

**INVESTIGATION OF POTENTIAL
ASBESTOS AND LEAD BASED PAINT**

AT

**NASA
CROWS LANDING FLIGHT FACILITY
CROWS LANDING, CA**

Prepared by:
Shaw Environmental Inc.
4005 Port Chicago Highway
Concord, CA 94520-1120

June 23, 2003

Project # 836557

**INVESTIGATION OF POTENTIAL
ASBESTOS AND LEAD BASED PAINT
AT NASA
CROWS LANDING FLIGHT FACILITY
CROWS LANDING, CA**

The material and data in this report were prepared under the supervision and direction of the undersigned. This report was prepared consistent with current and generally accepted environmental consulting principals and practice that are within the limitations provided herein.

Shaw Environmental Inc.



Rudy Von Burg, Ph.D., DABT, CIH, CEI
California Certified Asbestos Consultant
Certificate No 98-2471

TRANSMITTAL

SHAW ENVIRONMENTAL, INC.
4005 Port Chicago Highway
Concord, CA 94520-1120
(925)288-9898

To: Lynn Hornecker
Date: June 25, 2003
From: Tom Barry
Subject: Site 11A - NASA Research Facility
Investigation of Asbestos and Lead Based Paint

A lead and asbestos survey of the existing structures and building at the NASA Research Facility was conducted on May 27, 2003. The NASA Research facility consists of a modular office building, two trailers, and various utilities. A description and photos of the NASA Research Facility are included in Appendix B of *Project Plans, Time Critical Removal Action at Installation Restoration Program Site 11A, NASA Crows Landing Flight Facility, Crows Landing, California, Revision 1*. The lead and asbestos survey was conducted to facilitate demolition of the NASA Research Facility.

The results of the survey are presented in the attached *Investigation of Potential Asbestos and Lead Based Paint* report. Asbestos containing material was identified in the silver colored roofing paint on the building. Lead based paint was detected on exterior surfaces and on interior windowsills of the building.

cc: B Hulet
D Kelly
R Condit
D. Tillery
Project Files

Transmittal

Date: 1 July 2003

From: Lynn Marie Hornecker
Code 06CC.LMH

To: Diane Silva
Code ~~01LS.DS~~ 05G.DS
Administrative Record Manager

Subj: CERCLA ADMINISTRATIVE RECORD MATERIALS
NALF Crows Landing

Installation: NALF Crows Landing

UIC Number: N60211

Document Title: Asbestos and Lead-Based Paint Survey Results

Author:

Recipient:

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EXECUTIVE SUMMARY

This work was performed consistent with Federal Occupational Safety and Health Administration regulations 29 CFR Part 1926.1101 and 29 CFR 1910.1001" and the California-OSHA regulations in the construction industry 8 CCR Article 4, Section 1529 and 8 CCR Article 2.6 Section 341.15.

The asbestos containing materials that were identified include:

- Roofing paint, silver color.

Materials that were sampled or inspected but did not contain detectable asbestos include:

- Floor tile
- Floor tile mastic
- Wallboard
- Wallboard joint compound
- Ceiling acoustical tiles
- Wall insulation
- Ceiling insulation
- Floor insulation
- Roof surfacing material

Lead was not detected in any of the interior paint chip samples with the exception of the sample collected from the windowsill. The concentration of lead in the paint samples collected at the exterior of the building was somewhat higher. The highest levels of lead were detected in the paint applied to the electrical utility casings.

OSHA and Cal/OSHA regulated worker exposures to lead concentrations between 50 and 500 ppm especially when trigger tasks are being performed. Demolition is a specific trigger task identified in the regulation. As a result, compliance with 8 CCR 1532.1, Lead Standard for the Construction Industry is recommended.

INTRODUCTION

1.1 Background.

The NASA Crows Landing Flight Facility is located to the south-southeast of Patterson, California. The NASA building is no longer functional since it has been abandoned and gutted of its equipment for a number of years. As a result, the building has been declared surplus and scheduled for demolition or physical removal from the site. However, according to the latest ruling by NESHAPS, such action requires asbestos and lead based paint inspection prior to initiating any demolition/moving work.

The Federal Code of Regulations regarding asbestos in the construction industry is found in 29 CFR Section 1926 and Section 1910. Federal regulations are superceded by state regulations. The California Code of Regulations (8 CCR 1529) defines asbestos containing material (ACM) as material that contains at least 0.1% asbestos.

The building as a non-residential property, not accessible by the public, hence it is exempt from the Housing and Community Development Act of 1992 and DHS regulations. However, Cal/OSHA, EPA and California DHS regulations apply to workers involved with demolition/renovation activities associated with exposure to lead materials (8 CCR 1532.1) and lead based paint.

This work was performed consistent with Federal OSHA and Cal/OSHA regulations in the construction industry and for obtaining a demolition/renovation permit

1.2 Services Provided

Shaw Environmental Inc. (Shaw) was requested to assess the empty NASA Facility for potential asbestos containing materials through observation and sample collection. On May 27, 2003, an appropriate inspection was conducted by R. Von Burg and S. Hutchings. Bulk samples were collected for asbestos analysis and forwarded to AMA Analytical Services Inc. Lead paint chip samples were forwarded to GPL Laboratories. Both laboratories are certified analytical laboratories. Standard chain-of-custody procedures were employed.

2. SAMPLING AND ANALYSIS METHODS

All samples were collected using latex gloves. Asbestos samples were collected by finger pressure. Samples for lead analysis were collected by scrapping painted surfaces with a chisel. On occasion, samples of peeling paint could be collected by finger pressure

The samples were immediately placed into plastic bags that could be hermetically sealed, labeled and delivered to the analytical laboratory. Samples were packed and shipped by overnight FedEx to GPL Laboratories in Gaithersburg, MD for lead analysis. Asbestos samples were forwarded to AMA

Analytical Services Inc., in Lanhaus MD. These laboratories are certified by the American Industrial Hygiene Association, the National Voluntary Laboratory Accreditation Program (NAVLAP) and the New York ELAP.

Asbestos samples were analyzed using Environmental Protection Agency (EPA) interim bulk analysis method as per Appendix A of 40 CFR 763 (f).

Paint samples were analyzed for lead content consistent with EPA method SW 8467420

3. RESULTS

Based on the various materials that were sampled, only the silver roofing paint was found to contain asbestos. No asbestos was detected in the floor tiles, wallboard, joint-compound, or insulating materials in the ceilings, walls or floor.

The EPA/HUD and DHS definition of lead based paint is 5000 ppm or 0.5%. The OSHA is concerned with "any quantifiable" amount of lead and defines Lead based paint as containing more than 600 ppm lead. For the inspection of the current building, lead was detectable in the paint applied to:

Inside window sills	34.9 ppm
Deck rail paint on the northern deck	395.0 ppm
Deck paint on the southern deck	28.1 ppm
Beige utility box - east side	1380.0 ppm
Brown utility box by 12 kV transformer	4230.0 ppm
Roofing paint	24.6 ppm

Lead based paint was not detected by chip analysis in any of the interior paints other than the window sill paint. This interior paint is judged to be non-lead based paint based on the regulatory criteria mentioned above. Only the brown utility box near the 12 kV transformer comes close to being characterized as having lead based paint but analysis indicates that the value is still below 5000 ppm. Therefore prior notification of Cal/OSHA on a demolition is not required

Cal/OSHA however is concerned about worker exposure to lead at concentrations between 50-500 micrograms/m³ when performing certain trigger tasks. The trigger tasks include manual demolition, scrapping, sanding, using heat guns, the use of HEPA equipment and debris cleanup. The demolition of this building, particularly the north and south decks will involved manual demolition which is a trigger task. Therefore it will be encumbent upon Shaw to demonstrate that the PEL for lead is not exceeded and laborers will have the necessary training according to the Hazard Communication Standard.

LIMITATIONS

The services described in this report were performed consistent with generally accepted professional consulting principles and practice. No other warranty, express or implied, is made. These services were performed consistent with the agreement with the client. This report is solely for the use and information of the client unless otherwise noted. Any reliance on this report by a third party is at the party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when the services were performed and are intended only for the client, locations, time frames and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices or regulation subsequent to performance of this service. We do not warrant the accuracy of the information supplied by others nor the use of segregated portions of this report.

REFERENCE

American Conference of Governmental Industrial Hygienists. Documentation of the Threshold Limit Values.

California Administrative Code. Title 8, Article 4, Section 1529, Occupational Safety and Health Regulations, General, Construction Industry Safety Order for Asbestos.

California Administrative Code. Title 8, Article 110, Section 5208, Occupational Safety and Health Regulations, General Industry Safety Order for Asbestos.

California Administrative Code. Title 8, Article 4, Section 1529, Occupational Safety and Health Regulations, Construction Industry Safety Order for Asbestos, Notification required prior to disturbing ACM.

California Administrative Code. Title 8, Article 2.5, Section 341.9, Occupational Safety and Health Regulations, General, Construction Industry Safety Order for Asbestos.

California Administrative Code. Title 8, Article 2.6, Section 341.15. Consultants/ Site Surveillance Certification.

Code of Federal Regulations, 29 CFR 1910.1001. Asbestos Standard (General Industry).

Code of Federal Regulations, 29 CFR 1926.1101. Asbestos Standard for the Construction Industry" Work Practices of ACM disturbed as part of renovation, demolition, removal, O & M, etc.

Code of Federal Regulations, 29 CFR 1910.134. Respiratory Protection Standard.

California DHS Regulation, 17 CCR, Division 1, Chapter 8, Sections 35000 - 361000.DHS Training, Certification and Work Practices Regulation.

Code of Federal regulations, 40 CFR Part 745. Lead: Identification of Dangerous Levels of Lead; Final Rule.

California Code of Regulations, 8 CCR 1532.1. Lead Standard for the Construction Industry.

APPENDIX A
STRUCTURE DIAGRAMS
FOR
NASA CROW'S LANDING FLIGHT 1 FACILITY

NORTH END OF
NASA TRAILER

L-09
L-10
L-11

A-18
A-19
A-20
L-13

A-17

96

L-07

DECK

DECK

3'6"

12'4"

16'

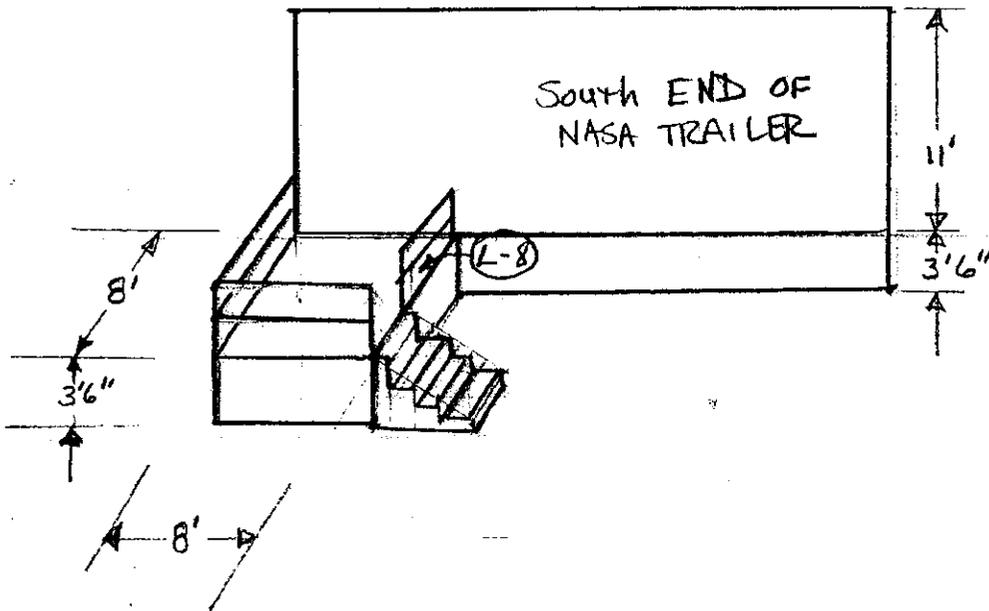
8'

8'

L-12

 PACIFIC ENVIRONMENTAL GROUP, INC.	Project No: 836557	Figure No:	Date: 4-7-03
			Drawn By: D.T

Title: NASA Trailer North Deck & Stairs



PACIFIC
ENVIRONMENTAL
GROUP, INC.

Project No:

836557

Figure No:

Date: 4-7-03

Drawn By: D.T

Title: NASA TRAILER - South Deck

N60211_000512
CROWS LANDING
SSIC NO. 5090.3

APPENDIX B
CHAIN OF CUSTODY

APPENDIX C
ANALYTICAL RESULTS

AMA Analytical Services, Inc.



A Specialized Environmental Laboratory

CERTIFICATE OF ANALYSIS

NVLAP
NY ELAP
AIHA

Client: GPL Environmental Services, Inc.
Address: 202 Perry Parkway
Oxonsburg, Maryland 20877
Attention: Amy Edwards

Job Name: Shaw E & I
Job Location: Crows Landing - Site 11A
Job Number: 305151
P.O. Number: Not Provided

Chain Of Custody: 113818
Date Analyzed: 06/02/2003
Person Submitting: Amy Edwards

Page 1 of 3

Summary of Polarized Light Microscopy

AMA Sample Number	Client Sample #	Total Asbestos	Chrysotile Percent	Amosite Percent	Crocidolite Percent	Other Asbestos Percent	Mineral Wool Percent	Fiberglass Percent	Organic Percent	Synthetic Percent	Other Percent	Particulate Percent	Sample Color	Analyst ID	Comments
0348587	305151-001-001-1/1	NAD	--	--	--	--	--	--	--	--	--	100	Gray	AS	
0348588	305151-002-002-1/1	NAD	--	--	--	--	--	--	--	--	--	100	White	AS	
0348589	305151-003-003-1/1	NAD	--	--	--	--	--	--	--	--	--	100	White	AS	
0348590	305151-004-004-1/1	NAD	--	--	--	--	--	--	--	--	--	100	White	AS	
0348591	305151-005-005-1/1	NAD	--	--	--	--	--	--	3	--	--	97	Multi	AS	
0348592	305151-006-006-1/1	NAD	--	--	--	--	30	--	30	--	--	40	Multi	AS	
0348593	305151-007-007-1/1	NAD	--	--	--	--	30	--	30	--	--	40	Gray	AS	
0348594	305151-008-008-1/1	NAD	--	--	--	--	30	--	30	--	--	40	Gray	AS	
0348595	305151-009-009-1/1	NAD	--	--	--	--	--	--	5	--	--	95	Multi	AS	
0348596	305151-010-010-1/1	NAD	--	--	--	--	--	--	5	--	--	95	Multi	AS	
0348597	305151-011-011-1/1	NAD	--	--	--	--	--	--	7	--	--	93	Multi	AS	
0348598	305151-012-012-1/1	NAD	--	--	--	--	--	--	--	--	--	100	Off-White	AS	

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public and these Laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from us. Sample types, locations and collection protocols are based upon the information provided by the person submitting them and, unless collected by personnel of these Laboratories, we expressly disclaim any knowledge and liability for the accuracy and completeness of this information. Residual sample material will be discarded in accordance with the appropriate regulatory guidelines, unless otherwise requested by the client. NVLAP Accreditation applies only to polarized light microscopy of bulk samples and transmission electron microscopy of AHERA air samples. All rights reserved. AMA Analytical Services, Inc.

An AIHA (#8863), NYLAP (#101133), & New York ELAP (#10930) Accredited Laboratory

1237 Park Road, Oxonsburg, NY 12045 Phone: (518) 486-1237 Fax: (518) 486-1237

JUN 02 09:04:55

AHR ANALYTICAL SERVICES

(301) 458-2643

P. 1

AMA Analytical Services, Inc.



A Specialized Environmental Laboratory

CERTIFICATE OF ANALYSIS



Client: GPL Environmental Services, Inc.

Job Name: Shaw E & I

Chain Of Custody: 113818

Address: 202 Perry Parkway
Calderburg, Maryland 20877

Job Location: Crows Landing - Site 11A

Date Analyzed: 06/02/2003

Job Number: 305151

Person Submitting: Amy Edwards

P.O. Number: Not Provided

Attention: Amy Edwards

Page 2 of 3

Summary of Polarized Light Microscopy

AMA Sample Number	Client Sample #	Total Asbestos	Chrysotile Percent	Amosite Percent	Crocidolite Percent	Other Asbestos Percent	Mineral Wool Percent	Fiberglass Percent	Organic Percent	Synthetic Percent	Other Percent	Particulate Percent	Sample Color	Analyst ID	Comments
0348599	305151-013-013-1/1	NAD	-	-	-	-	80	-	2	-	-	18	Black	AS	
0348600	305151-014-014-1/1	NAD	-	-	-	-	-	-	90	-	-	10	Brown	AS	
0348601	305151-015-015-1/1	NAD	-	-	-	-	-	-	70	-	-	30	Brown	AS	
0348602	305151-016-016-1/1	NAD	-	-	-	-	90	-	2	2	-	6	Yellow	AS	
0348603	305151-017-017-1/1	NAD	-	-	-	-	90	-	2	-	-	11	Yellow	AS	
0348604	305151-018-018-1/1	NAD	-	-	-	-	-	-	2	-	-	98	Black	AS	
0348605	305151-019-019-1/1	NAD	-	-	-	-	-	-	5	-	-	95	Black	AS	
0348606	305151-020-020-1/1	10	10	-	-	-	-	-	-	-	-	90	Multi	AS	

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a matter of protection to clients, the public and these Laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from us. Sample types, locations and collection protocols are based upon the information provided by the persons submitting them and, unless collected by personnel of these Laboratories, we expressly disclaim any knowledge and liability for the accuracy and completeness of this information. Residual sample material will be discarded in accordance with the appropriate regulatory guidelines, unless otherwise requested by the client. NVLAP Accreditation applies only to polarized light microscopy of both samples and transmission electron microscopy of AHERA air samples. All rights reserved. AMA Analytical Services, Inc.

An AIHA (03863), NVLAP (# 101113), & New York ELAP (#10920) Accredited Laboratory
4475 Forbes Blvd. • Lanham, MD 20706 • (301) 459-2640 • Toll Free (800) 346-8961 • Fax (301) 459-2643

JUN 02 03 04:58P

AMA ANALYTICAL SERVICES

(301) 459-2643

P. 2

AMA Analytical Services, Inc.



A Specialized Environmental Laboratory

CERTIFICATE OF ANALYSIS

NVLAP
NY ELAP
AIHA

Client: GPL Environmental Services, Inc.
Address: 202 Perry Parkway
Cathetersburg, Maryland, 20877
Attention: Amy Edwards

Job Name: Shaw E & I
Job Location: Crews Landing - Site 11A
Job Number: 305151
P.O. Number: Not Provided

Chain Of Custody: 113818
Date Analyzed: 06/02/2003
Person Submitting: Amy Edwards

Page 3 of 1

Summary of Polarized Light Microscopy

AMA Sample Number	CBest Sample #	Total Asbestos Percent	Chrysotile Percent	Amosite Percent	Crocidolite Percent	Other Asbestos Percent	Mineral Wool Percent	Fiberglass Percent	Organic Percent	Synthetic Percent	Other Percent	Particulate Percent	Sample Color	Analyst ID	Comments
-------------------	----------------	------------------------	--------------------	-----------------	---------------------	------------------------	----------------------	--------------------	-----------------	-------------------	---------------	---------------------	--------------	------------	----------

The following footnotes only apply to those samples which the total asbestos result is flagged with a note number.

- TEM RECOMMENDATION** - Please note, due to resolution limitations with optical microscopy and/or interference from matrix components of this sample, results which are reported via PLM as negative or trace (<1%) for asbestos may contain a significant quantity of asbestos. It is recommended that the additional analytical technique of TEM be used to check for asbestos fibers below the resolution limits of optical microscopy.
- MATRIX REDUCTION RECOMMENDATION** - Please note, due to interference from the matrix components of this sample, results which are reported via PLM as negative or trace (<1%) for asbestos may contain a significant quantity of asbestos which is obscured from view. It is recommended that the additional preparation technique of gravimetric reduction be performed on this sample to minimize the obscuring effects of matrix components, followed by reanalysis by PLM and/or TEM.

Analysis Method - EPA/560/R-93/116 dated July 1993

NAD = "No Asbestos Detected"

TR = "Trace equals less than 1% of this component"

Andrew Seldinger

This report applies only to the sample(s) or samples investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a general protection to clients, the public and these Laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from us. Sample types, locations and collection protocols are based upon the information provided by the persons submitting them and, unless collected by personnel of these Laboratories, we expressly disclaim any knowledge and liability for the accuracy and completeness of this information. Residual sample material will be discarded in accordance with the appropriate regulatory guidelines, unless otherwise requested by the client. NVLAP Accreditation applies only to polarized light microscopy of bulk samples and transmission electron microscopy of AIHRA air samples.

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Jun 02 03 04:35P

AMA Analytical Services

(301) 459-2643

P. 3

Analytical Report For 305151

for

Shaw E&I Inc

Project Manager : Rose Condit

Project Name : NASA Crows Landing Flight Facility

June 12, 2003

GPL

Laboratories

**GPL Laboratories, LLLP Certifies that the test results meet all requirements of the
NELAC Standards unless otherwise noted.**

Reviewed by,
Project Manager

Approved by,
Laboratory Director

202 Perry Parkway Gaithersburg, MD 20877 Phone (301) 926-6802 Fax: (301) 840-1209
www.gplab.com

Summary of Analytical Results

Client ID: L-001
GPL ID: 305151-021-021-1/1
Matrix: SOIL
Date Collected: 05/27/2003
Date Received: 05/28/2003

Prep Method:
Prep Date:
Prep Time:
Prep Batch:

Analytical Method: ASTM_D3335
Date Analyzed: 06/12/2003
Time Analyzed: 00:00
Analysis Batch: 60964

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	34.9	18.4	mg/kg		1

Summary of Analytical Results

Client ID: L-002
GPL ID: 305151-022-022-1/1
Matrix: SOIL
Date Collected: 05/27/2003
Date Received: 05/28/2003

Prep Method:
Prep Date:
Prep Time:
Prep Batch:

Analytical Method: ASTM_D3335
Date Analyzed: 06/12/2003
Time Analyzed: 00:00
Analysis Batch: 60964

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	BQL	38.5	mg/kg	U	1

Summary of Analytical Results

Client ID: L-003
GPL ID: 305151-023-023-1/1
Matrix: SOIL
Date Collected: 05/27/2003
Date Received: 05/28/2003

Prep Method:
Prep Date:
Prep Time:
Prep Batch:

Analytical Method: ASTM_D3335
Date Analyzed: 06/12/2003
Time Analyzed: 00:00
Analysis Batch: 60964

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	BQL	119	mg/kg	U	1

Summary of Analytical Results

Client ID: L-004
GPL ID: 305151-024-024-1/1
Matrix: SOIL
Date Collected: 05/27/2003
Date Received: 05/28/2003

Prep Method:
Prep Date:
Prep Time:
Prep Batch:

Analytical Method: ASTM_D3335
Date Analyzed: 06/12/2003
Time Analyzed: 00:00
Analysis Batch: 60964

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	BQL	625	mg/kg	U	1

GPL LABORATORIES, LLLP

Summary of Analytical Results

Client ID: L-005

GPL ID: 305151-025-025-1/1

Matrix: SOIL

Date Collected: 05/27/2003

Date Received: 05/28/2003

Prep Method:

Prep Date:

Prep Time:

Prep Batch:

Analytical Method: ASTM_D3335

Date Analyzed: 06/12/2003

Time Analyzed: 00:00

Analysis Batch: 60964

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	BQL	833	mg/kg	U	I

Summary of Analytical Results

Client ID: L-006

GPL ID: 305151-026-026-1/1

Matrix: SOIL

Date Collected: 05/27/2003

Date Received: 05/28/2003

Prep Method:

Prep Date:

Prep Time:

Prep Batch:

Analytical Method: ASTM_D3335

Date Analyzed: 06/12/2003

Time Analyzed: 00:00

Analysis Batch: 60964

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	395	208	mg/kg		1

Summary of Analytical Results

Client ID: L-007
GPL ID: 305151-027-027-1/1
Matrix: SOIL
Date Collected: 05/27/2003
Date Received: 05/28/2003

Prep Method:
Prep Date:
Prep Time:
Prep Batch:

Analytical Method: ASTM_D3335
Date Analyzed: 06/12/2003
Time Analyzed: 00:00
Analysis Batch: 60964

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	BQL	192	mg/kg	U	1

Summary of Analytical Results

Client ID: L-008

GPL ID: 305151-028-028-1/1

Matrix: SOIL

Date Collected: 05/27/2003

Date Received: 05/28/2003

Prep Method:

Prep Date:

Prep Time:

Prep Batch:

Analytical Method: ASTM_D3335

Date Analyzed: 06/12/2003

Time Analyzed: 00:00

Analysis Batch: 60964

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	28.1	11.8	mg/kg		1

Summary of Analytical Results

Client ID: L-009

GPL ID: 305151-029-029-1/1

Matrix: SOIL

Date Collected: 05/27/2003

Date Received: 05/28/2003

Prep Method:

Prep Date:

Prep Time:

Prep Batch:

Analytical Method: ASTM_D3335

Date Analyzed: 06/12/2003

Time Analyzed: 00:00

Analysis Batch: 60964

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	1380	417	mg/kg		1

Summary of Analytical Results

Client ID: L-010

Prep Method:

Analytical Method: ASTM_D3335

GPL ID: 305151-030-030-1/1

Prep Date:

Date Analyzed: 06/12/2003

Matrix: SOIL

Prep Time:

Time Analyzed: 00:00

Date Collected: 05/27/2003

Prep Batch:

Analysis Batch: 60964

Date Received: 05/28/2003

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	BQL	442	mg/kg	U	1

Summary of Analytical Results

Client ID: L-011
GPL ID: 305151-031-031-1/1
Matrix: SOIL
Date Collected: 05/27/2003
Date Received: 05/28/2003

Prep Method:
Prep Date:
Prep Time:
Prep Batch:

Analytical Method: ASTM_D3335
Date Analyzed: 06/12/2003
Time Analyzed: 00:00
Analysis Batch: 60964

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	4230	992	mg/kg		1

Summary of Analytical Results

Client ID: L-012
GPL ID: 305151-032-032-1/1
Matrix: SOIL
Date Collected: 05/27/2003
Date Received: 05/28/2003

Prep Method:
Prep Date:
Prep Time:
Prep Batch:

Analytical Method: ASTM_D3335
Date Analyzed: 06/12/2003
Time Analyzed: 00:00
Analysis Batch: 60964

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	BQL	520	mg/kg	U	1

Summary of Analytical Results

Client ID: L-013

GPL ID: 305151-033-033-1/1

Matrix: SOIL

Date Collected: 05/27/2003

Date Received: 05/28/2003

Prep Method:

Prep Date:

Prep Time:

Prep Batch:

Analytical Method: ASTM_D3335

Date Analyzed: 06/12/2003

Time Analyzed: 00:00

Analysis Batch: 60964

Parameter	Result	Rep Limit	Units	Qualifier	D.F.
Lead	24.6	10.4	mg/kg		1