen, RCRA and PCB) in main and west rooms of building 885. Found no elevated readings on all survey locations. Survey performed in accordance with REN and RE 's requirements.

SURVEY RESULTS

Swipe #	LOCATION	ALPHA Swipe dpm/100cm2	ALPHA Direct dpm/100cm2	ALPHA Wipe dpm/wipe	BETA Swipe dpm/100cm2	BETA Direct dpm/100cm2	BETA Wipe dpm/wipe
1	floor location for rad screen 01D0606-001 anchor pt.	< 20	< 60	NA	< 200	< 360	NA
2	floor location for rad screen 01D0606-001core sample	< 20	< 60	NA	< 200	< 360	NA
3	post borehole of rad screen on floor at anchor pt.	< 20	< 60	NA	< 200	< 360	NA
4	post borehole of rad screen on floor at anchor pt.	< 20	< 60	NA	< 200	< 360	NA
5	post borehole of rad screen on floor at anchor pt.	< 20	< 60	NA	< 200	< 360	NA
6	post borehole of rad screen on floor at core sample	< 20	< 60	NA	< 200	< 360	NA
7	post borehole of rad screen on floor at core sample	< 20	< 60	NA	< 200	< 360	NA
8	post borehole of rad screen on floor at core sample	< 20	< 60	NA	< 200	< 360	NA
9	post borehole of rad screen on hand drill	< 20	< 60	NA	< 200	< 360	NA
10	post borehole of rad screen on hand drill	< 20	< 60	NA	< 200	< 360	NA
11	post borehole of rad screen on core sampleing equip.	< 20	< 60	NA	< 200	< 360	NA
12	post borehole of rad screen on core sampleing equip.	< 20	< 60	NA	< 200	< 360	NA
13	post RCRA and PCB core samples on floor	< 20	< 60	NA	< 200	< 360	NA
14	post RCRA and PCB core samples on floor	< 20	< 60	NA	< 200	< 360	NA
15	post RCRA and PCB core samples on floor	< 20	< 60	NA	< 200	< 360	NA
16	post RCRA and PCB core samples on floor	< 20	< 60	NA	< 200	< 360	NA
17	post RCRA and PCB core samples on floor	< 20	< 60	NA	< 200	< 360	NA
18	post RCRA and PCB core samples on floor	< 20	< 60	NA	< 200	< 360	NA
19	post RCRA and PCB core samples on floor	< 20	< 60	NA	< 200	< 360	NA
20	post RCRA and PCB core samples on floor	< 20	< 60	NA	< 200	< 360	NA

Date Reviewed: 4-6-01 **RS Supervision:** [redacted]

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RS FORMS 07.02-01

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

SURVEY RESULTS

Swipe #	LOCATION	ALPHA Swipe dpm/100cm2	ALPHA Direct dpm/100cm2	ALPHA Wipe dpm/wipe	BETA Swipe dpm/100cm2	BETA Direct dpm/100cm2	BETA Wipe dpm/wipe
21	post RCRA and PCB core samples on floor	< 20	< 60	NA	< 200	< 360	NA
22	post RCRA and PCB core samples on floor	< 20	< 60	NA	< 200	< 360	NA
23	post RCRA and PCB core samples on floor	< 20	< 60	NA	< 200	< 360	NA
24	post RCRA and PCB core samples on hand driill	< 20	< 60	NA	< 200	< 360	NA
25	post RCRA and PCB core samples on hand driill	< 20	< 60	NA	< 200	< 360	NA
26	post RCRA and PCB core samples on hand driill	< 20	< 60	NA	< 200	< 360	NA
27	post RCRA and PCB on core sampleing equip.	< 20	< 60	NA	< 200	< 360	NA
28	post RCRA and PCB on core sampleing equip.	< 20	< 60	NA	< 200	< 360	NA
29	post RCRA and PCB on core sampleing equip.	< 20	< 60	NA	< 200	< 360	NA
30	N/A	N/A	N/A	N/A	N/A	N/A	N/A
31	N/A	N/A	N/A	N/A	N/A	N/A	N/A
32	N/A	N/A	N/A	N/A	N/A	N/A	N/A
33	N/A	N/A	N/A	N/A	N/A	N/A	N/A
34	N/A	N/A	N/A	N/A	N/A	N/A	N/A
35	N/A	N/A	N/A	N/A	N/A	N/A	N/A
36	N/A	N/A	N/A	N/A	N/A	N/A	N/A
37	N/A	N/A	N/A	N/A	N/A	N/A	N/A
38	N/A	N/A	N/A	N/A	N/A	N/A	N/A
39	N/A	N/A	N/A	N/A	N/A	N/A	N/A
40	N/A	N/A	N/A	N/A	N/A	N/A	N/A
41	N/A	N/A	N/A	N/A	N/A	N/A	N/A
42	N/A	N/A	N/A	N/A	N/A	N/A	N/A
43	N/A	N/A	N/A	N/A	N/A	N/A	N/A
44	N/A	N/A	N/A	N/A	N/A	N/A	N/A
45	N/A	N/A	N/A	N/A	N/A	N/A	N/A
46	N/A	N/A	N/A	N/A	N/A	N/A	N/A
47	N/A	N/A	N/A	N/A	N/A	N/A	N/A
48	N/A	N/A	N/A	N/A	N/A	N/A	N/A
49	N/A	N/A	N/A	N/A	N/A	N/A	N/A
50	N/A	N/A	N/A	N/A	N/A	N/A	N/A
51	N/A	N/A	N/A	N/A	N/A	N/A	N/A
52	N/A	N/A	N/A	N/A	N/A	N/A	N/A
53	N/A	N/A	N/A	N/A	N/A	N/A	N/A
54	N/A	N/A	N/A	N/A	N/A	N/A	N/A
55	N/A	N/A	N/A	N/A	N/A	N/A	N/A
56	N/A	N/A	N/A	N/A	N/A	N/A	N/A
57	N/A	N/A	N/A	N/A	N/A	N/A	N/A
58	N/A	N/A	N/A	N/A	N/A	N/A	N/A
59	N/A	N/A	N/A	N/A	N/A	N/A	N/A
60	N/A	N/A	N/A	N/A	N/A	N/A	N/A
61	N/A	N/A	N/A	N/A	N/A	N/A	N/A
62	N/A	N/A	N/A	N/A	N/A	N/A	N/A
63	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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RS FORMS 07.02-01

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg.	EBERLINE	Mfg.	NE	Mfg.	NA
Model	SAC 4	Model	ELECTRA	Model	NA
Serial #	961	Serial #	1244	Serial #	NA
Cal Due	4/30/01	Cal Due	5/1/01	Cal Due	NA
Bkg	0 cpmα	Bkg	5 cpmα	Bkg	NA cpmα
Efficiency	33.00 %	Efficiency	21.68 %	Efficiency	NA %
MDA	20 dpmα	MDA	60 dpmα	MDA	NA dpmα
Mfg.	NA	Mfg.	NA	Mfg.	NA
Model	NA	Model	NA	Model	NA
Serial #	NA	Serial #	NA	Serial #	NA
Cal Due	NA	Cal Due	NA	Cal Due	NA
Bkg	NA cpmβ	Bkg	NA cpmβ	Bkg	NA cpmβ
Efficiency	NA %	Efficiency	NA %	Efficiency	NA %
MDA	NA dpmβ	MDA	NA dpmβ	MDA	NA dpmβ

Survey Type: ALPHA/BETA CONTAMINATION
Building: 885
Location: main & east room
Purpose: Core samples (rad screen, rcra and pcb)

RWP #: NA

Date: 4/5/01 Time: 14:45

[redacted]

PRN/REN # : 010402-00116-001
Comments: Core samples (DOT RAD screen, RCRA and PCB) in main and west rooms of building 885. Found no elevated readings on all survey locations. Survey performed in accordance with REN and RE 's requirements.

SURVEY RESULTS

Swipe #	LOCATION	ALPHA Swipe dpm/100cm2	ALPHA Direct dpm/100cm2	ALPHA Wipe dpm/wipe	BETA Swipe dpm/100cm2	BETA Direct dpm/100cm2	BETA Wipe dpm/wipe
1	Core sample 01 D 0606 - 001.004 Rad screen	< 20	< 60	NA	NA	NA	NA
2	O/S of Container 01 D 0606 - 001.004 Rad screen	< 20	< 60	NA	NA	NA	NA
3	O/S of plastic bag 01 D 0606 - 001.004 Rad screen	< 20	< 60	NA	NA	NA	NA
4	Core sample 01 D 0606 - 001.005	< 20	< 60	NA	NA	NA	NA
5	Outside of Container 01 D 0606 - 001.005	< 20	< 60	NA	NA	NA	NA
6	Outside of plastic bag 01 D 0606 - 001.005	< 20	< 60	NA	NA	NA	NA
7	Core sample 01 D 0606 - 001.006 Rad screen	< 20	< 60	NA	NA	NA	NA
8	Outside of Container 01 D 0606 - 001.006 Rad screen	< 20	< 60	NA	NA	NA	NA
9	O/S of plastic bag 01 D 0606 - 001.006 Rad screen	< 20	< 60	NA	NA	NA	NA
10	Core sample 01 D 0606 - 002.001	< 20	< 60	NA	NA	NA	NA
11	Outside of Container 01 D 0606 - 002.001	< 20	< 60	NA	NA	NA	NA
12	Outside of plastic bag 01 D 0606 - 002.001	< 20	< 60	NA	NA	NA	NA
13	Core sample 01 D 0606 - 002.002	< 20	< 60	NA	NA	NA	NA
14	Outside of Container 01 D 0606 - 002.002	< 20	< 60	NA	NA	NA	NA
15	Outside of plastic bag 01 D 0606 - 002.002	< 20	< 60	NA	NA	NA	NA
16	Core sample 01 D 0606 - 003.001	< 20	< 60	NA	NA	NA	NA
17	Outside of Container 01 D 0606 - 003.001	< 20	< 60	NA	NA	NA	NA
18	Outside of plastic bag 01 D 0606 - 003.001	< 20	< 60	NA	NA	NA	NA
19	Core sample 01 D 0606 - 003.002	< 20	< 60	NA	NA	NA	NA
20	Outside of Container 01 D 0606 - 003.002	< 20	< 60	NA	NA	NA	NA

Date Reviewed: 4-6-01 **RS Supervision:** [redacted]

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COPY

RS FORMS 07.02-01

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

SURVEY RESULTS

Swipe #	LOCATION	ALPHA Swipe dpm/100cm2	ALPHA Direct dpm/100cm2	ALPHA Wipe dpm/wipe	BETA Swipe dpm/100cm2	BETA Direct dpm/100cm2	BETA Wipe dpm/wipe
21	Outside of plastic bag 01 D 0606 - 003.002	< 20	< 60	NA	NA	NA	NA
22	Core sample 01 D 0606 - 004.001	< 20	< 60	NA	NA	NA	NA
23	Outside of Container 01 D 0606 - 004.001	< 20	< 60	NA	NA	NA	NA
24	Outside of plastic bag 01 D 0606 - 004.001	< 20	< 60	NA	NA	NA	NA
25	Core sample 01 D 0606 - 004.002	< 20	< 60	NA	NA	NA	NA
26	Outside of Container 01 D 0606 - 004.002	< 20	< 60	NA	NA	NA	NA
27	Outside of plastic bag 01 D 0606 - 004.002	< 20	< 60	NA	NA	NA	NA
28	Core sample 01 D 0606 - 005.004	< 20	< 60	NA	NA	NA	NA
29	Outside of Container 01 D 0606 - 005.004	< 20	< 60	NA	NA	NA	NA
30	Outside of plastic bag 01 D 0606 - 005.004	< 20	< 60	NA	NA	NA	NA
31	Core sample 01 D 0606 - 006.004	< 20	< 60	NA	NA	NA	NA
32	Outside of Container 01 D 0606 - 006.004	< 20	< 60	NA	NA	NA	NA
33	Outside of plastic bag 01 D 0606 - 006.004	< 20	< 60	NA	NA	NA	NA
34	Core sample 01 D 0606 - 007.004	< 20	< 60	NA	NA	NA	NA
35	Outside of Container 01 D 0606 - 007.004	< 20	< 60	NA	NA	NA	NA
36	Outside of plastic bag 01 D 0606 - 007.004	< 20	< 60	NA	NA	NA	NA
37	Core sample 01 D 0606 - 010.004	< 20	< 60	NA	NA	NA	NA
38	Outside of Container 01 D 0606 - 010.004	< 20	< 60	NA	NA	NA	NA
39	Outside of plastic bag 01 D 0606 - 010.004	< 20	< 60	NA	NA	NA	NA
40	N/A	N/A	N/A	N/A	N/A	N/A	N/A
41	N/A	N/A	N/A	N/A	N/A	N/A	N/A
42	N/A	N/A	N/A	N/A	N/A	N/A	N/A
43	N/A	N/A	N/A	N/A	N/A	N/A	N/A
44	N/A	N/A	N/A	N/A	N/A	N/A	N/A
45	N/A	N/A	N/A	N/A	N/A	N/A	N/A
46	N/A	N/A	N/A	N/A	N/A	N/A	N/A
47	N/A	N/A	N/A	N/A	N/A	N/A	N/A
48	N/A	N/A	N/A	N/A	N/A	N/A	N/A
49	N/A	N/A	N/A	N/A	N/A	N/A	N/A
50	N/A	N/A	N/A	N/A	N/A	N/A	N/A
51	N/A	N/A	N/A	N/A	N/A	N/A	N/A
52	N/A	N/A	N/A	N/A	N/A	N/A	N/A
53	N/A	N/A	N/A	N/A	N/A	N/A	N/A
54	N/A	N/A	N/A	N/A	N/A	N/A	N/A
55	N/A	N/A	N/A	N/A	N/A	N/A	N/A
56	N/A	N/A	N/A	N/A	N/A	N/A	N/A
57	N/A	N/A	N/A	N/A	N/A	N/A	N/A
58	N/A	N/A	N/A	N/A	N/A	N/A	N/A
59	N/A	N/A	N/A	N/A	N/A	N/A	N/A
60	N/A	N/A	N/A	N/A	N/A	N/A	N/A
61	N/A	N/A	N/A	N/A	N/A	N/A	N/A
62	N/A	N/A	N/A	N/A	N/A	N/A	N/A
63	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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RS FORMS 07.02-01

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg.	EBERLINE	Mfg.	NE	Mfg.	NA
Model	SAC 4	Model	ELECTRA	Model	NA
Serial #	961	Serial #	1244	Serial #	NA
Cal Due	4/30/01	Cal Due	5/1/01	Cal Due	NA
Bkg	0 cpmα	Bkg	3 cpmα	Bkg	NA cpmα
Efficiency	33.00 %	Efficiency	21.68 %	Efficiency	NA %
MDA	20 dpmα	MDA	50 dpmα	MDA	NA dpmα

Mfg.	NA	Mfg.	NA	Mfg.	NA
Model	NA	Model	NA	Model	NA
Serial #	NA	Serial #	NA	Serial #	NA
Cal Due	NA	Cal Due	NA	Cal Due	NA
Bkg	NA cpmβ	Bkg	NA cpmβ	Bkg	NA cpmβ
Efficiency	NA %	Efficiency	NA %	Efficiency	NA %
MDA	NA dpmβ	MDA	NA dpmβ	MDA	NA dpmβ

Survey Type: ALPHA/BETA CONTAMINATION

Building: 885 AND 830

Location: FLOOR

Purpose: Core samples (rad screen, rcra and pcb)

RWP #: NA

Date: 4/6/01 Time: 10:00

[redacted]

PRN/REN # : 010402-00116-001

Comments: Core samples (DOT RAD screen, rcra and PCB) in main and west rooms of building 885 and bldg 830 rooms 1and 2. Found no elevated readings on all survey locations. Survey performed in accordance with REN and RE 's requirements.

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SURVEY RESULTS

Swipe #	LOCATION	ALPHA Swipe dpm/100cm2	ALPHA Direct dpm/100cm2	ALPHA Wipe dpm/wipe	BETA Swipe dpm/100cm2	BETA Direct dpm/100cm2	BETA Wipe dpm/wipe
1	Core sample 01 D 0621-.002.003 Rad screen	< 20	< 50	NA	NA	NA	NA
2	O/S of Container 01 D 0621-.002.003 Rad screen	< 20	< 50	NA	NA	NA	NA
3	O/S of plastic bag 01 D 0621-.002.003 Rad screen	< 20	< 50	NA	NA	NA	NA
4	Core sample 01 D 0606 - 008.004	< 20	< 50	NA	NA	NA	NA
5	Outside of Container 01 D 0606 - 008.004	< 20	< 50	NA	NA	NA	NA
6	Outside of plastic bag 01 D 0606 - 008.004	< 20	< 50	NA	NA	NA	NA
7	Core sample 01 D 0606 - 009.004	< 20	< 50	NA	NA	NA	NA
8	Outside of Container 01 D 0606 - 009.004	< 20	< 50	NA	NA	NA	NA
9	O/S of plastic bag 01 D 0606 - 009.004	< 20	< 50	NA	NA	NA	NA
10	Core sample 01 D 0606 - 011.004	< 20	< 50	NA	NA	NA	NA
11	Outside of Container 01 D 0606 - 011.004	< 20	< 50	NA	NA	NA	NA
12	Outside of plastic bag 01 D 0606 - 011.004	< 20	< 50	NA	NA	NA	NA
13	Core sample 01 D 0606 - 012.004	< 20	< 50	NA	NA	NA	NA
14	Outside of Container 01 D 0606 - 012.004	< 20	< 50	NA	NA	NA	NA
15	Outside of plastic bag 01 D 0606 - 012.004	< 20	< 50	NA	NA	NA	NA
16	Core sample 01 D 0621-001.005	< 20	< 50	NA	NA	NA	NA
17	Outside of Container 01 D 0621 -001.005	< 20	< 50	NA	NA	NA	NA
18	Outside of plastic bag 01 D 0621 - 001.005	< 20	< 50	NA	NA	NA	NA
19	Core sample 01 D 0621 - 001.006	< 20	< 50	NA	NA	NA	NA
20	Outside of Container 01 D 0621 - 001.006	< 20	< 50	NA	NA	NA	NA

Date Reviewed: 4-10-01 **RS Supervision:** [redacted]

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RS FORMS 07.02-01

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

SURVEY RESULTS

COPY

Swipe #	LOCATION	ALPHA Swipe dpm/100cm2	ALPHA Direct dpm/100cm2	ALPHA Wipe dpm/wipe	BETA Swipe dpm/100cm2	BETA Direct dpm/100cm2	BETA Wipe dpm/wipe
21	Outside of plastic bag 01 D 0621 - 001.006	< 20	< 50	NA	NA	NA	NA
22	Core sample 01 D 0621.002.001	< 20	< 50	NA	NA	NA	NA
23	Outside of Container 01 D 0621.002.001	< 20	< 50	NA	NA	NA	NA
24	Outside of plastic bag 01 D 0621.002.001	< 20	< 50	NA	NA	NA	NA
25	Core sample 01 D 0621.002.002	< 20	< 50	NA	NA	NA	NA
26	Outside of Container 01 D 0621.002.002	< 20	< 50	NA	NA	NA	NA
27	Outside of plastic bag 01 D 0621.002.002	< 20	< 50	NA	NA	NA	NA
28	Core sample 01 D 0621-.003.001	< 20	< 50	NA	NA	NA	NA
29	Outside of Container 01 D 0621.003.001	< 20	< 50	NA	NA	NA	NA
30	Outside of plastic bag 01 D 0621.003..001	< 20	< 50	NA	NA	NA	NA
31	Core sample 01 D 0621.003.002	< 20	< 50	NA	NA	NA	NA
32	Outside of Container 01 D 0621.003.002	< 20	< 50	NA	NA	NA	NA
33	Outside of plastic bag 01 D 0621.003.002	< 20	< 50	NA	NA	NA	NA
34	Core sample 01 D 0621.004.001	< 20	< 50	NA	NA	NA	NA
35	Outside of Container 01 D 0621.004.001	< 20	< 50	NA	NA	NA	NA
36	Outside of plastic bag 01 D 0621.004.001	< 20	< 50	NA	NA	NA	NA
37	Core sample 01 D 0621.004.002	< 20	< 50	NA	NA	NA	NA
38	Outside of Container 01 D 0621.004.002	< 20	< 50	NA	NA	NA	NA
39	Outside of plastic bag 01 D 0621.004.002	< 20	< 50	NA	NA	NA	NA
40	Core sample 01 D 0621.005.004	< 20	< 50	N/A	N/A	N/A	N/A
41	Outside of Container 01 D 0621.005.004	< 20	< 50	N/A	N/A	N/A	N/A
42	Outside of plastic bag 01 D 0621.005.004	< 20	< 50	N/A	N/A	N/A	N/A
43	Core sample 01 D 0621.006.004	< 20	< 50	N/A	N/A	N/A	N/A
44	Outside of Container 01 D 0621.006.004	< 20	< 50	N/A	N/A	N/A	N/A
45	Outside of plastic bag 01 D 0621.006.004	< 20	< 50	N/A	N/A	N/A	N/A
46	Core sample 01 D 0621.007.004	< 20	< 50	N/A	N/A	N/A	N/A
47	Outside of Container 01 D 0621.007.004	< 20	< 50	N/A	N/A	N/A	N/A
48	Outside of plastic bag 01 D 0621.007.004	< 20	< 50	N/A	N/A	N/A	N/A
49	Core sample 01 D 0621.008.004	< 20	< 50	N/A	N/A	N/A	N/A
50	Outside of Container 01 D 0621.008.004	< 20	< 50	N/A	N/A	N/A	N/A
51	Outside of plastic bag 01 D 0621.008.004	< 20	< 50	N/A	N/A	N/A	N/A
52	N/A	N/A	N/A	N/A	N/A	N/A	N/A
53	N/A	N/A	N/A	N/A	N/A	N/A	N/A
54	N/A	N/A	N/A	N/A	N/A	N/A	N/A
55	N/A	N/A	N/A	N/A	N/A	N/A	N/A
56	N/A	N/A	N/A	N/A	N/A	N/A	N/A
57	N/A	N/A	N/A	N/A	N/A	N/A	N/A
58	N/A	N/A	N/A	N/A	N/A	N/A	N/A
59	N/A	N/A	N/A	N/A	N/A	N/A	N/A
60	N/A	N/A	N/A	N/A	N/A	N/A	N/A
61	N/A	N/A	N/A	N/A	N/A	N/A	N/A
62	N/A	N/A	N/A	N/A	N/A	N/A	N/A
63	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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US DOE/RFETS RECORDS MANAGEMENT
01D0606

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Commodore Advanced Sciences

RFETS

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.# 01D0606#001

Page 1 of 1

Sampler(s)	Contact/Requester: JOHNSEN, SHELLY/MYERS, KIM	Telephone No.: 6401/7195
RIN: 01D0606	Sampling Origin: B885	Purchase Order/Charge Code: EED10720
Project Title: B885 CDRE SAMPLES	Logbook No.: 94 Dodge	Ice Chest No.: N/A Temp.: N/A
To (Lab): Thermo NuTech	Method of Shipment: Sample Team	Bill of Lading/Air Bill No.: N/A
Protocol: CAS SOP.003 REV 3	Related COC (if any): 01D0606 #002	PRE: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
Are acid preserved samples DOT hazardous per 40 CFR Part 136.3 Table II? YES or NO
Are other known hazardous substances present? YES or NO
** ** **

SCREENING REQUIRED ☐

SPECIAL INSTRUCTIONS Hold Time
IDC LISTED AS "UNK" ON SAAF 4/05/01

EVENT -005 NOT USED PER GENERATOR

Bottle No.	Customer Number	Matrix	Date	Time	Location	Container (size/type/quantity)	Sample Analysis	Preservative: Packing
01D0606-001.004	N/A	SOLID	4/5/01	0940	B885	20-G / G / 1	OS01A003 (Rad-Screen - Solid) [Routine]	None
								None
								None
01D0606-~~002.005~~	R	SOLID			B885	20-G / G / 1	OS01A003 (Rad-Screen - Solid) [Routine]	None
								None
01D0606-~~003.006~~		SOLID			B885	20-G / G / 1	OS01A003 (Rad-Screen - Solid) [Routine]	None

Relinquished By:	Date/Time	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
CAS	1610 4/6/01	T130A FEDEX #2	1610 4/6/01				
T130A FEDEX #2	0725 4/6/01	CAS	0725 4/6/01				
R. Boyle for TG	1335 4/6/01		1335 4/6/01				

FINAL SAMPLE DISPOSITION: Disposal Method (e.g., returned to customer, disposed of per lab procedure, used in analytical process)

Disposed By

Date/Time

01D0607-00116

Apr-06-01 11:42am from 3039663955303 966 4555 P.03 sent by:RECFAX

SAMPLE SUMMARY FOR RIN: 01D0606

RIN Title: B885 CORE SAMPLES
Project Name: Industrial and Site Services Project
Task Name: 800 Area - Decommissioning
Aggregate Area: N/A

Sampling Team: CAS
Sampling Mgr/Coordinator: Kim Myers
Samplers: SP/SG
Field Logbook ID: 94 Dodge
Media: SOLID

This sample summary is supplied to waste generators as notification of sample collection. Inquires into the status of this sampling effort may be directed to the Analytical Services Division (ASD).

Bottle Number	Customer Bottle Number	Location	LIC (See Attached)	Laboratory	Date Collected	Date Shipped	Date Returned	Comments
01D0606-001.004		B885	1	Thermo NuTech	4/05/01	4/06/01		0940 Rad Screen
01D0606-001.005		B885	2	RECRA Labnet-PA (L)				1257 PCB
01D0606-001.006		B885	3,4	RECRA Labnet-PA (L)				0940 TCLP
01D0606-002.001		B885	2	RECRA Labnet-PA (L)				1309 PCB
01D0606-002.002		B885	3,4	RECRA Labnet-PA (L)				1205 TCLP VOA-010.004 is Dup
01D0606-002.003		B885	1	Thermo NuTech				NOT USED
01D0606-003.001		B885	2	RECRA Labnet-PA (L)	4/05/01			1337 PCB
01D0606-003.002		B885	3,4	RECRA Labnet-PA (L)				
01D0606-003.003		B885	1	Thermo NuTech				
01D0606-004.001		B885	2	RECRA Labnet-PA (L)				NOT USED
01D0606-004.002		B885	3,4	RECRA Labnet-PA (L)	4/05/01			1342 PCB
01D0606-005.004		B885	3,4	RECRA Labnet-PA (L)				
01D0606-006.004		B885	3,4	RECRA Labnet-PA (L)				1401 TCLP
01D0606-007.004		B885	3,4	RECRA Labnet-PA (L)				
01D0606-008.004		B885	3,4	RECRA Labnet-PA (L)	4/06/01			
01D0606-009.004		B885	3,4	RECRA Labnet-PA (L)				0856
01D0606-010.004		B885	3,4	RECRA Labnet-PA (L)				0912
01D0606-011.004		B885	3,4	RECRA Labnet-PA (L)				1209 Dup of F-002.002 South Half
01D0606-012.004		B885	3,4	RECRA Labnet-PA (L)				0903 Dup of F-008.004 Last half
								0910 Dup of F-009.004 Last half

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04-AOZ-0116-001

SAMPLE SUMMARY FOR RIN: 01D0621

RIN Title: B830 CORE SAMPLES
Project Name: Industrial and Site Services Project
Task Name: 800 Area - Decommissioning
Aggregate Area: N/A

Sampling Team: CAS
Sampling Mgr/Coordinator: Kim Myers
Samplers: SP/JG
Field Logbook ID: 94 Dodge
Media: SOLID

This sample summary is supplied to waste generators as notification of sample collection. Inquires into the status of this sampling effort may be directed to the Analytical Services Division (ASD).

Bottle Number	Customer Bottle Number	Location	LIC (See Attached)	Laboratory	Date Collected	Date Shipped	Date Returned	Comments
~~01D0621-001.004~~	SP	~~B830~~	~~1~~	~~Thermo NuTech~~				
01D0621-001.005		B830	2	RECRA Labnet-PA (L)				NOT USED
01D0621-001.006		B830	3,4	RECRA Labnet-PA (L)	4/6/01			1105
01D0621-002.001		B830	2	RECRA Labnet-PA (L)				1045
01D0621-002.002		B830	3,4	RECRA Labnet-PA (L)				1501 PCB
01D0621-002.003		B830	1	Thermo NuTech				1127 TCLP
01D0621-003.001		B830	2	RECRA Labnet-PA (L)		4/6/01		1025 Rad Screen North West Side
01D0621-003.002		B830	3,4	RECRA Labnet-PA (L)				1643 PCB
01D0621-004.001		B830	2	RECRA Labnet-PA (L)				1245 TCLP
01D0621-004.002		B830	3,4	RECRA Labnet-PA (L)				1649 PCB Dup
01D0621-005.004		B830	3,4	RECRA Labnet-PA (L)				1510 TCLP
01D0621-006.004		B830	3,4	RECRA Labnet-PA (L)				1625 TCLP
01D0621-007.004		B830	3,4	RECRA Labnet-PA (L)				1705 TCLP of 001.006
01D0621-008.004		B830	3,4	RECRA Labnet-PA (L)				1050 - Dup Sample on South End
								1630 Dup Sample of 005.004

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Eberline Services - Rocky Flats
Radscreen Results

Distribution/Fax: ASD/ 8345
CAS/ 7228

RIN: 01D0606
Analysis: Radscreen
Report Date: 04/09/01

Laboratory Sample ID	APO Sample ID			Matrix	Location	Gross Alpha		Gross Beta		Total Activity pCi/g	DOT Class
	RIN	Event	Bottle			pCi/g	2σ	pCi/g	2σ		
1004004-01	01D0606	001	004	Soil	B985	19	9	40	7	75.00	NONRAD

DOT Classification <2000 pCi/g total activity is NONRAD
>= 2000 pCi/g total activity is RAD

Total Activity Calculated as the sum of the gross alpha and beta activities AND the measurement uncertainties for these two measurements.
If the measured activity is negative, 0 pCi/g (instead of the negative value) is used to calculate the total activity.

Analysis Methods Sample Preparation Procedure: ATP-004, "Sample Preparation for Radiological Screening of Soil Samples by Gas Proportional Counting".
Counting Procedure: ATP-008, "Operation of Tennelec LB4100 Gas Proportional Counters".

Kathy Hoagland /Date 4/9/01
Technical Review

Patricia B. Hunton /Date 4-9-01
Quality Assurance Review

Eberline Services - Rocky Flats
RFETS - Building 886
Golden, Colorado 80403
(303) 966-7764

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REV # 01D0607-0001G-001

Eberline Services - Rocky Flats
Radscreen Results

Distribution/Fax: ASD/ 8345
CAS/ 7228

RIN: 01D0621
Analysis: Radscreen
Report Date: 04/09/01

Laboratory Sample ID	APO Sample ID			Matrix	Location	Gross Alpha		Gross Beta		Total Activity pCi/g	DOT Class
	RIN	Event	Bottle			pCi/g	2σ	pCi/g	2σ		
1004005-01	01D0621	002	003	Soil	B830	8.3	7.0	34	7	56.30	NONRAD

DOT Classification: <2000 pCi/g total activity is NONRAD
>= 2000 pCi/g total activity is RAD

Total Activity: Calculated as the sum of the gross alpha and beta activities AND the measurement uncertainties for these two measurements.
If the measured activity is negative, 0 pCi/g (instead of the negative value) is used to calculate the total activity.

Analysis Methods: Sample Preparation Procedure: ATP-004, "Sample Preparation for Radiological Screening of Soil Samples by Gas Proportional Counting".
Counting Procedure: ATP-008, "Operation of Tennelec LB4100 Gas Proportional Counters".

Kathy Hagglund /Date 4/9/01
Technical Review

Patricia R. Newton /Date 4-9-01
Quality Assurance Review

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Eberline Services - Rocky Flats
RFETS - Building T886D
Golden, Colorado 80403
(303) 966-7765

RP-0002 (12/00)

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COMPANY

Information Only

INTEROFFICE MEMORANDUM

COPY

DATE: March 1, 2001

TO: C. K. Bean, RISS Radiological Safety Manager, B116, X2069
J. W. Mahaffey, Central Radiological Engineering Manager, T130 B, X2131

FROM: J. M. Britten, RISS Characterization Radiological Engineer, Bldg. 116, X3050

SUBJECT: REQUEST FOR APPROVAL OF ALPHA-ONLY SURVEYS FOR 800 AREA CLUSTER BUILDING SURFACES– JMB-002-01

Upon reviewing the Historical Site Assessment Report for the 800 Area Cluster (B830, B863, B864, B885, T883D, Tank 020 Slab, Tank 021 Slab, Tank 026 Slab, 863 Pad), RISS Radiological Engineering has determined that these facilities meet the requirements set forth in Technical Basis Document 00162. No unusual isotopes were identified in the HSA (i.e., pure beta emitters, mixed fission products). Therefore, it is requested that alpha-only surveys be performed in these indicated areas for the release of building surfaces. Please review the attached documentation, and if the content meets requirements, provide your approval signature in the space provided. The original of this memorandum will be kept in the project history files located in B116.

APPROVED:

3/6/01
C. K. Bean Date
RISS Radiological Safety Manager

3-7-01
J. W. Mahaffey Date
Central Radiological Engineering Manager

JMB:nll

cc:
D. Parsons
Project History File

"SAFETY IS CRITICAL TO OUR SUCCESS"

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COMPANY
ANALYTICAL SERVICES DIVISION

FAX COVER SHEET PRELIMINARY DATA REPORTS

RIN NUMBER: 0100606 + 0100621 Gross A/B

FROM: SHELLY JOHNSEN

PHONE: (303) 966-6401

FAX: (303) 966-8345

TO: Kim Myers

FAX: 6678

PHONE: _____

NUMBER OF PAGES, INCLUDING COVER SHEET: _____

Please contact _____ if the fax is not received in its entirety.
(phone number)

If the accompanying data is stamped preliminary it is because the final data package has not been received and validated or verified. Until the data is validated or verified it must be considered preliminary. Final data is usually not received until 30 days after the laboratory has received the sample. Verification or validation is completed a short time following receipt of the final data package. You will be sent a copy of the verification or validation report, which you should review. If qualifiers have been attached to individual results they may affect the way that you use the data. If you have any question please contact your Analytical Services Project Lead, do not contact the laboratory directly.

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Eberline Services - Rocky Flats
Radscreen Results

Distribution/Fax: ASD/ 8345
CAS/ 7228

RIN: 01D0606
Analysis: Radscreen
Report Date: 04/09/01

Laboratory Sample ID	APO Sample ID			Matrix	Location	Gross Alpha		Gross Beta		Total Activity pCi/g	DOT Class
	RIN	Event	Bottle			pCi/g	2σ	pCi/g	2σ		
1004004-01	01D0606	001	004	Soil	9885	19	9	40	7	75.00	NONRAD

DOT Classification <2000 pCi/g total activity is NONRAD
>= 2000 pCi/g total activity is RAD

Total Activity Calculated as the sum of the gross alpha and beta activities AND the measurement uncertainties for these two measurements.
If the measured activity is negative, 0 pCi/g (instead of the negative value) is used to calculate the total activity.

Analysis Methods Sample Preparation Procedure: ATP-004, "Sample Preparation for Radiological Screening of Soil Samples by Gas Proportional Counting".
Counting Procedure: ATP-008, "Operation of Tennelec LB4100 Gas Proportional Counters".

Kathy Hoagland Date 4/9/01
Technical Review

Patricia K. Hunton Date 4-9-01
Quality Assurance Review

Eberline Services - Rocky Flats
9675 - Building 886D
Golden, Colorado 80403
(303) 966-7754

RP-0052 (12/00)

19

US DOE/ES RECORDS MANAGEMENT 01D0606

419

Commodore Advanced Sciences

RFETS

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # 01D0606#001

Page 1 of 1

Sampler(s)	Contact/Requester: JOHNSEN, SHELLY/MYERS, KIM	Telephone No. 6401/7106
RIN 01D0606	Sampling Origin: B885	Purchase Order/Charge Code: EED10720
Project Title: B885 CORE SAMPLES 572632	Logbook No. 94 Dodge	Ice Chest No. N/A Temp. N/A
To (Lab): Thermo NuTech	Method of Shipment: Sample Team	Bill of Lading/Air Bill No. N/A
Protocol: CAS SOP.003 REV 3	Related COC (if any): 01D0606 #002	PRE N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
Are acid preserved samples DOT hazardous per 40 CFR Part 136.3 Table II? YES or NO
Are other known hazardous substances present? YES or NO
** ** **
EVENT 005 NOT USED PER GENERATOR

SCREENING REQUIRED ☐

SPECIAL INSTRUCTIONS Hold Time
IDC LISTED AS "UNK" on SARF 4/05/01

Bottle No.	Customer Number	Matrix	Date	Time	Location	Container (size/type/quantity)	Sample Analysis	Preservative: Packing
01D0606-001.004	N/A	SOLID	4/5/01	0940	B885	20-G / G / 1	OS01A003 (Rad-Screen - Solid) [Routine]	None
01D0606-002.005	R	SOLID			B885	20-G / G / 1	OS01A003 (Rad-Screen - Solid) [Routine]	None
01D0606-003.006		SOLID			B885	20-G / G / 1	OS01A003 (Rad-Screen - Solid) [Routine]	None

Relinquished By:	Date/Time	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
CAS	4/6/01 1610	T130A FRIDGE #2	4/6/01 1610				
T130A FRIDGE #2	4/6/01 0725	CAS	4/6/01 0725				
R. Boyle for JG	4/6/01 1035		4/6/01 1035				

FINAL SAMPLE DISPOSITION: Disposal Method (e.g., returned to customer, disposed of per lab procedure, used in analytical process) — Disposed By — Date/Time

Apr-06-01 11:42am from 3039663959303 966 4555 page 1/1
Sent by:RECFAX

Eberline Services - Rocky Flats
Radscreen Results

Distribution/Fax: ASD/ 8345
CAS/ 7228

RIN: 01D0621
Analysis: Radscreen
Report Date: 04/09/01

Laboratory Sample ID	APO Sample ID			Matrix	Location	Gross Alpha		Gross Beta		Total Activity pCi/g	DOT Class
	RIN	Event	Bottle			pCi/g	2σ	pCi/g	2σ		
1004005-01	01D0621	002	003	Soil	B830	8.3	7.0	34	7	56.30	NONRAD

DOT Classification: <2000 pCi/g total activity is NONRAD
>= 2000 pCi/g total activity is RAD

Total Activity: Calculated as the sum of the gross alpha and beta activities AND the measurement uncertainties for these two measurements.
If the measured activity is negative, 0 pCi/g (instead of the negative value) is used to calculate the total activity.

Analysis Methods: Sample Preparation Procedure: ATP-004, "Sample Preparation for Radiological Screening of Soil Samples by Gas Proportional Counting".
Counting Procedure: ATP-008, "Operation of Tennelec LB4100 Gas Proportional Counters".

Kathy Hoagland /Date 4/9/01
Technical Review

Patricia R. Newton /Date 4-9-01
Quality Assurance Review

Eberline Services - Rocky Flats
RFETS - Building T886D
Golden, Colorado 80403
(303) 966-7765

Rocky Flats Environmental Technology Site

TELEPHONE: (303)966-2225 FAX: (303)966-7228

Commodore Advanced Sciences, Inc.

Fax

To: Kim Meyers From: Sample Team

Fax: 6628 Pages: 6

Phone: Date:

Re: CC:

☐ Urgent ☐ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

• Comments:

Sample Summaries

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SAMPLE SUMMARY FOR RIN: 01D0606

RIN Title: B885 CORE SAMPLES
Project Name: Industrial and Site Services Project
Task Name: 800 Area - Decommissioning
Aggregate Area: N/A

Sampling Team: CAS
Sampling Mgr/Coordinator: Kim Myers
Samplers: SP/SG
Field Logbook ID: 94 Dodge
Media: SOLID

This sample summary is supplied to waste generators as notification of sample collection. Inquires into the status of this sampling effort may be directed to the Analytical Services Division (ASD).

Bottle Number	Customer Bottle Number	Location	LIC (See Attached)	Laboratory	Date Collected	Date Shipped	Date Returned	Comments
01D0606-001.004		B885	1	Thermo NuTech	4/05/01	4/06/01		0940 Rad Screen
01D0606-001.005		B885	2	RECRA Labnet-PA (L)				1257 PCB
01D0606-001.006		B885	3,4	RECRA Labnet-PA (L)				0940 TCLP
01D0606-002.001		B885	2	RECRA Labnet-PA (L)				1309 PCB
01D0606-002.002		B885	3,4	RECRA Labnet-PA (L)				1205 TCLP VOA - 010.004 is Dup
01D0606-002.003		B885	1	Thermo NuTech				NOT USED
01D0606-003.001		B885	2	RECRA Labnet-PA (L)	4/05/01			1337 PCB
01D0606-003.002		B885	3,4	RECRA Labnet-PA (L)				
01D0606-003.003		B885	1	Thermo NuTech				
01D0606-004.001		B885	2	RECRA Labnet-PA (L)				NOT USED
01D0606-004.002		B885	3,4	RECRA Labnet-PA (L)	4/05/01			1342 PCB
01D0606-005.004		B885	3,4	RECRA Labnet-PA (L)				
01D0606-006.004		B885	3,4	RECRA Labnet-PA (L)				1401 TCLP
01D0606-007.004		B885	3,4	RECRA Labnet-PA (L)				
01D0606-008.004		B885	3,4	RECRA Labnet-PA (L)				
01D0606-009.004		B885	3,4	RECRA Labnet-PA (L)	4/06/01			0856
01D0606-010.004		B885	3,4	RECRA Labnet-PA (L)				0912
01D0606-011.004		B885	3,4	RECRA Labnet-PA (L)				1209 Dup of - 002.002 South Half
01D0606-012.004		B885	3,4	RECRA Labnet-PA (L)				0903 Dup of - 008.004 Last half
								0910 Dup of - 009.004 Last half

PAGE 01
CASI
3039667228
04/09/2001 14:41

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Returning Excess Sample Material:

Unmodified sample material remaining after analysis is generally returned to the generator. The generator must be prepared to receive and dispose of excess sample material for applicable state and federal regulations. Regulatory exclusions for returning excess sample material are specified in the Code of Colorado Regulation (CCR) 1007-3, Part 261.4(d) 'Samples'. If problems with the disposal of excess sample material are encountered, the Environmental Coordinator for the generation area should be contacted for resolution of the issues. Only sample material which has not been modified during analysis will be returned. Material which has been acidified for preservation purposes will not be returned.

Customer Acknowledgement: KIMBERLY L. MYERS / Kimberly L. Myers
(Sign and Print Name)

Comments:

Line Item Codes:

1) OS01A003 (Rad-Screen - Solid)
2) SS03B006 (PCB 8080A/8081-Solid)
3) SS08C006 (TCLP Metals 1311)
4) SS08C010 (TCLP VOA 1311/8260)

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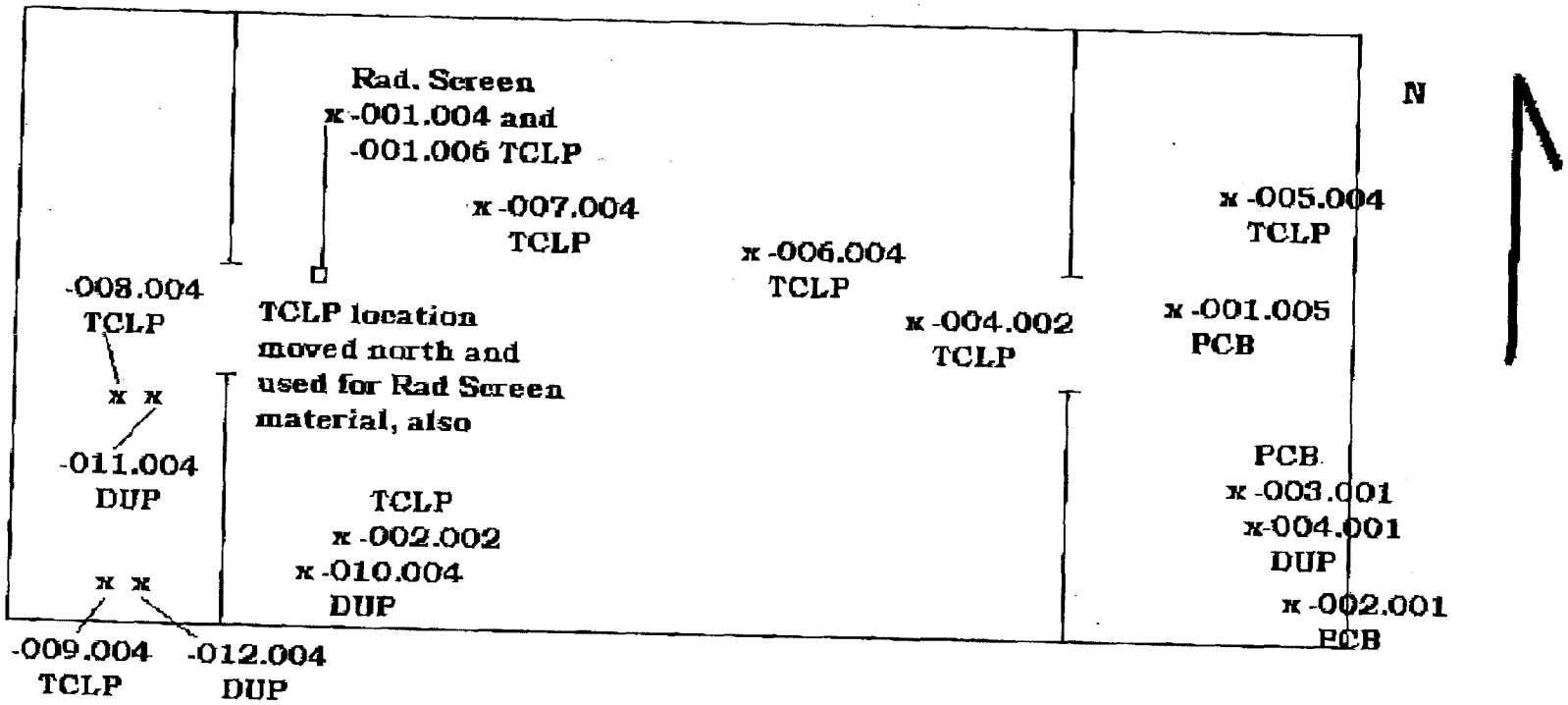

B885

01D0606
Floor core location map
Sampled on 4/05/01

x = core location

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SAMPLE SUMMARY FOR RIN: 01D0621

RIN Title: B830 CORE SAMPLES
Project Name: Industrial and Site Services Project
Task Name: 800 Area - Decommissioning
Aggregate Area: NW

Sampling Team: CAS
Sampling Mgr/Coordinator: Kim Myers
Samplers: SP/SG
Field Logbook ID: 94 Dodge
Media: SOLID

This sample summary is supplied to waste generators as notification of sample collection. Inquires into the status of this sampling effort may be directed to the Analytical Services Division (ASD).

Bottle Number	Customer Bottle Number	Location	LIC (See Attached)	Laboratory	Date Collected	Date Shipped	Date Returned	Comments
01D0621-001.004	SP	B830	1	Thermo NuTech				NOT USED
01D0621-001.005		B830	2	RECRA Labnet-PA (L)	4/06/01			
01D0621-001.006		B830	3,4	RECRA Labnet-PA (L)				1105
01D0621-002.001		B830	2	RECRA Labnet-PA (L)				1045
01D0621-002.002		B830	3,4	RECRA Labnet-PA (L)				1501 PCB
01D0621-002.003		B830	1	Thermo NuTech				1127 TCLP
01D0621-003.001		B830	2	RECRA Labnet-PA (L)		4/06/01		1025 Rad Screen North West Side
01D0621-003.002		B830	3,4	RECRA Labnet-PA (L)				1643 PCB
01D0621-004.001		B830	2	RECRA Labnet-PA (L)				1245 TCLP
01D0621-004.002		B830	3,4	RECRA Labnet-PA (L)				1649 PCB Dup
01D0621-005.004		B830	3,4	RECRA Labnet-PA (L)				1510 TCLP
01D0621-006.004		B830	3,4	RECRA Labnet-PA (L)				1625 TCLP
01D0621-007.004		B830	3,4	RECRA Labnet-PA (L)				1705 TCLP
01D0621-008.004		B830	3,4	RECRA Labnet-PA (L)				1050 - Dup Sample of 001.006 on South End
								1630 Dup Sample of 005.004

Returning Excess Sample Material:

Unmodified sample material remaining after analysis is generally returned to the generator. The generator must be prepared to receive and dispose of excess sample material for applicable state and federal regulations. Regulatory exclusions for returning excess sample material are specified in the Code of Colorado Regulation (CCR) 1007-3, Part 261.4(d) 'Samples'. If problems with the disposal of excess sample material are encountered, the Environmental Coordinator for the generation area should be contacted for resolution of the issues. Only sample material which has not been modified during analysis will be returned. Material which has been acidified for preservation purposes will not be returned.

Customer Acknowledgement: Kimberly L. Myers / Kimberly L. Myers
(Sign and Print Name)

Comments:

Line Item Codes:

1) OS01A003 (Rad-Screen - Solid)
2) SS03B006 (PCB 8080A/8081-Solid)
3) SS08C006 (TCLP Metals 1311)
4) SS08C010 (TCLP VOA 1311/8260)

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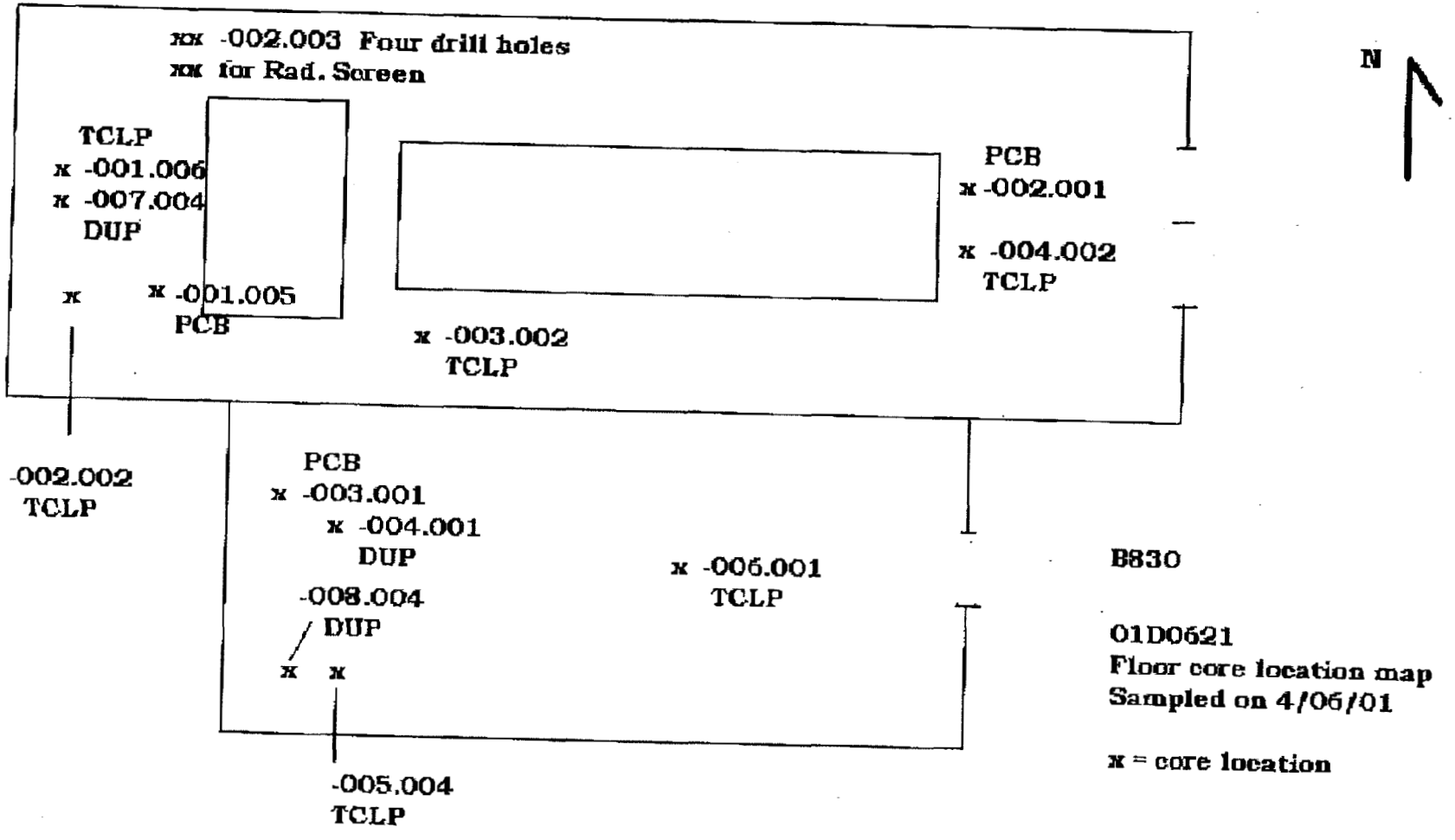

01D0621
Floor core location map
Sampled on 4/06/01

x = core location

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KAISER•HILL
COMPANY
ANALYTICAL SERVICES DIVISION

FAX COVER SHEET FOR FINAL DATA PACKAGE REPORTS

RIN NUMBER: 0100521 PCB

FROM: SHELLY JOHNSEN

PHONE: (303) 966-6401

FAX: (303) 966-8345

TO: Kim Myers

FAX: 6678

PHONE: _____

NUMBER OF PAGES, INCLUDING COVER SHEET: _____

Please contact _____ if the fax is not received in its entirety.
(phone number)

NOTE:
This facsimile contains the results, in the Final Sample Data Package, for the analytes requested in this RIN. The package has been scheduled for verification or validation. Until verification or validation is completed the results must be considered preliminary. You will be forwarded a copy of the verification or validation report shortly after it is received by ASD. You should examine this report to determine if any qualifiers (flags) have been attached to the results. Flagged data may or may not be suitable for use as originally intended and should be evaluated for acceptability before use. If you have any questions please contact your Analytical Services Project Lead, do no contact the laboratory directly.

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LIONVILLE LABORATORY INC.

Analytical Report

Client: K-H RIN #01D0621
LVL#: 01041.551
Subcontract #: KH700327EP6

W.O.#: 11830-001-001-9999-00
Date Received: 04-18-01

PCB

The set of samples consisted of four (4) solid samples collected on 04-06-01.

The samples and their associated QC samples were extracted on 04-19-01 and analyzed according to Lionville Laboratory OPs based on SW846, 3rd Edition procedures on 05-02-01. The extraction procedure was based on method 3540 and the extracts were analyzed based on method 8082 for Aroclors only.

The following is a summary of the QC results accompanying the sample results and a description of any problems encountered during their analyses:

1. The cooler temperature has been recorded on the chain-of-custodies.
2. All required holding times for extraction and analysis have been met.
3. The samples and their associated QC samples received a sulfuric acid cleanup.
4. The method blank was below the reporting limits for all target compounds.
5. All surrogate recoveries were within acceptance criteria.
6. All blank spike recoveries were within acceptance criteria.
7. All initial calibrations associated with this data set were within acceptance criteria.
8. All continuing calibration standards analyzed prior to sample extracts were within acceptance criteria.
9. As of January 27, 2001, Recra Labnet Philadelphia became Lionville Laboratory Incorporated. Some forms may still reference Recra Labnet Philadelphia.

Iain Daniels
Deputy Laboratory Manager
Lionville Laboratory Incorporated

5/8/01
Date

pefs \group\data\pesikh\041.551.peb

The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 191 pages.

208 Welsh Pool Road • Lionville, PA 19341-1333 • (610) 280-3020 • Fax (610) 280-3041

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Commodore Advanced Sciences

REETS

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.# 01D0621#002

Sampler(s) 5-12-70 (time/date)	Contact/Requester JOHNSEN, SHELLY/MYERS, KIM	Telephone No. 6401/7106
RIN 01D0621	Sampling Origin B830	Purchase Order/Charge Code EED10720
Project Title B830 CORE SAMPLES	Logbook No. 94 Dodge	Ice Chest No. N/A / Temp.
To (Lab) RECRA Labnet-PA (L)	Method of Shipment Sample Team	Bill of Lading/Air Bill No. N/A 4533-2127-2116
Protocol CAS SOP.003 REV 3	Related COC (if any) 01D0621 #	PRE

POSSIBLE SAMPLE HAZARDS/REMARKS
Are acid preserved samples DOT hazardous per 40 CFR Part 136.3 Table II? YES or NO
Are other known hazardous substances present? YES or NO
** ** **

SCREENING REQUIRED [ ]

SPECIAL INSTRUCTIONS Hold Time

Bottle No.	Customer Number	Matrix	Date	Time	Location	Container (size/type/quantity)	Sample Analysis	Preservative; Packing
01D0621-001.005	N/A	SOLID	4/6/01	1105	B830	125-G / G / 1	SS03B006 (PCB 8080A/8081-Solid) [Routine] A	None 4 degrees C
01D0621-001.006		SOLID	4/6/01	1045	B830	125-G / G / 1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine] B	None 4 degs C w/zhs
01D0621-002.001		SOLID	4/6/01	1501	B830	125-G / G / 1	SS03B006 (PCB 8080A/8081-Solid) [Routine]	None 4 degrees C
01D0621-002.002		SOLID	4/6/01	1127	B830	125-G / G / 1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0621-003.001		SOLID	4/6/01	1643	B830	125-G / G / 1	SS03B006 (PCB 8080A/8081-Solid) [Routine]	None 4 degrees C
01D0621-003.002		SOLID	4/6/01	1452 ~~1248~~ SP	B830	125-G / G / 1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0621-004.001		SOLID	4/6/01	1649	B830	125-G / G / 1	SS03B006 (PCB 8080A/8081-Solid) [Routine]	None 4 degrees C

Relinquished By	Date/Time	Received By	Date/Time
[signature]	1820 4/6/01	T150 A Freels #2	1820 4/6/01
T150 A Freels #2	4/7/01 1330	[signature]	4/7/01 1330
[signature]	4/7/01 1500	[signature]	
FedEx	4-18-01 0915	[signature]	4-18-01 0915

Relinquished By	Date/Time	Received By	Date/Time

FINAL SAMPLE DISPOSITION — Disposal Method (e.g., returned to customer, disposed of per lab procedure, used in analytical process) — Disposed By — Date/Time

Commodore Advanced Sciences

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # 01D0621#002

Page 2 of 2

RIN 01D0621

Contact/Requestor: JOHNSEN, SHELLY/MYERS, KIM

Telephone No. 6401/7106

Bottle No.	Customer Number	Matrix	Date	Time	Location	Container (size/type/quantity)	Sample Analysis	Preservative; Packing
01D0621-004.002	n/a	SOLID	4/6/01	1510	B830	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0621-005.004		SOLID	4/6/01	1625	B830	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0621-006.004		SOLID	4/6/01	1705	B830	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0621-007.004		SOLID	4/6/01	1050	B830	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0621-008.004		SOLID	4/6/01	1650	B830	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs

P 4/6/01

Relinquished By:	Date/Time	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
[illegible]	1820 4/6/01	T130A Fridge #2	1820 4/6/01				
T130A Fridge #2	4/7/01 1330	[illegible]	4/7/01 1330				
[illegible]	4/7/01 1200	[illegible]					
FedEx	4-18-01 0915	[illegible]	4-18-01 0915				

FINAL SAMPLE DISPOSITION — Disposal Method (e.g., returned to customer, disposed of per lab procedure, used in analytical process)

Disposed By — Date/Time

Lionville Laboratory, Inc.
PCBs by GC

Report Date: 05/03/01 21:51

RFW Batch Number: 0104L551 Client: K-H RIN#01D0621 Work Order: 11830001001 Page: 1

Sample Information							
Cust ID:	01D0621-001.005	01D0621-002.001	01D0621-003.001	01D0621-004.001	PBLKXK	PBLKXK BS	
RFW#:	001	003	005	007	01LE0455-MB1	01LE0455-MB1	
Matrix:	SOLID	SOLID	SOLID	SOLID	SOIL	SOIL	
D.F.:	1.00	1.00	1.00	1.00	1.00	1.00	
Units:	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	
Surrogate: Tetrachloro-m-xylene	82 %	88 %	85 %	92 %	95 %	100 %	
Decachlorobiphenyl	89 %	86 %	88 %	90 %	98 %	104 %	
Aroclor-1016	33 U	34 U	33 U	34 U	33 U	33 U	
Aroclor-1221	67 U	68 U	65 U	68 U	67 U	67 U	
Aroclor-1232	33 U	34 U	33 U	34 U	33 U	33 U	
Aroclor-1242	33 U	34 U	33 U	34 U	33 U	33 U	
Aroclor-1248	33 U	34 U	33 U	34 U	33 U	33 U	
Aroclor-1254	33 U	34 U	33 U	34 U	33 U	98 %	
Aroclor-1260	33 U	34 U	33 U	34 U	33 U	33 U	

Sample Information		
Cust ID:	PBLKXK BSD	
RFW#:	01LE0455-MB1	
Matrix:	SOIL	
D.F.:	1.00	
Units:	UG/KG	
Surrogate: Tetrachloro-m-xylene	95 %	
Decachlorobiphenyl	95 %	
Aroclor-1016	33 U	
Aroclor-1221	67 U	
Aroclor-1232	33 U	
Aroclor-1242	33 U	
Aroclor-1248	33 U	
Aroclor-1254	80 %	
Aroclor-1260	33 U	

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not reported. NS= Not spiked.
%= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

4C

PESTICIDE METHOD BLANK SUMMARY

Lab Name: Lionville Labs, Inc. Contract: 1830-01-01

Case No.: K-H RIN#01D0621

Lab Sample ID: 01LE0455-MB1 Lab File ID: 05010111 .10

Matrix: (Soil/Water) SOIL Level: (low/med) LOW

Date Extracted: 04/19/01 Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed (1): 05/02/01 Date Analyzed (2): 05/02/01

Time Analyzed (1): 0802 Time Analyzed (2): 0802

Instrument ID (1): 11 Instrument ID (2): 12

GC Column ID (1): DB608 GC Column ID (2): RTX 1701

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	01D0621-001.005	0104L551-001	05/02/01	05/02/01
02	01D0621-002.001	0104L551-003	05/02/01	05/02/01
03	01D0621-003.001	0104L551-005	05/02/01	05/02/01
04	01D0621-004.001	0104L551-007	05/02/01	05/02/01
05	PBLKXKLE0455-MB1 BS	01LE0455-MB1S	05/02/01	05/02/01
06	PBLKXKLE0455-MB1 BSD	01LE0455-MB1T	05/02/01	05/02/01

COMMENTS:

1D

PESTICIDE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

01D0621-001.005

Lab Name: Lionville Labs, Inc. Work Order: 11830001001

Client: K-H RJN#01D0621

Matrix: SOLID

Lab Sample ID: 0104L551-001

Sample wt/vol: 30.6 (g/mL) G

Lab File ID: 05010111.25

Level: (low/med) LOW

Date Received: 04/18/01

% Moisture: not dec. 2 dec.

Date Extracted: 04/19/01

Extraction: (SepF/Cont/Sonc) N/A

Date Analyzed: 05/02/01

GPC Cleanup: (Y/N) N pH: 7.0

Dilution Factor: 1.00

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		
12674-11-2	Aroclor-1016	33	U
11104-28-2	Aroclor-1221	67	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	33	U

Hgestalor

FORM 1 PEST 12/88 Rev.

95

1D

PESTICIDE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

01D0621-002.001

Lab Name: Lionville Labs, Inc. Work Order: 11830001001

Client: K-H RIN#01D0621

Matrix: SOLID

Lab Sample ID: 0104L551-003

Sample wt/vol: 29.9 (g/mL) G

Lab File ID: 05010111.26

Level: (low/med) LOW

Date Received: 04/18/01

% Moisture: not dec. 2 dec.

Date Extracted: 04/19/01

Extraction: (SepF/Cont/Sonc) N/A

Date Analyzed: 05/03/01

GPC Cleanup: (Y/N) N pH: 7.0

Dilution Factor: 1.00

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		
12674-11-2	Aroclor-1016	34	U
11104-28-2	Aroclor-1221	68	U
11141-16-5	Aroclor-1232	34	U
53469-21-9	Aroclor-1242	34	U
12672-29-6	Aroclor-1248	34	U
11097-69-1	Aroclor-1254	34	U
11096-82-5	Aroclor-1260	34	U

Postlab

FORM 1 PEST 12/88 Rev.

P6

1D

PESTICIDE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

01D0621-003.001

Lab Name: Lionville Labs, Inc. Work Order: 11830001001

Client: K-H RIN#01D0621

Matrix: SOLID

Lab Sample ID: 0104L551-005

Sample wt/vol: 32.1 (g/mL) G

Lab File ID: 05010111.27

Level: (low/med) LOW

Date Received: 04/18/01

% Moisture: not dec. 5 dec.

Date Extracted: 04/19/01

Extraction: (SepF/Cont/Sonc) N/A

Date Analyzed: 05/02/01

GPC Cleanup: (Y/N) N pH: 7.0

Dilution Factor: 1.00

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		
12674-11-2	Aroclor-1016	33	U
11104-28-2	Aroclor-1221	65	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	33	U

Flagstudy

FORM 1 PEST 12/88 Rev.

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1D

PESTICIDE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

01D0621-004.001

Lab Name: Lionville Labs, Inc. Work Order: 11030001001

Client: K-H RIN#01D0621

Matrix: SOLID

Lab Sample ID: 0104L551-007

Sample wt/vol: 31.8 (g/mL) G

Lab File ID: 05010111.30

Level: (low/med) LOW

Date Received: 04/18/01

% Moisture: not dec. 7 dec.

Date Extracted: 04/19/01

Extraction: (SepF/Cont/Sonc) N/A

Date Analyzed: 05/02/01

GPC Cleanup: (Y/N) N pH: 7.0

Dilution Factor: 1.00

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		
12674-11-2	Aroclor-1016	34	U
11104-28-2	Aroclor-1221	68	U
11141-16-5	Aroclor-1232	34	U
53469-21-9	Aroclor-1242	34	U
12672-29-6	Aroclor-1248	34	U
11097-69-1	Aroclor-1254	34	U
11096-82-5	Aroclor-1260	34	U

FORM 1 PEST 12/88 Rev.

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KAISER•HILL
COMPANY
ANALYTICAL SERVICES DIVISION

FAX COVER SHEET FOR FINAL DATA PACKAGE REPORTS

RIN NUMBER: 0100621 met

FROM: SHELLY JOHNSEN

PHONE: (303) 966-6401

FAX: (303) 966-8345

TO: K. Myers

FAX: 6678

PHONE: _____

NUMBER OF PAGES, INCLUDING COVER SHEET: _____

Please contact _____ **if the fax is not received in its entirety.**
(phone number)

NOTE:
This facsimile contains the results, in the Final Sample Data Package, for the analytes requested in this RIN. The package has been scheduled for verification or validation. Until verification or validation is completed the results must be considered preliminary. You will be forwarded a copy of the verification or validation report shortly after it is received by ASD. You should examine this report to determine if any qualifiers (flags) have been attached to the results. Flagged data may or may not be suitable for use as originally intended and should be evaluated for acceptability before use. If you have any questions please contact your Analytical Services Project Lead, do no contact the laboratory directly.

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LIONVILLE LABORATORY INC.

Analytical Report

Client : K-H RIN#01D0621
LVL# : 0104L551

W.O.# : 11830-001-001-9999-00
Date Received : 04-18-01

SW846 METALS

1. This narrative covers the analyses of 8 TCLP leachate samples.

2. The samples were prepared and analyzed in accordance with SW-846 protocol and reported with CLP deliverable. All samples and the method blank QC for ICP analysis were diluted six fold due to the sample matrix. With the six fold dilution, the client requested limit was exceeded for Silver and Beryllium. All sample results for Silver were nondetect and all sample results for Beryllium were below the UTS limits.

3. ICVs, CCVs, and LCSs stock standards were purchased from Inorganic Ventures Laboratory and High Purity.

4. All analyses were performed within the required holding times.

5. The cooler temperature (5.2°C) has been recorded on the Chain of Custody

6. All Initial and Continuing Calibration Verifications (ICV/CCVs) were within control limits.

7. All Initial and Continuing Calibration Blanks (ICB/CCBs) were within method criteria.

8. All preparation/method blanks were below the client requested limits found in RDL3 with the exception of Beryllium in MB2 and MB3, however the results were below the UTS limits. Refer to form 3.

9. All ICP Interference Check Standards were within control limits. Refer to form 4.

10. All laboratory control samples (LCS) were within the 80-120% control limits. Refer to form 7.

11. All sample IDs were changed to accommodate the EPA naming convention which allows a maximum of 6 characters on all CLP Forms. Refer to the comments section of form 1 for the original ID.

The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 275 pages.

208 Welsh Pond Road • Lionville, PA 19341-1333 • (610) 280-3000 • Fax (610) 280-3941

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12. All matrix spike and serial dilution analyses were performed on K-H RIN#01D0606, LVL batch# 01041L550 within the same digestion batch. Forms 5, 6, and 9 have been included for matrix QC reference.

13. As of January 27, 2001, Reera LabNet Philadelphia became Lionville Laboratory Incorporated. Some forms may still reference Reera LabNet Philadelphia.

Pat G

Iain Daniels
Deputy Laboratory Manager
Lionville Laboratory Incorporated

05-15-01
Date

alh/m01-551

LVLI
LIONVILLE LABORATORY, INC.

Commodore Advanced Sciences

REETS

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # 01D0621#0

Page 1 of 2

Sampler(s) 512570 (time/date)	Contact/Requester JOHNSEN, SHELLY/MYERS, KIM	Telephone No. 6401/7196
RIN 01D0621 JOHN GOODSEY	Sampling Origin B830	Purchase Order/Charge Code EED10720
Project Title B830 CORE SAMPLES C12652	Logbook No. 94 Dodge	Ice Chest No. N/A Temp.
To (Lab) RECRA Labnet-PA (L)	Method of Shipment Sample Team	Bill of Lading/Air Bill No. N/A 4533-2127-2116
Protocol CAS SOP.003 REV 3	Related COC (if any) 01D0621 #	PRE

POSSIBLE SAMPLE HAZARDS/REMARKS
Are acid preserved samples DOT hazardous per 40 CFR Part 136.3 Table II? YES or NO
Are other known hazardous substances present? YES or NO
** ** **

SCREENING REQUIRED ☐

SPECIAL INSTRUCTIONS Hold Time

Bottle No.	Customer Number	Matrix	Date	Time	Location	Container (size/type/quantity)	Sample Analysis	Preservative; Packing
01D0621-001.005	N/A	SOLID	4/6/01	1105	B830	125-G / G /1	SS03B006 (PCB 8080A/8081-Solid) [Routine] A	None 4 degrees C
01D0621-001.006		SOLID	4/6/01	1045	B830	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine] B+	None 4 degs C w/zhs
01D0621-002.001		SOLID	4/6/01	1501	B830	125-G / G /1	SS03B006 (PCB 8080A/8081-Solid) [Routine]	None 4 degrees C
01D0621-002.002		SOLID	4/6/01	1127	B830	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0621-003.001		SOLID	4/6/01	1643	B830	125-G / G /1	SS03B006 (PCB 8080A/8081-Solid) [Routine]	None 4 degrees C
01D0621-003.002		SOLID	4/6/01	1452 SP ~~1248~~	B830	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zh
01D0621-004.001		SOLID	4/6/01	1649	B830	125-G / G /1	SS03B006 (PCB 8080A/8081-Solid) [Routine]	None 4 degrees C

Relinquished By:	Date/Time	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
[illegible]	1320 4/6/01	T150 Hilroth #2	1340 4/6/01				
T150 Hilroth #2	4/17/01 1330	[illegible]	4/17/01 1330				
[illegible]	4/17/01 1400	[illegible]					
FedEx	4-18-01 0915	[illegible]	4-18-01 0915				

FINAL SAMPLE DISPOSITION — Disposal Method (e.g., returned to customer, disposed of per lab procedure, used in analytical process) — Disposed By — Date/Time

Commodore Advanced Sciences

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # 01D0621#00.

RIN 01D0621

Contact/Requestor: JOHNSEN, SHELLY/MYERS, KIM

Telephone No. 6401/7106

Bottle No.	Customer Number	Matrix	Date	Time	Location	Container (size/type/quantity)	Sample Analysis	Preservative; Packing
01D0621-C04.002	N/A	SOLID	4/6/01	1510	B830	125-G / G / 1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0621-005.004		SOLID	4/6/01	1625	B830	125-G / G / 1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0621-006.004		SOLID	4/6/01	1705	B830	125-G / G / 1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0621-007.004		SOLID	4/6/01	1050	B830	125-G / G / 1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0621-008.004		SOLID	4/6/01	1650	B830	125-G / G / 1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs

4/6/01

Relinquished By:	Date/Time	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
[illegible]	1820	T130A Fridge #2 [illegible]	1820				
T130A Fridge #2	4/7/01 1330	[illegible]	4/7/01 1330				
[illegible]	4/7/01 1400	Fed Ex					
Fed Ex	4-18-01 0915	[illegible]	4-18-01 0915				

Disposed By

Date/Time

FINAL SAMPLE DISPOSITION

Disposal Method (e.g., returned to customer, disposed of per lab procedure, used in analytical process)

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U.S. EPA

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

001006

Lab Name: LIONVILLE_LABORATORY Contract: 11830-1
Lab Code: LVLI Case No.: 01D06 SAS No.: SDG No.: 001006
Matrix (soil/water): WATER Lab Sample ID: 0104L551-013
Level (low/med): LOW Date Received: 04/18/01
% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	443	B		P
7440-36-0	Antimony	11.4	U		P
7440-38-2	Arsenic	13.8	U		P
7440-39-3	Barium	242	B		P
7440-41-7	Beryllium	6.1			P
7440-43-9	Cadmium	1.8	U		P
7440-70-2	Calcium	621000			P
7440-47-3	Chromium	35.2	B		P
7440-48-4	Cobalt	4.8	U		P
7440-50-8	Copper	4.3	B		P
7439-89-6	Iron	94.2	U		P
7439-92-1	Lead	15.6	U		P
7439-95-4	Magnesium	3500	B		P
7439-96-5	Manganese	15.3	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	7.2	U		P
7440-09-7	Potassium	38200			P
7782-49-2	Selenium	15.6	U		P
7440-22-4	Silver	6.0	U		P
7440-28-0	Thallium	23.4	U		P
7440-62-2	Vanadium	11.1	B		P
7440-66-6	Zinc	7.5	B		P
7439-98-7	Molybdenu	8.6	B		P
7440-24-6	Strontium	2680			P
7440-31-5	Tin	21.0	U		P
7439-93-2	Lithium	33.5	B		P
11-09-6	Uranium	64.2	U		P

Color Before: Clarity Before: Texture:
Color After: Clarity After: Artifacts:

Comments:
01D0621-001.006
TCLP_OF_002

FORM I - IN

104

U.S. EPA

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

002002

Lab Name: LIONVILLE LABORATORY Contract: 11830-1
Lab Code: LVLI Case No.: 01D06 SAS No.: SDG No.: 001006
Matrix (soil/water): WATER Lab Sample ID: 0104L551-014
Level (low/med): LOW Date Received: 04/18/01
% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	707	B		P
7440-36-0	Antimony	14.7	B		P
7440-38-2	Arsenic	13.8	U		P
7440-39-3	Barium	299	B		P
7440-41-7	Beryllium	5.2			P
7440-43-9	Cadmium	1.8	U		P
7440-70-2	Calcium	656000			P
7440-47-3	Chromium	37.4	B		P
7440-48-4	Cobalt	4.8	U		P
7440-50-8	Copper	8.6	B		P
7439-89-6	Iron	94.2	U		P
7439-92-1	Lead	15.6	U		P
7439-95-4	Magnesium	252	B		P
7439-96-5	Manganese	16.4	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	7.2	U		P
7440-09-7	Potassium	17400	B		P
7782-49-2	Selenium	15.6	U		P
7440-22-4	Silver	6.0	U		P
7440-28-0	Thallium	23.4	U		P
7440-62-2	Vanadium	4.4	B		P
7440-66-6	Zinc	48.8	B		P
7439-98-7	Molybdenu	7.6	B		P
7440-24-6	Strontium	3250			P
7440-31-5	Tin	21.0	U		P
7439-93-2	Lithium	25.0	B		P
11-09-6	Uranium	64.2	U		P

Color Before: Clarity Before: Texture:
Color After: Clarity After: Artifacts:

Comments:
01D0621-002.002
TCLP OF 004

FORM I - IN

105

U.S. EPA

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

003002

Lab Name: LIONVILLE LABORATORY Contract: 11830-1
Lab Code: LVLI Case No.: 01D06 SAS No.: SDG No.: 001006
Matrix (soil/water): WATER Lab Sample ID: 0104L551-015
Level (low/med): LOW Date Received: 04/18/01
% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	294	B		P
7440-36-0	Antimony	15.6	B		P
7440-38-2	Arsenic	13.8	U		P
7440-39-3	Barium	235	B		P
7440-41-7	Beryllium	3.4	B		P
7440-43-9	Cadmium	1.8	U		P
7440-70-2	Calcium	578000			P
7440-47-3	Chromium	43.1	B		P
7440-48-4	Cobalt	4.8	U		P
7440-50-8	Copper	10.5	B		P
7439-89-6	Iron	94.2	U		P
7439-92-1	Lead	15.6	U		P
7439-95-4	Magnesium	3490	B		P
7439-96-5	Manganese	7.5	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	7.2	U		P
7440-09-7	Potassium	39000			P
7782-49-2	Selenium	15.6	U		P
7440-22-4	Silver	6.0	U		P
7440-28-0	Thallium	23.4	U		P
7440-62-2	Vanadium	10.9	B		P
7440-66-6	Zinc	35.8	B		P
7439-98-7	Molybdenu	15.6	B		P
7440-24-6	Strontium	2580			P
7440-31-5	Tin	21.0	U		P
7439-93-2	Lithium	33.8	B		P
11-09-6	Uranium	64.2	U		P

Color Before: Clarity Before: Texture:
Color After: Clarity After: Artifacts:

Comments:
01D0621-003.002
TCLP_OF_006

FORM I - IN

106

U.S. EPA

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

004002

Lab Name: LIONVILLE_LABORATORY Contract: 11830-1
Lab Code: LVLI Case No.: 01D06 SAS No.: SDG No.: 001006
Matrix (soil/water): WATER Lab Sample ID: 0104L551-016
Level (low/med): LOW Date Received: 04/18/01
% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	348	B		P
7440-36-0	Antimony	15.9	B		P
7440-38-2	Arsenic	13.8	U		P
7440-39-3	Barium	224	B		P
7440-41-7	Beryllium	4.2	B		P
7440-43-9	Cadmium	1.8	U		P
7440-70-2	Calcium	587000			P
7440-47-3	Chromium	36.8	B		P
7440-48-4	Cobalt	4.8	U		P
7440-50-8	Copper	10	B		P
7439-89-6	Iron	94.2	U		P
7439-92-1	Lead	15.6	U		P
7439-95-4	Magnesium	2420	B		P
7439-96-5	Manganese	9.5	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	7.2	U		P
7440-09-7	Potassium	26100	B		P
7782-49-2	Selenium	15.6	U		P
7440-22-4	Silver	6.0	U		P
7440-28-0	Thallium	23.4	U		P
7440-62-2	Vanadium	19.3	B		P
7440-66-6	Zinc	45.5	B		P
7439-98-7	Molybdenu	12.0	B		P
7440-24-6	Strontium	2610			P
7440-31-5	Tin	21.0	U		P
7439-93-2	Lithium	29.2	B		P
11-09-6	Uranium	64.2	U		P

Color Before: Clarity Before: Texture:
Color After: Clarity After: Artifacts:

Comments:
01D0621-004.002
TCLP_OF_008

FORM I - IN

107

U.S. EPA

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

005004

Lab Name: LIONVILLE_LABORATORY Contract: 11830-1
Lab Code: LVLI Case No.: 01D06 SAS No.: SDG No.: 001006
Matrix (soil/water): WATER Lab Sample ID: 0104L551-017
Level (low/med): LOW Date Received: 04/18/01
% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	563	B		P
7440-36-0	Antimony	18.0	B		P
7440-38-2	Arsenic	13.8	U		P
7440-39-3	Barium	365	B		P
7440-41-7	Beryllium	3.2	B		P
7440-43-9	Cadmium	1.8	U		P
7440-70-2	Calcium	656000			P
7440-47-3	Chromium	15.9	B		P
7440-48-4	Cobalt	4.8	U		P
7440-50-8	Copper	14.1	B		P
7439-89-6	Iron	94.2	U		P
7439-92-1	Lead	15.6	U		P
7439-95-4	Magnesium	406	B		P
7439-96-5	Manganese	7.3	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	7.2	U		P
7440-09-7	Potassium	26700	B		P
7782-49-2	Selenium	15.6	U		P
7440-22-4	Silver	6.0	U		P
7440-28-0	Thallium	23.4	U		P
7440-62-2	Vanadium	92.2	B		P
7440-66-6	Zinc	21.5	B		P
7439-98-7	Molybdenu	72.0	B		P
7440-24-6	Strontium	2720			P
7440-31-5	Tin	21.0	U		P
7439-93-2	Lithium	38.4	B		P
11-09-6	Uranium	64.2	U		P

Color Before: Clarity Before: Texture:
Color After: Clarity After: Artifacts:

Comments:
01D0621-005.004
TCLP_OF_009

FORM I - IN

108

U.S. EPA

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

006004

Lab Name: LIONVILLE LABORATORY Contract: 11830-1
Lab Code: LVLI Case No.: 01D06 SAS No.: SDG No.: 001006
Matrix (soil/water): WATER Lab Sample ID: 0104L551-018
Level (low/med): LOW Date Received: 04/18/01
% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	919	B		P
7440-36-0	Antimony	20.5	B		P
7440-38-2	Arsenic	13.8	U		P
7440-39-3	Barium	453	B		P
7440-41-7	Beryllium	3.4	B		P
7440-43-9	Cadmium	1.8	U		P
7440-70-2	Calcium	691000			P
7440-47-3	Chromium	7.7	B		P
7440-48-4	Cobalt	4.8	U		P
7440-50-8	Copper	9.0	B		P
7439-89-6	Iron	94.2	U		P
7439-92-1	Lead	15.6	U		P
7439-95-4	Magnesium	375	B		P
7439-96-5	Manganese	11.2	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	7.2	U		P
7440-09-7	Potassium	25400	B		P
7782-49-2	Selenium	21.9	B		P
7440-22-4	Silver	6.0	U		P
7440-28-0	Thallium	23.4	U		P
7440-62-2	Vanadium	30.3	B		P
7440-66-6	Zinc	18.3	B		P
7439-98-7	Molybdenu	58.1	B		P
7440-24-6	Strontium	3000			P
7440-31-5	Tin	21.0	U		P
7439-93-2	Lithium	34.7	B		P
11-09-6	Uranium	64.2	U		P

Color Before: Clarity Before: Texture:
Color After: Clarity After: Artifacts:

Comments:
01D0621-006.004
TCLP OF 010

FORM I - IN

109

U.S. EPA

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

007004

Lab Name: LIONVILLE_LABORATORY Contract: 11830-1

Lab Code: LVLI Case No.: 01D06 SAS No.: SDG No.: 001006

Matrix (soil/water): WATER Lab Sample ID: 0104L551-019

Level (low/med): LOW Date Received: 04/18/01

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	389	B		P
7440-36-0	Antimony	20.5	B		P
7440-38-2	Arsenic	22.6	B		P
7440-39-3	Barium	246	B		P
7440-41-7	Beryllium	1.9	B		P
7440-43-9	Cadmium	1.8	U		P
7440-70-2	Calcium	646000			P
7440-47-3	Chromium	32.5	B		P
7440-48-4	Cobalt	4.8	U		P
7440-50-8	Copper	7.9	B		P
7439-89-6	Iron	94.2	U		P
7439-92-1	Lead	15.6	U		P
7439-95-4	Magnesium	252	B		P
7439-96-5	Manganese	0.60	U		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	7.2	U		P
7440-09-7	Potassium	15800	B		P
7782-49-2	Selenium	15.6	U		P
7440-22-4	Silver	6.0	U		P
7440-28-0	Thallium	23.4	U		P
7440-62-2	Vanadium	9.9	B		P
7440-66-6	Zinc	6.8	B		P
7439-98-7	Molybdenu	8.6	B		P
7440-24-6	Strontium	2910			P
7440-31-5	Tin	21.0	U		P
7439-93-2	Lithium	20.4	B		P
11-09-6	Uranium	64.2	U		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

01D0621-007.004

TCLP_OF_011

FORM I - IN

110

U.S. EPA

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

008004

Lab Name: LIONVILLE LABORATORY Contract: 11830-1

Lab Code: LVLI Case No.: 01D06 SAS No.: SDG No.: 001006

Matrix (soil/water): WATER Lab Sample ID: 0104L551-020

Level (low/med): LOW Date Received: 04/18/01

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1240			P
7440-36-0	Antimony	19.6	B		P
7440-38-2	Arsenic	13.8	U		P
7440-39-3	Barium	900			P
7440-41-7	Beryllium	2.2	B		P
7440-43-9	Cadmium	1.8	U		P
7440-70-2	Calcium	842000			P
7440-47-3	Chromium	11.2	B		P
7440-48-4	Cobalt	4.8	U		P
7440-50-8	Copper	9.6	B		P
7439-89-6	Iron	94.2	U		P
7439-92-1	Lead	15.6	U		P
7439-95-4	Magnesium	63.3	B		P
7439-96-5	Manganese	0.60	U		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	7.2	U		P
7440-09-7	Potassium	42000			P
7782-49-2	Selenium	15.6	U		P
7440-22-4	Silver	6.0	U		P
7440-28-0	Thallium	23.4	U		P
7440-62-2	Vanadium	4.2	U		P
7440-66-6	Zinc	7.8	B		P
7439-98-7	Molybdenu	63.0	B		P
7440-24-6	Strontium	4560			P
7440-31-5	Tin	21.0	U		P
7439-93-2	Lithium	42.8	B		P
11-09-6	Uranium	64.2	U		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

01D0621-008.004

TCLP_OF_012

FORM I - IN

U.S. EPA

3
BLANKS

Lab Name: LIONVILLE LABORATORY Contract: 11830-1

Lab Code: LVLI Case No.: 01D06 SAS No.: SDG No.: 001006

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum	16.5	B	46.0	B	68.6	B	12.7	U	79.400	B	P
Antimony	2.4	B	2.0	B	4.2	B	1.9	U	1.900	U	P
Arsenic	2.3	U	3.1	B	2.7	B	2.3	B	2.300	U	P
Barium	0.2	U	0.2	U	0.2	U	0.2	U	0.410	B	P
Beryllium	0.3	B	0.7	B	1.1		0.3	B	0.746	B	P
Cadmium	0.3	U	0.3	U	0.3	U	0.3	U	0.300	U	P
Calcium	16.3	B	8.1	U	8.1	U	8.1	U	21.050	B	P
Chromium	0.9	U	0.9	U	0.9	U	0.9	U	0.900	U	P
Cobalt	0.8	U	0.8	U	0.8	U	0.8	U	-0.854	B	P
Copper	0.7	U	-0.9	B	-1.3	B	0.7	U	0.700	U	P
Iron	15.7	U	15.7	U	15.7	U	15.7	U	15.700	U	P
Lead	2.6	U	2.6	U	2.6	U	2.6	U	2.600	U	P
Magnesium	8.8	U	8.8	U	8.8	U	8.8	U	13.290	B	P
Manganese	0.3	B	0.4	B	0.4	B	0.3	B	0.340	B	P
Mercury	0.1	U	0.1	U	0.1	U	0.1	U	0.100	U	AV
Nickel	1.2	U	1.2	U	1.2	U	-1.3	B	1.200	U	P
Potassium	35.3	U	35.3	U	35.3	U	35.3	U	35.300	U	P
Selenium	2.6	U	2.6	U	2.6	U	2.6	U	2.600	U	P
Silver	1.0	U	1.0	U	1.0	U	1.0	U	1.000	U	P
Thallium	3.9	U	3.9	U	3.9	U	3.9	U	3.900	U	P
Vanadium	0.7	U	0.7	U	0.7	U	0.7	U	0.700	U	P
Zinc	0.3	B	0.3	B	0.3	U	0.3	U	0.300	U	P
Molybdenu	1.0	U	1.0	U	1.0	U	1.9	B	1.000	U	P
Strontium	0.1	U	0.1	U	0.1	U	0.1	U	0.182	B	P
Tin	3.5	U	3.5	U	-5.4	B	3.5	U	3.500	U	P
Lithium	0.6	B	0.5	B	1.0	B	0.9	B	0.290	B	P
Uranium	10.7	U	10.7	U	10.7	U	10.7	U	10.700	U	P

FORM III - IN

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U.S. EPA

3
BLANKS

Lab Name: LIONVILLE_LABORATORY_____ Contract: 11830-1___

Lab Code: LVLI__ Case No.: 01D06 SAS No.: _____ SDG No.: 001006

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L_

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum			-23.0	B	-40.0	B			555.960	B	P
Antimony			1.9	U	1.9	U			11.400	U	P
Arsenic			2.3	U	2.3	U			13.800	U	P
Barium			0.2	U	0.2	U			3.078	B	P
Beryllium			0.2	U	-0.4	B			7.860		P
Cadmium			0.3	U	0.3	U			1.800	U	P
Calcium			8.1	U	8.1	U			92.340	B	P
Chromium			0.9	U	0.9	U			5.400	U	P
Cobalt			0.8	U	0.8	U			4.800	U	P
Copper			0.7	U	0.7	U			4.200	U	P
Iron			15.7	U	15.7	U			94.200	U	P
Lead			2.6	U	2.6	U			15.600	U	P
Magnesium			8.8	U	8.8	U			52.800	U	P
Manganese			0.2	B	0.4	B			1.680	B	P
Mercury			0.1	U	0.1	U	0.1	U	0.100	U	AV
Nickel			1.2	U	1.2	U			-10.752	B	P
Potassium			35.3	U	35.3	U			1113.840	B	P
Selenium			2.6	U	2.6	U			15.600	U	P
Silver			1.0	U	1.0	U			6.000	U	P
Thallium			3.9	U	3.9	U			23.400	U	P
Vanadium			0.7	U	0.7	U			4.200	U	P
Zinc			0.3	U	0.3	U			9.768	B	P
Molybdenu			1.3	B	1.3	B			7.140	B	P
Strontium			0.1	U	0.1	U			0.600	U	P
Tin			3.5	U	-5.3	B			21.000	U	P
Lithium			0.6	B	0.4	B			6.390	B	P
Uranium			10.7	U	10.7	U			64.200	U	P

FORM III - IN

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U.S. EPA

3
BLANKS

Lab Name: LIONVILLE LABORATORY Contract: 11830-1

Lab Code: LVLI Case No.: 01D06 SAS No.: SDG No.: 001006

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum									521.100	B	P
Antimony									11.400	U	P
Arsenic									13.800	U	P
Barium									7.068	B	P
Beryllium									7.002		P
Cadmium									1.800	U	P
Calcium									462.480	B	P
Chromium									5.400	U	P
Cobalt									4.800	U	P
Copper									4.374	B	P
Iron									94.200	U	P
Lead									15.600	U	P
Magnesium									73.740	B	P
Manganese									1.200	B	P
Mercury									0.100	U	AV
Nickel									7.200	U	P
Potassium									901.128	B	P
Selenium									15.600	U	P
Silver									6.000	U	P
Thallium									23.400	U	P
Vanadium									4.200	U	P
Zinc									14.598	B	P
Molybdenu									6.732	B	P
Strontium									0.612	B	P
Tin									21.000	U	P
Lithium									5.916	B	P
Uranium									64.200	U	P

FORM III - IN

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U.S. EPA

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DUPLICATES

EPA SAMPLE NO.

001006D

Lab Name: LIONVILLE_LABORATORY Contract: 11830-1

Lab Code: LVLI Case No.: 01D06 SAS No.: SDG No.: 001006

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0 % Solids for Duplicate: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum								NR
Antimony								NR
Arsenic								NR
Barium								NR
Beryllium								NR
Cadmium								NR
Calcium								NR
Chromium								NR
Cobalt								NR
Copper								NR
Iron								NR
Lead								NR
Magnesium								NR
Manganese								NR
Mercury	0.1	0.1000		0.1200		18.2		AV
Nickel								NR
Potassium								NR
Selenium								NR
Silver								NR
Thallium								NR
Vanadium								NR
Zinc								NR
Molybdenu								NR
Strontium								NR
Tin								NR
Lithium								NR
Uranium								NR

FORM VI - IN

Reference only

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U.S. EPA

DUPLICATES

EPA SAMPLE NO.

002002D

Lab Name: LIONVILLE LABORATORY Contract: 11830-1

Lab Code: LVLI Case No.: 01D06 SAS No.: SDG No.: 001006

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0 % Solids for Duplicate: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		772.9800	B	877.9800	B	12.7		P
Antimony		11.4000	U	12.2880	B	200.0		P
Arsenic		13.8000	U	13.8000	U			P
Barium		297.2160	B	295.7220	B	0.5		P
Beryllium	4.8	9.3120		11.3520		19.7		P
Cadmium		1.8000	U	1.8000	U			P
Calcium		877694.6400		871672.2000		0.7		P
Chromium		35.2680	B	35.7120	B	1.3		P
Cobalt		4.8000	U	4.8000	U			P
Copper		4.2000	U	4.2000	U			P
Iron		94.2000	U	94.2000	U			P
Lead		15.6000	U	15.6000	U			P
Magnesium		997.5000	B	993.1800	B	0.4		P
Manganese		0.6000	U	1.0200	B	200.0		P
Mercury								NR
Nickel		7.2000	U	7.2000	U			P
Potassium	30000.0	30207.6720		30734.4780		1.7		P
Selenium		15.6000	U	15.6000	U			P
Silver		6.0000	U	6.0000	U			P
Thallium		23.4000	U	23.4000	U			P
Vanadium		18.0000	B	20.0400	B	10.7		P
Zinc		4.1340	B	3.3540	B	20.8		P
Molybdenu		9.5220	B	15.9420	B	50.4		P
Strontium	1200.0	3860.6700		3884.3040		0.6		P
Tin		21.0000	U	21.0000	U			P
Lithium		31.0380	B	30.9120	B	0.4		P
Uranium		64.2000	U	64.2000	U			P

FORM VI - IN

Reference only

U.S. EPA

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LABORATORY CONTROL SAMPLE

Lab Name: LIONVILLE LABORATORY Contract: 11830-1

Lab Code: LVLI Case No.: 01D06 SAS No.: SDG No.: 001006

Solid LCS Source:

Aqueous LCS Source: IV

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum	5000.0	5240.95	104.8						
Antimony	3000.0	3030.36	101.0						
Arsenic	10000.0	9701.16	97.0						
Barium	5000.0	4945.61	98.9						
Beryllium	250.0	244.74	97.9						
Cadmium	250.0	248.51	99.4						
Calcium	25000.0	24571.00	98.3						
Chromium	500.0	504.80	101.0						
Cobalt	2500.0	2499.87	100.0						
Copper	1250.0	1246.02	99.7						
Iron	5000.0	4910.83	98.2						
Lead	2500.0	2477.31	99.1						
Magnesium	25000.0	25558.39	102.2						
Manganese	750.0	780.22	104.0						
Mercury									
Nickel	2000.0	2026.59	101.3						
Potassium	25000.0	27463.67	109.9						
Selenium	10000.0	9685.12	96.9						
Silver	500.0	500.26	100.1						
Thallium	10000.0	9576.60	95.8						
Vanadium	2500.0	2539.42	101.6						
Zinc	1000.0	999.23	99.9						
Molybdenu	5000.0	5019.48	100.4						
Strontium	5000.0	4862.91	97.3						
Tin	5000.0	4938.29	98.8						
Lithium	5000.0	5339.12	106.8						
Uranium	5000.0	4940.00	98.8						

FORM VII - IN

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U.S. EPA

LABORATORY CONTROL SAMPLE

Lab Name: LIONVILLE LABORATORY Contract: 11830-1

Lab Code: LVLI Case No.: 01D06 SAS No.: SDG No.: 001006

Solid LCS Source:

Aqueous LCS Source: IV

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Mercury	5.0	5.18	103.6						
Nickel									
Potassium									
Selenium									
Silver									
Thallium									
Vanadium									
Zinc									
Molybdenu									
Strontium									
Tin									
Lithium									
Uranium									

FORM VII - IN

KAISER•HILL
COMPANY
ANALYTICAL SERVICES DIVISION

FAX COVER SHEET FOR FINAL DATA PACKAGE REPORTS

RIN NUMBER: 0120021 V04

FROM: SHELLY JOHNSEN

PHONE: (303) 966-6401

FAX: (303) 966-8345

TO: K. Myers

FAX: 6678

PHONE: _____

NUMBER OF PAGES, INCLUDING COVER SHEET: _____

Please contact _____ **if the fax is not received in its entirety.**
(phone number)

NOTE:
This facsimile contains the results, in the Final Sample Data Package, for the analytes requested in this RIN. The package has been scheduled for verification or validation. Until verification or validation is completed the results must be considered preliminary. You will be forwarded a copy of the verification or validation report shortly after it is received by ASD. You should examine this report to determine if any qualifiers (flags) have been attached to the results. Flagged data may or may not be suitable for use as originally intended and should be evaluated for acceptability before use. If you have any questions please contact your Analytical Services Project Lead, do no contact the laboratory directly.

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LVLI
LIONVILLE LABORATORY INC.

Client : K-11 RIN # 01D0621
LVL #: 0104L551

W.O. #: 11830-001-001-9999-00
Date Received: 04-18-2001

GC/MS VOLATILE-TCLP

Eight (8) leachate samples were generated on 04-21-2001 from solid samples collected on 04-06-2001.

The samples and their associated QC samples were analyzed according to criteria set forth in Lionville Laboratory OPs based on SW846 Method 8260B for client specified TCLP Volatile target compounds on 04-27,30-2001 and 05-01-2001.

The following is a summary of the QC results accompanying these sample results and a description of any problems encountered during their analyses:

1. The cooler temperature upon receipt has been recorded on the chain-of-custody.
2. Non-target compounds were not detected in the samples.
3. The required analysis holding time was met.
4. The samples were analyzed at five-fold dilution due to the leachate matrix.
5. All surrogate recoveries were within EPA QC limits.
6. The matrix spike analyses are associated with LVL # 0104L550.
7. All blank spike recoveries were within EPA QC limits.
8. Internal standard area and retention time criteria were met.
9. As of January 27, 2001, Recra LabNet Philadelphia became Lionville Laboratory Incorporated. Some Forms may still reference Recra LabNet Philadelphia.

J. Michael Taylor
President
Lionville Laboratory Incorporated

5/16/01
Date

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The results presented in this report relate only to the analytical testing and conditions of the sample at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 2 0 2 pages

208 Welsh Pond Road • Lionville, PA 19341-1333 • (610) 280-3000 • Fax (610) 280-3041

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Commodore Advanced Sciences

REETS

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.# 01D0621#002

Page 1 of 2

Sampler(s) Stowell 512570 (time/date)	Contact/Requester JOHNSEN, SHELLY/MYERS, KIM	Telephone No. 6401/7106
RIN 01D0621 Tom Goodsey	Sampling Origin B830	Purchase Order/Charge Code EED10720
Project Title B830 CORE SAMPLES C12632	Logbook No. 94 Dodge	Ice Chest No. N/A Temp.
To (Lab) RECRA Labnet-PA (L)	Method of Shipment Sample Team	Bill of Lading/Air Bill No. N/A 4533-2127-2716
Protocol CAS SOP.003 REV 3	Related COC (if any) 01D0621 #	PRE

POSSIBLE SAMPLE HAZARDS/REMARKS
Are acid preserved samples DOT hazardous per 40 CFR Part 136.3 Table II? YES or NO
Are other known hazardous substances present? YES or NO
** ** **

SCREENING REQUIRED [ ]

SPECIAL INSTRUCTIONS Hold Time

Bottle No.	Customer Number	Matrix	Date	Time	Location	Container (size/type/quantity)	Sample Analysis	Preservative; Packing
01D0621-001.005	N/A	SOLID	4/6/01	1105	B830	125-G / G / 1	SS03B006 (PCB 8080A/8081-Solid) [Routine] A	None 4 degrees C
01D0621-001.006		SOLID	4/6/01	1045	B830	125-G / G / 1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine] B	None 4 degs C w/zhs
01D0621-002.001		SOLID	4/6/01	1501	B830	125-G / G / 1	SS03B006 (PCB 8080A/8081-Solid) [Routine]	None 4 degrees C
01D0621-002.002		SOLID	4/6/01	1127	B830	125-G / G / 1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0621-003.001		SOLID	4/6/01	1643	B830	125-G / G / 1	SS03B006 (PCB 8080A/8081-Solid) [Routine]	None 4 degrees C
01D0621-003.002		SOLID	4/6/01	1450 ~~1248~~ SP	B830	125-G / G / 1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0621-004.001		SOLID	4/6/01	1649	B830	125-G / G / 1	SS03B006 (PCB 8080A/8081-Solid) [Routine]	None 4 degrees C

Relinquished By:	Date/Time	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
[signature] CAS	1820 4/6/01	T150 A Ervine #2	1820 4/6/01				
T130 A Ludgitt #7	4/17/01 1330	[signature]	4/17/01 1330				
[signature]	4/17/01 1400	[signature] FEDEX					
FedEx	4-18-01 0915	[signature]	4-18-01 0915				

FINAL SAMPLE DISPOSITION — Disposal Method (e.g., returned to customer, disposed of per lab procedure, used in analytical process) — Disposed By — Date/Time

Commodore Advanced Sciences

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.# 01D0621#002

Page 2 of 2

RIN 01D0621

Contact/Requestor JOHNSEN, SHELLY/MYERS, KIM

Telephone No. 6401/7106

Bottle No	Customer Number	Matrix	Date	Time	Location	Container (size/type/quantity)	Sample Analysis	Preservative; Packing
01D0621-004.002	n/a	SOLID	4/6/01	1510	B830	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0621-005.004		SOLID	4/6/01	1625	B830	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0621-006.004		SOLID	4/6/01	1705	B830	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0621-007.004		SOLID	4/6/01	1050	B830	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0621-008.004		SOLID	4/6/01	1650	B830	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs

4/6/01

Relinquished By:	Date/Time	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
[illegible] CAS 4/6/01	1820	T130A Fridge #2 4/6/01	1820				
T130A Fridge #2 4/7/01	1330	[illegible] 4/7/01	1330				
[illegible] 4/7/01	1400	FedEx					
FedEx 4-18-01	0915	[illegible] 4-18-01	0915				

FINAL SAMPLE DISPOSITION Disposal Method (e.g., returned to customer, disposed of per lab procedure, used in analytical process) Disposed By Date/Time

Lionville Laboratory, Inc.

Volatiles by GC/MS, TCLP Leachate

Report Date: 05/11/01 11:35

RFW Batch Number: 0104L551 Client: K-H RIN#01D0621 Work Order: 1183000100I Page: 1a

Sample Information													
	Cust ID:	01D0621-001. 006		01D0621-002. 002		01D0621-003. 002		01D0621-004. 002		01D0621-005. 004		01D0621-006. 004	
	RFW#:	021		022		023		024		025		026	
	Matrix:	WATER		WATER		WATER		WATER		WATER		WATER	
	D.F.:	5.00		5.00		5.00		5.00		5.00		5.00	
	Units:	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
Surrogate Recovery	Toluene-d8	93	%	99	%	98	%	95	%	100	%	99	%
	Bromofluorobenzene	82	%	81	%	81	%	84	%	82	%	82	%
	1,2-Dichloroethane-d4	102	%	99	%	96	%	100	%	100	%	102	%
Vinyl Chloride		50	U	50	U	50	U	50	U	50	U	50	U
1,1-Dichloroethene		25	U	25	U	25	U	25	U	25	U	25	U
Chloroform		25	U	25	U	25	U	25	U	25	U	25	U
1,2-Dichloroethane		25	U	25	U	25	U	25	U	25	U	25	U
2-Butanone		50	U	50	U	50	U	50	U	7	J	50	U
Carbon Tetrachloride		25	U	25	U	25	U	25	U	25	U	25	U
Trichloroethene		25	U	25	U	25	U	25	U	25	U	25	U
Benzene		25	U	25	U	25	U	25	U	25	U	25	U
Tetrachloroethene		25	U	25	U	25	U	25	U	25	U	25	U
Chlorobenzene		25	U	25	U	25	U	25	U	25	U	25	U
1,3-Dichlorobenzene		25	U	25	U	25	U	25	U	25	U	25	U
1,4-Dichlorobenzene		25	U	25	U	25	U	25	U	25	U	25	U
1,2-Dichlorobenzene		25	U	25	U	25	U	25	U	25	U	25	U

*= Outside of EPA CLP QC limits.

Lionville Laboratory, Inc.

Volatiles by GC/MS, TCLP Leachate

Report Date: 05/11/01 11:35

RFW Batch Number: 0104L551 Client: K-H RIN#01D0621 Work Order: 11830001001 Page: 2a

	Cust ID:	01D0621-007. 004		01D0621-008. 004		VBLKWG		VBLKWG BS		VBLKWP		VBLKWP BS	
Sample Information	RFW#:	027		028		01LVN095-MB1		01LVN095-MB1		01LVN096-MB1		01LVN096-MB1	
	Matrix:	WATER		WATER		WATER		WATER		WATER		WATER	
	D.F.:	5.00		5.00		1.00		1.00		1.00		1.00	
	Units:	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
Surrogate Recovery	Toluene-d8	94	%	95	%	103	%	98	%	105	%	100	%
	Bromofluorobenzene	84	%	84	%	86	%	85	%	86	%	83	%
	1,2-Dichloroethane-d4	103	%	104	%	98	%	96	%	100	%	95	%
		fl		fl		fl		fl		fl		fl	
Vinyl Chloride		50	U	50	U	10	U	114	%	10	U	111	%
1,1-Dichloroethene		25	U	25	U	5	U	109	%	5	U	108	%
Chloroform		25	U	25	U	5	U	104	%	5	U	103	%
1,2-Dichloroethane		25	U	25	U	5	U	100	%	5	U	100	%
2-Butanone		50	U	50	U	10	U	95	%	10	U	105	%
Carbon Tetrachloride		25	U	25	U	5	U	108	%	5	U	106	%
Trichloroethene		25	U	25	U	5	U	101	%	5	U	100	%
Benzene		25	U	25	U	5	U	100	%	5	U	100	%
Tetrachloroethene		25	U	25	U	5	U	99	%	5	U	100	%
Chlorobenzene		25	U	25	U	5	U	103	%	5	U	106	%
1,3-Dichlorobenzene		25	U	25	U	5	U	5	U	5	U	5	U
1,4-Dichlorobenzene		25	U	25	U	5	U	85	%	5	U	84	%
1,2-Dichlorobenzene		25	U	25	U	5	U	5	U	5	U	5	U

*= Outside of EPA CLP QC limits.

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Lionville Laboratory, Inc.

Volatiles by GC/MS, TCLP Leachate

Report Date: 05/11/01 11:35

RFW Batch Number: 0104L551 Client: K-H RIN#01D0621 Work Order: 1183C001001 Page: 3a

	Cust ID:	LCHBLK	VBLKWD
Sample Information	RFW#:	01LTV012-LB1	01LVH147-MB1
	Matrix:	WATER	WATER
	D.F.:	5.00	1.00
	Units:	ug/L	ug/L
Surrogate Recovery	Toluene-d8	99 %	94 %
	Bromofluorobenzene	100 %	104 %
	1,2-Dichloroethane-d4	101 %	90 %
Vinyl Chloride		50 U	10 U
1,1-Dichloroethene		25 U	5 U
Chloroform		25 U	5 U
1,2-Dichloroethane		25 U	5 U
2-Butanone		50 U	10 U
Carbon Tetrachloride		25 U	5 U
Trichloroethene		25 U	5 U
Benzene		25 U	5 U
Tetrachloroethene		25 U	5 U
Chlorobenzene		25 U	5 U
1,3-Dichlorobenzene		25 U	5 U
1,4-Dichlorobenzene		25 U	5 U
1,2-Dichlorobenzene		25 U	5 U

*= Outside of EPA CLP QC limits.

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4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: Lionville Laboratory Inc. Contract: 11830-001-001-9999-00

Lab Code: LVLI Case No.: SAS No.: SDG No.: 04L551

Lab File ID: H042705 Lab Sample ID: 01LVH147-MB1

Date Analyzed: 04/27/1 Time Analyzed: 1106

Matrix: (soil/water) WATER Level: (low/med) LOW

Instrument ID: 5972H

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCHBLK	01LTV012-LB1	H042716	1813
02				
03				
04				
05				
06				
07				
08				
09				
10				
11				
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30				

COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: Lionville Laboratory Inc. Contract: 11830-001-001-9999-00

Lab Code: LVLI Case No.: SAS No.: SDG No.: 04L551

Lab File ID: N043004 Lab Sample ID: 01LVN095-MB1

Date Analyzed: 04/30/1 Time Analyzed: 1308

Matrix: (soil/water) WATER Level:(low/med) LOW

Instrument ID: 5972N

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VBLKWGBS	01LVN095-MB1S	N043003	1231
02	01D0621-001.006	0104L551-021	N043008	1536
03	01D0621-003.002	0104L551-023	N043010	1650
04	01D0621-004.002	0104L551-024	N043011	1727
05	01D0621-005.004	0104L551-025	N043012	1804
06	01D0621-006.004	0104L551-026	N043013	1841
07	01D0621-008.004	0104L551-028	N043015	1955
08				
09				
10				
11				
12				
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COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: Lionville Laboratory Inc. Contract: 11830-001-001-9999-00

Lab Code: LVLI Case No.: SAS No.: SDG No.: 04L551

Lab File ID: N050104 Lab Sample ID: 01LVN096-MB1

Date Analyzed: 05/01/1 Time Analyzed: 1112

Matrix: (soil/water) WATER Level: (low/med) LOW

Instrument ID: 5972N

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VBLKWPBS	01LVN096-MB1S	N050103	1035
02	01D0621-007.004	0104L551-027	N050106	1226
03	01D0621-002.002	0104L551-022	N050105	0000
04				
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COMMENTS:

1A

VOLATILE ORGANICS ANALYSIS SHEET

EPA SAMPLE NO.

01D0621-001.006

Lab Name: Lionville Labs, Inc. Contract: 11830001001

Lab Code: Lionvi Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix: (soil/water) WATER Lab Sample ID: 0104L551-021

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: n043008

Level: (low/med) LOW Date Received: 04/18/01

% Moisture: not dec. ____ Date Analyzed: 04/30/01

Column: (pack/cap) CAP Dilution Factor: 5.00

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		
75-01-4	Vinyl Chloride	50	U
75-35-4	1,1-Dichloroethene	25	U
67-66-3	Chloroform	25	U
107-06-2	1,2-Dichloroethane	25	U
78-93-3	2-Butanone	50	U
56-23-5	Carbon Tetrachloride	25	U
79-01-6	Trichloroethene	25	U
71-43-2	Benzene	25	U
127-18-4	Tetrachloroethene	25	U
108-90-7	Chlorobenzene	25	U
541-73-1	1,3-Dichlorobenzene	25	U
106-46-7	1,4-Dichlorobenzene	25	U
95-50-1	1,2-Dichlorobenzene	25	U

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VOLATILE ORGANICS ANALYSIS SHEET

EPA SAMPLE NO.

01D0621-002.002

Lab Name: Lionville Labs, Inc. Contract: 11830001001

Lab Code: Lionvi Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix: (soil/water) WATER Lab Sample ID: 0104L551-022

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: n050105

Level: (low/med) LOW Date Received: 04/18/01

% Moisture: not dec. ____ Date Analyzed: 05/01/01

Column: (pack/cap) CAP Dilution Factor: 5.00

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		
75-01-4	Vinyl Chloride	50	U
75-35-4	1,1-Dichloroethene	25	U
67-66-3	Chloroform	25	U
107-06-2	1,2-Dichloroethane	25	U
78-93-3	2-Butanone	50	U
56-23-5	Carbon Tetrachloride	25	U
79-01-6	Trichloroethene	25	U
71-43-2	Benzene	25	U
127-18-4	Tetrachloroethene	25	U
108-90-7	Chlorobenzene	25	U
541-73-1	1,3-Dichlorobenzene	25	U
106-46-7	1,4-Dichlorobenzene	25	U
95-50-1	1,2-Dichlorobenzene	25	U

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VOLATILE ORGANICS ANALYSIS SHEET

EPA SAMPLE NO.

01D0621-003.002

Lab Name: Lionville Labs, Inc. Contract: 11830001001

Lab Code: Lionvi Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix: (soil/water) WATER Lab Sample ID: 0104L551-023

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: n043010

Level: (low/med) LOW Date Received: 04/18/01

% Moisture: not dec. ____ Date Analyzed: 04/30/01

Column: (pack/cap) CAP Dilution Factor: 5.00

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		
75-01-4	Vinyl Chloride	50	U
75-35-4	1,1-Dichloroethene	25	U
67-66-3	Chloroform	25	U
107-06-2	1,2-Dichloroethane	25	U
78-93-3	2-Butanone	50	U
56-23-5	Carbon Tetrachloride	25	U
79-01-6	Trichloroethene	25	U
71-43-2	Benzene	25	U
127-18-4	Tetrachloroethene	25	U
108-90-7	Chlorobenzene	25	U
541-73-1	1,3-Dichlorobenzene	25	U
106-46-7	1,4-Dichlorobenzene	25	U
95-50-1	1,2-Dichlorobenzene	25	U

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VOLATILE ORGANICS ANALYSIS SHEET

EPA SAMPLE NO.

01D0621-004.002

Lab Name: Lionville Labs, Inc. Contract: 11830001001

Lab Code: Lionvi Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix: (soil/water) WATER Lab Sample ID: 0104L551-024

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: n043011

Level: (low/med) LOW Date Received: 04/18/01

% Moisture: not dec. ____ Date Analyzed: 04/30/01

Column: (pack/cap) CAP Dilution Factor: 5.00

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		
75-01-4	Vinyl Chloride	50	U
75-35-4	1,1-Dichloroethene	25	U
67-66-3	Chloroform	25	U
107-06-2	1,2-Dichloroethane	25	U
78-93-3	2-Butanone	50	U
56-23-5	Carbon Tetrachloride	25	U
79-01-6	Trichloroethene	25	U
71-43-2	Benzene	25	U
127-18-4	Tetrachloroethene	25	U
108-90-7	Chlorobenzene	25	U
541-73-1	1,3-Dichlorobenzene	25	U
106-46-7	1,4-Dichlorobenzene	25	U
95-50-1	1,2-Dichlorobenzene	25	U

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VOLATILE ORGANICS ANALYSIS SHEET

EPA SAMPLE NO.

01D0621-005.004

Lab Name: Lionville Labs, Inc. Contract: 11830001001

Lab Code: Lionvi Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix: (soil/water) WATER Lab Sample ID: 0104L551-025

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: n043012

Level: (low/med) LOW Date Received: 04/18/01

% Moisture: not dec. ____ Date Analyzed: 04/30/01

Column: (pack/cap) CAP Dilution Factor: 5.00

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		
75-01-4	Vinyl Chloride	50	U
75-35-4	1,1-Dichloroethene	25	U
67-66-3	Chloroform	25	U
107-06-2	1,2-Dichloroethane	25	U
78-93-3	2-Butanone	7	J
56-23-5	Carbon Tetrachloride	25	U
79-01-6	Trichloroethene	25	U
71-43-2	Benzene	25	U
127-18-4	Tetrachloroethene	25	U
108-90-7	Chlorobenzene	25	U
541-73-1	1,3-Dichlorobenzene	25	U
106-46-7	1,4-Dichlorobenzene	25	U
95-50-1	1,2-Dichlorobenzene	25	U

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VOLATILE ORGANICS ANALYSIS SHEET

EPA SAMPLE NO.

01D0621-006.004

Lab Name: Lionville Labs, Inc. Contract: 11030001001

Lab Code: Lionvi Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix: (soil/water) WATER Lab Sample ID: 0104L551-026

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: n043013

Level: (low/med) LOW Date Received: 04/18/01

% Moisture: not dec. ____ Date Analyzed: 04/30/01

Column: (pack/cap) CAP Dilution Factor: 5.00

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		
75-01-4	Vinyl Chloride	50	U
75-35-4	1,1-Dichloroethene	25	U
67-66-3	Chloroform	25	U
107-06-2	1,2-Dichloroethane	25	U
78-93-3	2-Butanone	50	U
56-23-5	Carbon Tetrachloride	25	U
79-01-6	Trichloroethene	25	U
71-43-2	Benzene	25	U
127-18-4	Tetrachloroethene	25	U
108-90-7	Chlorobenzene	25	U
541-73-1	1,3-Dichlorobenzene	25	U
106-46-7	1,4-Dichlorobenzene	25	U
95-50-1	1,2-Dichlorobenzene	25	U

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VOLATILE ORGANICS ANALYSIS SHEET

EPA SAMPLE NO.

01D0621-007.004

Lab Name: Lionville Labs, Inc. Contract: 11830001001

Lab Code: Lionvi Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix: (soil/water) WATER Lab Sample ID: 0104L551-027

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: n050106

Level: (low/med) LOW Date Received: 04/18/01

% Moisture: not dec. ____ Date Analyzed: 05/01/01

Column: (pack/cap) CAP Dilution Factor: 5.00

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		
75-01-4	Vinyl Chloride	50	U
75-35-4	1,1-Dichloroethene	25	U
67-66-3	Chloroform	25	U
107-06-2	1,2-Dichloroethane	25	U
78-93-3	2-Butanone	50	U
56-23-5	Carbon Tetrachloride	25	U
79-01-6	Trichloroethene	25	U
71-43-2	Benzene	25	U
127-18-4	Tetrachloroethene	25	U
108-90-7	Chlorobenzene	25	U
541-73-1	1,3-Dichlorobenzene	25	U
106-46-7	1,4-Dichlorobenzene	25	U
95-50-1	1,2-Dichlorobenzene	25	U

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VOLATILE ORGANICS ANALYSIS SHEET

EPA SAMPLE NO.

01D0621-008.004

Lab Name: Lionville Labs, Inc. Contract: 11R30001001

Lab Code: Lionvi Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix: (soil/water) WATER Lab Sample ID: 0104L5S1-028

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: n043015

Level: (low/med) LOW Date Received: 04/18/01

% Moisture: not dec. ____ Date Analyzed: 04/30/01

Column: (pack/cap) CAP Dilution Factor: 5.00

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		
75-01-4	Vinyl Chloride	50	U
75-35-4	1,1-Dichloroethene	25	U
67-66-3	Chloroform	25	U
107-06-2	1,2-Dichloroethane	25	U
78-93-3	2-Butanone	50	U
56-23-5	Carbon Tetrachloride	25	U
79-01-6	Trichloroethene	25	U
71-43-2	Benzene	25	U
127-18-4	Tetrachloroethene	25	U
108-90-7	Chlorobenzene	25	U
541-73-1	1,3-Dichlorobenzene	25	U
106-46-7	1,4-Dichlorobenzene	25	U
95-50-1	1,2-Dichlorobenzene	25	U

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KAISER•HILL
COMPANY
ANALYTICAL SERVICES DIVISION

FAX COVER SHEET FOR FINAL DATA PACKAGE REPORTS

RIN NUMBER: 0100606 PCB

FROM: SHELLY JOHNSEN

PHONE: (303) 966-6401

FAX: (303) 966-8345

TO: K. Myers

FAX: 6678

PHONE: _____

NUMBER OF PAGES, INCLUDING COVER SHEET: _____

Please contact _____ if the fax is not received in its entirety.
(phone number)

NOTE:
This facsimile contains the results, in the Final Sample Data Package, for the analytes requested in this RIN. The package has been scheduled for verification or validation. Until verification or validation is completed the results must be considered preliminary. You will be forwarded a copy of the verification or validation report shortly after it is received by ASD. You should examine this report to determine if any qualifiers (flags) have been attached to the results. Flagged data may or may not be suitable for use as originally intended and should be evaluated for acceptability before use. If you have any questions please contact your Analytical Services Project Lead, do no contact the laboratory directly.

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LIONVILLE LABORATORY INC.

Analytical Report

Client: K-11 RIN #01D0606
LVI #: 01041.550
Subcontract #: KH7003271EP6

W.O.#: 11830-001-001-9999-00
Date Received: 04-18-01

PCB

The set of samples consisted of four (4) solid samples collected on 04-05-01.

The samples and their associated QC samples were extracted on 04-19-01 and analyzed according to Lionville Laboratory OPs based on SW846, 3rd Edition procedures on 05-02-01. The extraction procedure was based on method 3540 and the extracts were analyzed based on method 8082 for Aroclors only.

The following is a summary of the QC results accompanying the sample results and a description of any problems encountered during their analyses:

1. The cooler temperature has been recorded on the chain-of-custodies.
2. All required holding times for extraction and analysis have been met.
3. The samples and their associated QC samples received a sulfuric acid cleanup.
4. The method blank was below the reporting limits for all target compounds.
5. All surrogate recoveries were within acceptance criteria.
6. All blank spike recoveries were within acceptance criteria.
7. Several samples required instrument dilutions due to the high concentrations of target analytes. Reporting limits have been adjusted to reflect the necessary dilutions.
8. All initial calibrations associated with this data set were within acceptance criteria.
9. All continuing calibration standards analyzed prior to sample extracts were within acceptance criteria.
10. Patterns for Aroclors 1254 and 1260 were identified in these samples. The reported Aroclor was chosen based on the best pattern match and fit. Quantitation was performed using congeners common to both Aroclors to give the best overall total PCB concentration.
11. As of January 27, 2001, Recra Labnet Philadelphia became Lionville Laboratory Incorporated. Some forms may still reference Recra Labnet Philadelphia.

Iain Daniels
Deputy Laboratory Manager
Lionville Laboratory Incorporated

5/8/01
Date

pcb\r\group\data\pestkh\\041.551.pcb

The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 190 pages.

208 Welsh Pool Road • Lionville, PA 19341-1333 • (610) 280-3000 • Fax (610) 280 3041

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Commodore Advanced Sciences

RFETS

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # 01D0606#002

Page 1 of 2

Sampler(s) 5:00 5:25 [time/date]	Contact/Requester JOHNSEN, SHELLY/MYERS, KIM	Telephone No. 6401/7106
RIN 01D0606 JOHN GORSEY	Sampling Origin B885	Purchase Order/Charge Code EED10720
Project Title B885 CORE SAMPLES	Logbook No. 94 PORE	Ice Chest No. N/A Temp. N/A
To (Lab) RECRA Labnet-PA (L)	Method of Shipment SAMPLE TRAN	Bill of Lading/Air Bill No. N/A 4533 2172 7116
Protocol ARS SOP-003 Rev. 3	Related COC (if any) 01D0606#001	FRE

POSSIBLE SAMPLE HAZARDS/REMARKS
Are acid preserved samples DOT hazardous per 40 CFR Part 136.3 Table II? YES or NO
Are other known hazardous substances present? YES or NO
** ** **

SCREENING REQUIRED ☐

SPECIAL INSTRUCTIONS Hold Time

Bottle No.	Customer Number	Matrix	Date	Time	Location	Container (size/type/quantity)	Sample Analysis	Preservative; Packing
01D0606-001.005	N/A	SOLID	4/5/01	1257	B885	125-G / G / 1	SS03B006 (PCB 8080A/8081-Solid) [Routine]	None 4 degrees C
01D0606-001.006		SOLID	4/5/01	0940	B885	125-G / G / 1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-002.001		SOLID	4/5/01	1309	B885	125-G / G / 1	SS03B006 (PCB 8080A/8081-Solid) [Routine]	None 4 degrees C
01D0606-002.002		SOLID	4/5/01	1205	B885	125-G / G / 1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-003.001		SOLID	4/5/01	1537	B885	125-G / G / 1	SS03B006 (PCB 8080A/8081-Solid) [Routine]	None 4 degrees C
01D0606-003.002		SOLID	4/5/01	1227	B885	125-G / G / 1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-004.001		SOLID	4/5/01	1342	B885	125-G / G / 1	SS03B006 (PCB 8080A/8081-Solid) [Routine]	None 4 degrees C

Relinquished By:	Date/Time	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	1605	T130A Fedex #2	4/5/01 1605				
T130A Fedex #2	4/11/01 1330	J. Christman	4/11/01 1330				
J. Christman	4/11/01 1500	Fed Ex					
Fed Ex	4-18-01 0915	[signature]	4-18-01 0915				

FINAL SAMPLE DISPOSITION — Disposal Method (e.g., returned to customer, disposal per lab procedure, used in analytical process) — Disposed By — Date/Time

Commodore Advanced Sciences

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # 01D0606#002

Page 2 of 2

RIN 01D0606

Contact/Requestor: JOHNSEN, SHELLY/MYERS, KIM

Telephone No. 6401/7106

Bottle No.	Customer Number	Matrix	Date	Time	Location	Container (size/type/quantity)	Sample Analysis	Preservative; Packing
01D0606-004.002	N/A	SOLID	4/5/01	1246	B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-005.004		SOLID	4/5/01	1401	B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-006.004		SOLID	4/05/01	1415	B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-007.004		SOLID	4/05/01	1430	B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-008.004		SOLID			B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-009.004		SOLID			B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-010.004	N/A	SOLID	4/5/01	1209	B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-011.004		SOLID			B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-012.004		SOLID			B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs

Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time
	1605 4/18/01	T130A Fridge #2 4/18/01	1605				
T130A fridge #2 4/17/01	1330		4/17/01 1330				
	4/17/01	FED EX					
FedEx 4-18-01	0915		4-18-01 0915				

FINAL SAMPLE DISPOSITION: Disposal Method (e.g., returned to customer, disposed of per lab procedure, used in analytical process)

Disposed By

Date/Time

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # 01D0606#002

Page 1 of 1

Commodore Advanced Sciences, Inc.

RFETS

Sampler(s) (Signature) Vincent Sandoval 512520 / John Burcey

RIN 01D0606

Project Title B885 CORE SAMPLES 01263

To (Lab) RECRA Labnet-PA (L)

Protocol CAS SOP.003 REV 3

Contact/Requester JOHNSEN, SHELLY/MYERS, KIM

Sampling Origin B885

Logbook No. 94 Dodge

Method of Shipment Sample Team

Related COC (if any) 01D0606 # 001

Telephone No. 6101/7106

Purchase Order/Charge Code EED10720

Ice Chest No. n/a

Temp.

Bill of Lading/Air Bill No. N/A

PRE

SCREENING REQUIRED

SPECIAL INSTRUCTIONS Hold Time

POSSIBLE SAMPLE HAZARDS/REMARKS
Are acid preserved samples DOT hazardous per 40 CFR Part 136.3 Table II? YES or NO
Are other known hazardous substances present? YES or NO
** ** **

Bottle No.	Customer Number	Matrix	Date	Time	Location	Container (size(s) per quant(ity))	Sample Analysis	Preservative; Packing
01D0606-008.004	n/a	SOLID	4/6/01	0857	B885	125-G / G / 1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-009.004		SOLID	4/6/01	0912	B885	125-G / G / 1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-011.004		SOLID	4/6/01	0903	B885	125-G / G / 1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-012.004		SOLID	4/6/01	0910	B885	125-G / G / 1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs

4/6/01 SP

Relinquished By:	Date/Time	Received By:	Date/Time
CAS	4/6/01 1820	T130A Fridge #2	4/6/01 1820
T130A Fridge #2	4/7/01 1330	J. Christman	4/7/01 1330
J. Christman	4/7/01 1500	FedEx	
FedEx	4-18-01 0915	T. Kopp	4-18-01 0915

Relinquished By:	Date/Time	Received By:	Date/Time

FINAL SAMPLE DISPOSITION: Disposal Method (e.g., returned to customer, disposed of per lab procedure, used in analytical process)

Disposed By: Date/Time

Lionville Laboratory, Inc.

PCBs by GC

Report Date: 05/03/01 20:53

RFW Batch Number: 0104L550 Client: K-H RIN#01D0606 Work Order: 11830001001 Page: 1

Sample Information																							
Cust ID:	01D0606-001.005			01D0606-002.001			01D0606-003.001			01D0606-004.001			PBLKXX			PBLKXX BS		
RFW#:	001			003			005			007			01LE0455-MB1			01LE0455-MB1		
Matrix:	SOLID			SOLID			SOLID			SOLID			SOIL			SOIL		
D.F.:	1.00			1.00			20.0			10.0			1.00			1.00		
Units:	UG/KG			UG/KG			UG/KG			UG/KG			UG/KG			UG/KG		
Surrogate: Tetrachloro-m-xylene	98	%		102	%		D	%		D	%		95	%		100	%	
Decachlorobiphenyl	106	%		102	%		D	%		D	%		98	%		104	%	
Aroclor-1016	36	U		31	U		710	U		340	U		33	U		33	U	
Aroclor-1221	72	U		63	U		1400	U		680	U		67	U		67	U	
Aroclor-1232	36	U		31	U		710	U		340	U		33	U		33	U	
Aroclor-1242	36	U		31	U		710	U		340	U		33	U		33	U	
Aroclor-1248	36	U		31	U		710	U		340	U		33	U		33	U	
Aroclor-1254	250			29	J		1400			470			33	U		98	%	
Aroclor-1260	36	U		31	U		710	U		340	U		33	U		33	U	

0.25 ppm 1.4 ppm 0.47 ppm

Sample Information		
Cust ID:	PBLKXX BSD	
RFW#:	01LE0455-MB1	
Matrix:	SOIL	
D.F.:	1.00	
Units:	UG/KG	
Surrogate: Tetrachloro-m-xylene	95	%
Decachlorobiphenyl	95	%
Aroclor-1016	33	U
Aroclor-1221	67	U
Aroclor-1232	33	U
Aroclor-1242	33	U
Aroclor-1248	33	U
Aroclor-1254	80	%
Aroclor-1260	33	U

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not reported. NS= Not spiked.
%= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

4C

PESTICIDE METHOD BLANK SUMMARY

Lab Name: Lionville Labs, Inc.

Contract: ~~8830-01-01~~ 11830-001-001-9999-00 5/3/01

Case No.: K-H RIN#01D0606

Lab Sample ID: 01LE0455-MB1

Lab File ID: 05010111 .18

Matrix: (Soil/Water) SOIL

Level: (low/med) LOW

Date Extracted: 04/19/01

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed (1): 05/02/01

Date Analyzed (2): 05/02/01

Time Analyzed (1): 0802

Time Analyzed (2): 0802

Instrument ID (1): 11

Instrument ID (2): 12

GC Column ID (1): DB608

GC Column ID (2): RTX 1701

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	01D0606-001.005	0104L550-001	05/02/01	05/02/01
02	01D0606-002.001	0104L550-003	05/02/01	05/02/01
03	01D0606-003.001	0104L550-005	05/02/01	05/02/01
04	01D0606-004.001	0104L550-007	05/02/01	05/02/01
05	FBLKXXLE0455-MB1 BS	01LE0455-MB1S	05/02/01	05/02/01
06	FBLKXXLE0455-MB1 BSD	01LE0455-MB1T	05/02/01	05/02/01

COMMENTS:

5/4/01

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1D

PESTICIDE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

01D0606-001.005

Lab Name: Lionville Labs, Inc. Work Order: 11830001001

Client: K-H RIN#01D0605

Matrix: SOLID

Lab Sample ID: 0104L550-001

Sample wt/vol: 29.3 (g/mL) G

Lab File ID: 05010111.21

Level: (low/med) LOW

Date Received: 04/18/01

% Moisture: not dec. 5 dec.

Date Extracted: 04/19/01

Extraction: (SepF/Cont/Sonc) N/A

Date Analyzed: 05/02/01

GPC Cleanup: (Y/N) N pH: 7.0

Dilution Factor: 1.00

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		
12674-11-2	Aroclor-1016	36	U
11104-28-2	Aroclor-1221	72	U
11141-16-5	Aroclor-1232	36	U
53469-21-9	Aroclor-1242	36	U
12672-29-6	Aroclor-1248	36	U
11097-69-1	Aroclor-1254	250	
11096-82-5	Aroclor-1260	36	U

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1D

PESTICIDE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

01D0606-002.001

Lab Name: Lionville Labs, Inc. Work Order: 11830001001

Client: K-H RIN#01D0606

Matrix: SOLID

Lab Sample ID: 0104L550-003

Sample wt/vol: 33.2 (g/mL) G

Lab File ID: 05010111.22

Level: (low/med) LOW

Date Received: 04/18/01

% Moisture: not dec. 4 dec.

Date Extracted: 04/19/01

Extraction: (SepF/Cont/Sonc) N/A

Date Analyzed: 05/02/01

GPC Cleanup: (Y/N) N pH: 7.0

Dilution Factor: 1.00

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		
12674 11-2------	Aroclor-1016	31	U
11104-28-2------	Aroclor-1221	63	U
11141-16-5------	Aroclor-1232	31	U
53469-21-9------	Aroclor-1242	31	U
12672-29-6------	Aroclor-1248	31	U
11097-69-1------	Aroclor-1254	29	J
11096-82-5------	Aroclor-1260	31	U

FGS 5/4/01

FORM 1 PEST 12/88 Rev.

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1D

PESTICIDE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

01D0606-003.001

Lab Name: Lionville Labs, Inc. Work Order: 11830001001

Client: K-H RINS01D0606

Matrix: SOLID

Lab Sample ID: 0104L550-005

Sample wt/vol: 30.9 (g/mL) G

Lab File ID: 05010111.23

Level: (low/med) LOW

Date Received: 04/18/01

% Moisture: not dec. 8 dec.

Date Extracted: 04/19/01

Extraction: (SepF/Cont/Sonc) N/A

Date Analyzed: 05/02/01

GPC Cleanup: (Y/N) N pH: 7.0

Dilution Factor: 20.0

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		
12674-11-2	Aroclor-1016	710	U
11104-28-2	Aroclor-1221	1400	U
11141-16-5	Aroclor-1232	710	U
53469-21-9	Aroclor-1242	710	U
12672-29-6	Aroclor-1248	710	U
11097-69-1	Aroclor-1254	1400	
11096-82-5	Aroclor-1260	710	U

Keystone

FORM 1 PEST 12/88 Rev.

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1D

PESTICIDE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

01D0606-004.001

Lab Name: Lionville Labs, Inc. Work Order: 11830001001

Client: K-H RIN#01D0606

Matrix: SOLID

Lab Sample ID: 01041550-007

Sample wt/vol: 32.6 (g/mL) G

Lab File ID: 05010111.24

Level: (low/med) LOW

Date Received: 04/18/01

% Moisture: not dec. 9 dec.

Date Extracted: 04/19/01

Extraction: (SepF/Cont/Sonc) N/A

Date Analyzed: 05/02/01

GPC Cleanup: (Y/N) N pH: 7.0

Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	
12674-11-2	Aroclor-1016	340	U
11104-28-2	Aroclor-1221	680	U
11141-16-5	Aroclor-1232	340	U
53469-21-9	Aroclor-1242	340	U
12672-29-6	Aroclor-1248	340	U
11097-69-1	Aroclor-1254	470	
11096-82-5	Aroclor-1260	340	U

FORM 1 PEST 12/88 Rev.

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KAISER•HILL
COMPANY
ANALYTICAL SERVICES DIVISION

FAX COVER SHEET FOR FINAL DATA PACKAGE REPORTS

RIN NUMBER: 01D0606 VOA

FROM: SHELLY JOHNSEN

PHONE: (303) 966-6401

FAX: (303) 966-8345

TO: L. Myers

FAX: 6678

PHONE:

NUMBER OF PAGES, INCLUDING COVER SHEET: _____

Please contact _____ **if the fax is not received in its entirety.**
(phone number)

NOTE:
This facsimile contains the results, in the Final Sample Data Package, for the analytes requested in this RIN. The package has been scheduled for verification or validation. Until verification or validation is completed the results must be considered preliminary. You will be forwarded a copy of the verification or validation report shortly after it is received by ASD. You should examine this report to determine if any qualifiers (flags) have been attached to the results. Flagged data may or may not be suitable for use as originally intended and should be evaluated for acceptability before use. If you have any questions please contact your Analytical Services Project Lead, do no contact the laboratory directly.

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LVLI
LIONVILLE LABORATORY INC.

Client : K-II RIN # 01D0606
LVL #: 0104L550

W.O. #: 11830-001-001-9999-00
Date Received: 04-18-2001

GC/MS VOLATILE-TCLP

Twelve (12) leachate samples were generated on 04-20,21,25-2001 from solid samples collected on 04-05,06-2001.

The samples and their associated QC samples were analyzed according to criteria set forth in Lionville Laboratory OPs based on SW846 Method 8260B for client specified TCLP Volatile target compounds on 04-25,27-2001.

The following is a summary of the QC results accompanying these sample results and a description of any problems encountered during their analyses:

1. The cooler temperature upon receipt has been recorded on the chain-of-custody.
2. Non-target compounds were not detected in the samples.
3. All samples were analyzed within required holding time; however, samples 01D0606-011.004 and 01D0606-012.004 were leached outside of holding time due to late arrival of the samples in the laboratory. These samples were analyzed within 7-days from sample receipt.
4. The samples were analyzed at five-fold dilution due to the leachate matrix.
5. All surrogate recoveries were within EPA QC limits.
6. All matrix spike recoveries were within EPA QC limits.
7. All blank spike recoveries were within EPA QC limits.
8. The leachate blanks 01LTV011-LB1 and 01LTV013-LB1 contained the target compound Benzene at levels less than 2x the CRQL.
9. Internal standard area and retention time criteria were met.
10. As of January 27, 2001, Reera LabNet Philadelphia became Lionville Laboratory Incorporated. Some Forms may still reference Reera LabNet Philadelphia.

J. Michael Taylor
President
Lionville Laboratory Incorporated

5/16/01
Date

som\\qcomp\htm\vcolk-b-rin\0104L550.doc

The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 2 2 6 pages.

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Commodore Advanced Sciences

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.# 01D0606#002

RFETS

Sampler(s) Stogsdill 5125.0 / John Gorsey (time/date)	Contact/Requester JOHNSEN, SHELLY/MYERS, KIM	Telephone No. 6401/7106	
RIN 01D0606	Sampling Origin B885	Purchase Order/Charge Code EED10720	
Project Title B885 CORE SAMPLES	Logbook No. 94 DOBAE	Ice Chest No. N/A	Temp. N/A
To (Lab) RECRA Labnet-PA (L)	Method of Shipment Sample Team	Bill of Lading/Air Bill No. N/A 4533 7177 7716	
Protocol ARS SOP-003 Rev. 3	Related COC (if any) 01D0606#001	PRE	

POSSIBLE SAMPLE HAZARDS/REMARKS
Are acid preserved samples DOT hazardous per 40 CFR Part 136.3 Table II? YES or NO
Are other known hazardous substances present? YES or NO
** ** **

SCREENING REQUIRED ☐

SPECIAL INSTRUCTIONS Hold Time

Bottle No.	Customer Number	Matrix	Date	Time	Location	Container (size/type/quantity)	Sample Analysis	Preservative; Packing
01D0606-001.005	N/A	SOLID	4/5/01	1257	B885	125-G / G / 1	SS03B006 (PCB 8080A/8081-Solid) [Routine]	None 4 degrees C
01D0606-001.006		SOLID	4/5/01	0940	B885	125-G / G / 1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-002.001		SOLID	4/5/01	1309	B885	125-G / G / 1	SS03B006 (PCB 8080A/8081-Solid) [Routine]	None 4 degrees C
01D0606-002.002		SOLID	4/5/01	1205	B885	125-G / G / 1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-003.001		SOLID	4/5/01	1537	B885	125-G / G / 1	SS03B006 (PCB 8080A/8081-Solid) [Routine]	None 4 degrees C
01D0606-003.002		SOLID	4/5/01	1227	B885	125-G / G / 1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-004.001		SOLID	4/5/01	1342	B885	125-G / G / 1	SS03B006 (PCB 8080A/8081-Solid) [Routine]	None 4 degrees C

Relinquished By:	Date/Time	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
[signature] CES-Stogsdill	1605	T130A Fedex #2	4/16/01 1605				
T130A Fedex #2	4/17/01 1330	J. Christman	4/17/01 1330				
J. Christman	4/17/01 1500	Fed Ex					
Fed Ex	4-18-01 0915	[signature]	4-18-01 0915				

FINAL SAMPLE DISPOSITION — Disposal Method (e.g., returned to customer, disposed of per lab procedure, used in analytical process) — Disposed By — Date/Time

Commodore Advanced Sciences

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.# 01D0606#002

RIN 01D0606

Contact/Requestor: JOHNSEN, SHELLY/MYERS, KIM

Telephone No. 6401/7106

Bottle No.	Customer Number	Matrix	Date	Time	Location	Container (size/type/quantity)	Sample Analysis	Preservative; Packing
01D0606-004.002	N/A	SOLID	4/5/01	1246	B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-005.004		SOLID	4/5/01	1401	B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-006.004		SOLID	4/05/01	1415	B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-007.004		SOLID	4/05/01	1450	B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
~~01D0606-008.004~~		~~SOLID~~			B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine] 4/05/01	None ~~4 degs C w/zhs~~
~~01D0606-009.004~~		~~SOLID~~			B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine] 4/05/01	None ~~4 degs C w/zhs~~
01D0606-010.004	N/A	SOLID	4/5/01	1209	B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
~~01D0606-011.004~~		~~SOLID~~			B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine] 4/05/01	None ~~4 degs C w/zhs~~
~~01D0606-012.004~~		~~SOLID~~			B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine] 4/05/01	None ~~4 degs C w/zhs~~

Relinquished By:	Date/Time	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
[illegible]	1605 4/05/01	T1300 A/Ridge #2	1605 4/05/01				
T1300 Judge #2	4/17/01 1330	[illegible]	4/17/01 1330				
[illegible]	4/17/01 1500	FedEx					
FedEx	4-18-01 0915	[illegible]	4-18-01 0915				

FINAL SAMPLE DISPOSITION Disposal Method (e.g., returned to customer, disposed of per lab procedure, used in analytical process) Disposed By Date/Time

Commodore Advanced Sciences, Inc.

RFETS

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # 01D0606#002

Page 1 of 1

Sampler(s) (Signature) 512520	Contact/Requester JOHNSEN, SHELLY/MYERS, KIM	Telephone No. 6401/7106
RIN 01D0606 JOHN BOWLEY	Sampling Origin B885	Purchase Order/Charge Code EED10720
Project Title B885 CORE SAMPLES 51263	Logbook No. 94 Dodge	Ice Chest No. n/a Temp.
To (Lab) RECRA Labnet-PA (L)	Method of Shipment Sample Team	Bill of Lading/Air Bill No. NA
Protocol CAS SOP.003 REV 3	Related COC (if any) 01D0606 # 001	PRE

POSSIBLE SAMPLE HAZARDS/REMARKS
Are acid preserved samples DOT hazardous per 40 CFR Part 136.3 Table II? YES or NO
Are other known hazardous substances present? YES or NO
** ** **

SCREENING REQUIRED [ ]

SPECIAL INSTRUCTIONS Hold Time

Bottle No	Customer Number	Matrix	Date	Time	Location	Container (size/type/quantity)	Sample Analysis	Preservative ; Packing
01D0606-008.004	n/a	SOLID	4/6/01	0856	B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-009.004		SOLID	4/6/01	0912	B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-011.004		SOLID	4/6/01	0903	B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-012.004		SOLID	4/6/01	0910	B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs

4/6/01 SP

Relinquished By:	Date/Time	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
CAS	4/6/01 1820	T1304 Fed Ex #2	4/6/01 1820				
T1304 Fed Ex #2	4/17/01 1330	JH Christman	4/17/01 1330				
JH Christman	4/17/01 1500	Fed Ex					
Fed Ex	4-18-01 0915	T Kopp	4-18-01 0915				

FINAL SAMPLE DISPOSITION Disposal Method (e.g., returned to customer, disposed of per lab procedure, used in analytical process) Disposed By Date/Time

Lionville Laboratory, Inc.

Volatiles by GC/MS, TCLP Leachate

Report Date: 05/04/01 17:43

RFW Batch Number: 0104L550 Client: K-H RIN#01D0606 Work Order: 1183000100I Page: 1a

Sample Information	Cust ID:	01D0606-001.006		01D0606-001.006		01D0606-001.006		01D0606-002.002		01D0606-003.002		01D0606-004.002	
	RFW#:	029		029 MS		029 MSD		030		031		032	
	Matrix:	WATER		WATER		WATER		WATER		WATER		WATER	
	D.F.:	5.00		5.00		5.00		5.00		5.00		5.00	
	Units:	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
Surrogate Recovery	Toluene-d8	104	%	103	%	102	%	96	%	93	%	97	%
	Bromofluorobenzene	96	%	95	%	95	%	97	%	92	%	88	%
	1,2-Dichloroethane-d4	118	%	121	%	119	%	117	%	116	%	119	%
Vinyl Chloride		50	U	96	%	97	%	50	U	50	U	50	U
1,1-Dichloroethene		25	U	100	%	103	%	25	U	25	U	25	U
Chloroform		25	U	116	%	116	%	25	U	25	U	25	U
1,2-Dichloroethane		25	U	121	%	121	%	25	U	25	U	25	U
2-Butanone		50	U	149	%	137	%	10	J	50	U	11	J
Carbon Tetrachloride		25	U	126	%	128	%	25	U	25	U	25	U
Trichloroethene		25	U	104	%	106	%	25	U	25	U	25	U
Benzene		25	U	99	%	102	%	25	U	25	U	25	U
Tetrachloroethene		25	U	100	%	100	%	25	U	25	U	25	U
Chlorobenzene		25	U	104	%	106	%	25	U	25	U	25	U
1,3-Dichlorobenzene		25	U	25	U	25	U	25	U	25	U	25	U
1,4-Dichlorobenzene		25	U	94	%	95	%	25	U	25	U	25	U
1,2-Dichlorobenzene		25	U	25	U	25	U	25	U	25	U	25	U

*= Outside of EPA CLP QC limits.

Lionville Laboratory, Inc.

Volatiles by GC/MS, TCLP Leachate

Report Date: 05/04/01 17:43

RFW Batch Number: 0104L550 Client: K-H RIN#01D0606 Work Order: 11830001001 Page: 2a

	Cust ID:	01D0606-005.004		01D0606-006.004		01D0606-007.004		01D0606-010.004		01D0606-008.004		01D0606-009.004	
Sample Information	RFW#:	033		034		035		036		037		038	
	Matrix:	WATER		WATER		WATER		WATER		WATER		WATER	
	D.F.:	5.00		5.00		5.00		5.00		5.00		5.00	
	Units:	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
Surrogate Recovery	Toluene-d8	97	%	101	%	108	%	106	%	93	%	94	%
	Bromofluorobenzene	87	%	102	%	102	%	100	%	92	%	87	%
	1,2-Dichloroethane-d4	122	%	100	%	123	%	121	%	122	%	122	%
Vinyl Chloride		50	U	50	U	50	U	50	U	50	U	50	U
1,1-Dichloroethene		25	U	25	U	25	U	25	U	25	U	25	U
Chloroform		25	U	25	U	25	U	25	U	25	U	25	U
1,2-Dichloroethane		25	U	25	U	25	U	25	U	25	U	25	U
2-Butanone		50	U	17	J	10	J	12	J	50	U	50	U
Carbon Tetrachloride		25	U	25	U	25	U	25	U	25	U	25	U
Trichloroethene		25	U	25	U	25	U	25	U	25	U	25	U
Benzene		25	U	25	U	25	U	25	U	25	U	25	U
Tetrachloroethene		25	U	25	U	25	U	25	U	25	U	25	U
Chlorobenzene		25	U	25	U	25	U	25	U	25	U	25	U
1,3-Dichlorobenzene		25	U	25	U	25	U	25	U	25	U	25	U
1,4-Dichlorobenzene		25	U	25	U	25	U	25	U	25	U	25	U
1,2-Dichlorobenzene		25	U	25	U	25	U	25	U	25	U	25	U

*= Outside of EPA CLP QC limits.

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RFW Batch Number: 01041550

Lionville Laboratory, Inc.

Volatiles by GC/MS, TCLP Leachate

Client: K-H RIN#01D0606

Work Order: 11830C01001 Page: 3a

Report Date: 05/04/01 17:43

	Cust ID:	01D0606-011.004		01D0606-012.004		VBLKWE		VBLKWE BS		VBLKWD		LCHBLK	
Sample Information	RFW#:	039		040		01LVN092-MB1		01LVN092-MB1		01LVH147-MB1		01LTV011-LB1	
	Matrix:	WATER		WATER		WATER		WATER		WATER		WATER	
	D.F.:	5.00		5.00		1.00		1.00		1.00		5.00	
	Units:	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
	Toluene-d8	99	%	98	%	98	%	100	%	94	%	98	%
Surrogate	Bromofluorobenzene	100	%	99	%	90	%	89	%	104	%	99	%
Recovery	1,2-Dichloroethane-d4	98	%	99	%	121	%	124	%	90	%	101	%
Vinyl Chloride		50	U	50	U	10	U	90	%	10	U	50	U
1,1-Dichloroethene		25	U	25	U	5	U	95	%	5	U	25	U
Chloroform		25	U	25	U	5	U	111	%	5	U	25	U
1,2-Dichloroethane		25	U	25	U	5	U	121	%	5	U	25	U
2-Butanone		50	U	50	U	10	U	88	%	10	U	50	U
Carbon Tetrachloride		25	U	25	U	5	U	120	%	5	U	25	U
Trichloroethene		25	U	25	U	5	U	101	%	5	U	25	U
Benzene		25	U	25	U	5	U	96	%	5	U	28	
Tetrachloroethene		25	U	25	U	5	U	96	%	5	U	25	U
Chlorobenzene		25	U	25	U	5	U	103	%	5	U	25	U
1,3-Dichlorobenzene		25	U	25	U	5	U	5	U	5	U	25	U
1,4-Dichlorobenzene		25	U	25	U	5	U	86	%	5	U	25	U
1,2-Dichlorobenzene		25	U	25	U	5	U	5	U	5	U	25	U

*= Outside of EPA CLP QC limits.

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MAY-21-2001 MON 09:21 AM SOURCE ONE ASD FAX NO. 303 966 8345 P. 08

Lionville Laboratory, Inc.

Volatiles by GC/MS, TCLP Leachate

Report Date: 05/04/01 17:43

RFW Batch Number: **0104L550** Client: **K-H RIN#01D0606** Work Order: 11830001001 Page: 4a

	Cust ID:	**LCHBLK**	**LCHBLK**
Sample Information	RFW#:	**01LTV012-LB1**	**01LTV013-LB1**
	Matrix:	WATER	WATER
	D.F.:	5.00	5.00
	Units:	ug/L	ug/L
Surrogate Recovery	Toluene-d8	99 %	101 %
	Bromofluorobenzene	100 %	103 %
	1,2-Dichloroethane-d4	101 %	105 %
Vinyl Chloride		50 U	50 U
1,1-Dichloroethene		25 U	25 U
Chloroform		25 U	25 U
1,2-Dichloroethane		25 U	25 U
2-Butanone		50 U	50 U
Carbon Tetrachloride		25 U	25 U
Trichloroethene		25 U	25 U
Benzene		25 U	11 J
Tetrachloroethene		25 U	25 U
Chlorobenzene		25 U	25 U
1,3-Dichlorobenzene		25 U	25 U
1,4-Dichlorobenzene		25 U	25 U
1,2-Dichlorobenzene		25 U	25 U

*= Outside of EPA CLP QC limits.

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: Lionville Laboratory Inc. Contract: 11830-001-001-9999-00

Lab Code: LVLI Case No.: SAS No.: SDG No.: 04L550

Lab File ID: H042705 Lab Sample ID: 01LVH147-MB1

Date Analyzed: 04/27/1 Time Analyzed: 1106

Matrix: (soil/water) WATER Level: (low/med) LOW

Instrument ID: 5972H

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	01D0606-006.004	0104L550-034	H042712	1539
02	01D0606-011.004	0104L550-039	H042713	1618
03	01D0606-012.004	0104L550-040	H042714	1656
04	LCHBLK	01LTV011-LB1	H042715	1734
05	LCHBLK	01LTV012-LB1	H042716	1813
06	LCHBLK	01LTV013-LB1	H042717	1852
07				
08				
09				
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COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: Lionville Laboratory Inc. Contract: 11830-001-001-9999-00

Lab Code: LVLI Case No.: SAS No.: SDG No.: 04L550

Lab File ID: N042507 Lab Sample ID: 01LVN092-MB1

Date Analyzed: 04/25/1 Time Analyzed: 1320

Matrix: (soil/water) WATER Level:(low/med) LOW

Instrument ID: 5972N

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VBLKWEBS	01LVN092-MB1S	N042506	1243
02	01D0606-001.006	0104L550-029	N042508	1357
03	01D0606-001.006MS	0104L550-029S	N042509	1435
04	01D0606-001.006MSD	0104L550-029T	N042510	1512
05	01D0606-002.002	0104L550-030	N042511	1549
06	01D0606-003.002	0104L550-031	N042512	1627
07	01D0606-004.002	0104L550-032	N042513	1705
08	01D0606-005.004	0104L550-033	N042514	1742
09	01D0606-007.004	0104L550-035	N042516	1858
10	01D0606-010.004	0104L550-036	N042517	1935
11	01D0606-008.004	0104L550-037	N042518	2013
12	01D0606-009.004	0104L550-038	N042519	2050
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COMMENTS:

1A

VOLATILE ORGANICS ANALYSIS SHEET

EPA SAMPLE NO.

01D0606-001.006

Lab Name: Lionville Labs, Inc. Contract: 11830001001

Lab Code: Lionvi Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix: (soil/water) WATER Lab Sample ID: 0104L550-029

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: n042508

Level: (low/med) LOW Date Received: 04/18/01

% Moisture: not dec. ____ Date Analyzed: 04/25/01

Column: (pack/cap) CAP Dilution Factor: 5.00

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		
75-01-4	Vinyl Chloride	50	U
75-35-4	1,1-Dichloroethene	25	U
67-66-3	Chloroform	25	U
107-06-2	1,2-Dichloroethane	25	U
78-93-3	2-Butanone	50	U
56-23-5	Carbon Tetrachloride	25	U
79-01-6	Trichloroethene	25	U
71-43-2	Benzene	25	U
127-18-4	Tetrachloroethene	25	U
108-90-7	Chlorobenzene	25	U
541-73-1	1,3-Dichlorobenzene	25	U
106-46-7	1,4-Dichlorobenzene	25	U
95-50-1	1,2-Dichlorobenzene	25	U

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VOLATILE ORGANICS ANALYSIS SHEET

EPA SAMPLE NO.

01D0606-002.002

Lab Name: Lionville Labs, Inc. Contract: 11830001001

Lab Code: Lionvi Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix: (soil/water) WATER Lab Sample ID: 0104L550-030

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: n042511

Level: (low/med) LOW Date Received: 04/18/01

% Moisture: not dec. ____ Date Analyzed: 04/25/01

Column: (pack/cap) CAP Dilution Factor: 5.00

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		
75-01-4	Vinyl Chloride	50	U
75-35-4	1,1-Dichloroethene	25	U
67-66-3	Chloroform	25	U
107-06-2	1,2-Dichloroethane	25	U
78-93-3	2-Butanone	10	J
56-23-5	Carbon Tetrachloride	25	U
79-01-6	Trichloroethene	25	U
71-43-2	Benzene	25	U
127-18-4	Tetrachloroethene	25	U
108-90-7	Chlorobenzene	25	U
541-73-1	1,3-Dichlorobenzene	25	U
106-46-7	1,4-Dichlorobenzene	25	U
95-50-1	1,2-Dichlorobenzene	25	U

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1A

VOLATILE ORGANICS ANALYSIS SHEET

EPA SAMPLE NO.

01D0606-003.002

Lab Name: Lionville Labs, Inc. Contract: 11830001001

Lab Code: Lionvi Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix: (soil/water) WATER Lab Sample ID: 0104L550-031

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: n012512

Level: (low/med) LOW Date Received: 04/18/01

% Moisture: not dec. ____ Date Analyzed: 04/25/01

Column: (pack/cap) CAP Dilution Factor: 5.00

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		
75-01-4	Vinyl Chloride	50	U
75-35-4	1,1-Dichloroethene	25	U
67-66-3	Chloroform	25	U
107-06-2	1,2-Dichloroethane	25	U
78-93-3	2-Butanone	50	U
56-23-5	Carbon Tetrachloride	25	U
79-01-6	Trichloroethene	25	U
71-43-2	Benzene	25	U
127-18-4	Tetrachloroethene	25	U
108-90-7	Chlorobenzene	25	U
541-73-1	1,3-Dichlorobenzene	25	U
106-46-7	1,4-Dichlorobenzene	25	U
95-50-1	1,2-Dichlorobenzene	25	U

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1A

VOLATILE ORGANICS ANALYSIS SHEET

EPA SAMPLE NO.

01D0606-001.002

Lab Name: Lionville Labs, Inc. Contract: 11830001001

Lab Code: Lionvi Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix: (soil/water) WATER Lab Sample ID: 0104L550-032

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: n042513

Level: (low/med) LOW Date Received: 04/18/01

% Moisture: not dec. ____ Date Analyzed: 04/25/01

Column: (pack/cap) CAP Dilution Factor: 5.00

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		
75-01-4	Vinyl Chloride	50	U
75-35-4	1,1-Dichloroethene	25	U
67-66-3	Chloroform	25	U
107-06-2	1,2-Dichloroethane	25	U
78-93-3	2-Butanone	11	J
56-23-5	Carbon Tetrachloride	25	U
79-01-6	Trichloroethene	25	U
71-43-2	Benzene	25	U
127-18-4	Tetrachloroethene	25	U
108-90-7	Chlorobenzene	25	U
541-73-1	1,3-Dichlorobenzene	25	U
106-46-7	1,4-Dichlorobenzene	25	U
95-50-1	1,2-Dichlorobenzene	25	U

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VOLATILE ORGANICS ANALYSIS SHEET

EPA SAMPLE NO.

01D0606-005.004

Lab Name: Lionville Labs, Inc. Contract: 11830001001

Lab Code: Lionvi Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix: (soil/water) WATER Lab Sample ID: 0104L550-033

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: n042514

Level: (low/med) LOW Date Received: 04/18/01

% Moisture: not dec. ____ Date Analyzed: 04/25/01

Column: (pack/cap) CAP Dilution Factor: 5.00

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		
75-01-4	Vinyl Chloride	50	U
75-35-4	1,1-Dichloroethene	25	U
67-66-3	Chloroform	25	U
107-06-2	1,2-Dichloroethane	25	U
78-93-3	2-Butanone	50	U
56-23-5	Carbon Tetrachloride	25	U
79-01-6	Trichloroethene	25	U
71-43-2	Benzene	25	U
127-18-4	Tetrachloroethene	25	U
108-90-7	Chlorobenzene	25	U
541-73-1	1,3-Dichlorobenzene	25	U
106-46-7	1,4-Dichlorobenzene	25	U
95-50-1	1,2-Dichlorobenzene	25	U

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VOLATILE ORGANICS ANALYSIS SHEET

EPA SAMPLE NO.

01D0606-006.004

Lab Name: Lionville Labs, Inc. Contract: 11830001001

Lab Code: Lionvi Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix: (soil/water) WATER Lab Sample ID: 0104L550-034

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: h042712

Level: (low/med) LOW Date Received: 04/18/01

% Moisture: not dec. ____ Date Analyzed: 04/27/01

Column: (pack/cap) CAP Dilution Factor: 5.00

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		
75-01-4	Vinyl Chloride	50	U
75-35-4	1,1-Dichloroethene	25	U
67-66-3	Chloroform	25	U
107-06-2	1,2-Dichloroethane	25	U
78-93-3	2-Butanone	17	J
56-23-5	Carbon Tetrachloride	25	U
79-01-6	Trichloroethene	25	U
71-43-2	Benzene	25	U
127-18-4	Tetrachloroethene	25	U
108-90-7	Chlorobenzene	25	U
541-73-1	1,3-Dichlorobenzene	25	U
106-46-7	1,4-Dichlorobenzene	25	U
95-50-1	1,2-Dichlorobenzene	25	U

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VOLATILE ORGANICS ANALYSIS SHEET

EPA SAMPLE NO.

01D0606-007.004

Lab Name: Lionville Labs, Inc. Contract: 11830001001

Lab Code: Lionvi Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix: (soil/water) WATER Lab Sample ID: 0104L550-035

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: n042516

Level: (low/med) LOW Date Received: 04/18/01

% Moisture: not dec. ____ Date Analyzed: 04/25/01

Column: (pack/cap) CAP Dilution Factor: 5.00

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		
75-01-4	Vinyl Chloride	50	U
75-35-4	1,1-Dichloroethene	25	U
67-66-3	Chloroform	25	U
107-06-2	1,2-Dichloroethane	25	U
78-93-3	2-Butanone	10	J
56-23-5	Carbon Tetrachloride	25	U
79-01-6	Trichloroethene	25	U
71-43-2	Benzene	25	U
127-18-4	Tetrachloroethene	25	U
108-90-7	Chlorobenzene	25	U
541-73-1	1,3-Dichlorobenzene	25	U
106-46-7	1,4-Dichlorobenzene	25	U
95-50-1	1,2-Dichlorobenzene	25	U

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1A

VOLATILE ORGANICS ANALYSIS SHEET

EPA SAMPLE NO.

01D0606-010.004

Lab Name: Lionville Labs, Inc. Contract: 11830001001

Lab Code: Lionvi Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix: (soil/water) WATER Lab Sample ID: 0104L550-036

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: n042517

Level: (low/med) LOW Date Received: 04/18/01

% Moisture: not dec. ____ Date Analyzed: 04/25/01

Column: (pack/cap) CAP Dilution Factor: 5.00

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		
75-01-4	Vinyl Chloride	50	U
75-35-4	1,1-Dichloroethene	25	U
67-66-3	Chloroform	25	U
107-06-2	1,2-Dichloroethane	25	U
78-93-3	2-Butanone	12	J
56-23-5	Carbon Tetrachloride	25	U
79-01-6	Trichloroethene	25	U
71-43-2	Benzene	25	U
127-18-4	Tetrachloroethene	25	U
108-90-7	Chlorobenzene	25	U
541-73-1	1,3-Dichlorobenzene	25	U
106-46-7	1,4-Dichlorobenzene	25	U
95-50-1	1,2-Dichlorobenzene	25	U

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VOLATILE ORGANICS ANALYSIS SHEET

EPA SAMPLE NO.

01D0606-008.004

Lab Name: Lionville Labs, Inc. Contract: 11830001001

Lab Code: Lionvi Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix: (soil/water) WATER Lab Sample ID: 0104L550-037

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: n042518

Level: (low/med) LOW Date Received: 04/18/01

% Moisture: not dec. ____ Date Analyzed: 04/25/01

Column: (pack/cap) CAP Dilution Factor: 5.00

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		
75-01-4	Vinyl Chloride	50	U
75-35-4	1,1-Dichloroethene	25	U
67-66-3	Chloroform	25	U
107-06-2	1,2-Dichloroethane	25	U
78-93-3	2-Butanone	50	U
56-23-5	Carbon Tetrachloride	25	U
79-01-6	Trichloroethene	25	U
71-43-2	Benzene	25	U
127-18-4	Tetrachloroethene	25	U
108-90-7	Chlorobenzene	25	U
541-73-1	1,3-Dichlorobenzene	25	U
106-46-7	1,4-Dichlorobenzene	25	U
95-50-1	1,2-Dichlorobenzene	25	U

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VOLATILE ORGANICS ANALYSIS SHEET

EPA SAMPLE NO.

01D0606-009.004

Lab Name: Lionville Labs, Inc. Contract: 11830001001

Lab Code: Lionvi Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix: (soil/water) WATER Lab Sample ID: 0104L550-038

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: n042519

Level: (low/med) LOW Date Received: 04/18/01

% Moisture: not dec. ____ Date Analyzed: 04/25/01

Column: (pack/cap) CAP Dilution Factor: 5.00

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		
75-01-4	Vinyl Chloride	50	U
75-35-4	1,1-Dichloroethene	25	U
67-66-3	Chloroform	25	U
107-06-2	1,2-Dichloroethane	25	U
78-93-3	2-Butanone	50	U
56-23-5	Carbon Tetrachloride	25	U
79-01-6	Trichloroethene	25	U
71-43-2	Benzene	25	U
127-18-4	Tetrachloroethene	25	U
108-90-7	Chlorobenzene	25	U
541-73-1	1,3-Dichlorobenzene	25	U
106-46-7	1,4-Dichlorobenzene	25	U
95-50-1	1,2-Dichlorobenzene	25	U

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VOLATILE ORGANICS ANALYSIS SHEET

EPA SAMPLE NO.

01D0606-011.004

Lab Name: Lionville Labs, Inc. Contract: 11830001001

Lab Code: Lionvi Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix: (soil/water) WATER Lab Sample ID: 0104L550-039

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: h042713

Level: (low/med) LOW Date Received: 04/18/01

% Moisture: not dec. ____ Date Analyzed: 04/27/01

Column: (pack/cap) CAP Dilution Factor: 5.00

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		
75-01-4	Vinyl Chloride	50	U
75-35-4	1,1-Dichloroethene	25	U
67-66-3	Chloroform	25	U
107-06-2	1,2-Dichloroethane	25	U
78-93-3	2-Butanone	50	U
56-23-5	Carbon Tetrachloride	25	U
79-01-6	Trichloroethene	25	U
71-43-2	Benzene	25	U
127-18-4	Tetrachloroethene	25	U
108-90-7	Chlorobenzene	25	U
541-73-1	1,3-Dichlorobenzene	25	U
106-46-7	1,4-Dichlorobenzene	25	U
95-50-1	1,2-Dichlorobenzene	25	U

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VOLATILE ORGANICS ANALYSIS SHEET

EPA SAMPLE NO.

01D0606-012.004

Lab Name: Lionville Labs, Inc. Contract: 11830001001

Lab Code: Lionvi Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix: (soil/water) WATER Lab Sample ID: 0104L550-040

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: h042714

Level: (low/med) LOW Date Received: 04/18/01

% Moisture: not dec. ____ Date Analyzed: 04/27/01

Column: (pack/cap) CAP Dilution Factor: 5.00

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		
75-01-4	Vinyl Chloride	50	U
75-35-4	1,1-Dichloroethene	25	U
67-66-3	Chloroform	25	U
107-06-2	1,2-Dichloroethane	25	U
78-93-3	2-Butanone	50	U
56-23-5	Carbon Tetrachloride	25	U
79-01-6	Trichloroethene	25	U
71-43-2	Benzene	25	U
127-18-4	Tetrachloroethene	25	U
108-90-7	Chlorobenzene	25	U
541-73-1	1,3-Dichlorobenzene	25	U
106-46-7	1,4-Dichlorobenzene	25	U
95-50-1	1,2-Dichlorobenzene	25	U

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KAISER•HILL
COMPANY
ANALYTICAL SERVICES DIVISION

FAX COVER SHEET FOR FINAL DATA PACKAGE REPORTS

RIN NUMBER: 01D0606 met

FROM: SHELLY JOHNSEN

PHONE: (303) 966-6401

FAX: (303) 966-8345

TO: K. Myers

FAX: 6678

PHONE: _____

NUMBER OF PAGES, INCLUDING COVER SHEET: _____

Please contact _____ if the fax is not received in its entirety.
(phone number)

NOTE:
This facsimile contains the results, in the Final Sample Data Package, for the analytes requested in this RIN. The package has been scheduled for verification or validation. Until verification or validation is completed the results must be considered preliminary. You will be forwarded a copy of the verification or validation report shortly after it is received by ASD. You should examine this report to determine if any qualifiers (flags) have been attached to the results. Flagged data may or may not be suitable for use as originally intended and should be evaluated for acceptability before use. If you have any questions please contact your Analytical Services Project Lead, do no contact the laboratory directly.

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LIONVILLE LABORATORY INC.

Analytical Report

Client : K-H RIN#01D0606
LVL# : 0104L550

W.O.# : 11830-001-001-9999-00
Date Received : 04-18-01

SW846 METALS

1. This narrative covers the analyses of 12 TCLP leachate samples.

2. The samples were prepared and analyzed in accordance with SW-846 protocol and reported with CLP deliverable. All samples and the method blank QC for ICP analysis were diluted six fold due to the sample matrix. With the six fold dilution, the client requested limit was exceeded for Silver and Beryllium. All sample results for Silver were nondetect and all sample results for Beryllium were below the UTS limits.

3. ICVs, CCVs, and LCSs stock standards were purchased from Inorganic Ventures Laboratory and High Purity.

4. All analyses were performed within the required holding times.

5. The cooler temperature (5.2°C) has been recorded on the Chain of Custody

6. All Initial and Continuing Calibration Verifications (ICV/CCVs) were within control limits.

7. All Initial and Continuing Calibration Blanks (ICB/CCBs) were within method criteria.

8. All preparation/method blanks were below the client requested limits found in RDL3 with the exception of Beryllium in MB2 and MB3, however the results were below the UTS limits. Refer to form 3.

9. All ICP Interference Check Standards were within control limits. Refer to form 4.

10. All laboratory control samples (LCS) were within the 80-120% control limits. Refer to form 7.

11. The serial dilution percent difference for 1 analyte was outside SW-846 control limits. Refer to form 9.

The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 285 pages.

208 Welsh Pool Road • Lionville, PA 19341-1333 • (610) 280-2650 • Fax (610) 280-3041

12. All sample IDs were changed to accommodate the EPA naming convention which allows a maximum of 6 characters on all CLP Forms. Refer to the comments section of form 1 for the original ID.

13. All duplicate analyses were within the 20% Relative Percent Difference (RPD) control limits. Refer to form 6.

14. The TCLP extract from sample 01D0606-001.006 was selected for the matrix spike (MS) for this analytical batch. The MS recoveries for the eight RCRA analytes and the additional regulatory metal analytes in the TCLP extract were above 50%, with the exception of Calcium, as per method criteria. The remaining analytes were not spiked. Please refer to form 5.

15. As of January 27, 2001, Recra LabNet Philadelphia became Lionville Laboratory Incorporated. Some forms may still reference Recra LabNet Philadelphia.

Iain Daniels
Deputy Laboratory Manager
Lionville Laboratory Incorporated

05-15-01
Date

alm/m04-550

LVLI
LIONVILLE LABORATORY INC.

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Commodore Advanced Sciences

RFETS

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # 01D0606

Page 1 of 2

Sampler(s) Stozzo 5125.0 (time/date)	Contact/Requester JOHNSEN, SHELLY/MYERS, KIM	Telephone No. 6401/7106
RIN 01D0606 John Grossey	Sampling Origin B885	Purchase Order/Charge Code EED10720
Project Title B885 CORE SAMPLES 51263	Logbook No. 94 P0266	Ice Chest No. N/A Temp. N/A
To (Lab) RECRA Labnet-PA (L)	Method of Shipment Sample Team	Bill of Lading/Air Bill No. N/A 4533 2177 2716
Protocol 205 SOP-003 Rev. 3	Related COC (if any) 01D0606 #001	PRE

POSSIBLE SAMPLE HAZARDS/REMARKS
Are acid preserved samples DOT hazardous per 40 CFR Part 136.3 Table II? YES or NO
Are other known hazardous substances present? YES or NO
** ** **

SCREENING REQUIRED ☐

SPECIAL INSTRUCTIONS Hold Time

Bottle No.	Customer Number	Matrix	Date	Time	Location	Container (size/type/quantity)	Sample Analysis	Preservative; Packing
01D0606-001.005	N/A	SOLID	4/5/01	1257	B885	125-G / G /1	SS03B006 (PCB 8080A/8081-Solid) [Routine]	None 4 degrees C
01D0606-001.006		SOLID	4/5/01	0940	B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-002.001		SOLID	4/5/01	1309	B885	125-G / G /1	SS03B006 (PCB 8080A/8081-Solid) [Routine]	None 4 degrees C
01D0606-002.002		SOLID	4/5/01	1205	B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-003.001		SOLID	4/5/01	1337	B885	125-G / G /1	SS03B006 (PCB 8080A/8081-Solid) [Routine]	None 4 degrees C
01D0606-003.002		SOLID	4/5/01	1227	B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-004.001		SOLID	4/5/01	1342	B885	125-G / G /1	SS03B006 (PCB 8080A/8081-Solid) [Routine]	None 4 degrees C

Relinquished By:	Date/Time	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
[illegible]	1605	T130A Fed Ex #2	1605 4/5/01				
T130A Fed Ex #2	4/11/01 1330	J H Christman	4/11/01 1330				
J H Christman	4/17/01 1500	Fed Ex					
Fed Ex	4-18-01 0915	[illegible]	4-18-01 0915				

FINAL SAMPLE DISPOSITION — Disposal Method (e.g., returned to customer, disposed of per lab procedure, used in analytical process) — Disposed By — Date/Time

Commodore Advanced Sciences

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # 01D0606

RUN 01D0606

Contact/Requestor: JOHNSEN, SHELLY/MYERS, KIM

Telephone No.: 6401/7106

Bottle No.	Customer Number	Matrix	Date	Time	Location	Container (size/type/quantity)	Sample Analysis	Preservative; Packing
01D0606-004.002	N/A	SOLID	4/5/01	1246	B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-005.004		SOLID	4/5/01	1401	B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-006.004		SOLID	4/05/01	1415	B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-007.004		SOLID	4/05/01	1430	B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-008.004		SOLID			B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-009.004		SOLID			B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-010.004	N/A	SOLID	4/5/01	1209	B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-011.004		SOLID			B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs
01D0606-012.004		SOLID			B885	125-G / G /1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None 4 degs C w/zhs

Relinquished By:	Date/Time	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
[illegible]	1605 4/5/01	TBOA Fridge #2	1605 4/5/01				
TBOA Fridge #2	4/12/01 1330	JH Christman	4/12/01 1330				
JH Christman	4/12/01 1500	Fed Ex					
Fed Ex	4-18-01 0915	[illegible]	4-18-01 0915				

FINAL SAMPLE DISPOSITION — Disposal Method (e.g., returned to customer, disposed of per lab procedure, used in analytical process) — Disposed By — Date/Time

Commodore Advanced Sciences, Inc.

RFETS

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.# 01D0606

Page 1 of 1

Sampler(s) Stuart / 512520 (Signature)

Contact/Requester: JOHNSEN, SHELLY/MYERS, KIM

Telephone No.: 6401/7105

RIN: 01D0606 — John Bailey

Sampling Origin: B885

Purchase Order/Charge Code: EED10720

Project Title: B885 CORE SAMPLES — 01263

Logbook No.: 94 Dodge

Ice Chest No.: N/A Temp.

To (Lab): RECRA Labnet-PA (L)

Method of Shipment: Sample Team

Bill of Lading/Air Bill No.: N/A

Protocol: CAS SOP.003 REV 3

Related COC (if any): 01D0604 # 001

PRE

POSSIBLE SAMPLE HAZARDS/REMARKS
Are acid preserved samples DOT hazardous per 40 CFR Part 136.3 Table II? YES or NO
Are other known hazardous substances present? YES or NO
** ** **

SCREENING REQUIRED: [ ]

SPECIAL INSTRUCTIONS: Hold Time

Bottle No.	Customer Number	Matrix	Date	Time	Location	Container (size/type/quantity)	Sample Analysis	Preservative; Packing
01D0606-008.004	N/A	SOLID	4/6/01	0857	B885	125-G / G / 1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None; 4 degs C w/zhs
01D0606-009.004		SOLID	4/6/01	0912	B885	125-G / G / 1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None; 4 degs C w/zhs
01D0606-011.004		SOLID	4/6/01	0903	B885	125-G / G / 1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None; 4 degs C w/zhs
01D0606-012.004		SOLID	4/6/01	0910	B885	125-G / G / 1	SS08C006 (TCLP Metals 1311) [Routine]; SS08C010 (TCLP VOA 1311/8260) [Routine]	None; 4 degs C w/zhs

4/6/01 SP

Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time
CAS	1820 4/6/01	TISOA Fridge #2	1820 4/6/01				
TISOA Fridge #2	4/17/01 1330	J. Christman	4/17/01 1330				
J. Christman	4/17/01 1500	FedEx					
FedEx	4/18/01 0915	T. Boone	4/18/01 0915				

FINAL SAMPLE DISPOSITION: Disposal Method (e.g., returned to customer, disposed of per lab procedure, used in analytical process) — Disposed By — Date/Time

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U.S. EPA

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

001006

Lab Name: LIONVILLE LABORATORY Contract: 11830-1
Lab Code: LVLI Case No.: 01D06 SAS No.: SDG No.: 001006
Matrix (soil/water): WATER Lab Sample ID: 0104L550-017
Level (low/med): LOW Date Received: 04/18/01
% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1460			P
7440-36-0	Antimony	11.4	U		P
7440-38-2	Arsenic	13.8	U		P
7440-39-3	Barium	362	B		P
7440-41-7	Beryllium	9.2			P
7440-43-9	Cadmium	1.8	U		P
7440-70-2	Calcium	905000			P
7440-47-3	Chromium	27.7	B		P
7440-48-4	Cobalt	4.8	U		P
7440-50-8	Copper	4.2	U		P
7439-89-6	Iron	94.2	U		P
7439-92-1	Lead	15.6	U		P
7439-95-4	Magnesium	96.2	B		P
7439-96-5	Manganese	0.60	U		P
7439-97-6	Mercury	0.10			AV
7440-02-0	Nickel	7.2	U		P
7440-09-7	Potassium	41200		E	P
7782-49-2	Selenium	29.9	B		P
7440-22-4	Silver	6.0	U		P
7440-28-0	Thallium	24.4	B		P
7440-62-2	Vanadium	4.2	U		P
7440-66-6	Zinc	5.8	B		P
7439-98-7	Molybdenu	11.8	B		P
7440-24-6	Strontium	5300			P
7440-31-5	Tin	21.0	U		P
7439-93-2	Lithium	36.3	B		P
11-09-6	Uranium	64.2	U		P

Color Before: Clarity Before: Texture:
Color After: Clarity After: Artifacts:

Comments:
01D0606-001.006
TCLP OF SAMPLE 002

FORM I - IN

U.S. EPA

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

002002

Lab Name: LIONVILLE_LABORATORY Contract: 11830-1
Lab Code: LVLI Case No.: 01D06 SAS No.: SDG No.: 001006
Matrix (soil/water): WATER Lab Sample ID: 0104L550-018
Level (low/med): LOW Date Received: 04/18/01
% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	773	B		P
7440-36-0	Antimony	11.4	U		P
7440-38-2	Arsenic	13.8	U		P
7440-39-3	Barium	297	B		P
7440-41-7	Beryllium	9.3			P
7440-43-9	Cadmium	1.8	U		P
7440-70-2	Calcium	878000			P
7440-47-3	Chromium	35.3	B		P
7440-48-4	Cobalt	4.8	U		P
7440-50-8	Copper	4.2	U		P
7439-89-6	Iron	94.2	U		P
7439-92-1	Lead	15.6	U		P
7439-95-4	Magnesium	998	B		P
7439-96-5	Manganese	0.60	U		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	7.2	U		P
7440-09-7	Potassium	30200		E	P
7782-49-2	Selenium	15.6	U		P
7440-22-4	Silver	6.0	U		P
7440-28-0	Thallium	23.4	U		P
7440-62-2	Vanadium	18.0	B		P
7440-66-6	Zinc	4.1	B		P
7439-98-7	Molybdenu	9.5	B		P
7440-24-6	Strontium	3860			P
7440-31-5	Tin	21.0	U		P
7439-93-2	Lithium	31.0	B		P
11-09-6	Uranium	64.2	U		P

Color Before: Clarity Before: Texture:
Color After: Clarity After: Artifacts:

Comments:
01D0606-002.002
TCLP OF SAMPLE 004

FORM I - IN

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U.S. EPA

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

003002

Lab Name: LIONVILLE LABORATORY Contract: 11830-1
Lab Code: LVLI Case No.: 01D06 SAS No.: SDG No.: 001006
Matrix (soil/water): WATER Lab Sample ID: 0104L550-019
Level (low/med): LOW Date Received: 04/18/01
% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	762	B		P
7440-36-0	Antimony	17.4	B		P
7440-38-2	Arsenic	27.9	B		P
7440-39-3	Barium	261	B		P
7440-41-7	Beryllium	10.3			P
7440-43-9	Cadmium	1.8	U		P
7440-70-2	Calcium	897000			P
7440-47-3	Chromium	47.4	B		P
7440-48-4	Cobalt	15.7	B		P
7440-50-8	Copper	4.2	U		P
7439-89-6	Iron	94.2	U		P
7439-92-1	Lead	15.6	U		P
7439-95-4	Magnesium	2540	B		P
7439-96-5	Manganese	1.3	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	7.2	U		P
7440-09-7	Potassium	33200		E	P
7782-49-2	Selenium	22.5	B		P
7440-22-4	Silver	6.0	U		P
7440-28-0	Thallium	23.4	U		P
7440-62-2	Vanadium	26.5	B		P
7440-66-6	Zinc	2.9	B		P
7439-98-7	Molybdenu	10.1	B		P
7440-24-6	Strontium	4050			P
7440-31-5	Tin	21.0	U		P
7439-93-2	Lithium	50.5	B		P
11-09-6	Uranium	64.2	U		P

Color Before: Clarity Before: Texture:
Color After: Clarity After: Artifacts:

Comments:
01D0606-002.002
TCLP OF SAMPLE 006

FORM I - IN

179

U.S. EPA

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

004002

Lab Name: LIONVILLE LABORATORY Contract: 11830-1
Lab Code: LVLI Case No.: 01D06 SAS No.: SDG No.: 001006
Matrix (soil/water): WATER Lab Sample ID: 0104L550-020
Level (low/med): LOW Date Received: 04/18/01
% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	721	B		P
7440-36-0	Antimony	14.6	B		P
7440-38-2	Arsenic	13.8	U		P
7440-39-3	Barium	299	B		P
7440-41-7	Beryllium	10			P
7440-43-9	Cadmium	1.8	U		P
7440-70-2	Calcium	853000			P
7440-47-3	Chromium	40.7	B		P
7440-48-4	Cobalt	4.8	U		P
7440-50-8	Copper	16.7	B		P
7439-89-6	Iron	94.2	U		P
7439-92-1	Lead	15.6	U		P
7439-95-4	Magnesium	2760	B		P
7439-96-5	Manganese	114			P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	8.9	B		P
7440-09-7	Potassium	45700		E	P
7782-49-2	Selenium	40.1	B		P
7440-22-4	Silver	6.0	U		P
7440-28-0	Thallium	23.4	U		P
7440-62-2	Vanadium	14.6	B		P
7440-66-6	Zinc	66.4	B		P
7439-98-7	Molybdenu	6.0	U		P
7440-24-6	Strontium	3620			P
7440-31-5	Tin	21.0	U		P
7439-93-2	Lithium	39.0	B		P
11-09-6	Uranium	64.2	U		P

Color Before: Clarity Before: Texture:
Color After: Clarity After: Artifacts:

Comments:
01D0606-004.002
TCLP OF SAMPLE 008

FORM I - IN

180

U.S. EPA

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

005004

Lab Name: LIONVILLE LABORATORY Contract: 11830-1
Lab Code: LVLI Case No.: 01D06 SAS No.: SDG No.: 001006
Matrix (soil/water): WATER Lab Sample ID: 0104L550-021
Level (low/med): LOW Date Received: 04/18/01
% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	669	B		P
7440-36-0	Antimony	11.4	U		P
7440-38-2	Arsenic	13.8	U		P
7440-39-3	Barium	266	B		P
7440-41-7	Beryllium	9.5			P
7440-43-9	Cadmium	1.8	U		P
7440-70-2	Calcium	849000			P
7440-47-3	Chromium	32.5	B		P
7440-48-4	Cobalt	18.8	B		P
7440-50-8	Copper	5.8	B		P
7439-89-6	Iron	94.2	U		P
7439-92-1	Lead	15.6	U		P
7439-95-4	Magnesium	2760	B		P
7439-96-5	Manganese	115			P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	12.0	B		P
7440-09-7	Potassium	40500		E	P
7782-49-2	Selenium	20.6	B		P
7440-22-4	Silver	6.0	U		P
7440-28-0	Thallium	23.4	U		P
7440-62-2	Vanadium	13.9	B		P
7440-66-6	Zinc	85.0	B		P
7439-98-7	Molybdenu	10.1	B		P
7440-24-6	Strontium	3790			P
7440-31-5	Tin	21.0	U		P
7439-93-2	Lithium	43.7	B		P
11-09-6	Uranium	64.2	U		P

Color Before: Clarity Before: Texture:
Color After: Clarity After: Artifacts:

Comments:
01D0606-005.004
TCLP OF SAMPLE 009

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U.S. EPA

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

006004

Lab Name: LIONVILLE_LABORATORY Contract: 11830-1

Lab Code: LVLI Case No.: 01D06 SAS No.: SDG No.: 001006

Matrix (soil/water): WATER Lab Sample ID: 0104L550-022

Level (low/med): LOW Date Received: 04/18/01

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	674	B		P
7440-36-0	Antimony	11.4	U		P
7440-38-2	Arsenic	13.8	U		P
7440-39-3	Barium	273	B		P
7440-41-7	Beryllium	9.2			P
7440-43-9	Cadmium	1.8	U		P
7440-70-2	Calcium	866000			P
7440-47-3	Chromium	39.7	B		P
7440-48-4	Cobalt	10.2	B		P
7440-50-8	Copper	7.5	B		P
7439-89-6	Iron	94.2	U		P
7439-92-1	Lead	15.6	U		P
7439-95-4	Magnesium	2620	B		P
7439-96-5	Manganese	83.5	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	7.2	U		P
7440-09-7	Potassium	63800		E	P
7782-49-2	Selenium	15.6	U		P
7440-22-4	Silver	6.0	U		P
7440-28-0	Thallium	23.4	U		P
7440-62-2	Vanadium	13.9	B		P
7440-66-6	Zinc	36.4	B		P
7439-98-7	Molybdenu	6.0	U		P
7440-24-6	Strontium	4020			P
7440-31-5	Tin	21.0	U		P
7439-93-2	Lithium	47.3	B		P
11-09-6	Uranium	64.2	U		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

01D0606-006.004

TCLP OF SAMPLE 010

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U.S. EPA

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

007004

Lab Name: LIONVILLE_LABORATORY Contract: 11830-1

Lab Code: LVLI Case No.: 01D06 SAS No.: SDG No.: 001006

Matrix (soil/water): WATER Lab Sample ID: 0104L550-023

Level (low/med): LOW Date Received: 04/18/01

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	629	B		P
7440-36-0	Antimony	12.1	B		P
7440-38-2	Arsenic	14.8	B		P
7440-39-3	Barium	346	B		P
7440-41-7	Beryllium	8.9			P
7440-43-9	Cadmium	1.8	U		P
7440-70-2	Calcium	846000			P
7440-47-3	Chromium	22.5	B		P
7440-48-4	Cobalt	4.8	U		P
7440-50-8	Copper	4.2	U		P
7439-89-6	Iron	94.2	U		P
7439-92-1	Lead	15.6	U		P
7439-95-4	Magnesium	2220	B		P
7439-96-5	Manganese	2.2	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	7.2	U		P
7440-09-7	Potassium	55100		E	P
7782-49-2	Selenium	19.5	B		P
7440-22-4	Silver	6.0	U		P
7440-28-0	Thallium	23.4	U		P
7440-62-2	Vanadium	21.4	B		P
7440-66-6	Zinc	7.4	B		P
7439-98-7	Molybdenu	11.0	B		P
7440-24-6	Strontium	3890			P
7440-31-5	Tin	21.0	U		P
7439-93-2	Lithium	48.8	B		P
11-09-6	Uranium	64.2	U		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

01D0606-007.004

TCLP_OF_SAMPLE_011

FORM I - IN

U.S. EPA

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

008004

Lab Name: LIONVILLE LABORATORY Contract: 11830-1
Lab Code: LVLI Case No.: 01D06 SAS No.: SDG No.: 001006
Matrix (soil/water): WATER Lab Sample ID: 0104L550-025
Level (low/med): LOW Date Received: 04/18/01
% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	622	B		P
7440-36-0	Antimony	11.4	U		P
7440-38-2	Arsenic	13.8	U		P
7440-39-3	Barium	285	B		P
7440-41-7	Beryllium	7.8			P
7440-43-9	Cadmium	1.8	U		P
7440-70-2	Calcium	856000			P
7440-47-3	Chromium	40.0	B		P
7440-48-4	Cobalt	4.8	U		P
7440-50-8	Copper	4.2	U		P
7439-89-6	Iron	94.2	U		P
7439-92-1	Lead	15.6	U		P
7439-95-4	Magnesium	1500	B		P
7439-96-5	Manganese	0.60	U		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	7.2	U		P
7440-09-7	Potassium	38400		E	P
7782-49-2	Selenium	15.6	U		P
7440-22-4	Silver	6.0	U		P
7440-28-0	Thallium	23.4	U		P
7440-62-2	Vanadium	18.0	B		P
7440-66-6	Zinc	6.3	B		P
7439-98-7	Molybdenu	9.7	B		P
7440-24-6	Strontium	4050			P
7440-31-5	Tin	21.0	U		P
7439-93-2	Lithium	31.6	B		P
11-09-6	Uranium	64.2	U		P

Color Before: Clarity Before: Texture:
Color After: Clarity After: Artifacts:

Comments:
01D0606-008.004
TCLP OF SAMPLE 013

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U.S. EPA

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

009004

Lab Name: LIONVILLE_LABORATORY Contract: 11830-1
Lab Code: LVLI Case No.: 01D06 SAS No.: SDG No.: 001006
Matrix (soil/water): WATER Lab Sample ID: 0104L550-026
Level (low/med): LOW Date Received: 04/18/01
% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	694	B		P
7440-36-0	Antimony	11.6	B		P
7440-38-2	Arsenic	26.1	B		P
7440-39-3	Barium	386	B		P
7440-41-7	Beryllium	6.5			P
7440-43-9	Cadmium	1.8	U		P
7440-70-2	Calcium	894000			P
7440-47-3	Chromium	35.6	B		P
7440-48-4	Cobalt	4.8	U		P
7440-50-8	Copper	4.2	U		P
7439-89-6	Iron	94.2	U		P
7439-92-1	Lead	15.6	U		P
7439-95-4	Magnesium	787	B		P
7439-96-5	Manganese	0.60	U		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	7.2	U		P
7440-09-7	Potassium	25200	B	E	P
7782-49-2	Selenium	15.6	U		P
7440-22-4	Silver	6.0	U		P
7440-28-0	Thallium	23.4	U		P
7440-62-2	Vanadium	16.0	B		P
7440-66-6	Zinc	6.5	B		P
7439-98-7	Molybdenu	8.0	B		P
7440-24-6	Strontium	4760			P
7440-31-5	Tin	21.0	U		P
7439-93-2	Lithium	27.5	B		P
11-09-6	Uranium	64.2	U		P

Color Before: Clarity Before: Texture:
Color After: Clarity After: Artifacts:

Comments:
01D0606-009.004
TCLP OF SAMPLE 014

FORM I - IN

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U.S. EPA

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

010004

Lab Name: LIONVILLE_LABORATORY Contract: 11830-1
Lab Code: LVLI Case No.: 01D06 SAS No.: SDG No.: 001006
Matrix (soil/water): WATER Lab Sample ID: 0104L550-024
Level (low/med): LOW Date Received: 04/18/01
% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	601	B		P
7440-36-0	Antimony	12.3	B		P
7440-38-2	Arsenic	13.8	U		P
7440-39-3	Barium	362	B		P
7440-41-7	Beryllium	7.9			P
7440-43-9	Cadmium	3.1	B		P
7440-70-2	Calcium	855000			P
7440-47-3	Chromium	26.6	B		P
7440-48-4	Cobalt	69.6	B		P
7440-50-8	Copper	17.6	B		P
7439-89-6	Iron	94.2	U		P
7439-92-1	Lead	15.6	U		P
7439-95-4	Magnesium	4270	B		P
7439-96-5	Manganese	666			P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	23.6	B		P
7440-09-7	Potassium	36300		E	P
7782-49-2	Selenium	15.6	U		P
7440-22-4	Silver	6.0	U		P
7440-28-0	Thallium	23.4	U		P
7440-62-2	Vanadium	12.0	B		P
7440-66-6	Zinc	79.3	B		P
7439-98-7	Molybdenu	11.8	B		P
7440-24-6	Strontium	2960			P
7440-31-5	Tin	21.0	U		P
7439-93-2	Lithium	32.6	B		P
11-09-6	Uranium	64.2	U		P

Color Before: Clarity Before: Texture:
Color After: Clarity After: Artifacts:

Comments:
01D0606-010.004
TCLP OF SAMPLE 012

FORM I - IN

180

U.S. EPA

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

011004

Lab Name: LIONVILLE LABORATORY Contract: 11830-1

Lab Code: LVLI Case No.: 01D06 SAS No.: SDG No.: 001006

Matrix (soil/water): WATER Lab Sample ID: 0104L550-027

Level (low/med): LOW Date Received: 04/18/01

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	473	B		P
7440-36-0	Antimony	11.4	U		P
7440-38-2	Arsenic	13.8	U		P
7440-39-3	Barium	307	B		P
7440-41-7	Beryllium	6.3			P
7440-43-9	Cadmium	1.8	U		P
7440-70-2	Calcium	840000			P
7440-47-3	Chromium	33.0	B		P
7440-48-4	Cobalt	4.8	U		P
7440-50-8	Copper	4.2	U		P
7439-89-6	Iron	94.2	U		P
7439-92-1	Lead	15.6	U		P
7439-95-4	Magnesium	1990	B		P
7439-96-5	Manganese	0.72	B		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	7.2	U		P
7440-09-7	Potassium	30000	B	E	P
7782-49-2	Selenium	15.6	U		P
7440-22-4	Silver	6.0	U		P
7440-28-0	Thallium	23.4	U		P
7440-62-2	Vanadium	14.5	B		P
7440-66-6	Zinc	22.6	B		P
7439-98-7	Molybdenu	8.1	B		P
7440-24-6	Strontium	3870			P
7440-31-5	Tin	21.0	U		P
7439-93-2	Lithium	25.8	B		P
11-09-6	Uranium	64.2	U		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

01D0606-011.004

TCLP OF SAMPLE 015

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U.S. EPA

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

012004

Lab Name: LIONVILLE LABORATORY Contract: 11830-1

Lab Code: LVLI Case No.: 01D06 SAS No.: SDG No.: 001006

Matrix (soil/water): WATER Lab Sample ID: 0104L550-028

Level (low/med): LOW Date Received: 04/18/01

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1710			P
7440-36-0	Antimony	11.4	U		P
7440-38-2	Arsenic	13.8	U		P
7440-39-3	Barium	560	B		P
7440-41-7	Beryllium	7.1			P
7440-43-9	Cadmium	1.8	U		P
7440-70-2	Calcium	942000			P
7440-47-3	Chromium	36.1	B		P
7440-48-4	Cobalt	4.8	U		P
7440-50-8	Copper	4.2	U		P
7439-89-6	Iron	94.2	U		P
7439-92-1	Lead	15.6	U		P
7439-95-4	Magnesium	81.5	B		P
7439-96-5	Manganese	0.60	U		P
7439-97-6	Mercury	0.10	U		AV
7440-02-0	Nickel	7.2	U		P
7440-09-7	Potassium	54900		E	P
7782-49-2	Selenium	25.5	B		P
7440-22-4	Silver	6.0	U		P
7440-28-0	Thallium	23.4	U		P
7440-62-2	Vanadium	4.2	U		P
7440-66-6	Zinc	5.7	B		P
7439-98-7	Molybdenu	6.0	U		P
7440-24-6	Strontium	6640			P
7440-31-5	Tin	21.0	U		P
7439-93-2	Lithium	32.0	B		P
11-09-6	Uranium	64.2	U		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

01D0606-012.004

TCLP OF SAMPLE 016

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U.S. EPA

3
BLANKS

Lab Name: LIONVILLE LABORATORY Contract: 11830-1

Lab Code: LVLI Case No.: 01D06 SAS No.: SDG No.: 001006

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank.	C	M
Aluminum	16.5	B	46.0	B	68.6	B	12.7	U	79.400	B	P
Antimony	2.4	B	2.0	B	4.2	B	1.9	U	1.900	U	P
Arsenic	2.3	U	3.1	B	2.7	B	2.3	B	2.300	U	P
Barium	0.2	U	0.2	U	0.2	U	0.2	U	0.410	B	P
Beryllium	0.3	B	0.7	B	1.1		0.3	B	0.746	B	P
Cadmium	0.3	U	0.3	U	0.3	U	0.3	U	0.300	U	P
Calcium	16.3	B	8.1	U	8.1	U	8.1	U	21.050	B	P
Chromium	0.9	U	0.9	U	0.9	U	0.9	U	0.900	U	P
Cobalt	0.8	U	0.8	U	0.8	U	0.8	U	-0.854	B	P
Copper	0.7	U	-0.9	B	-1.3	B	0.7	U	0.700	U	P
Iron	15.7	U	15.7	U	15.7	U	15.7	U	15.700	U	P
Lead	2.6	U	2.6	U	2.6	U	2.6	U	2.600	U	P
Magnesium	8.8	U	8.8	U	8.8	U	8.8	U	13.290	B	P
Manganese	0.3	B	0.4	B	0.4	B	0.3	B	0.340	B	P
Mercury	0.1	U	0.1	U	0.1	U	0.1	U	0.100	U	AV
Nickel	1.2	U	1.2	U	1.2	U	-1.3	B	1.200	U	P
Potassium	35.3	U	35.3	U	35.3	U	35.3	U	35.300	U	P
Selenium	2.6	U	2.6	U	2.6	U	2.6	U	2.600	U	P
Silver	1.0	U	1.0	U	1.0	U	1.0	U	1.000	U	P
Thallium	3.9	U	3.9	U	3.9	U	3.9	U	3.900	U	P
Vanadium	0.7	U	0.7	U	0.7	U	0.7	U	0.700	U	P
Zinc	0.3	B	0.3	B	0.3	U	0.3	U	0.300	U	P
Molybdenu	1.0	U	1.0	U	1.0	U	1.9	B	1.000	U	P
Strontium	0.1	U	0.1	U	0.1	U	0.1	U	0.182	B	P
Tin	3.5	U	3.5	U	-5.4	B	3.5	U	3.500	U	P
Lithium	0.6	B	0.5	B	1.0	B	0.9	B	0.290	B	P
Uranium	10.7	U	10.7	U	10.7	U	10.7	U	10.700	U	P

FORM III - IN

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U.S. EPA

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BLANKS

Lab Name: LIONVILLE_LABORATORY Contract: 11830-1

Lab Code: LVLI Case No.: 01D06 SAS No.: SDG No.: 001006

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum			-23.0	B	-40.0	B			555.960	B	P
Antimony			1.9	U	1.9	U			11.400	U	P
Arsenic			2.3	U	2.3	U			13.800	U	P
Barium			0.2	U	0.2	U			3.078	B	P
Beryllium			0.2	U	-0.4	B			7.860		P
Cadmium			0.3	U	0.3	U			1.800	U	P
Calcium			8.1	U	8.1	U			92.340	B	P
Chromium			0.9	U	0.9	U			5.400	U	P
Cobalt			0.8	U	0.8	U			4.800	U	P
Copper			0.7	U	0.7	U			4.200	U	P
Iron			15.7	U	15.7	U			94.200	U	P
Lead			2.6	U	2.6	U			15.600	U	P
Magnesium			8.8	U	8.8	U			52.800	U	P
Manganese			0.2	B	0.4	B			1.680	B	P
Mercury			0.1	U	0.1	U	0.1	U	0.100	U	AV
Nickel			1.2	U	1.2	U			-10.752	B	P
Potassium			35.3	U	35.3	U			1113.840	B	P
Selenium			2.6	U	2.6	U			15.600	U	P
Silver			1.0	U	1.0	U			6.000	U	P
Thallium			3.9	U	3.9	U			23.400	U	P
Vanadium			0.7	U	0.7	U			4.200	U	P
Zinc			0.3	U	0.3	U			9.768	B	P
Molybdenu			1.3	B	1.3	B			7.140	B	P
Strontium			0.1	U	0.1	U			0.600	U	P
Tin			3.5	U	-5.3	B			21.000	U	P
Lithium			0.6	B	0.4	B			6.390	B	P
Uranium			10.7	U	10.7	U			64.200	U	P

FORM III - IN

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U.S. EPA

3
BLANKS

Lab Name: LIONVILLE LABORATORY Contract: 11830-1

Lab Code: LVLI Case No.: 01D06 SAS No.: SDG No.: 001006

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum									521.100	B	P
Antimony									11.400	U	P
Arsenic									13.800	U	P
Barium									7.068	B	P
Beryllium									7.002		P
Cadmium									1.800	U	P
Calcium									462.480	B	P
Chromium									5.400	U	P
Cobalt									4.800	U	P
Copper									4.374	B	P
Iron									94.200	U	P
Lead									15.600	U	P
Magnesium									73.740	B	P
Manganese									1.200	B	P
Mercury									0.100	U	AV
Nickel									7.200	U	P
Potassium									901.128	B	P
Selenium									15.600	U	P
Silver									6.000	U	P
Thallium									23.400	U	P
Vanadium									4.200	U	P
Zinc									14.598	B	P
Molybdenu									6.732	B	P
Strontium									0.612	B	P
Tin									21.000	U	P
Lithium									5.916	B	P
Uranium									64.200	U	P

FORM III - IN

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U.S. EPA

6
DUPLICATES

EPA SAMPLE NO.

001006D

Lab Name: LIONVILLE_LABORATORY_____ Contract: 11830-1___

Lab Code: LVLI__ Case No.: 01D06 SAS No.: _____ SDG No.: 001006

Matrix (soil/water): WATER Level (low/med): _LOW__

% Solids for Sample: __0.0 % Solids for Duplicate: ___0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum								NR
Antimony								NR
Arsenic								NR
Barium								NR
Beryllium								NR
Cadmium								NR
Calcium								NR
Chromium								NR
Cobalt								NR
Copper								NR
Iron								NR
Lead								NR
Magnesium								NR
Manganese								NR
Mercury	0.1	0.1000		0.1200		18.2		AV
Nickel								NR
Potassium								NR
Selenium								NR
Silver								NR
Thallium								NR
Vanadium								NR
Zinc								NR
Molybdenu								NR
Strontium								NR
Tin								NR
Lithium								NR
Uranium								NR

FORM VI - IN

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U.S. EPA

6
DUPLICATES

EPA SAMPLE NO.

002002D

Lab Name: LIONVILLE LABORATORY Contract: 11830-1

Lab Code: LVLI Case No.: 01D06 SAS No.: SDG No.: 001006

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0 % Solids for Duplicate: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		772.9800	B	877.9800	B	12.7		P
Antimony		11.4000	U	12.2880	B	200.0		P
Arsenic		13.8000	U	13.8000	U			P
Barium		297.2160	B	295.7220	B	0.5		P
Beryllium	4.8	9.3120		11.3520		19.7		P
Cadmium		1.8000	U	1.8000	U			P
Calcium		877694.6400		871672.2000		0.7		P
Chromium		35.2680	B	35.7120	B	1.3		P
Cobalt		4.8000	U	4.8000	U			P
Copper		4.2000	U	4.2000	U			P
Iron		94.2000	U	94.2000	U			P
Lead		15.6000	U	15.6000	U			P
Magnesium		997.5000	B	993.1800	B	0.4		P
Manganese		0.6000	U	1.0200	B	200.0		P
Mercury								NR
Nickel		7.2000	U	7.2000	U			P
Potassium	30000.0	30207.6720		30734.4780		1.7		P
Selenium		15.6000	U	15.6000	U			P
Silver		6.0000	U	6.0000	U			P
Thallium		23.4000	U	23.4000	U			P
Vanadium		18.0000	B	20.0400	B	10.7		P
Zinc		4.1340	B	3.3540	B	20.8		P
Molybdenu		9.5220	B	15.9420	B	50.4		P
Strontium	1200.0	3860.6700		3884.3040		0.6		P
Tin		21.0000	U	21.0000	U			P
Lithium		31.0380	B	30.9120	B	0.4		P
Uranium		64.2000	U	64.2000	U			P

FORM VI - IN

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U.S. EPA

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LABORATORY CONTROL SAMPLE

Lab Name: LIONVILLE LABORATORY Contract: 11830-1

Lab Code: LVLI Case No.: 01D06 SAS No.: SDG No.: 001006

Solid LCS Source:

Aqueous LCS Source: IV

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum	5000.0	5240.95	104.8						
Antimony	3000.0	3030.36	101.0						
Arsenic	10000.0	9701.16	97.0						
Barium	5000.0	4945.61	98.9						
Beryllium	250.0	244.74	97.9						
Cadmium	250.0	248.51	99.4						
Calcium	25000.0	24571.00	98.3						
Chromium	500.0	504.80	101.0						
Cobalt	2500.0	2499.87	100.0						
Copper	1250.0	1246.02	99.7						
Iron	5000.0	4910.83	98.2						
Lead	2500.0	2477.31	99.1						
Magnesium	25000.0	25558.39	102.2						
Manganese	750.0	780.22	104.0						
Mercury									
Nickel	2000.0	2026.59	101.3						
Potassium	25000.0	27463.67	109.9						
Selenium	10000.0	9685.12	96.9						
Silver	500.0	500.26	100.1						
Thallium	10000.0	9576.60	95.8						
Vanadium	2500.0	2539.42	101.6						
Zinc	1000.0	999.23	99.9						
Molybdenu	5000.0	5019.48	100.4						
Strontium	5000.0	4862.91	97.3						
Tin	5000.0	4938.29	98.8						
Lithium	5000.0	5339.12	106.8						
Uranium	5000.0	4940.00	98.8						

FORM VII - IN

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U.S. EPA

7

LABORATORY CONTROL SAMPLE

Lab Name: LIONVILLE LABORATORY Contract: 11830-1

Lab Code: LVLI Case No.: 01D06 SAS No.: _____ SDG No.: 001006

Solid LCS Source: _____

Aqueous LCS Source: IV

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Mercury	5.0	5.18	103.6						
Nickel									
Potassium									
Selenium									
Silver									
Thallium									
Vanadium									
Zinc									
Molybdenu									
Strontium									
Tin									
Lithium									
Uranium									

FORM VII - IN