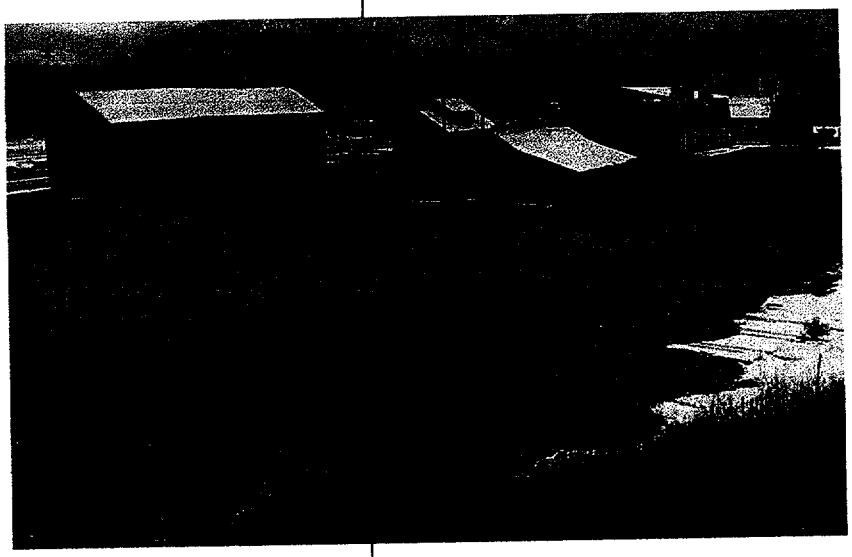
486769

GRACE



Final Report

Removal Activities at the Export Plant Libby, MT

Appendices E through J

March 16, 2001

Prepared for

W.R. Grace & Co.

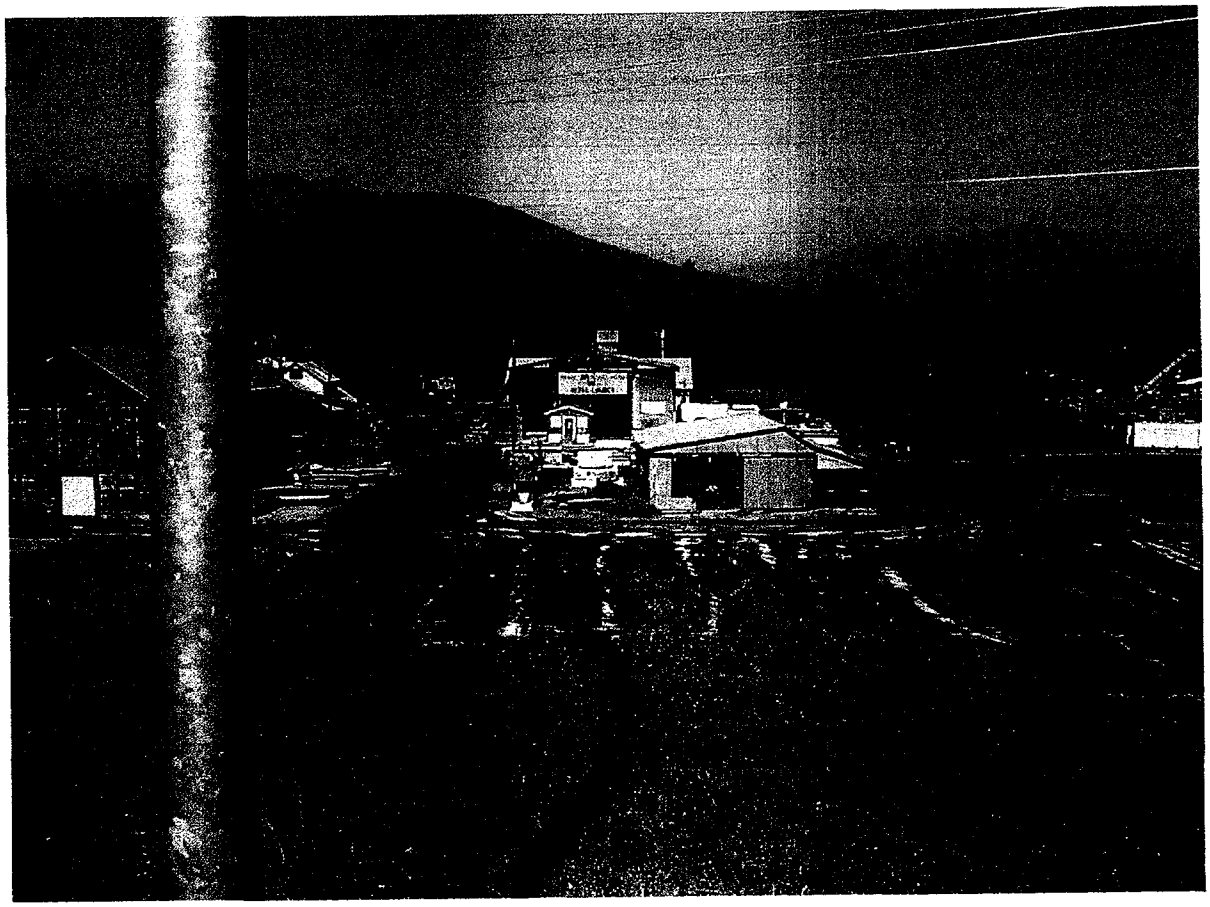
URS

APPENDIX E

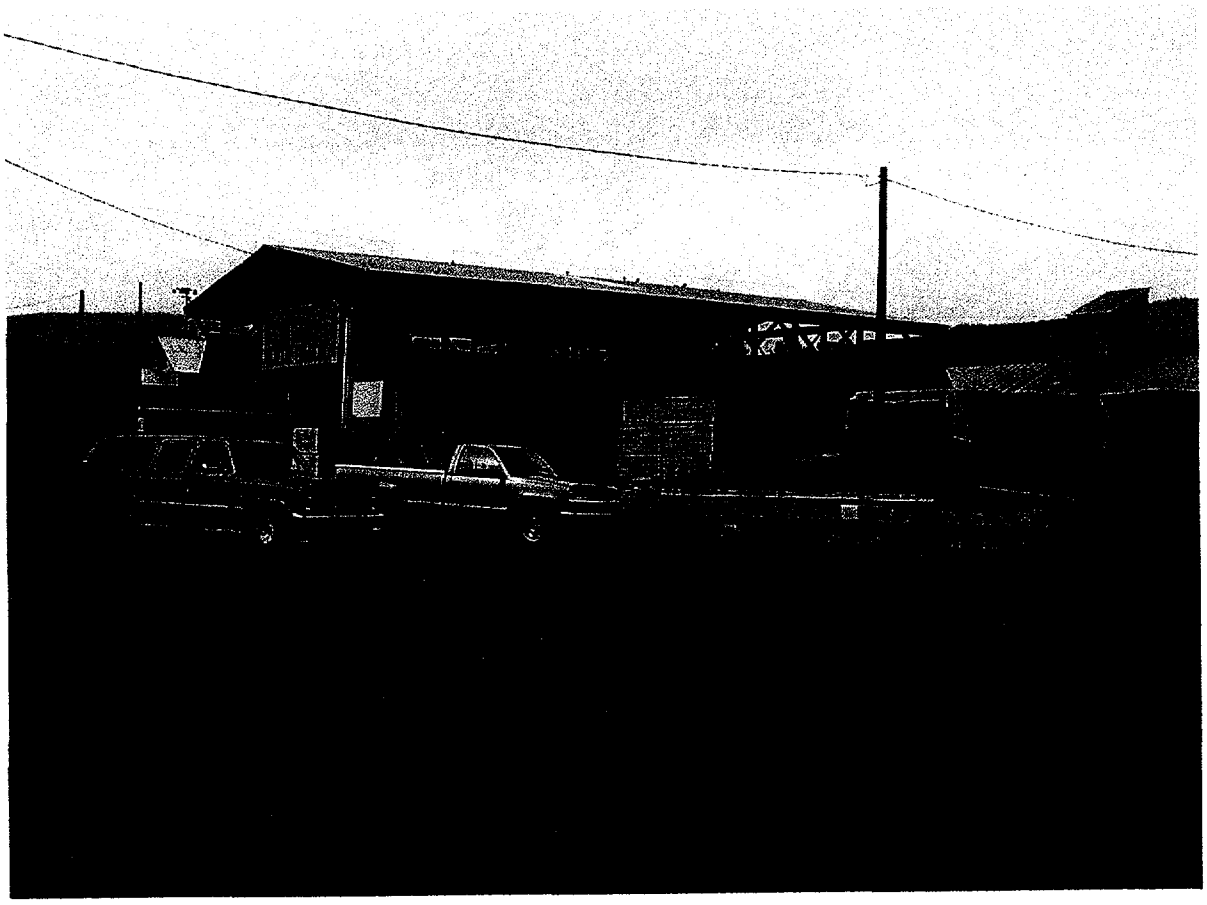
SITE PHOTOGRAPHS

Color Photo(s)

The following photos contain color that does not appear in the scanned images.
To view the actual images please contact the Superfund Record Center at (303) 312-6473.

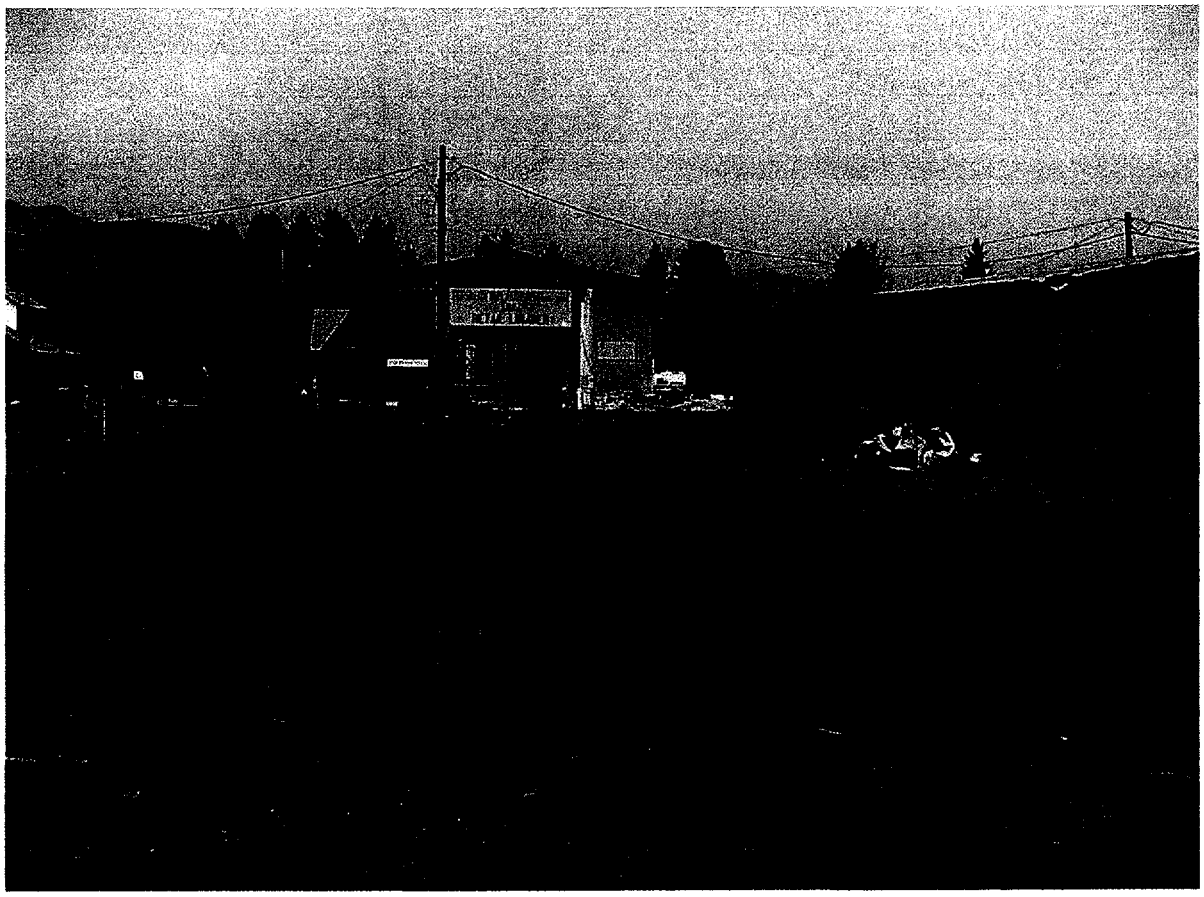


View of Export Plant looking west before soil excavation and building cleaning.

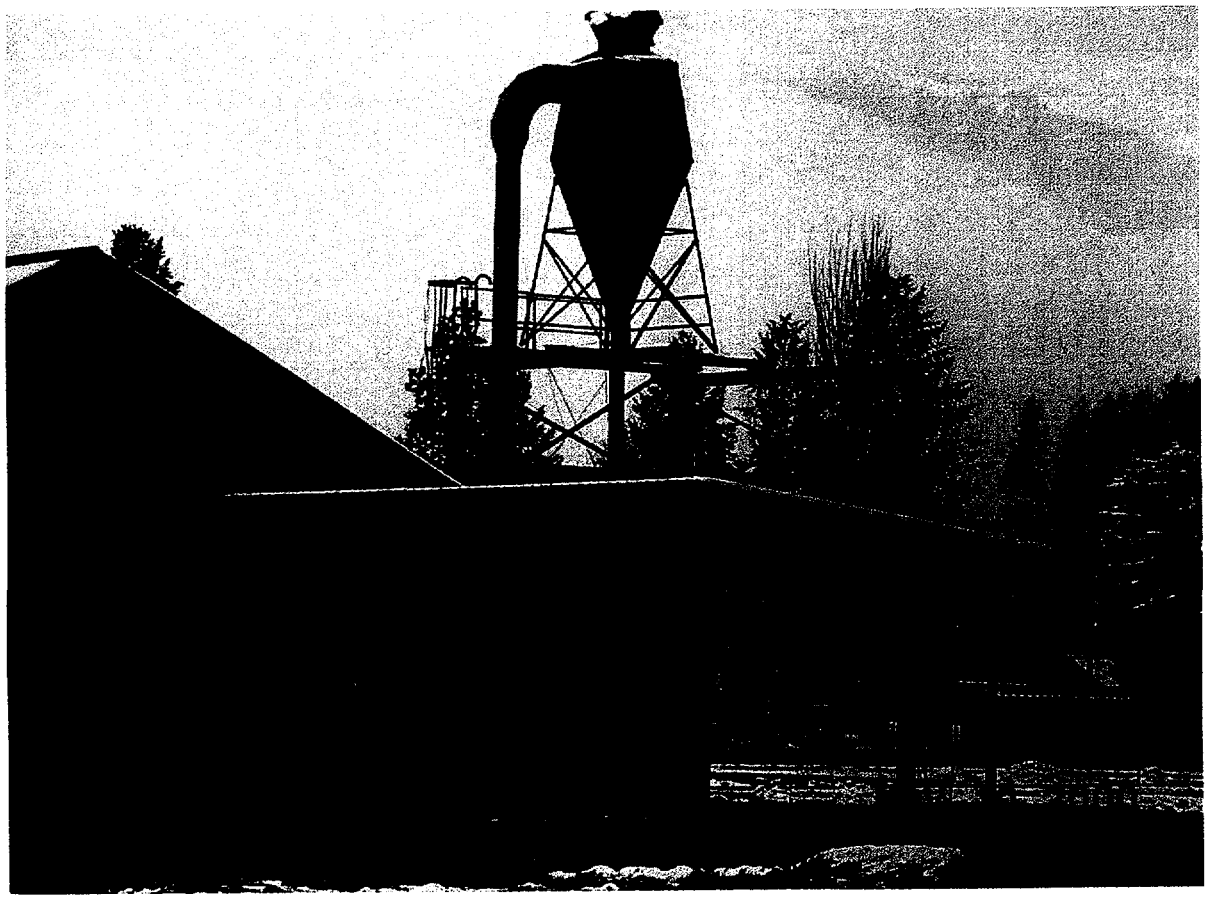


View of Pole Barn before cleaning and prior to relocation.

View of Pole Barn before cleaning and after retail office was relocated.

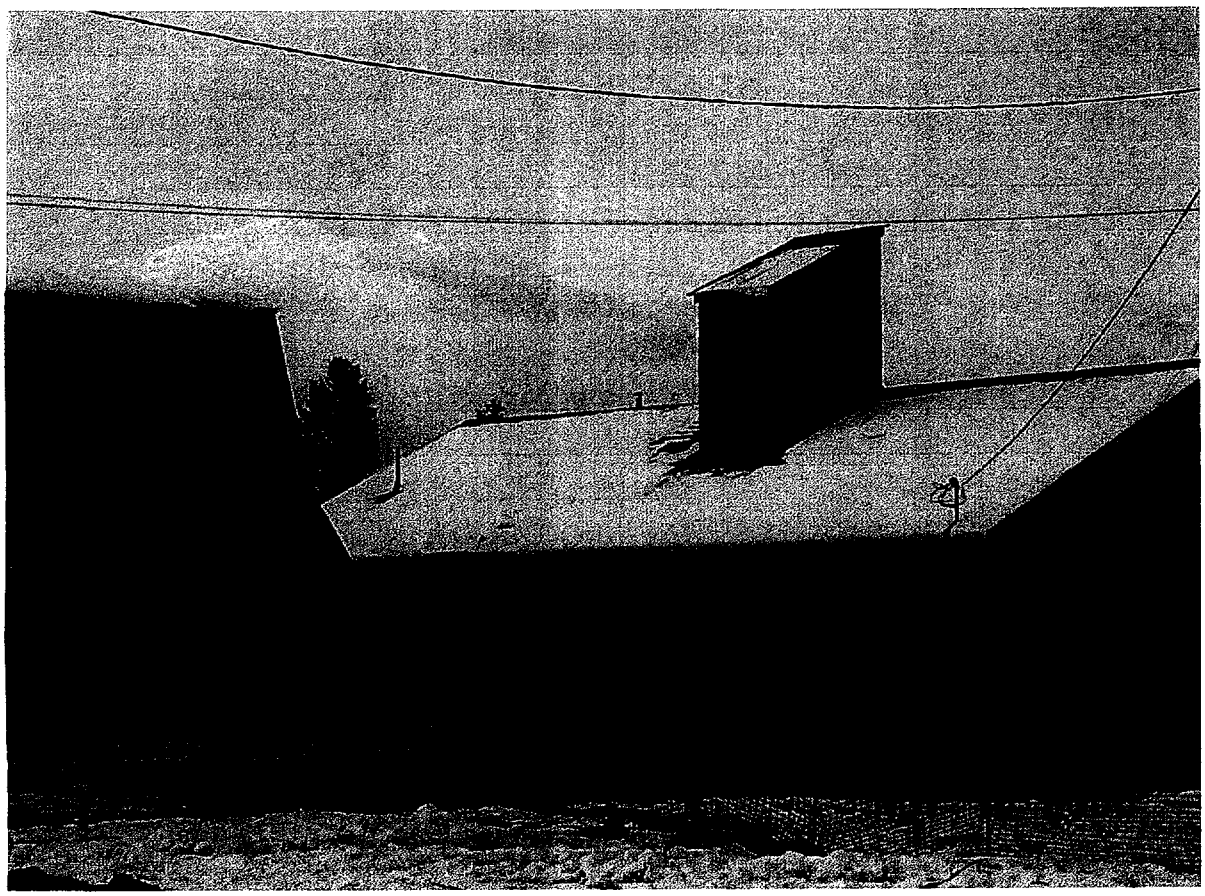


View of Pole Barn and Lumber Storage Shed (right) before cleaning.

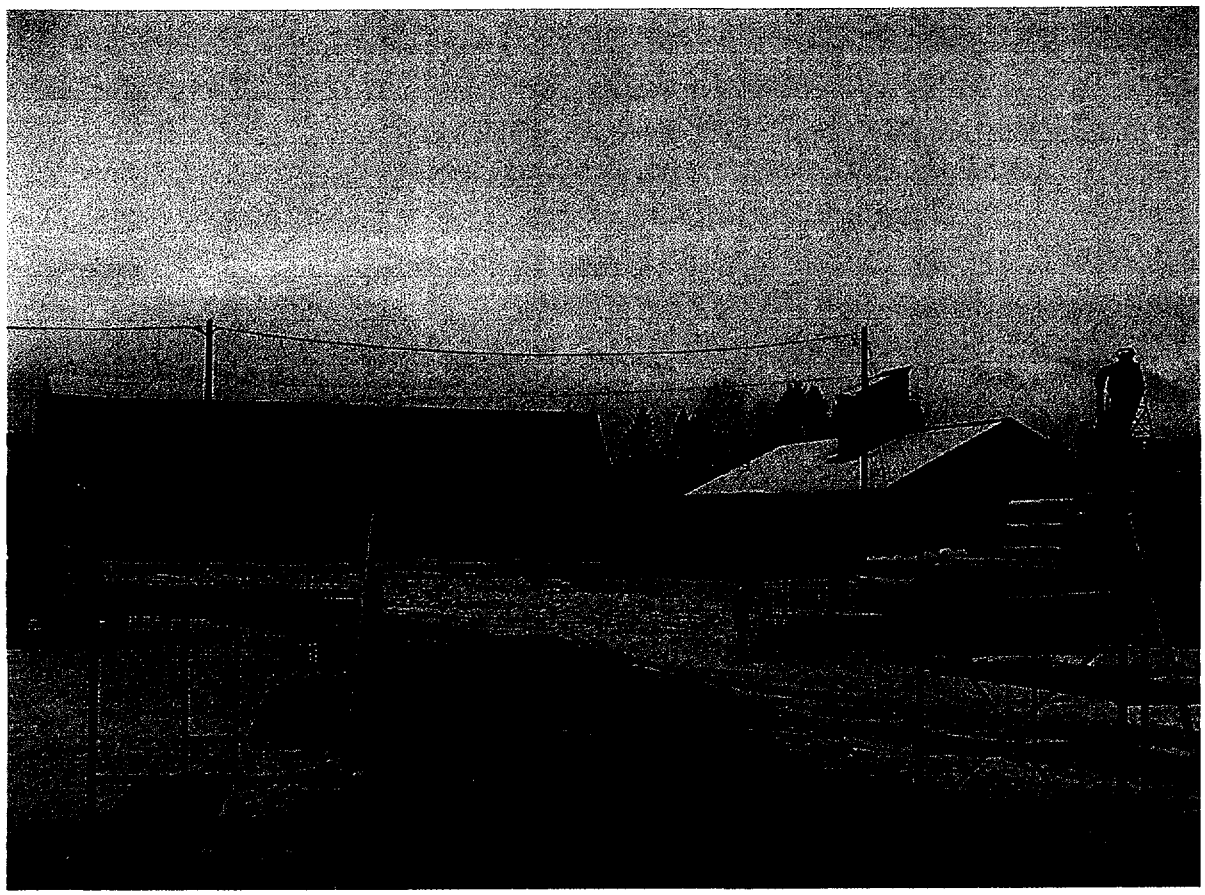


View of Planer Shed after cleaning and after backfilling activities at West Field.

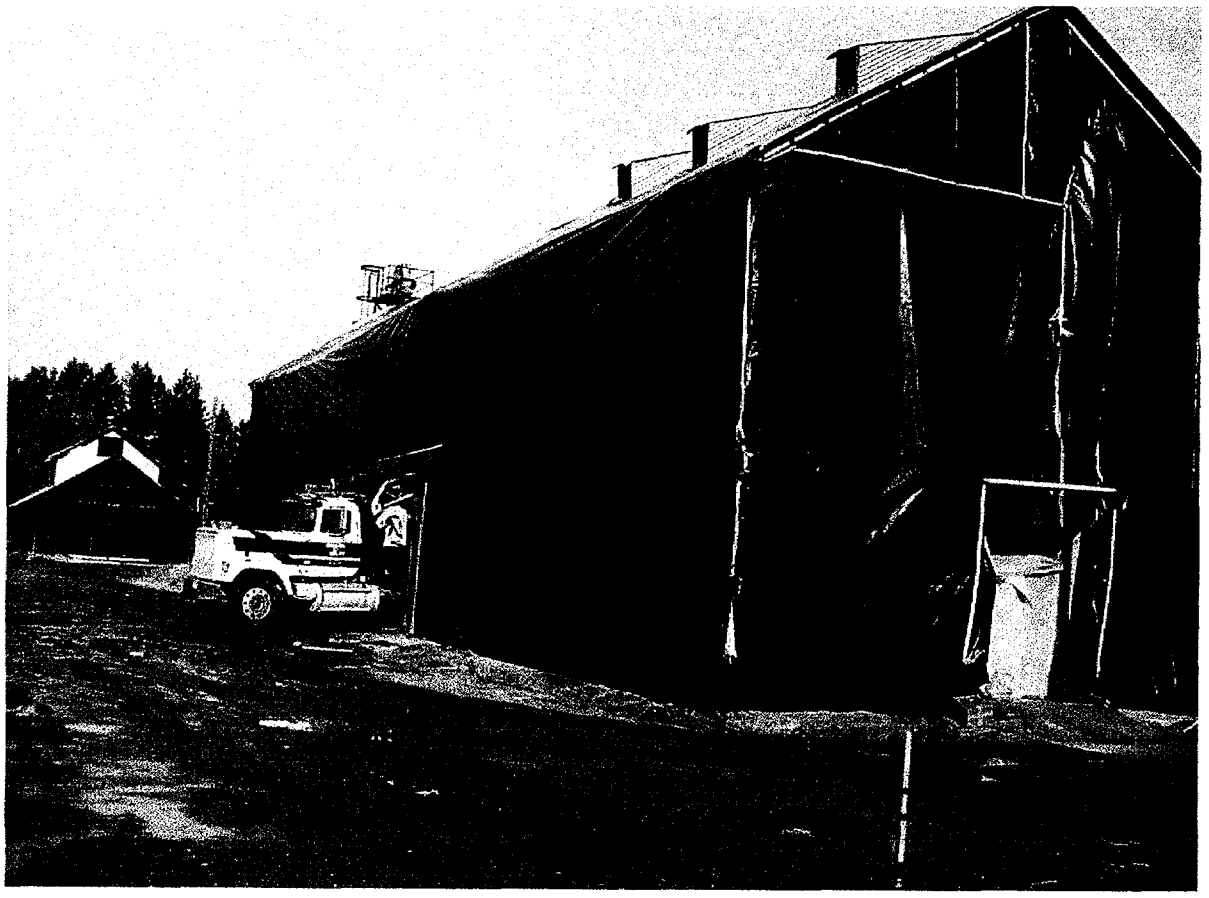
View of Planer Shed after cleaning and during backfilling activities in West Field.



View of Pole Barn while under containment and Planer Shed on right.



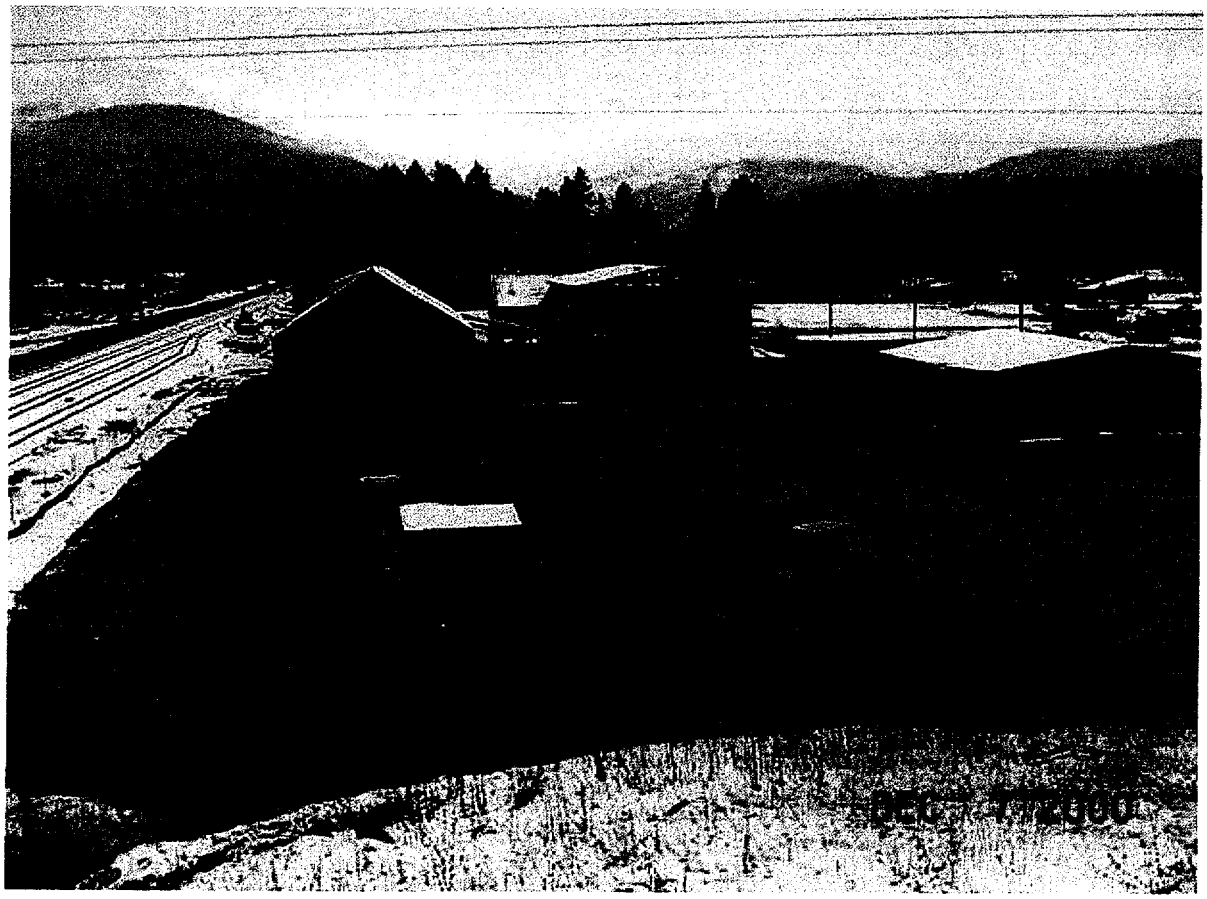
View of Pole Barn while under containment and Planer Shed on right.



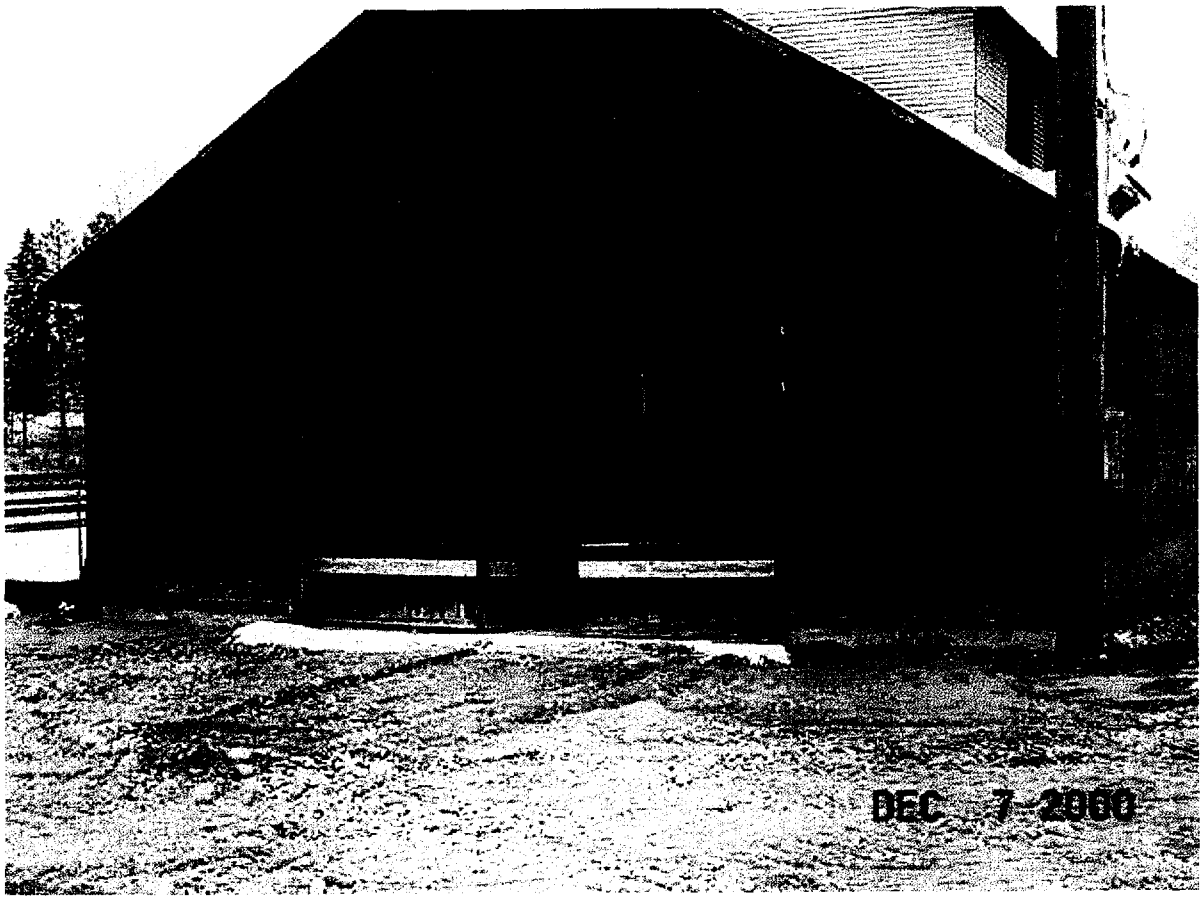
View of Large Warehouse while under containment.

Excavation activities at northeast corner of site.

Excavation activities at northeast corner of site. Lumber Storage Shed (foreground) and Pole Barn under containment.



View from southeast corner of Site after cleaning. Backfilling activities continue.



View of Large Warehouse after cleaning and after backfilling activities were completed.

View from northeast corner of site after cleaning and backfilling activities were completed.

APPENDIX F

ANALYTICAL RESULTS FOR AIR

APPENDIX F-1

BUILDING AIR SAMPLE RESULTS ASSOCIATED WITH SECTION 5

EMSL Analytical, Inc.

716 Highway 2 West
Libby, MT 59923
Phone: (406) 293-9066 Fax: (406) 293-7016

EMSL

Attn.: Tim Wall
CDM Federal Programs, Corp.
One Cambridge Place
50 Hampshire St.
Cambridge, MA 02142

Saturday, September 02, 2000

Ref Number: ML00223

Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by EPA 40 CFR Part 763 Final Rule (AHERA)

Project: Koch Environmental Health, Inc. 9/1/00

Sample ID	Volume (liters)	Asbestos Type(s)	# STRUCTURES > 0.5µ - < 5µ	# STRUCTURES ≥ 5µ	# STRUCTURES Non-Asbestos	Area Analyzed (mm²)	Analytical Sensitivity (S/cc)	Asbestos Concentration (S/mm²)	Asbestos Concentration (S/cc)
FC03A	1529.85	None Detected			0	0.0516	0.0049	<19.38	<0.0049
FC04A	1837.44	None Detected			0	0.0516	0.0041	<19.38	<0.0041
FC05A	1494.08	None Detected			1	0.0516	0.0050	<19.38	<0.0050
FC06A	1470.88	None Detected			2	0.0645	0.0041	<15.50	<0.0041
FC07A	1612.26	None Detected			0	0.0516	0.0046	<19.38	<0.0046

Results of Planer Bldg. Clearance Samples. From EMSL

URS COPY
Project No. 805169
File Code No. 10.0.a.2.1
Doc No.

Note: Sent via PES

Myron Getman
Analyst

Approved Signatory

Disclaimer: This laboratory is not responsible for data reported in structures/cc, which is dependent on volume collected by non-laboratory personnel. This laboratory is only responsible for data reported in structures/mm². This report may not be reproduced, except in full, without written approval by EMSL. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. This report relates only to the samples reported above. Quality control data (including 95% confidence limits and laboratory and analysts' accuracy and precision) is available upon request.

Accredited for NVLAP PLM/TEM #200481-0.

Sample Date: 9/1/00

ML00223

KOCH ENVIRONMENTAL HEALTH, INC.

7342 S. MOORE CT. LITTLETON, COLORADO 80127 (303) 932-8484 FAX (303) 932-8585

AIR/BULK CONTAMINANT SAMPLING/CHAIN OF CUSTODY FORM

SAMPLES SUBMITTED TO:	ANALYSIS REQUESTED:
EPA	AIR ✓ BULK ___ OTHER ___
	TEM AHERA ✓ Patrick McGuire
9/1/00	~~NIOSH 7400 Method, A Counting Rules~~ ___
	Polarized Light Microscopy N/A
	Other Analysis N/A
	Turnaround Time 2 hr. ___ 24 hr. X 3-5 day ___

Special Instructions: ___

KEH SAMPLE #	Volume (Liters)
1. FC03A	1529.85
2. FC04A	1837.44
3. FC05A	1494.08
4. FC06A	1470.88
5. FC07A	1612.26
6. B01A	—
7. B02A	—
8.	
9.	
10.	
11.	
12.	
13.	
14.	
15.	

Patrick McGuire 9/1/00 — Relinquished by / Date

Gregory P. Parsons 9/1/00 — Received By / Date

Gregory P. Parsons 9/1/00 — Relinquished by / Date

[signature] 9/1/00 4:08 — Received By / Date

Clearance Samples for Planer Bldg. Results file (10.0.6.2.1)

submitted to EMSL

URS

Project No. 805169

File Code No. 10.3.6.1.11

Doc No. ___

EMSL Analytical, Inc.

716 Highway 2 West
Libby, MT 59923
Phone: (406) 293-9066 Fax: (406) 293-7016

Attn.: Tim Wall
CDM Federal Programs, Corp.
One Cambridge Place
50 Hampshire St.
Cambridge, MA 02142

Tuesday, September 19, 2000

Ref Number: ML00281

Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by EPA 40 CFR Part 763 Final Rule (AHERA)

Project: Millworks West Final Clearance 9/18/00 The Small Shed

Sample ID	Volume (liters)	Asbestos Type(s)	# STRUCTURES > 0.5µ - < 5µ	# STRUCTURES ≥ 5µ	# STRUCTURES Non-Asbestos	Area Analyzed (mm²)	Analytical Sensitivity (S/cc)	Asbestos Concentration (S/mm²)	Asbestos Concentration (S/cc)
1R-01902	1320.00	None Detected			0	0.0645	0.0045	<15.50	<0.0045
1R-01903	1485.00	None Detected			0	0.0645	0.0040	<15.50	<0.0040
1R-01904	1485.00	None Detected			0	0.0645	0.0040	<15.50	<0.0040
1R-01905	1536.00	None Detected			0	0.0516	0.0049	<19.38	<0.0049
1R-01906	1817.00	None Detected			0	0.0516	0.0046	<19.38	<0.0046

Carlos D. Salinas
Analyst

Approved Signatory

Disclaimers: This laboratory is not responsible for data reported in structures/cc, which is dependent on volume collected by non-laboratory personnel. This laboratory is only responsible for data reported in structures/mm². This report may not be reproduced, except in full, without written approval by EMSL. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. This report relates only to the samples reported above. Quality control data (including 95% confidence limits and laboratory and analysts' accuracy and precision) is available upon request.

Accredited for NVLAP PLM/TEM #200481-0.

MLOOL81 MLOO282
+ML00283

The Small Shed

Chain of Custody Record
U.S. Environmental Protection Agency, Region VIII
999 18th Street, Suite 500
Denver, CO 80202-2413

CCONEP082500
Send to:
EMSL
On-site Mobile Lab

Field Sample ID	Sample Type	Sample Date	Volume (L)	Turn Around Time	Analysis Request
1R-01898	Millworks West	9/18/00	2142	24 Hour	NIOSH 7400 Followed by AHERA
1R-01901	Millworks West	9/18/00	2457	24 Hour	NIOSH 7400 Followed by AHERA
1R-01902	Millworks West Final Clearance	9/18/00	1320	12 Hour	AHERA
1R-01903	Millworks West Final Clearance	9/18/00	1485	12 Hour	AHERA
1R-01904	Millworks West Final Clearance	9/18/00	1485	12 Hour	AHERA
1R-01905	Millworks West Final Clearance	9/18/00	1535	12 Hour	AHERA
1R-01906	Millworks West Final Clearance	9/18/00	1617	12 Hour	AHERA
1R-01907	Blank	9/18/00	Blank	24 Hour	NIOSH 7400 Followed by AHERA
1R-01908	Blank	9/18/00	Blank	24 Hour	NIOSH 7400 Followed by AHERA

END OF SUBMITTAL

Relinquished by (Signature and Company):	Date/Time	Received by (Signature and Company):	Sample Condition upon Receipt:
Gregory P. [illegible] PES	9/18/00 2815	[signature]	9/18/00 22:30
Relinquished by (Signature and Company):	Date/Time	Received by (Signature and Company):	Sample Condition upon Receipt:

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EMSL Analytical, Inc.

716 Highway 2 West
Libby, MT 59923
Phone: (406) 293-9066 Fax: (406) 293-7016

EMSL

Attn: Tim Wall
CDM Federal Programs, Corp.
One Cambridge Place
50 Hampshire St.
Cambridge, MA 02142

Thursday, September 14, 2000

Ref Number: ML00269
Analysis Date: 9/14/00

PHASE CONTRAST MICROSCOPY (PCM) FIBER COUNT BY NIOSH METHOD 7400, ISSUE 2, 4TH EDITION, 8/15/94

Project: Millworks West 9/13/00 – Retail office Clearance

Sample	Location	Sample Date	Volume (liters)	Fibers	Fields	fibers/mm²	LOD fib/cc	fibers/cc
1R-01563	Millworks West	9/13/00	1812.00	<5.5	100	<7.0	0.002	<LOD
1R-01564	Millworks West	9/13/00	1837.00	<5.5	100	<7.0	0.002	<LOD
1R-01565	Millworks West	9/13/00	1790.00	<5.5	100	<7.0	0.002	<LOD
1R-01566 Retail office	Millworks West	9/13/00	1688.00	10.0	100	12.74	0.002	0.003
1R-01567	Blank	9/13/00	0.00	<5.5	100	<7.0		
1R-01568	Blank	9/13/00	0.00	<5.5	100	<7.0		

BLANK ID. 1R-01567, 1R-01568

URS
Project No. 805169
File Code No 10.0.9.2.7
Doc No. 1/4

Myron Getman
Analyst

Approved Signatory

Disclaimers: LOD = Limit of Detection. This method assumes the limit of detection is 7 fibers/mm². The laboratory is not responsible for data reported in fibers/cc, which is dependent on volume collected by non-laboratory personnel. This report relates only to the samples reported above. This report may not be reproduced, except in full, without written approval by EMSL.

Analysis performed by EMSL Mobile Lab (NVLAP #200461-0)

EMSL Analytical, Inc.

716 Highway 2 West
Libby, MT 59923
Phone: (406) 293-9066 Fax: (406) 293-7016

EMSL

Attn : Tim Wall
CDM Federal Programs, Corp.
One Cambridge Place
50 Hampshire St.
Cambridge, MA 02142

Thursday, September 14, 2000

Ref Number: ML00261

Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by EPA 40 CFR Part 763 Final Rule (AHERA)

Project: Millworks West 9/13/00 Retail Office Clearance

Sample ID	Volume (liters)	Asbestos Type(s)	# STRUCTURES > 0.5µ - < 5µ	≥ 5µ	Non-Asbestos	Area Analyzed (mm²)	Analytical Sensitivity (S/cc)	Asbestos Concentration (S/mm²)	(S/cc)
1R-01563	1812.00	None Detected			0	0.0516	0.0041	<19.38	<0.0041
1R-01564	1837.00	None Detected			0	0.0516	0.0041	<19.38	<0.0041
1R-01565	1780.00	None Detected			0	0.0516	0.0042	<19.38	<0.0042
1R-01566 Retail Office	1688.00	None Detected			0	0.0516	0.0044	<19.38	<0.0044

URS
Project No. 805169
File Code No. 10.0.a.2.7
Doc No. 2/4

Myron Getman
Analyst

Approved Signatory

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Accredited for NVLAP PLM/TEM #200481-0.

Chain of Custody Record

U.S. Environmental Protection Agency, Region VIII
999 18th Street, Suite 500
Denver, CO 80202-2413

CCONEP082500
Send to:
EMSL
On-site Mobile Lab

Field Sample ID	Sample Type	Sample Date	Volume (L)	Turn Around Time	Analysis Request
1R-01563	Millwork West	9/13/00	1812	24 Hour	NIOSH 7400 Followed by AHERA
1R-01564	Millwork West	9/13/00	1837	24 Hour	NIOSH 7400 Followed by AHERA
1R-01565	Millwork West	9/13/00	1790	24 Hour	NIOSH 7400 Followed by AHERA
1R-01566 Retail office	Millwork West	9/13/00	1688	24 Hour	NIOSH 7400 Followed by AHERA
1R-01567	Blank	9/13/00	Blank	24 Hour	NIOSH 7400 Followed by AHERA
1R-01568	Blank	9/13/00	Blank	24 Hour	NIOSH 7400 Followed by AHERA

END OF SUBMITTAL

URS
Project No. 805109
File Code No. 10.0.9.2.7
Doc No. 3/4

Relinquished by (Signature and Company):	Date/Time	Received by (Signature and Company):	Sample Condition upon Receipt:
Gregory P. Parana PES	9/13/00 1650	[signature] EMSL 9/13/00 14:26	
Relinquished by (Signature and Company):	Date/Time	Received by (Signature and Company):	Sample Condition upon Receipt:

Sheet No. A-

LIBBY MONTANA SITE INVESTIGATION
FIELD SAMPLE DATA SHEET FOR
AIR

Idress or Location ID: M.11 Work West
GPS (if no address available): Northing _____ Easting _____
Owner: Burnett's
Land Use Category: Residential School (Commercial) Mining Other (_____)

Site Visit Date: 9/13/00 Sampling Team: PES, GP

Data Item	Cassette 1	Cassette 2	Cassette 3
Field ID Number			
Index ID	1R-01566	1R-01567	1R-01568
Category (circle)	(FS) Rep Blank	FS Rep (Blank)	FS Rep (Blank)
Matrix Type (circle)	(Indoor) Outdoor	Indoor Outdoor	Indoor Outdoor
Location Description	Burnett's Office SE Corner	N/A	N/A
Flow Meter Type	Rotameter		
Flow Meter ID No.	00811		
Pump ID Number	0591		
Start-Date	9/13/00		
Start-Time	815		
Start-Flow (L/min)	3.54		
Start-Counter	N/A		
Stop-Date	9/13/00		
Stop-Time	1555		
Stop-Flow (L/min)	3.79		
Stop-Counter	N/A		
Pump fault?	No Yes	No Yes	No Yes
MET Station onsite?	No Yes	No Yes	No Yes
Field Comments	3.67 x 460 = 1688		

URS

Project No. 805169
File Code No. 10.0.a.2.7
Doc No. 4/4

EMSL Analytical, Inc.

716 Highway 2 West
Libby, MT 59923
Phone: (406) 293-9066 Fax: (406) 293-7016

EMSL

Attn.: Tim Wall
CDM Federal Programs, Corp.
One Cambridge Place
50 Hampshire St.
Cambridge, MA 02142

Monday, October 23, 2000

Ref Number: ML00434
Analysis Date: 10/23/00

PHASE CONTRAST MICROSCOPY (PCM) FIBER COUNT BY NIOSH METHOD 7400, ISSUE 2, 4TH EDITION, 8/15/94

Project: Millworks West 10/23/2000 The Warehouse

Sample	Location	Sample Date	Volume (liters)	Fibers	Fields	fibers/ mm²	LOD fib/cc	fibers/cc
1R-03003	Millworks West	10/21/00	2383.00	<5.5	100	<7.0	0.001	<LOD
1R-03005	Millworks West	10/21/00	2485.00	<5.5	100	<7.0	0.001	<LOD
1R-03006	Millworks West	10/21/00	2382.00	<5.5	100	<7.0	0.001	<LOD
1R-03009	Millworks West	10/21/00	2326.00	<5.5	100	<7.0	0.001	<LOD
1R-03010	Millworks West-Final Clearance Warehouse	10/21/00	1300.00	<5.5	100	<7.0	0.002	<LOD
1R-03011	Millworks West-Final Clearance Warehouse	10/21/00	1300.00	<5.5	100	<7.0	0.002	<LOD

BLANK ID: 1R-03015, 1R-03016

Tom Ferrante
Analyst

Approved Signatory

Disclaimers: LOD = Limit of Detection. This method assumes the limit of detection is 7 fibers/mm². The laboratory is not responsible for data reported in fibers/cc, which is dependent on volume collected by non-laboratory personnel. This report relates only to the samples reported above. This report may not be reproduced, except in full, without written approval by EMSL.

Analysis performed by EMSL Mobile Lab (NVLAP #200481-0)

10.0.a.2.2

EMSL Analytical, Inc.

716 Highway 2 West
Libby, MT 59923
Phone: (406) 293-9066 Fax: (406) 293-7016

Attn.: Tim Wall
CDM Federal Programs, Corp.
One Cambridge Place
50 Hampshire St.
Cambridge, MA 02142

Monday, October 23, 2000

Ref Number: ML00434
Analysis Date: 10/23/00

PHASE CONTRAST MICROSCOPY (PCM) FIBER COUNT BY NIOSH METHOD 7400, ISSUE 2, 4TH EDITION, 8/15/94

Project: Millworks West 10/23/2000 The Warehouse

Sample	Location	Sample Date	Volume (liters)	Fibers	Fields	fibers/ mm²	LOD fib/cc	fibers/cc
1R-03012	Millworks West-Final Clearance Warehouse	10/21/00	1300.00	<5.5	100	<7.0	0.002	<LOD
1R-03013	Millworks West-Final Clearance Warehouse	10/21/00	1295.00	<5.6	100	<7.0	0.002	<LOD
1R-03014	Millworks West-Final Clearance Warehouse	10/21/00	1300.00	<5.5	100	<7.0	0.002	<LOD
1R-03015	Blank	10/21/00	0.00	<6.5	100	<7.0		
1R-03016	Blank	10/21/00	0.00	<5.5	100	<7.0		

BLANK ID: 1R-03015, 1R-03016

Tom Ferrante
Analyst

Approved Signatory

Disclaimers: LOD = Limit of Detection. This method assumes the limit of detection is 7 fiber/mm². The laboratory is not responsible for data reported in fibers/cc, which is dependent on volume collected by non-laboratory personnel. This report relates only to the samples reported above. This report may not be reproduced, except in full, without written approval by EMSL.

Analysis performed by EMSL Mobile Lab (NVLAP #200481-0)

EMSL Analytical, Inc.

716 Highway 2 West
Libby, MT 59923
Phone: (406) 293-9066 Fax: (406) 293-7016

Attn.: Tim Wall
COM Federal Programs, Corp.
One Cambridge Place
50 Hampshire St.
Cambridge, MA 02142

Monday, October 23, 2000

Ref Number: ML00436

Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by EPA 40 CFR Part 763 Final Rule (AHERA)

Project: Millworks West 10/21/2000 The Warehouse

Sample ID	Volume (liters)	Asbestos Type(s)	# STRUCTURES > 0.5µ - < 5µ	# STRUCTURES ≥ 5µ	# STRUCTURES Non-Asbestos	Area Analyzed (mm²)	Analytical Sensitivity (S/cc)	Asbestos Concentration (S/mm²)	Asbestos Concentration (S/cc)
1R-03003	2393.00	None Detected			0	0.0518	0.0031	<19.38	<0.0031
1R-03005	2485.00	None Detected			0	0.0516	0.0030	<19.38	<0.0030
1R-03006	2382.00	None Detected			0	0.0516	0.0031	<19.38	<0.0031
1R-03009	2325.00	None Detected			0	0.0518	0.0032	<19.38	<0.0032
1R-03010	1300.00	None Detected			0	0.0645	0.0046	<15.50	<0.0046
1R-03011	1300.00	None Detected			0	0.0645	0.0046	<15.50	<0.0046

Tom Ferrante
Analyst

Approved Signatory

Disclaimers: This laboratory is not responsible for data reported in structures/cc, which is dependent on volume collected by non-laboratory personnel. This laboratory is only responsible for data reported in structures/mm². This report may not be reproduced, except in full, without written approval by EMSL. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. This report relates only to the samples reported above. Quality control data (including 95% confidence limits and laboratory and analysts' accuracy and precision) is available upon request.

Accredited for NVLAP PLM/TEM #200481-0.

EMSL Analytical, Inc.

716 Highway 2 West
Libby, MT 59923
Phone: (406) 293-9066 Fax: (406) 293-7016

Attn.: Tim Wall
CDM Federal Programs, Corp.
One Cambridge Place
50 Hampshire St.
Cambridge, MA 02142

Monday, October 23, 2000

Ref Number: ML00435

Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by EPA 40 CFR Part 763 Final Rule (AHERA)

Project: Millworks West 10/21/2000 The Warehouse

Sample ID	Volume (liters)	Asbestos Type(s)	# STRUCTURES > 0.5µ - < 5µ	≥ 5µ	Non-Asbestos	Area Analyzed (mm²)	Analytical Sensitivity (S/cc)	Asbestos Concentration (S/mm²)	(S/cc)
1R-03012	1300.00	None Detected			0	0.0645	0.0046	<15.50	<0.0046
1R-03013	1295.00	None Detected			0	0.0645	0.0046	<15.80	<0.0046
1R-03014	1300.00	None Detected			0	0.0645	0.0046	<15.50	<0.0046

Tom Ferrante
Analyst

Approved Signatory

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Accredited for NVLAP PLM/TEM #200481-0.

Chain of Custody Record

U.S. Environmental Protection Agency, Region VIII
999 18th Street, Suite 500
Denver, CO 80202-2413

ML00434

The Warehouse

CCONEP082500
Send to:
EMSL
On-site Mobile Lab

Field Sample ID	Sample Type	Sample Date	Volume (L)	Turn Around Time	Analysis Request
1R-03003	Millworks West	10/21/00	2393	24 Hour	NIOSH 7400 Followed by AHERA
1R-03005	Millworks West	10/21/00	2485	24 Hour	NIOSH 7400 Followed by AHERA
1R-03006	Millworks West	10/21/00	2382	24 Hour	NIOSH 7400 Followed by AHERA
1R-03009	Millworks West	10/21/00	2325	24 Hour	NIOSH 7400 Followed by AHERA
1R-03010	Millworks West Final Clearance	10/21/00	1300	24 Hour	AHERA
1R-03011	Millworks West Final Clearance	10/21/00	1300	24 Hour	AHERA
1R-03012	Millworks West Final Clearance	10/21/00	1300	24 Hour	AHERA
1R-03013	Millworks West Final Clearance	10/21/00	1295	24 Hour	AHERA
1R-03014	Millworks West Final Clearance	10/21/00	1300	24 Hour	AHERA
1R-03015	Blank	10/21/00	Blank	24 Hour	NIOSH 7400 Followed by AHERA
1R-03016	Blank	10/21/00	Blank	24 Hour	NIOSH 7400 Followed by AHERA

END OF SUBMITTAL

Relinquished by (Signature and Company): Gregory P. Parma PES — Date/Time 10/21/00

Received by (Signature and Company): TMF 10-22-00 — Sample Condition upon Receipt:

Relinquished by (Signature and Company): — Date/Time

Received by (Signature and Company): — Sample Condition upon Receipt:

EMSL Analytical, Inc.

716 Highway 2 West
Libby, MT 59923
Phone: (406) 293-9066 Fax: (406) 293-7016

EMSL

Attn.. Tim Wall
CDM Federal Programs, Corp.
One Cambridge Place
50 Hampshire St.
Cambridge, MA 02142

Thursday, November 02, 2000

Ref Number: ML00471
Analysis Date: 11/2/00

PHASE CONTRAST MICROSCOPY (PCM) FIBER COUNT BY NIOSH METHOD 7400, ISSUE 2, 4TH EDITION, 8/15/94

Project: Millworks West 11/1/2000 The Pole Barn

Sample	Location	Sample Date	Volume (liters)	Fibers	Fields	fibers/ mm²	LOD fib/cc	fibers/cc
1R-03115	Millworks West	11/1/00	2558.00	<5.5	100	<7.0	0.001	<LOD
1R-03116	Millworks West	11/1/00	2626.00	<5.5	100	<7.0	0.001	<LOD
1R-03117	Millworks West	11/1/00	2585.00	<6.6	100	<7.0	0.001	<LOD
1R-03120	Millworks West	11/1/00	2602.00	7.0	100	8.92	0.001	0.001
1R-03121	Millworks West	11/1/00	2201.00	<5.5	100	<7.0	0.001	<LOD
1R-03123	Millworks West Final Clearance Pole Barn	11/1/00	1276.00	<5.6	100	<7.0	0.002	<LOD

BLANK ID: 1R-03128, 1R-03129

Tom Ferrante
Analyst

Approved Signatory

Disclaimers: LOD = Limit of Detection. This method assumes the limit of detection is 7 fibers/mm². The laboratory is not responsible for data reported in fibers/cc, which is dependent on volume collected by non-laboratory personnel. This report relates only to the samples reported above. This report may not be reproduced, except in full, without written approval by EMSL.

Analysis performed by EMSL Mobile Lab (NVLAP #200461-0)

805169
File 10.0.a.25
1/4

EMSL Analytical, Inc.

716 Highway 2 West
Libby, MT 59923
Phone: (406) 293-9066 Fax: (406) 293-7016

EMSL

Attn.: Tim Wall
CDM Federal Programs, Corp.
One Cambridge Place
50 Hampshire St.
Cambridge, MA 02142

Thursday, November 02, 2000

Ref Number: ML00471
Analysis Date: 11/2/00

PHASE CONTRAST MICROSCOPY (PCM) FIBER COUNT BY NIOSH METHOD 7400, ISSUE 2, 4TH EDITION, 8/15/94

Project: Millworks West 11/1/2000 The Pole Barn

Sample	Location	Sample Date	Volume (liters)	Fibers	Fields	fibers/mm²	LOD f/b/cc	fibers/cc
1R-03124	Millworks West Final Clearance Pole Barn	11/1/00	1275.00	<5.5	100	<7.0	0.002	<LOD
1R-03125	Millworks West Final Clearance Pole Barn	11/1/00	1275.00	<5.5	100	<7.0	0.002	<LOD
1R-03126	Millworks West Final Clearance PoleBarn	11/1/00	1275.00	<5.5	100	<7.0	0.002	<LOD
1R-03127	Millworks West Final Clearance Pole Barn	11/1/00	1275.00	<5.5	100	<7.0	0.002	<LOD
1R-03128	Blank	11/1/00	0.00	<5.5	100	<7.0		
1R-03129	Blank	11/1/00	0.00	<5.5	100	<7.0		

BLANK ID: 1R-03128, 1R-03129

Tom Ferrante
Analyst

Approved Signatory

Disclaimers: LOD = Limit of Detection. This method assumes the limit of detection is 7 fibers/mm². The laboratory is not responsible for cases reported in fibers/cc, which is dependent on volume collected by non-laboratory personnel. This report relates only to the samples reported above. This report may not be reproduced, except in full, without written approval by EMSL.

Analysis performed by EMSL Mobile Lab (NVLAP #200481-0)

405169
10.0.a.2.5
2/4

EMSL Analytical, Inc.

716 Highway 2 West
Libby, MT 59923
Phone: (406) 293-9066 Fax: (406) 293-7016

EMSL

Attn.: Tim Wall
CDM Federal Programs, Corp.
One Cambridge Place
50 Hampshire St.
Cambridge, MA 02142

Thursday, November 02, 2000

Ref Number: ML00472

Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by EPA 40 CFR Part 763 Final Rule (AHERA)

Project: Millworks West 11/1/2000 The Pole Barn

Sample ID	Volume (liters)	Asbestos Type(s)	# STRUCTURES > 0.5µ - < 5µ	# STRUCTURES ≥ 5µ	# STRUCTURES Non-Asbestos	Area Analyzed (mm²)	Analytical Sensitivity (S/cc)	Asbestos Concentration (S/mm²)	Asbestos Concentration (S/cc)
1R-03115	2556.00	None Detected			0	0.0516	0.0029	<19.38	<0.0029
1R-03116	2626.00	None Detected			0	0.0516	0.0028	<19.38	<0.0026
1R-03117	2585.00	None Detected			0	0.0516	0.0029	<19.38	<0.0029
1R-03120	2602.00	None Detected			0	0.0516	0.0029	<19.38	<0.0029
1R-03121	2201.00	None Detected			0	0.0516	0.0034	<19.38	<0.0034
1R-03123	1275.00	None Detected			0	0.0645	0.0047	<16.50	<0.0047

Tom Ferrante
Analyst

Approved Signatory

Disclaimers: This laboratory is not responsible for data reported in structures/cc, which is dependent on volume collected by non-laboratory personnel. This laboratory is only responsible for data reported in structures/mm². This report may not be reproduced, except in full, without written approval by EMSL. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. This report relates only to the samples reported above. Quality control data (including 95% confidence limits and laboratory and analysts' accuracy and precision) is available upon request.

Accredited for NVLAP PLM/TEM #200481-0.

805 167
10.0.a.2.5
3/4

EMSL Analytical, Inc.

716 Highway 2 West
Libby, MT 59923
Phone: (406) 293-9066 Fax: (406) 293-7016

EMSL

Attn.: Tim Wall
CDM Federal Programs, Corp.
One Cambridge Place
50 Hampshire St.
Cambridge, MA 02142

Thursday, November 02, 2000

Ref Number: ML00472

Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by EPA 40 CFR Part 763 Final Rule (AHERA)

Project: Millworks West 11/1/2000 The Rolc Barn

Sample ID	Volume (liters)	Asbestos Type(s)	# STRUCTURES > 0.5µ - < 5µ	# STRUCTURES ≥ 5µ	# STRUCTURES Non-Asbestos	Area Analyzed (mm²)	Analytical Sensitivity (S/cc)	Asbestos Concentration (S/mm²)	Asbestos Concentration (S/cc)
1R-03124	1275.00	None Detected			0	0.0645	0.0047	<15.50	<0.0047
1R-03125	1275.00	None Detected			0	0.0645	0.0047	<15.50	<0.0047
1R-03128	1275.00	None Detected			0	0.0645	0.0047	<15.50	<0.0047
1R-03127	1275.00	None Detected			0	0.0645	0.0047	<15.50	<0.0047

Tom Ferrante
Analyst

Approved Signatory

Disclaimer: This laboratory is not responsible for data reported in structures/cc, which is dependent on volume collected by non-laboratory personnel. This laboratory is only responsible for data reported in structures/mm². This report may not be reproduced, except in full, without written approval by EMSL. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. This report relates only to the samples reported above. Quality control data (including 95% confidence limits and laboratory and analysts' accuracy and precision) is available upon request.

Accredited for NVLAP PLM/TEM #200441-0.

705165
10.0.a.2.5
pg 4/4

U.S. Environmental Protection Agency, Region VIII
999 18th Street, Suite 500
Denver, CO 80202-2413

M[redacted]
00472
The Pole Barn

Send to:
EMSL
On-site Mobile Lab

Field Sample ID	Sample Type	Sample Date	Volume (L)	Turn Around Time	Analysis Request
IR-03115	Millworks West	11/1/00	2558	24 Hour	NIOSH 7400 Followed by AHERA
IR-03116	Millworks West	11/1/00	2626	24 Hour	NIOSH 7400 Followed by AHERA
IR-03117	Millworks West	11/1/00	2585	24 Hour	NIOSH 7400 Followed by AHERA
IR-03120	Millworks West	11/1/00	2602	24 Hour	NIOSH 7400 Followed by AHERA
IR-03121	Millworks West	11/1/00	2201	24 Hour	NIOSH 7400 Followed by AHERA
IR-03123	Millworks West Final Clearance	11/1/00	1275	24 Hour	AHERA
IR-03124	Millworks West Final Clearance	11/1/00	1275	24 Hour	AHERA
IR-03125	Millworks West Final Clearance	11/1/00	1275	24 Hour	AHERA
IR-03126	Millworks West Final Clearance	11/1/00	1275	24 Hour	AHERA
IR-03127	Millworks West Final Clearance	11/1/00	1275	24 Hour	AHERA
IR-03128	Blank	11/1/00	Blank	24 Hour	NIOSH 7400 Followed by AHERA
IR-03129	Blank	11/1/00	Blank	24 Hour	NIOSH 7400 Followed by AHERA

Relinquished by (Signature and Company): Gregory P. Parman PES
Date/Time 11/2/00 @ 0800
Received by (Signature and Company): TMF 11-2-00
Sample Condition upon Receipt:

Relinquished by (Signature and Company):
Date/Time
Received by (Signature and Company):
Sample Condition upon Receipt

EMSL Analytical, Inc.

716 Highway 2 West
Libby, MT 59923
Phone: (406) 293-9066 Fax: (406) 293-7016

Attn.: Tim Wall
CDM Federal Programs, Corp.
One Cambridge Place
50 Hampshire St.
Cambridge, MA 02142

Monday, November 13, 2000

Ref Number: ML00520
Analysis Date: 11/13/00

PHASE CONTRAST MICROSCOPY (PCM) FIBER COUNT BY NIOSH METHOD 7400, ISSUE 2, 4TH EDITION, 8/15/94

Project: Millworks West 11/11/2000 Lumber Storage Shed

Sample	Location	Sample Date	Volume (liters)	Fibers	Fields	fibers/ mm²	LOD fib/cc	fibers/cc
1R-03693	Millworks West-Final Clearance Lumber Storage	11/11/00	1490.00	<5.5	100	<7.0	0.002	<LOD
1R-03694	Millworks West-Final Clearance Lumber Storage	11/11/00	1490.00	<5.5	100	<7.0	0.002	<LOD
1R-03695	Millworks West-Final Clearance Lumber Storage	11/11/00	1485.00	<5.5	100	<7.0	0.002	<LOD
1R-03696	Millworks West-Final Clearance Lumber Storage	11/11/00	1490.00	<5.5	100	<7.0	0.002	<LOD
1R-03697	Millworks West-Final Clearance Lumber Storage	11/11/00	1485.00	<5.5	100	<7.0	0.002	<LOD
1R-03698	Millworks West	11/11/00	2596.00	<5.5	100	<7.0	0.001	<LOD

BLANK ID: 1R-03705, 1R-03706

Tom Ferrante
Analyst

Approved Signatory

Disclaimers: LOD = Limit of Detection. This method assumes the limit of detection is 7 fibers/mm². The laboratory is not responsible for data reported in fibers/cc, which is dependent on volume collected by non-laboratory personnel. This report relates only to the samples reported above. This report may not be reproduced, except in full, without written approval by EMSL.

Analysis performed by EMSL Mobile Lab (NVLAP #200481-0)

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EMSL Analytical, Inc.

716 Highway 2 West
Libby, MT 59923
Phone: (406) 293-9066 Fax: (406) 293-7016

Attn.: Tim Wall
CDM Federal Programs, Corp.
One Cambridge Place
50 Hampshire St.
Cambridge, MA 02142

Monday, November 13, 2000

Ref Number: ML00521

Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by EPA 40 CFR Part 763 Final Rule (AHERA)

Project: Millworks West 11/11/2000 Lumber Storage Shed

Sample ID	Volume (liters)	Asbestos Type(s)	# STRUCTURES > 0.5µ - < 5µ	# STRUCTURES ≥ 5µ	# STRUCTURES Non-Asbestos	Area Analyzed (mm²)	Analytical Sensitivity (S/cc)	Asbestos Concentration (S/mm²)	Asbestos Concentration (S/cc)
1R-03693	1490.00	None Detected			0	0.0645	0.0040	<15.50	<0.0040
1R-03694	1490.00	None Detected			0	0.0645	0.0040	<15.50	<0.0040
1R-03695	1485.00	None Detected			0	0.0645	0.0040	<15.50	<0.0040
1R-03696	1490.00	None Detected			0	0.0645	0.0040	<15.50	<0.0040
1R-03697	1485.00	None Detected			0	0.0645	0.0040	<15.50	<0.0040
1R-03698	2595.00	Tremolite	1	2	0	0.0645	0.0023	46.51	0.0069

Tom Ferrante
Analyst

Approved Signatory

Disclaimers: This laboratory is not responsible for data reported in structures/cc, which is dependent on volume collected by non-laboratory personnel. This laboratory is only responsible for data reported in structures/mm². This report may not be reproduced, except in full, without written approval by EMSL. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. This report relates only to the samples reported above. Quality control data (including 95% confidence limits and laboratory and analysts' accuracy and precision) is available upon request.

Accredited for NVLAP PLM/TEM #200451-0.

80 5169

10.0.a.2.6

Chain of Custody Record

U.S. Environmental Protection Agency, Region VIII
999 18th Street, Suite 500
Denver, CO 80202-2413

ML00520

Send to:
EMSL
On-site Mobile Lab

805-169
10.0.9.2.6

Field Sample ID	Sample Type	Sample Date	Volume (L)	Turn Around Time	Analysis Request
1R-03693	Millworks West Final Clearance	11/11/00	1490	24 Hour	AHERA
1R-03694	Millworks West Final Clearance	11/11/00	1490	24 Hour	AHERA
1R-03695	Millworks West Final Clearance	11/11/00	1485	24 Hour	AHERA
1R-03696	Millworks West Final Clearance	11/11/00	1490	24 Hour	AHERA
1R-03697	Millworks West Final Clearance	11/11/00	1485	24 Hour	AHERA
1R-03698	Millworks West	11/11/00	2596	24 Hour	NIOSH 7400 Followed by AHERA
1R-03699	Millworks West	11/11/00	2613	24 Hour	NIOSH 7400 Followed by AHERA
1R-03700	Millworks West	11/11/00	2602	24 Hour	NIOSH 7400 Followed by AHERA
1R-03701	Millworks West	11/11/00	2602	24 Hour	NIOSH 7400 Followed by AHERA
1R-03704	Millworks West	11/11/00	2532	24 Hour	NIOSH 7400 Followed by AHERA
1R-03705	Blank	11/11/00	Blank	24 Hour	NIOSH 7400 Followed by AHERA
1R-03706	Blank	11/11/00	Blank	24 Hour	NIOSH 7400 Followed by AHERA

Relinquished by (Signature and Company): Hugay P. Parma PES Date/Time 11/11/00

Received by (Signature and Company): TMF 11-11-00 Sample Condition upon Receipt:

Relinquished by (Signature and Company): Date/Time

Received by (Signature and Company): Sample Condition upon Receipt:

APPENDIX F-2

BACKGROUND AIR RESULTS

Sample Date: 7/28/00

KOCH ENVIRONMENTAL HEALTH, INC.

7342 S. MOORE CT. LITTLETON, COLORADO 80127 (303) 932-8484 FAX (303) 932-8585

AIR/BULK CONTAMINANT SAMPLING/CHAIN OF CUSTODY FORM

SAMPLES SUBMITTED TO:	ANALYSIS REQUESTED:
URS Radian	AIR ✓ BULK ___ OTHER ___
	NIOSH 7400 Method, A Counting Rules ___
	Polarized Light Microscopy ___
	Other Analysis ✓ TEM ISO 10312
	Turnaround Time 2 hr. ___ 24 hr. ___ 3-5 day ___

Special Instructions: Analyze TEM ISO 10312
Fax results to (406) 293-3745

KEH SAMPLE #	Volume (Liters)
1. 5 - Location #4 - Southwest of Planer Building - on perimeter	1302.8
2. 6 - Location #5 - South of warehouse building - on perimeter	1677.3
3. 7 - Location #1 - North of Bark Burn - on perimeter	1676.2
4. 8 - Location #2 - Northwest of Planer building - on perimeter	1597.1
5. 9 - Location #3 - West of Planer building - on perimeter	1651.6
6. 10 - Location #6 - NE of lumber storage building - on perimeter	1264.0
7. 11 - Location #7 - NE corner of property - on stop sign - Hwy 37	1278.4
8.	
9.	
10.	
11.	
12.	
13.	
14.	
15.	

[signature] 8/1/00

Relinquished by Date Received By Date

Relinquished by Date Received By Date

results background

results 10.5.a.1.1

URS COPY

Project No 805169
File Code No 10.3.a.1.4
Doc No

Sample Date: 7/29/00

KOCH ENVIRONMENTAL HEALTH, INC.

7342 S. MOORE CT. LITTLETON, COLORADO 80127 (303) 932-8484 FAX (303) 932-8585

AIR/BULK CONTAMINANT SAMPLING/CHAIN OF CUSTODY FORM

SAMPLES SUBMITTED TO:	ANALYSIS REQUESTED:
URS Radian	AIR X BULK ___ OTHER ___
	NIOSH 7400 Method, A Counting Rules ___
	Polarized Light Microscopy ___
	Other Analysis ✓ TEM ISO 10312
	Turnaround Time 2 hr. ___ 24 hr. ___ 3-5 day ___

Special Instructions: Analyze TEM ISO 10312
FAX results to (406) 293-3745

KEH SAMPLE #	Volume (Liters)
1. 12- Location #2 - Field Blank	—
2. 13- Location #1- North of Pole Barn - on perimeter	1382.54
3. 14- Location #2 - Northwest of Planer Bldg - on perimeter	1377.6
4. 15- Location #3- West of Planer Bldg - on perimeter	1269.94
5. 16- Location #4 - S.W. of Planer Bldg - on perimeter	1350.33
6. 17- Location #4- Field Blank	—
7. 18- Location #5- South of warehouse bldg - on perimeter	1264.77
8. 19- Location #6 - NE of lumber storage bldg - on perimeter	1271.66
9. 20- Location #7- NE corner of property - on stop sign - Irwy 37	1224.64
10.	
11.	
12.	
13.	
14.	
15.	

[signature] 8/1/00

Relinquished by Date Received By Date

Relinquished by Date Received By Date

[illegible] 2 days [illegible] background

[illegible]

results 10.0.a.1.1

URS COPY
Project No. 805167
File Code No 10.3.a.1.6
Doc No.

Preliminary Table I

Total Asbestos Structure Concentration
ISO 10312 Analysis
Project LAH004417-3

RJ Lee Group Sample Number	Client Sample Number	Filter Area (sq mm)	Volume ‡ (Liters)	Area Analyzed (sq mm)	Count Sheet	Analytical Sensitivity † (S/sq mm)	Analytical Sensitivity † (S/cc)	Concentration (S/sq mm)	Concentration (S/cc)
0111987HT	1	385	Blank	0.0861	0	11.6	-	<11.6*	-
0111988HT	2	385	Blank	0.0861	0	11.6	-	<11.6*	-
0111989HT	3	385	1520.50	0.0861	0	11.6	0.0029	<11.6*	<0.0029*
0111990HT	4	385	1810.60	0.0861	3	11.6	0.0025	34.8	0.0074
0111991HT	5	385	1302.80	0.0861	0	11.6	0.0034	<11.6*	<0.0034*
0111992HT	6	385	1677.00	0.0861	0	11.6	0.0027	<11.6*	<0.0027*
0111993HT	7	385	1676.20	0.0861	0	11.6	0.0027	<11.6*	<0.0027*
0111994HT	8	385	1597.10	0.0861	0	11.6	0.0028	<11.6*	<0.0028*
0111995HT	9	385	1651.60	0.0861	0	11.6	0.0027	<11.6*	<0.0027*
0111996HT	10	385	1264.00	0.0861	1	11.6	0.0035	11.6	0.0035
0111997HT	11	385	1278.40	0.0861	0	11.6	0.0035	<11.6*	<0.0035*
0111998HT	12	385	Blank	0.0861	0	11.6	-	<11.6*	-
0111999HT	13	385	1382.54	0.0861	0	11.6	0.0032	<11.6*	<0.0032*
0112000HT	14	385	1377.60	0.0861	0	11.6	0.0032	<11.6*	<0.0032*
0112001HT	15	385	1269.94	0.0861	0	11.6	0.0035	<11.6*	<0.0035*
0112002HT	16	385	1350.33	0.0861	0	11.6	0.0033	<11.6*	<0.0033*
0112003HT	17	385	Blank	0.0861	0	11.6		<11.6*	

‡ Volumes provided by Radian for Project 21001-001 were used to calculate analytical results and sensitivities.
† Analytical sensitivity is the calculated concentration based on one structure in the area analyzed.

* Results Less Than Analytical Sensitivity.

URS
Project No. 805169
File Code No. 10.0.a.1.1
Doc No. pg 1/4

Results at 7/27 - 7/29 Background air sampling at expert plant

RJ Lee Group, Inc.
Headquarters

350 Hochberg Road
Monroeville, PA 15146

Phone (724) 325-1776
Fax (724) 733-1799

COCs 10.3.a.1.1
10.3.a.1.4
10.3.a.1.6

Preliminary Table I

Total Asbestos Structure Concentration
ISO 10312 Analysis
Project LAH004417-3

RJ Lee Group Sample Number	Client Sample Number	Filter Area (sq mm)	Volume ‡ (Liters)	Area Analyzed (sq mm)	Count Sheet	Analytical Sensitivity † (S/sq mm)	Analytical Sensitivity † (S/cc)	Concentration (S/sq mm)	Concentration (S/cc)
0112004HT	18	385	1264.77	0.0861	0	11.6	0.0035	<11.6*	<0.0035*
0112005HT	19	385	1271.66	0.0861	0	11.6	0.0035	<11.6*	<0.0035*
0112006HT	20	385	1224.64	0.0861	0	11.6	0.0037	<11.6*	<0.0037*

URS

Project No. 805169
File Code No. 10.0.a.1.1
Doc No. Pg 2/4

‡ Volumes provided by Radian for Project 21001-001 were used to calculate analytical results and sensitivities.
†Analytical sensitivity is the calculated concentration based on one structure in the area analyzed.

* Results Less Than Analytical Sensitivity.

Results of 7/27 - 7/24 Background air sampling at Export Plant

Date Wednesday, August 9, 2000

RJ Lee Group, Inc.
Headquarters

350 Hochberg Road
Monroeville, PA 15146

Phone (724) 325-1776
Fax (724) 733-1799

KOCH ENVIRONMENTAL HEALTH, INC.

7342 S. MOORE CT. LITTLETON, COLORADO 80127 (303) 932-8484 FAX (303) 932-8585

AIR/BULK CONTAMINANT SAMPLING/CHAIN OF CUSTODY FORM

SAMPLES SUBMITTED TO:	ANALYSIS REQUESTED:
EPA	AIR X BULK ___ OTHER ___
	NIOSH 7400 Method, A Counting Rules ___
12/6/00	Polarized Light Microscopy ___
	Other Analysis ___
	Turnaround Time 2 hr. ___ 24 hr. ___ 3-5 day ___

Special Instructions: ___

KEH SAMPLE #	Volume (Liters)
1. B01 EPA -	Field Blank
2. B02 EPA -	Field Blank
3. PM03 EPA -	2260.00
4. PM04 EPA -	2486.00
5. PM05 EPA -	2260.00
6. PM06 EPA -	2260.00
7. PM07 EPA -	2260.00
8. PM08 EPA -	2265.00
9. PM09 EPA -	2265.00
10.	
11.	
12.	
13.	
14.	
15.	

[signature] 12/6/00 [signature] 12/6/00

Relinquished by Date Received By Date

[signature] Dm

Relinquished by Date Received By Date

Clearance samples for the export plant around the perimeter 12/6/00

Archived on site

URS

Prop. No. 805169
File Code No.
Doc No 10.3.a.1.21

ML00590

Chain of Custody Record

U.S. Environmental Protection Agency, Region VIII
999 18th Street, Suite 500
Denver, CO 80202-2413

Send to:
EMSL
On-site Mobile Lab

Field Sample ID	Sample Type	Sample Date	Volume (L)	Turn Around Time	Analysis Request
1R-04354	Millworks West	12/07/00	2035	24 Hour	NIOSH 7400 Followed by AHERA
1R-04355	Millworks West	12/07/00	2109	24 Hour	NIOSH 7400 Followed by AHERA
1R-04356	Millworks West	12/07/00	2041	24 Hour	NIOSH 7400 Followed by AHERA
1R-04357	Millworks West	12/07/00	2003	24 Hour	NIOSH 7400 Followed by AHERA
1R-04358	Millworks West	12/07/00	2030	24 Hour	NIOSH 7400 Followed by AHERA
1R-04359	Millworks West	12/07/00	2109	24 Hour	NIOSH 7400 Followed by AHERA
1R-04360	Blank	12/07/00	Blank	24 Hour	NIOSH 7400 Followed by AHERA
1R-04361	Blank	12/07/00	Blank	24 Hour	NIOSH 7400 Followed by AHERA
1R-04362	Millworks West	12/07/00	1760	24 Hour	NIOSH 7400 Followed by AHERA
1R-04363	Millworks West	12/07/00	1752	24 Hour	NIOSH 7400 Followed by AHERA

Final background Samples @ Export Plant

Relinquished by (Signature and Company): Date/Time
Gregory P Parra PES @ 1515 12/07/00
Relinquished by (Signature and Company): Date/Time

Received by (Signature and Company): Sample Condition upon Receipt:
EMSL
Received by (Signature and Company): Sample Condition upon Receipt:

URS

Project No. 805169
File Code No.
Doc No.

Page 1 of 1

Sheet No: A-

LIBBY MONTANA SITE INVESTIGATION
FIELD SAMPLE DATA SHEET FOR
AIR

Address or Location ID: Millwork West
GPS (if no address available): Northing _____ Easting _____
Owner: Barrett
Land Use Category: Residential School Commercial Mining Other ( )

Site Visit Date: 12/07/00 Sampling Team: PES, GP

Data Item	Cassette 1	Cassette 2	Cassette 3
Field ID Number			
Index ID	1R-04354	1R-04355	1R-04356
Category (circle)	FS Rep Blank	FS Rep Blank	FS Rep Blank
Matrix Type (circle)	Indoor Outdoor	Indoor Outdoor	Indoor Outdoor
Location Description	Perimeter #1	Perimeter #2	Perimeter #3
Flow Meter Type	Rotometer	Rotometer	Rotometer
Flow Meter ID No.	00811	00811	00811
Pump ID Number	1341	1375	0891
Start-Date	12/07/00	12/07/00	12/07/00
Start-Time	0820	0822	0825
Start-Flow (L/min)	5.5	5.5	5.5
Start-Counter	N/A	N/A	N/A
Stop-Date	12/07/00	12/07/00	12/07/00
Stop-Time	1430	1432	1436
Stop-Flow (L/min)	5.5	5.8	5.5
Stop-Counter	N/A	N/A	N/A
Pump fault?	No Yes	No Yes	No Yes
MET Station onsite?	No Yes	No Yes	No Yes
Field Comments	2035 Final Clearance	2109 Final Clearance	2041 Final Clearance

Sheet No: A-____

LIBBY MONTANA SITE INVESTIGATION
FIELD SAMPLE DATA SHEET FOR
AIR

Address or Location ID: Millwork West
GPS (if no address available): Northing_____ Easting_____
Owner: Burnett
Land Use Category: Residential School (Commercial) Mining Other (_____)

Site Visit Date: 12/07/00 Sampling Team: PES, GP

Data Item	Cassette 1	Cassette 2	Cassette 3
Field ID Number			
Index ID	1R-04357	1R-04358	1R-04359
Category (circle)	(FS) Rep_____ Blank	(FS) Rep_____ Blank	(FS) Rep_____ Blank
Matrix Type (circle)	Indoor (Outdoor)	Indoor (Outdoor)	Indoor (Outdoor)
Location Description	Perimeter #4	Perimeter #5	Perimeter #6
Flow Meter Type	Rotometer	Rotometer	Rotometer
Flow Meter ID No.	00811	00811	00811
Pump ID Number	0591	1339	0689
Start-Date	12/07/00	12/07/00	12/07/00
Start-Time	0829	0832	0835
Start-Flow (L/min)	5.5	5.5	5.5
Start-Counter	N/A	N/A	N/A
Stop-Date	12/07/00	12/07/00	12/07/00
Stop-Time	1440	1441	1445
Stop-Flow (L/min)	5.3	5.5	5.8
Stop-Counter	N/A	N/A	N/A
Pump fault?	(No) Yes	(No) Yes	(No) Yes
MET Station onsite?	No (Yes)	No (Yes)	No (Yes)
Field Comments	2003 Final Clearance	2030 Final Clearance	2109 Final Clearance

Sheet No: A-_____

LIBBY MONTANA SITE INVESTIGATION
FIELD SAMPLE DATA SHEET FOR
AIR

Address or Location ID: N/A
GPS (if no address available): Northing_____ Easting_____
Owner: N/A
Land Use Category: Residential School Commercial Mining Other (_____)

Site Visit Date: 12/07/00 Sampling Team: PES, GP

Data Item	Cassette 1	Cassette 2	Cassette 3
Field ID Number			
Index ID	1R-04360	1R-04361	1R-04362
Category (circle)	FS Rep Blank	FS Rep Blank	FS Rep Blank
Matrix Type (circle)	Indoor Outdoor	Indoor Outdoor	Indoor Outdoor
Location Description	N/A	N/A	Center of Planer Building
Flow Meter Type			Rotometer
Flow Meter ID No.			00811
Pump ID Number			3
Start-Date			12/07/00
Start-Time			1024
Start-Flow (L/min)			8.0
Start-Counter			N/A
Stop-Date			12/07/00
Stop-Time			1404
Stop-Flow (L/min)			8.0
Stop-Counter			N/A
Pump fault?	No Yes	No Yes	No Yes
MET Station onsite?	No Yes	No Yes	No Yes
Field Comments			1760 Final Clearance

Sheet No: A-____

LIBBY MONTANA SITE INVESTIGATION
FIELD SAMPLE DATA SHEET FOR
AIR

Address or Location ID: Millwork West
GPS (if no address available): Northing_____ Easting_____
Owner: Burnett
Land Use Category: Residential School Commercial Mining Other (_____)

Site Visit Date: 12/07/00 Sampling Team: DES, GP

Data Item	Cassette 1	Cassette 2	Cassette 3
Field ID Number			
Index ID	1R-04363		
Category (circle)	FS Rep_____ Blank	FS Rep_____ Blank	FS Rep_____ Blank
Matrix Type (circle)	Indoor Outdoor	Indoor Outdoor	Indoor Outdoor
Location Description	Center of Pole Barn		
Flow Meter Type	Rotometer		
Flow Meter ID No.	00811		
Pump ID Number	1		
Start-Date	12/07/00		
Start-Time	1026		
Start-Flow (L/min)	8.0		
Start-Counter	N/A		
Stop-Date	12/07/00		
Stop-Time	1405		
Stop-Flow (L/min)	8.0		
Stop-Counter	N/A		
Pump fault?	No Yes	No Yes	No Yes
MET Station onsite?	No Yes	No Yes	No Yes
Field Comments	1752 Final Clearance		

EMSL Analytical, Inc.

716 Highway 2 West
Libby, MT 59923
Phone: (406) 293-9066 Fax: (406) 293-7016

EMSL

Attn.: Tim Wall
CDM Federal Programs, Corp.
One Cambridge Place
50 Hampshire St.
Cambridge, MA 02142

Saturday, December 09, 2000

Ref Number: ML00590

Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by EPA 40 CFR Part 763 Final Rule (AHERA)

Project: Millworks West final background samples @ Export Plant

Sample ID	Volume (liters)	Asbestos Type(s)	# STRUCTURES > 0.5µ - < 5µ	# STRUCTURES ≥ 5µ	# STRUCTURES Non-Asbestos	Area Analyzed (mm²)	Analytical Sensitivity (S/cc)	Asbestos Concentration (S/mm²)	Asbestos Concentration (S/cc)
1R-04354	2035.00	None Detected			0	0.0516	0.0037	<19.38	<0.0037
1R-04355	2109.00	None Detected			0	0.0516	0.0035	<19.38	<0.0035
1R-04356	2041.00	None Detected			0	0.0516	0.0037	<19.38	<0.0037
1R-04357	2003.00	None Detected			0	0.0516	0.0037	<19.38	<0.0037
1R-04358	2030.00	None Detected			0	0.0516	0.0037	<19.38	<0.0037
1R-04359	2109.00	None Detected			0	0.0516	0.0035	<19.38	<0.0035

Adrian Arav
Analyst

Approved Signatory

Disclaimers: This laboratory is not responsible for data reported in structures/cc, which is dependent on volume collected by non-laboratory personnel. This laboratory is only responsible for data reported in structures/mm². This report may not be reproduced, except in full, without written approval by EMSL. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. This report relates only to the samples reported above. Quality control data (including 95% confidence limits and laboratory and analysts' accuracy and precision) is available upon request.

Accredited for NVLAP PLM/TEM #200481-0.

URS

Project No. 805169
File Code No.
Doc No.

EMSL Analytical, Inc.

716 Highway 2 West
Libby, MT 59923
Phone: (406) 293-9066 Fax: (406) 293-7016

EMSL

Attn.: Tim Wall
CDM Federal Programs, Corp.
One Cambridge Place
50 Hampshire St.
Cambridge, MA 02142

Saturday, December 09, 2000

Ref Number: ML00590

Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by EPA 40 CFR Part 763 Final Rule (AHERA)

Project: Millworks West

Sample ID	Volume (liters)	Asbestos Type(s)	# STRUCTURES > 0.5µ - < 5µ	≥ 5µ	Non-Asbestos	Area Analyzed (mm²)	Analytical Sensitivity (S/cc)	Asbestos Concentration (S/mm²)	(S/cc)
1R-04362	1760.00	None Detected			0	0.0516	0.0042	<19.38	<0.0042
1R-04363	1762.00	None Detected			0	0.0516	0.0043	<19.38	<0.0043

Final background
Samples @ Export Plant

URS
Project No. 805169
File Code No.
Doc No.

Adrian Arev
Analyst

Approved Signatory

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Accredited for NVLAP PLM/TEM #200481-0.

APPENDIX F-3

AMBIENT AIR SAMPLE RESULTS

KEH PROJECT AIR MONITORING REPORT

Prepared for:

URS RADIAN CORPORATION
707 17th STREET, SUITE 3400
DENVER, CO 80202

Project:

W.R. GRACE VERMICULITE PLANT
LIBBY, MONTANA

KEH PROJECT NUMBER 21001-001A
July 27, 2000 through August 31, 2000

EXECUTIVE SUMMARY

Koch Environmental Health, Inc. (KEH) conducted project air sampling and analysis via Phase Contrast Microscopy (PCM) for URS Radian Corporation at the W.R. Grace Vermiculite Plant in Libby, Montana from July 27, 2000 through August 31, 2000. Services were provided at the request of the customer in support of asbestos cleanup and abatement activities being conducted in various work locations of the plant and mine site. Asbestos cleanup activities are being conducted by AC&S, Inc. of Arvada, Colorado.

KEH's scope of work for this project included collection and analysis of ambient air samples by NIOSH 582-trained personnel for determination of airborne asbestos concentrations in identified areas.

Clearance samples were collected in an aggressive manner after an acceptable status visual inspection had been performed by a qualified Air Sampling Professional (ASP) in each applicable work area. Results of all final clearance samples contained in this report were below the project clearance guideline of 0.01 fibers/cubic centimeter (f/cc) for PCM analysis and 70 asbestos structures/square millimeter (s/mm^2) for TEM analysis.

PROJECT INFORMATION

CLIENT:	URS Radian Corporation 707 17th Street, Suite 3400 Denver, CO 80202
PROJECT LOCATION:	W.R. Grace Vermiculite Plant Libby, Montana
PROJECT CONTACT:	Jim Stout
WORK AREA:	Export Plant and Mine Site
DESCRIPTION OF SERVICES:	Project air sampling and Analysis Via PCM, NIOSH 7400 Method
LABORATORY SERVICES:	R.J. Lee Group Monroeville, PA Badlands Environmental Consultants, Inc. Bismarck, ND
KEH REPRESENTATIVE:	Mark Emter, BEC Patrick McGurren, BEC

PROJECT INTRODUCTION

Koch Environmental Health, Inc. (KEH) conducted project air sampling and analysis via Phase Contrast Microscopy (PCM) for URS Radian Corporation at the W.R. Grace Vermiculite Plant in Libby, Montana from July 27, 2000 through August 31, 2000. Services were provided at the request of the customer in support of asbestos cleanup and abatement activities being conducted in various work locations of the plant and mine site. Asbestos cleanup activities are being conducted by AC&S, Inc. of Arvada, Colorado.

SCOPE OF WORK

KEH's scope of work for this project included collection and analysis of ambient air samples by NIOSH 582-trained personnel for determination of airborne asbestos concentrations in identified areas.

AIR MONITORING

Air samples were collected utilizing a modified NIOSH 7400 Method whereby samples were collected on 25 millimeter (mm) mixed cellulose ester membrane filters with 0.45 micron pore size and analyzed via Phase Contrast Microscopy (PCM).

Sample Collection

Phase Contrast Microscopy (PCM) samples were collected on 25-millimeter (mm) mixed-cellulose ester membrane filters, 0.45-micron pore size, with an effective collection area of 385 mm^2. Transmission Electron Microscopy (TEM) samples, when applicable, were collected on 25 millimeter (mm) mixed-cellulose ester membrane filters, 0.45 micron pore size, with an effective collection area of 385 mm^2. All filters were pre-assembled by the manufacturer in three-stage, conductive sampling cassettes with extension cowls.

Air samples were collected at flow rates between 1.0 and 10.0 liters per minute (L/m). KEH Representatives used professional judgment and expertise in determining sample flow rates and locations based upon project conditions. Flow rates were recorded at the beginning and at the end of the sampling period utilizing a primary flow calibration instrument (e.g. DryCal DC Lite) or an airflow rotameter calibrated against a primary flow calibration instrument. Start times and stop times were recorded for all sampling periods.

PCM Sample Analysis Method

PCM samples were analyzed according to a modified NIOSH 7400 Method, A Counting Rules, although samples were collected on 25 millimeter (mm) mixed cellulose ester membrane filters with 0.45 micron pore size and analyzed via Phase Contrast Microscopy (PCM). Air sample results contained in this report have been calculated with blank sample corrections; sample volumes have not been corrected for altitude. Unused portions of sample filters are maintained in their original three-stage cassettes and archived for a period of three (3) months unless prior arrangements have been made.

Analytical Equipment, PCM

PCM laboratory analysis was performed using a Nikon Alphaphot YS microscope or equivalent with a microscope field area of 0.00785 mm^2 as defined by a Walton-Beckett graticule. Air sample analysis on site was performed by Badlands Environmental Inc. TEM sample analysis was performed by the customer's designated laboratory, the R.J. Lee Group.

SAMPLE RESULTS KEY

S/mm^2	=	TEM concentration
f/cc	=	fibers/cubic centimeter
f/fld.	=	fibers/field
LOQ	=	Limit of Quantitation (the calculated lower limit of quantitation expressed in f/cc; based on a limit of detection of 10/100 fibers/field)
ECA	=	Effective Collection Area, filter
L/min	=	Liters per minute (sample flow rate)
CBR	=	Could Not Be Read (overloaded, etc.)
BAS	=	Below Analytical Sensitivity
BDL	=	Below Detection Limit
ND	=	None Detected

Work Activity/Conditions

SU	=	Setup Operations
REM	=	Removal
GB	=	Glovebag Operations
CU	=	Cleanup (shoveling, bagging, etc.)
PC	=	Pre cleaning
FC	=	Final Cleaning
BO	=	Bag Out Operations
EN	=	Encapsulating
O	=	Occupied
U	=	Unoccupied
L	=	Laundry
ST	=	Storage

Sample Types

OWA	=	Outside Work Area sample
IWA	=	Inside Work Area sample
CL	=	Clearance sample
BAK	=	Background (ambient) sample
P	=	Personal sample
P/Ex	=	Personal sample, excursion
TD	=	Tear-down

Reviewed by

10/16/00
Date

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001A
SAMPLING DATE: 7/27/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	TEM Concentration (S/mm^2)
1	FB									<11.6
2	LAB									<11.6
3	OWA	PC	09:18	12:47	209	7.27	7.28	7.275	1520.5	<11.6
4	OWA	PC	12:48	4:54	246	7.28	7.43	7.36	1810.6	34.8

Sample Number	Sample Description/Location	TEM Concentration (S/mm^2)
1	FIELD BLANK	<11.6
2	LAB	<11.6
3	Planer building-outside north door	<11.6
4	Planer building-outside north door	34.8

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7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001A
SAMPLING DATE: 7/28/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	TEM Concentration (S/mm^2)
	FB									
	FB									
5	BAK	-	10:25	13:43	198	6.66	6.50	6.58	1302.8	<11.6
5A	BAK	-	10:25	13:43	198	6.45	6.30	6.38	1262.3	*
6	BAK	-	09:05	12:13	188	8.96	8.88	8.92	1677.0	<11.6
6A	BAK	-	09:05	12:13	188	9.92	9.78	9.85	1851.8	*
7	BAK	-	09:20	12:17	177	9.60	9.34	9.47	1676.2	<11.6
7A	BAK	-	09:20	12:17	177	9.91	9.67	9.79	1732.8	*
8	BAK	-	09:30	12:21	171	9.37	9.31	9.34	1597.1	<11.6
8A	BAK	-	09:30	12:21	171	9.91	9.85	9.88	1689.5	*

Sample Number	Sample Description/Location	TEM Concentration (S/mm^2)
	FIELD BLANK	
	FIELD BLANK	
5	Location #4-SW of Planer building, on perimeter	<11.6
5A	Location #4-SW of Planer building, on perimeter	*
6	Location #5-south of warehouse building, on perimeter	<11.6
6A	Location #5-south of warehouse building, on perimeter	*
7	Location #1-north of Pole Barn, on perimeter	<11.6
7A	Location #1-north of Pole Barn, on perimeter	*
8	Location #2-NW of Planer building, on perimeter	<11.6
8A	Location #2-NW of Planer building, on perimeter	*

** not analyzed*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001A
SAMPLING DATE: 7/28/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	TEM Concentration (S/mm^2)
	FB									
	FB									
9	BAK	-	09:38	12:25	167	9.91	9.86	9.89	1651.6	<11.6
9A	BAK	-	09:38	12:25	167	9.03	9.00	9.02	1506.3	*
10	BAK	-	10:10	13:12	182	7.16	6.73	6.95	1264.0	11.6
10A	BAK	-	10:10	13:12	182	7.15	6.71	6.93	1261.3	*
11	BAK	-	10:00	13:05	185	7.02	6.79	6.91	1278.4	<11.6
11A	BAK	-	10:00	13:05	185	6.96	6.75	6.86	1269.1	*

Sample Number	Sample Description/Location	TEM Concentration (S/mm^2)
	FIELD BLANK	
	FIELD BLANK	
9	Location #3-west of Planer building, on perimeter	<11.6
9A	Location #3-west of Planer building, on perimeter	*
10	Location #6-NE of lumber storage building, on perimeter	11.6
10A	Location #6-NE of lumber storage building, on perimeter	*
11	Location #7-NE corner of property, on stop sign, Hwy 37	<11.6
11A	Location #7-NE corner of property, on stop sign, Hwy 37	*

** not analyzed*

KOCH ENVIRONMENTAL HEALTH. INC.
7342 South Moore Court
Littleton. Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001A
SAMPLING DATE: 7/29/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	TEM Concentration (S/mm^2)
12	FB									<11.6
12A	LAB									*
13	BAK	-	10:02	12:29	147	9.19	9.62	9.41	1382.54	<11.6
13A	BAK	-	10:02	12:29	147	9.41	9.52	9.47	1391.36	*
14	BAK	-	10:11	13:36	205	6.78	6.65	6.72	1377.6	<11.6
14A	BAK	-	10:11	13:36	205	6.11	6.03	6.07	1244.35	*
15	BAK	-	10:17	13:25	188	6.79	6.72	6.76	1269.94	<11.6
15A	BAK	-	10:17	13:25	188	7:06	7.03	7.05	1324.46	*
16	BAK	-	10:38	12:56	138	9.87	9.70	9.79	1350.33	<11.6
16A	BAK	-	10:38	12:56	138	8.40	8.65	8.78	1210.95	*

Sample Number	Sample Description/Location	TEM Concentration (S/mm^2)
12	FIELD BLANK-Location #2	<11.6
12A	LAB-Location #7	*
13	Location #1-north of Pole barn, on perimeter	<11.6
13A	Location #1-north of Pole barn, on perimeter	*
14	Location #2-NW of Planer building, on perimeter	<11.6
14A	Location #2-NW of Planer building, on perimeter	*
15	Location #3-west of Planer building, on perimeter	<11.6
15A	Location #3-west of Planer building, on perimeter	*
16	Location #4-SW of Planer building, on perimeter	<11.6
16A	Location #4-SW of Planer building, on perimeter	*

** not analyzed*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001A
SAMPLING DATE: 7/29/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	TEM Concentration (S/mm²)
17	FB									<11.6
17A	LAB									*
18	BAK	-	10:51	13:12	141	9.07	8.87	8.97	1264.77	<11.6
18A	BAK	-	10:51	13:12	141	9.03	8.90	8.97	1264.77	*
19	BAK	-	11:06	13:20	134	9.34	9.64	9.49	1271.66	<11.6
19A	BAK	-	11:06	13:20	134	9.37	9.58	9.48	1269.65	*
20	BAK	-	11:16	14:14	178	6.88	6.88	6.88	1224.64	<11.6
20A	BAK	-	11:16	14:14	178	7.28	7.20	7.24	1288.72	*

Sample Number	Sample Description/Location	TEM Concentration (S/mm²)
17	FIELD BLANK-Location #4	<11.6
17A	LAB-Location #6	*
18	Location #5-south of warehouse building, on perimeter	<11.6
18A	Location #5-south of warehouse building, on perimeter	*
19	Location #6-NE of lumber storage building, on perimeter	<11.6
19A	Location #6-NE of lumber storage building, on perimeter	*
20	Location #7-NE corner of property, on stop sign, Hwy 37	<11.6
20A	Location #7-NE corner of property, on stop sign, Hwy 37	*

** not analyzed*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001A
SAMPLING DATE: 8/6/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
21	LAB									7/100		
21A	LAB									7/100		
22	OWA	Prep	08:11	14:06	355	9.65	9.66	9.66	3429.3	21.5/100	0.001	0.003
23	OWA	Prep	08:15	14:07	352	9.85	12.07	10.96	3857.92	5/100	0.001	0.001
24	OWA	Prep	08:22	14:13	351	9.47	9.46	9.47	3323.97	4.5/100	0.001	0.001
24A	OWA	Prep	08:22	14:13	351	8.65	8.64	8.65	3036.15	35/100	0.002	0.006
25	OWA	Prep	08:32	14:16	344	8.47	8.18	8.33	2865.52	5/100	0.002	0.001
25A	OWA	Prep	08:32	14:16	344	9.42	9.49	9.46	3254.24	1.5/100	0.002	<0.001
26	IWA	Prep	09:04	14:24	320	4.10	3.95	4.03	1289.6	1/100	0.004	<0.001
26A	IWA	Prep	09:04	14:24	320	3.75	4.02	3.89	1244.8	9.5/100	0.004	0.004

Sample Number	Sample Description/Location	Results (f/cc)
21	LAB	
21A	LAB	
22	Between NE corner of Planer building & NW corner of Pole barn	0.003
23	Between SE corner of Planer building & SW corner of Pole barn	0.001
24	Location #4-SW of Planer building on perimeter	0.001
24A	Location #4-SW of Planer building on perimeter	0.006
25	Location #3-west of Planer building, on perimeter	0.001
25A	Location #3-west of Planer building, on perimeter	<0.001
26	Planer building-NE side of cleaning area	<0.001
26A	Planer building-NE side of cleaning area	0.004

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001A
SAMPLING DATE: 8/7/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
	FB											
	FB											
27	OWA	Prep	07:38	14:07	389	9.85	11.41	10.63	4135.07	5/100	0.001	0.001
28	OWA	Prep	07:40	14:10	390	9.67	12.41	11.04	4305.6	2/100	0.001	<0.001
29	OWA	Prep	07:45	-	-	9.79	-	-				*
29A	OWA	Prep	07:45	-	-	8.33	-	-				*
30	OWA	Prep	07:49	14:23	394	7.96	8.00	7.98	3144.12	15.5/100	0.002	0.002
30A	OWA	Prep	07:49	14:23	394	9.18	9.31	9.25	3644.5	9/100	0.001	0.001
31	IWA	Prep	08:11	13:32	321	3.89	3.86	3.88	1245.48	35/100	0.004	0.014
31A	IWA	Prep	08:11	13:32	321	3.91	4.11	4.01	1287.21		0.004	**

Sample Number	Sample Description/Location	Results (f/cc)
	FIELD BLANK	
	FIELD BLANK	
27	Between NE corner of Planer building & NW corner of Pole barn	0.001
28	Between SE corner of Planer building & SW corner of Pole barn	<0.001
29	Location #4-SW of Planer building, on perimeter	*
29A	Location #4-SW of Planer building, on perimeter	*
30	Location #3-west of Planer building, on perimeter	0.002
30A	Location #3-west of Planer building, on perimeter	0.001
31	Inside Planer building, NE of cleaning area	0.014
31A	Inside Planer building, NE of cleaning area	**

**void - pump cords were severed while sampling-train rolled over them & cut them*
*** Sample was submitted to EPA for TEM analysis*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W.R. Grace Export Plant & Mine Site

KEH #: 21001-001A
SAMPLING DATE: 8/8/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
32	FB									3/100		
32A	FB									5/100		
33	A		07:37	13:37	360	4.03	3.90	3.97	1429.2	24/100	0.003	0.008
33A	A		07:37	13:37	360	3.42	3.74	3.58	1288.8		0.004	*

Sample Number	Sample Description/Location	Results (f/cc)
32	Field Blank	
32A	Field Blank	
33	Inside Planer building-center	0.008
33A	Inside Planer building-center	*

** Sample was submitted to EPA for TEM analysis*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001A
SAMPLING DATE: 8/9/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
34	FB									3/100		
34A	FB											
35	OWA	Prep	08:50	17:02	492	9.51	9.57	9.54	4693.68	19.5/100	0.001	0.002
36	OWA	Prep	08:54	17:05	491	9.50	11.86	10.86	5243.88	20/100	0.001	0.002
37	OWA	Prep	09:00	17:09	489	8.86	9.38	9.12	4459.68	4/100	0.001	<0.001
37A	OWA	Prep	09:00	17:09	489	9.72	9.42	9.57	4679.73		0.001	**
38	OWA	Prep	09:06	17:16	490	9.44	9.64	9.54	4674.6	16.5/100	0.001	0.002
38A	OWA	Prep	09:06	17:16	490	9.46	8.93	9.20	4508.0		0.001	**
39	IWA	Prep	09:43	17:29	466	5.33	5.75	5.54	2581.64	11/100	0.002	0.002
39A	IWA	Prep	09:43	17:29	466	5.80	5.96	5.88	2740.08		0.002	**

Sample Number	Sample Description/Location	Results (f/cc)
34	FIELD BLANK	
34A	FIELD BLANK	
35	Between NE corner of Planer building & NW corner of Pole barn	0.002
36	Between SE corner of Planer building & SW corner of Pole barn	0.002
37	Location #4-SW of Planer building, on perimeter	<0.001
37A	Location #4-SW of Planer building, on perimeter	
38	Location #3-west of Planer building, on perimeter	0.002
38A	Location #3-west of Planer building, on perimeter	
39	Inside Planer building, NE corner	0.002
39A	Inside Planer building, NE corner	

** sample submitted to EPA*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001A
SAMPLING DATE: 8/10/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									1/100		
B00	LAB									1/100		
A01	OWA		07:33	15:51	498	7.22	9.55	8.39	4178.22	25/100	0.001	0.003
A02	OWA		07:37	15:56	499	7.31	9.78	8.55	4266.45	31.5/100	0.001	0.004
A03	OWA		07:46	16:02	496	7.49	7.43	7.46	3700.16	22/100	0.001	0.003*
A03EPA	OWA		07:46	16:02	496	7.44	7.43	7.44	3690.24		0.001	**
A04	OWA		07:56	16:11	495	6.50	6.20	6.35	3143.25	45.5/100	0.001	0.007
A04EPA	OWA		07:56	16:11	495	7.42	7.52	7.47	3697.65		0.001	**
A05	IWA		08:46	16:30	464	5.57	5.63	5.60	2598.4	29/100	0.001	0.006
A05EPA	IWA		08:46	16:30	464	5.75	5.80	5.78	2681.92		0.001	**

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B00	FIELD BLANK	
A01	Between NE corner of Planer building & NW corner of Pole barn	0.003
A02	Between SE corner of Planer building & SW corner of Pole barn	0.004
A03	Location #4-SW of Planer building, on perimeter	0.003*
A03EPA	Location #4-SW of Planer building, on perimeter	**
A04	Location #3-west of Planer building, on perimter	0.007
A04EPA	Location #3-west of Planer building, on perimter	**
A05	Inside Planer building, center of containment	0.006
A05EPA	Inside Planer building, center of containment	**

** Stop time approximate-sample had been unplugged by unknown parties sometime after 13:00*
*** sample submitted to EPA*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001A
SAMPLING DATE: 8/11/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									1.5/100		
A03	OWA		08:05	16:39	514	7.46	7.69	7.58	3896.12	2.5/100	<0.001	<LOQ
A04	OWA		08:08	16:44	516	7.58	7.85	7.72	3983.52	6.5/100	<0.001	<LOQ
A05	OWA		08:11	16:48	517	7.47	9.72	8.60	4446.2	11/100	<0.001	0.001
A06	OWA		08:14	16:53	519	7.37	10.06	8.72	4525.68	8.5/100	<0.001	<LOQ
A07	IWA		08:52	17:12	500	7.75	7.72	7.74	3870.0	76.5/100	<0.001	0.010

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
A03	Between NE corner of Planer building & NW corner of Pole barn	<LOQ
A04	Between SE corner of Planer building & SW corner of Pole barn	<LOQ
A05	Location #4-SW of Planer building on perimeter	0.001
A06	Location #3-west of Planer building on perimeter	<LOQ
A07	Inside Planer building-center of containment	0.010

KOCH ENVIRONMENTAL HEALTH, INC.
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Littleton, Colorado 80127
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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001A
SAMPLING DATE: 8/12/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB											
B02	FB											
A03	OWA	Prep	07:39	14:38	419	7.35	10.02	8.69	3641.11	4.5/100	0.001	<LOQ
A04	OWA	Prep	07:45	14:43	418	7.56	8.07	7.82	3268.76	28.5/100	0.001	0.004
A05	OWA	Prep	07:49	14:47	418	7.51	7.58	7.55	3155.9	7.5/100	0.001	0.001
A06	OWA	Prep	08:58	14:53	415	7.50	10.30	8.9	3693.5	23/100	0.001	0.003
A07	IWA	Prep	08:40	15:13	393	7.16	7.28	7.22	2837.46	15.5/100	0.001	0.003
A08	OWA	Prep	09:33	15:01	328	1.82	1.55	1.69	554.32	9/100	0.001	0.008

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
A03	Between NE corner of Planer building & NW corner of Pole barn	<LOQ
A04	Between SE corner of Planer building & SW corner of Pole barn	0.004
A05	Location #4-SW of Planer building, on perimeter	0.001
A06	Location #4-west of Planer building, on perimeter	0.003
A07	Planer building-center of containment	0.003
A08	Clean room, Planer building	0.008

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001A
SAMPLING DATE: 8/14/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									5/100		
B02	FB									4/100		
A03	OWA	Prep	07:38	16:28	530	7.71	10.26	8.99	4764.7	11.5/100	0.001	0.001
A04	OWA	Prep	07:42	16:34	532	7.33	10.08	8.71	4633.72	13/100	0.001	0.001
A05	OWA	Prep	07:48	16:39	531	7.45	7.57	7.51	3987.81	19.5/100	0.001	0.002
A06	OWA	Prep	07:54	16:44	530	7.48	10.27	8.88	4706.4	25/100	0.001	0.003
A07	IWA	Prep	08:49	17:05	496	6.22	6.10	6.16	3055.36	21/100	0.001	0.003
A08	OWA	Prep	08:10	16:51	521	1.54						*

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
A03	Between the NE corner of Planer building & NW corner of Pole barn	0.001
A04	Between the SE corner of Planer building & SW corner of Pole barn	0.001
A05	Location #4-SW of Planer building, on perimeter	0.002
A06	Location #3-west of Planer building, on the perimeter	0.003
A07	Planer building-inside Planer head room, NW side by doorway	0.003
A08	Planer building-clean room	*

** Void – flow fault*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001A
SAMPLING DATE: 8/15/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									6/100		
B02	FB									3.5/100		
A03	OWA		07:25	16:38	553	7.45	10.37	8.71	4927.23	12/100	0.001	<0.001
A04	OWA		07:29	16:40	551	7.29	7.43	7.36	4055.36	33/100	0.001	0.004
A05	OWA		07:48	16:49	541	7.70	10.12	8.91	4820.31	0.5/100	0.001	<LOQ
A06	OWA		07:53	16:55	542	7.28	9.90	8.59	4655.78	0.5/100	0.001	<LOQ
A07	IWA		08:29	17:19	530	6.63	6.97	6.80	3604.00			*
A08	OWA		08:05	17:13	548	1.51						**

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
A03	Between NE corner of Planer building & NW corner of Pole barn	<0.001
A04	Between SE corner of Planer building & SW corner of Pole barn	0.004
A05	Location #4-SW of Planer building, on perimeter	<LOQ
A06	Location #3-west of Planer building, on perimeter	<LOQ
A07	Planer building-inside Planer head room, NW corneer	*
A08	Planer building-decon clean room	**

** Void – overload*
*** Void – flow fault*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001A
SAMPLING DATE: 8/16/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									3/100		
A03	OWA		07:35	16:42	547	7.31	10.08	8.70	4758.9	7/100	<0.001	<LOQ
A04	OWA		07:40	16:48	548	7.24	6.84	7.04	3857.92	13/100	<0.001	0.002
A05	OWA		07:47	16:53	546	7.63	10.22	8.93	4875.78	2/100	<0.001	<LOQ
A06	OWA		07:55	16:59	544	7.42	10.24	8.83	4803.52	5.5/100	<0.001	<LOQ
A07	IWA		08:45	17:11	506	10.19	11.03	10.61	5368.66	33/100	<0.001	0.003
A08	OWA		08:15	17:27	552	4.02	4.00	4.01	2213.52	7/100	0.001	0.002

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
A03	Between NE corner of Planer building & NW corner or Pole barn	<LOQ
A04	Between SE corner of Planer building & SW corner of Pole barn	0.002
A05	Location #4-SW of Pole barn, on perimeter	<LOQ
A06	West of Planer building	<LOQ
A07	NW corner of Planer building-inside	0.003
A08	Planer building-clean room	0.002

KOCH ENVIRONMENTAL HEALTH, INC.
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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001A
SAMPLING DATE: 8/17/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									1/100		
B02	LAB									0/100		
A03	OWA	Demo	08:02	16:42	520	6.44	6.71	6.58	3421.6	9/100	0.001	<0.001
A04	OWA	Demo	08:03	16:43	520	7.29	10.04	8.67	4508.4	9/100	0.001	<LOQ
A05	OWA	Demo	08:05	16:50	525	7.52	10.03	8.78	4609.5		0.001	*
A06	OWA	Demo	08:07	16:55	528	7.23	9.92	8.58	4530.24	5/100	0.001	<LOQ
A07	OWA	Demo	08:32	17:01	509	4.06	3.88	3.97	2020.73	30/100	0.001	0.007
A08	IWA	Demo	09:09	17:09	480	4.88	4.90	4.89	2347.2		0.001	**

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
A03	Between NE corner of Planer building & NW corner of Pole barn	<0.001
A04	Between SE corner of Planer building & corner of Pole barn	<LOQ
A05	Location #4-SW of Planer building, on perimeter	*
A06	West of Planer building	<LOQ
A07	Inside Planer building-clean room	0.007
A08	Inside Planer building-center of containment	**

** Void – filter damage*
*** Void - overload*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001A
SAMPLING DATE: 8/18/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									1/100		
B02	FB									0/100		
A03	OWA	Demo	08:03	16:35	512	7.32	10.49	8.91	4561.92	6/100	0.001	<LOQ
A04	OWA	Demo	08:07	16:37	510	6.58	6.97	6.78	3457.80		0.001	*
A05	OWA	Demo	08:15	16:44	509	7.69	10.40	9.05	4606.45	5/100	0.001	<LOQ
A06	OWA	Demo	08:21	16:49	508	7.50	10.46	8.98	4561.84	5.5/100	0.001	<LOQ
A07	OWA	Demo	08:35	16:58	503	4.02	3.89	3.96	1991.88	28/100	0.001	0.007
A08	IWA	Demo	08:58	17:07	489	4.37	5.20	4.79	2342.31	100/36	0.001	0.006

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
A03	Between NE corner of Planer building & NW corner of Pole barn	<LOQ
A04	Between SE corner of Planer building & SW corner or Pole barn	*
A05	Location #4-SW of Planer building, on perimeter	<LOQ
A06	West of Planer building	<LOQ
A07	Inside Planer building-clean room, decon	0.007
A08	Inside Planer building-center of containment	0.006

* *Void - filter damage*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
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(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001A
SAMPLING DATE: 8/19/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	LAB									1/100		
A03	OWA	Demo	08:02	16:38	516	7.39	10	8.70	4489.2	21.5/100	0.001	0.002
A04	OWA	Demo	08:08	16:48	520	7.46	10.09	8.78	4565.6	23/100	0.001	0.002
A05	OWA	Demo	08:13	16:55	522	7.77	10.02	8.90	4645.8	2/100	0.001	<LOQ
A06	OWA	Demo	08:18	17:01	523	6.51	6.49	6.50	3399.5	2/100	0.001	<LOQ
A07	OWA	Demo	08:50	17:09	499	5.77	3.76	3.77	1881.23	20/100	0.001	0.005
A08	IWA	Demo	09:30	17:20	470	4.38	4.32	4.35	2044.5	100/49	0.001	0.049

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
A03	NE corner of Planer building & NW corner of Pole barn	0.002
A04	Between SE corner of Planer building & SW corner of Pole barn	0.002
A05	Location #4-SW of Planer building, on perimeter	<LOQ
A06	West of Planer building	<LOQ
A07	Inside Planer building-clean room, decon	0.005
A08	Inside Planer building building-center of containment	0.049

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Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001A
SAMPLING DATE: 8/21/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									1/100		
B02	FB									1/100		
A03	OWA	Demo	08:09	16:58	529	7.34	*	7.34	3882.86	18/100	0.001	0.002
A04	OWA	Demo	08:12	16:59	527	7.33	*	7.33	3862.91	9/100	0.001	0.001
A05	OWA	Demo	08:43	17:01	498	7.51	*	7.51	3739.98	6/100	0.001	0.001
A06	OWA	Demo	08:46	17:04	498	7.57	*	7.57	3769.86	14/100	0.001	0.002
A07	OWA	Demo	08:51	17:09	498	3.75	*	3.75	1867.5	20.5/100	0.001	0.005
A08	IWA	Demo	09:11	17:19	488	4.32	4.51	4.42	2156.96		0.001	*

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
A03	Between NE corner of Planer building & NW corner of Pole barn	0.002
A04	Between SE corner of Planer building & SW corner of Pole barn	0.001
A05	Location #4-SW of Planer building, on perimeter	0.001
A06	West of Planer building	0.002
A07	Planer building-clean room-decon	0.005
A08	Inside Planer building-center of containment	*

** Void - overload*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001A
SAMPLING DATE: 8/22/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									2/100		
B02	FB									0/100		
A03	OWA	Demo	07:31	17:02	571	7.32	7.84	7.58	4328.18	4/100	0.001	<LOQ
A04	OWA	Demo	07:37	17:07	570	7.13	10.08	8.61	4907.7	7/100	0.001	<LOQ
A05	OWA	Demo	07:41	17:11	570	7.45	10.21	8.83	5033.1	5/100	0.001	<LOQ
A06	OWA	Demo	07:47	17:17	570	7.25	10.30	8.78	5004.6	5/100	0.001	<LOQ
A07	OWA	Demo	08:03	17:25	562	3.82	3.96	3.89	2186.18	59/100	0.001	0.013
A08	IWA	Demo	08:35	17:32	537	4.25	4.68	4.47	2400.39	100/35	0.001	0.057

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
A03	Between NE corner of Planer building & NW corner of Pole barn	<LOQ
A04	Between SE corner of Planer building & SW corner of Pole barn	<LOQ
A05	Location #4-SW of Planer building, on perimeter	<LOQ
A06	West of Planer building	<LOQ
A07	Planer building-clean room decon	0.013
A08	Inside Planer building-center of containment	0.057

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001A
SAMPLING DATE: 8/23/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
A03	OWA	Demo	07:33	16:45	552	7.49	10.61	9.05	4995.60	8/100	0.001	0.001
A04	OWA	Demo	07:40	16:50	550	7.35	10.34	8.85	4867.50	5/100	0.001	LOQ
A05	OWA	Demo	07:45	16:54	549	7.68	10.47	9.08	4984.92	6/100	0.001	0.001
A06	OWA	Demo	07:51	16:59	548	7.58	7.95	7.77	4257.96	5.5/100	0.001	LOQ
A07	OWA	Demo	08:06	17:08	542	3.90	4.10	4.00	2168.00	71.5/100	0.001	0.016
A08	IWA	Demo	08:32	17:28	536	4.25	4.25	4.25	2278.00	100/30	0.001	0.072

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
A03	Between NE corner of Planer building & NW corner of Pole barn	0.001
A04	Between SE corner of Planer building & SW corner of Pole barn	LOQ
A05	Location #4-SW of Planer building, on perimeter	0.001
A06	West of Planer building	LOQ
A07	Inside Planer building-clean room decon	0.016
A08	Inside Planer building-center of containment	0.072

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001A
SAMPLING DATE: 8/24/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
A03	OWA	Demo	07:37	17:19	582	7.28	7.34	7.31	4254.42	1.5/100	0.001	<LOQ
A04	OWA	Demo	07:43	17:23	580	7.42	9.87	8.65	5017.00	6/100	0.001	0.001
A05	OWA	Demo	07:51	17:31	580	7.74	10.01	8.88	5150.40	2/100	0.001	<LOQ
A06	OWA	Demo	07:56	17:38	578	7.52	10.03	8.78	5074.84	7/100	0.001	0.001
A07	OWA	Demo	08:12	17:44	572	3.83	4.21	4.02	2299.44	45.5/100	0.001	0.010
A08	IWA	Demo	08:49	17:56	547	1.25	1.18	1.22	667.34	33.5/100	0.004	0.025
A09	OWA	Demo	17:19	18:53	94	7.45	7.27	7.36	691.84	4/100	0.004	<LOQ
A10	OWA	Demo	17:23	18:58	95	9.84	9.68	9.76	927.2	9.5/100	0.003	0.005
A11	OWA	*	17:31	19:03	92	7.59	7.46	7.53	692.76	2/100	0.004	<LOQ
A12	OWA	*	17:38	19:08	90	7.32	7.22	7.27	654.30	2/100	0.004	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
A03	*Between NE corner of Planer building & NW corner of Pole barn	<LOQ
A04	*Between SE corner of Planer building & SW corner of Pole barn	0.001
A05	Location #4-SW of Planer building, on perimeter	<LOQ
A06**	West of Planer building	0.001
A07	Inside Planer building-clean room decon	0.010
A08	Inside Planer building-center of containment	0.025
A09	*Between NE corner of Planer building & NW corner of Pole barn	<LOQ
A10	*Between SE corner of Planer building & SW corner of Pole barn	0.005
A11	Location #4-SW of Planer building on perimeter	<LOQ
A12	West of Planer building	<LOQ

** Bladder installation*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001A
SAMPLING DATE: 8/25/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
A03	OWA	*	08:28	16:04	456	7.39	7.40	7.40	3374.40	1/100	0.001	<LOQ
A04	OWA	*	08:34	16:11	457	7.36	7.32	7.34	3354.38	6.5/100	0.001	0.001
A05	OWA	*	08:39	16:16	457	7.60	7.55	7.58	3464.06	3/100	0.001	<LOQ
A06	OWA	*	08:46	16:21	455	7.46	7.41	7.44	3385.20	0.5/100	0.001	<LOQ
A07	OWA	*	08:58	16:29	451	4.11	4.17	4.14	1867.14	36.5/100	0.001	0.010
A08	IWA	*	08:09	16:35	506	4.45	4.81	4.63	2342.78	100/54	0.001	0.039

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
A03	Between NE corner of Planer building & NW corner of Pole barn	<LOQ
A04	Between SE corner of Planer building & SW corner of Pole barn	0.001
A05	Location #4-SW of Planer building, on perimeter	<LOQ
A06	West of Planer building	<LOQ
A07	Inside Planer building-clean room decon	0.010
A08	Inside Planer building-center of containment	0.039

*Bladder installation

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001A
SAMPLING DATE: 8/28/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									2/100		
A03	OWA	**	10:28	16:09	341	8.94	9.38	9.16	3123.56	13/100	0.001	0.002
A04	OWA	**	10:31	16:11	340	9.05	9.75	9.40	3196.00	11/100	0.001	0.002
PM05	*		10:35	16:19	344	5.52	6.09	5.81	1998.64	3/100	0.001	<LOQ
PM06	*		10:46	16:22	336	7.96	8.19	8.08	2714.88	6/100	0.001	LOQ
PM07	*		10:52	16:32	340	9.00	9.36	9.18	3121.20	9/100	0.001	0.001
PM08	*		10:57	16:40	343	8.96	9.32	9.14	3135.02	11/100	0.001	0.002
PM09	*		11:02	16:47	345	6.12	6.59	6.36	2194.20	8/100	0.001	0.002
PM10	*		11:08	16:51	343	7.39	7.69	7.54	2586.22	7/100	0.001	0.001
PM11	*		11:13	16:56	343	6.08	6.38	6.23	2136.89	4.5/100	0.001	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
A03	Between NE corner of Planer building & NW corner of Pole barn	0.002
A04	Between SE corner of Planer building & SW corner of Pole barn	0.002
PM05	Location #1-north of Pole barn on perimeter	<LOQ
PM06	Location #2-NW of Planer building on perimeter	LOQ
PM07	Location #3-west of Planer building on perimeter	0.001
PM08	Location #4-SW of Planer building on perimeter	0.002
PM09	Location #5-south of warehouse building on perimeter	0.002
PM10	Location #6-NE of lumber storage building on perimeter	0.001
PM 11	Location # 7-NE corner of property on road sign-pared road	<LOQ

** perimeter*
*** power washing*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001A
SAMPLING DATE: 8/29/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									2/100		
A03	OWA		09:31	16:25	414	5.62	5.46	5.54	2293.56	4/100	0.001	LOQ
A04	OWA		09:36	16:28	412	5.66	5.59	5.63	2319.56	5/100	0.001	LOQ
PM05	*		08:22	15:46	444	5.24	5.43	5.59	2481.96	4.5/100	0.001	LOQ
PM06	*		08:36	15:59	443	5.55	5.77	5.66	2507.38	7/100	0.001	LOQ
PM07	*		08:44	16:02	438	5.57	6.20	5.89	2579.82	8/100	0.001	LOQ
PM08	*		08:55	16:07	432	5.66	6.35	6.01	2596.32	6/100	0.001	LOQ
PM09	*		09:03	16:11	428	5.50	5.46	5.48	2345.44	3/100	0.001	<LOQ
PM10	*		09:13	16:17	424	5.57	5.49	5.53	2344.72	4/100	0.001	LOQ
PM11	*		09:20	16:20	420	6.44	6.40	6.42	2696.40	7/100	0.001	LOQ
PM12	OWA		10:09	16:45	396	5.50	5.65	5.58	2209.68	20.5/100	0.001	0.004

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
A03	Between NE corner of Planer building & NW corner of Pole barn	LOQ
A04	Between SE corner of Planer building & SW corner of Pole barn	LOQ
PM05	Location #1-north of Pole barn on perimeter	LOQ
PM06	Location #2-NW of Planer building on perimeter	LOQ
PM07	Location #3-west of Planer building on perimeter	LOQ
PM08	Location #4-SW of Planer building on perimeter	LOQ
PM09	Location #5-south of warehouse building on perimeter	<LOQ
PM10	Location #6-NE of lumber storage building on perimeter	LOQ
PM11	Location #7-NE corner of property on stop sign, Highwy 37	LOQ
PM12	Inside Planer building-clean room decon	0.004

** perimeter*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001A
SAMPLING DATE: 8/30/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									1/100		
B02	FB									1/100		
A03	OWA	FC	09:28	17:16	468	5.48	5.52	5.50	2574.00	5/100	0.001	LOQ
A04	OWA	FC	09:31	17:19	468	5.61	6.45	5.53	2580.04	6.5/100	0.001	LOQ
PM05	*	-	09:58	16:40	402	7.59	7.95	7.77	3123.54	2/100	0.001	<LOQ
PM06	*	-	10:38	16:45	367	5.80	6.04	5.92	2172.64	4/100	0.001	LOQ
PM07	*	-	10:42	16:50	368	6.10	6.36	6.23	2292.64	5/100	0.001	LOQ
PM08	*	-	09:34	16:55	441	5.61	6.54	6.08	2681.28	6.5/100	0.001	LOQ
PM09	*	-	09:38	17:02	444	5.41	5.52	5.47	2428.68	2.5/100	0.001	<LOQ
PM10	*	-	09:47	17:07	440	5.48	5.60	5.54	2437.60	3/100	0.001	<LOQ
PM11	*		09:51	17:11	440	6.27	6.44	6.36	2798.40	5/100	0.001	LOQ
PM12	OWA		11:00	17:26	386	2.03	1.85	1.94	748.84	17.5/100	0.001	0.011

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
A03	Between NE corner of Planer building & NW corner of Pole barn	LOQ
A04	Between SE corner of Planer building & SW corner of Pole barn	LOQ
PM05	Location #1-north of Pole barn on perimeter	<LOQ
PM06	Location #2-NW of Planer building on perimeter	LOQ
PM07	Location #3-west of Planer building on perimeter	LOQ
PM08	Location #4-SW of Planer building on perimeter	LOQ
PM09	Location #5-south of warehouse building on perimeter	<LOQ
PM10	Location #6-NE of lumber storage building on perimeter	<LOQ
PM11	Location #7-NE corner of property on stop sign, Highwy 37	LOQ
PM12	Planer building-clean room decon	0.011

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT:

KEH #: 21001-001A
SAMPLING DATE: 8/31/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									2/100		
B02	FB									1/100		
A03	OWA	FC	08:39	16:06	447	5.66	6.31	5.99	2677.53	9.5/100	0.001	0.001
A04	OWA	FC	08:43	16:10	447	5.56	5.45	5.51	2462.97	3/100	0.001	<LOQ
PM05	*	-	07:41	15:21	460	7.07	7.84	7.46	3431.60	8.5/100	0.001	0.001
PM06	*	-	07:52	15:27	455	6.29	6.34	6.32	2875.60	6.5/100	0.001	LOQ
PM07	*	-	07:59	15:31	452	5.59	5.44	5.52	2495.04	4.5/100	0.001	LOQ
PM08	*	-	08:07	15:38	451	5.50	6.37	5.94	2678.94	6/100	0.001	LOQ
PM09	*	-	08:16	15:44	448	5.28	5.74	5.51	2468.48	4.5/100	0.001	LOQ
PM10	*	-	08:23	15:49	446	5.32	5.30	5.31	2368.26	3.5/100	0.001	<LOQ
PM11	*	-	08:30	15:55	445	5.32	5.34	5.33	2371.85	5/100	0.001	LOQ
PM12	OWA	FC	09:04	16:16	432	1.93	1.85	1.89	816.48	**	0.003	**

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
A03	Between NE corner of Planer building & NW corner of Pole barn	0.001
A04	Between SE corner of Planer building & SW corner of Pole barn	<LOQ
PM05	Location #1-north of Pole barn on perimeter	0.001
PM06	Location #2-NW of Planer building on perimeter	LOQ
PM07	Location #3-west of Planer building on perimeter	LOQ
PM08	Location #4-SW of Planer building on perimeter	LOQ
PM09	Location #5-south of warehouse building on perimeter	LOQ
PM10	Location #6-NE of lumber storage building on perimeter	<LOQ
PM11	Location #7- NE corner of property on stop sign, highwy 37	LOQ
PM12	Planer building-clean room decon	**

** perimeter*
***Void - filter overload*

KEH PROJECT AIR MONITORING REPORT

Prepared for:

URS RADIAN
707 17th STREET, SUITE 3400
DENVER, CO 80202

Project:

W R. GRACE EXPORT PLANT
LIBBY, MONTANA

KEH PROJECT NUMBER 21001-001B
SEPTEMBER 1-30, 2000

URS COPY
Project No 805169
File Code No 6.3.6.1
Doc No.

EXECUTIVE SUMMARY

Koch Environmental Health, Inc. (KEH) conducted project air sampling and analysis via Phase Contrast Microscopy (PCM) for URS Radian Corporation at the W.R. Grace Export Plant in Libby, Montana from September 1, 2000 through September 30, 2000. Services were provided at the request of the customer in support of asbestos cleanup and abatement activities being conducted in various work locations of the plant and mine site. Asbestos cleanup activities are being conducted by AC&S, Inc. of Arvada, Colorado.

KEH's scope of work for this project included collection and analysis of ambient air samples by NIOSH 582-trained personnel for determination of airborne asbestos concentrations in identified areas.

Clearance samples were collected in an aggressive manner after an acceptable status visual inspection had been performed by a qualified Air Sampling Professional (ASP) in each applicable work area. Results of all final clearance samples contained in this report were below the project clearance guideline of 0.01 fibers/cubic centimeter (f/cc) for PCM analysis and 70 asbestos structures/square millimeter (s/mm^2) for TEM analysis.

PROJECT INFORMATION

CLIENT	URS Radian Corporation 707 17th Street, Suite 3400 Denver, CO 80202
PROJECT LOCATION:	W.R. Grace Export Plant Libby, Montana
PROJECT CONTACT:	Jim Stout
WORK AREA:	Export Plant and Mine Site
DESCRIPTION OF SERVICES:	Project air sampling and Analysis Via PCM, NIOSH 7400 Method
LABORATORY SERVICES:	R.J. Lee Group Monroeville, PA Badlands Environmental Consultants, Inc. Bismarck, ND
KEH REPRESENTATIVE:	Patrick McGurren, BEC

PROJECT INTRODUCTION

Koch Environmental Health, Inc. (KEH) conducted project air sampling and analysis via Phase Contrast Microscopy (PCM) for URS Radian Corporation at the W.R. Grace Export Plant in Libby, Montana from September 1, 2000 through September 30, 2000. Services were provided at the request of the customer in support of asbestos cleanup and abatement activities being conducted in various work locations of the plant and mine site. Asbestos cleanup activities are being conducted by AC&S, Inc. of Arvada, Colorado.

SCOPE OF WORK

KEH's scope of work for this project included collection and analysis of ambient air samples by NIOSH 582-trained personnel for determination of airborne asbestos concentrations in identified areas.

AIR MONITORING

Air samples were collected utilizing a modified NIOSH 7400 Method whereby samples were collected on 25 millimeter (mm) mixed cellulose ester membrane filters with 0.45 micron pore size and analyzed via Phase Contrast Microscopy (PCM).

Sample Collection

Phase Contrast Microscopy (PCM) samples were collected on 25-millimeter (mm) mixed-cellulose ester membrane filters, 0.45-micron pore size, with an effective collection area of 385 mm^2. Transmission Electron Microscopy (TEM) samples, when applicable, were collected on 25 millimeter (mm) mixed-cellulose ester membrane filters, 0.45 micron pore size, with an effective collection area of 385 mm^2. All filters were pre-assembled by the manufacturer in three-stage, conductive sampling cassettes with extension cowls.

Air samples were collected at flow rates between 1.0 and 10.0 liters per minute (L/m). KEH Representatives used professional judgment and expertise in determining sample flow rates and locations based upon project conditions. Flow rates were recorded at the beginning and at the end of the sampling period utilizing a primary flow calibration instrument (e.g. DryCal DC Lite) or an airflow rotameter calibrated against a primary flow calibration instrument. Start times and stop times were recorded for all sampling periods.

PCM Sample Analysis Method

PCM samples were analyzed according to a modified NIOSH 7400 Method, A Counting Rules, although samples were collected on 25 millimeter (mm) mixed cellulose ester membrane filters with 0.45 micron pore size and analyzed via Phase Contrast Microscopy (PCM). Air sample results contained in this report have been calculated with blank sample corrections; sample volumes have not been corrected for altitude. Unused portions of sample filters are maintained in their original three-stage cassettes and archived for a period of three (3) months unless prior arrangements have been made

Analytical Equipment, PCM

PCM laboratory analysis was performed using a Nikon Alphaphot YS microscope or equivalent with a microscope field area of 0.00785 mm^2 as defined by a Walton-Beckett graticule. Air sample analysis on site was performed by Badlands Environmental Inc. TEM sample analysis was performed by the customer's designated laboratory, the R.J. Lee Group.

SAMPLE RESULTS KEY

S/mm^2	=	TEM concentration
f/cc	=	fibers/cubic centimeter
f/fld.	=	fibers/field
LOQ	=	Limit of Quantitation (the calculated lower limit of quantitation expressed in f/cc; based on a limit of detection of 10/100 fibers/field)
ECA	=	Effective Collection Area, filter
L/min	=	Liters per minute (sample flow rate)
CBR	=	Could Not Be Read (overloaded, etc.)
BAS	=	Below Analytical Sensitivity
BDL	=	Below Detection Limit
ND	=	None Detected

Work Activity/Conditions

SU	=	Setup Operations
REM	=	Removal
GB	=	Glovebag Operations
CU	=	Cleanup (shoveling, bagging, etc.)
PC	=	Pre cleaning
FC	=	Final Cleaning
BO	=	Bag Out Operations
EN	=	Encapsulating
O	=	Occupied
U	=	Unoccupied
L	=	Laundry
ST	=	Storage

Sample Types

OWA	=	Outside Work Area sample
IWA	=	Inside Work Area sample
CL	=	Clearance sample
BAK	=	Background (ambient) sample
P	=	Personal sample
P/Ex	=	Personal sample, excursion
TD	=	Tear-down
PR	=	Perimeter

Reviewed by

11/16/00
Date

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001B
SAMPLING DATE: 9/1/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB											
B02	FB											
FC03	CL	-	09:42	13:37	235	6.40	6.34	6.37	1496.95			*
FC04	CL	-	09:42	13:37	235	6.48	6.51	6.51	1529.85			*
FC04A	CL	-	09:59	13:51	232	6.80	6.45	6.63	1538.16			*
FC05	CL	-	09:59	13:51	232	7.83	8.01	7.92	1837.44			*
FC05A	CL	-	09:58	13:50	232	6.41	6.04	6.23	1445.36			*
FC06	CL	-	09:58	13:50	232	6.41	6.47	6.44	1494.08			*
FC06A	CL	-	09:53	13:45	232	6.72	6.03	6.38	1480.16			*
			09:53	13:45	232	6.62	6.05	6.34	1470.88			*

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
FC03	South end of Planer building-inside	*
FC04	South end of Planer building-inside	*
FC04A	SE end of Planer building-inside	*
FC05	SE end of Planer building-inside	*
FC05A	NE end of Planer building-inside	*
FC06	NE corner of Planer building-inside	*
FC06A	NW corner of Planer building-inside	*

** Samples submitted to customer for analysis by R.J. Lee Group*

KOCH ENVIRONMENTAL HEALTH, INC
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001B
SAMPLING DATE: 9/1/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB											
B02	FB											
FC07	CL	-	09:48	13:42	234	6.77	6.73	6.75	1579.50			*
FC07A	CL	-	09:48	13:42	234	6.87	6.91	6.89	1612.26			*

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
FC07	SW corner of Planer building-inside SW	*
FC07A	SW corner of Planer building-inside SW	*

** Samples submitted to customer for analysis by R.J. Lee Group*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001B
SAMPLING DATE: 9/12/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
A03		-	08:01	16:35	514	5.18	5.60	5.39	2770.46	2.5/100		<LOQ
A04		-	08:13	16:38	505	5.64	6.36	6.00	3030.00	10/100		0.002
A05		-	08:20	16:47	507	5.27	5.66	5.47	2773.29	3/1100		<LOQ
A06		-	08:25	13:50	325	3.40	3.48	3.44	1118.00	14/100		0.006
A07*	OWA	**	14:16	17:04	168	7.02	7.14	7.08	1189.44	3/100		<LOQ
A08*	OWA	**	14:19	17:06	167	6.65	6.90	6.78	1132.26	3.5/100		<LOQ
A09*	OWA	**	14:22	17:08	166	8.24	8.46	8.35	1386.10	4/100		<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
A03	Location #1-north of Pole barn on perimeter	<LOQ
A04	West of Planer building-20' east of location #3	0.002
A05	South of Pole barn-against building	<LOQ
A06	Inside Millwork west office	0.006
A07	Millwork west office north	<LOQ
A08	Millwork westoffice east	<LOQ
A09	Millwork west office south	<LOQ

**Mel unplugged our pumps right at the end of testing so we plugged it back in & took our final calibrations*
*** office cleaning*

KOCH ENVIRONMENTAL HEALTH, INC
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001B
SAMPLING DATE: 9/13/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									1/100		
A03	*	-	07:47	15:59	492	5.34	5.70	5.52	2715.84	4.5/100	0.001	<LOQ
A04	*	-	07:55	16:02	487	5.11	5.38	5.25	2556.75	8.5/100	0.001	0.002
A05	*	-	08:03	16:07	484	6.52	7.08	6.80	3291.20	12/100	0.001	0.002

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
A03	Location #1-north of Pole barn on perimeter	<LOQ
A04	West of Planer building-20' east of location #3	0.002
A05	South & against Pole barn	0.002

** perimeter*

KOCH ENVIRONMENTAL HEALTH, INC
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001B
SAMPLING DATE: 9/15/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									1/100		
PM03	PR		17:45	21:19	214	5.00	5.00	5.00	1070.00	3/100	0.003	<LOQ
PM04	PR		17:49	21:42	233	5.00	5.00	5.00	1165.00	1/100	0.002	<LOQ
PM05	PR		17:52	21:45	233	6.00	6.00	6.00	1398.00	4/100	0.002	<LOQ
PM06	PR		17:59	21:24	205	5.00	5.00	5.00	1025.00	1/100	0.003	<LOQ
PM07	PR		18:03	21:29	206	5.75	5.25	5.50	1133.00	5.5/100	0.002	<LOQ
PM08	PR		18:30	21:36	186	6.00	6.00	6.00	1116.00	1.5/100	0.002	<LOQ
PM09	PR		17:31	21:50	259	6.00	5.50	5.75	1489.25	1/100	0.002	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
PM03	Location #1-north of Pole barn on perimeter	<LOQ
PM04	Location #2-NW of Planer building on perimeter	<LOQ
PM05	Location #3-west of Planer building on perimeter	<LOQ
PM06	Location #4-SW of Planer building on perimeter	<LOQ
PM07	Location #5-south of warehouse building on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building on perimeter	<LOQ
PM09	Location #7-NE corner of property on stop sign Highway 37	<LOQ

KOCH ENVIRONMENTAL HEALTH, INC
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH # 21001-001B
SAMPLING DATE 9/16/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									1/100		
B02	FB									0/100		
PM03	PR	-	15:02	20:10	308	5.0	5.0	5.0	1540.00	0/100	0.002	<LOQ
PM04	PR	-	15:10	20:32	322	5.0	5.5	5.25	1690.50	1/100	0.002	<LOQ
PM05	PR	-	15:13	20:36	323	6.0	6.0	6.0	1938.00	0.5/100	0.001	<LOQ
PM06	PR	-	15:47	20:16	269	5.5	5.5	5.5	1479.50	2.5/100	0.002	<LOQ
PM07	PR	-	15:53	20:21	268	5.5	5.5	5.5	1474.00	1.5/100	0.002	<LOQ
PM08	PR	-	15:56	20:28	272	6.0	6.5	6.25	1700.00	2.5/100	0.002	<LOQ
PM09	PR	-	16:45	20:52	247	5.0	5.5	5.25	1296.75	1/100	0.002	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
PM03	Location #1-north of Pole barn on perimeter	<LOQ
PM04	Location #2-NW of Planer building on perimeter	<LOQ
PM05	Location #3-west of Planer building on perimeter	<LOQ
PM06	Location #4-SW of Planer building on perimeter	<LOQ
PM07	Location #5-south of warehouse building on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building on perimeter	<LOQ
PM09	Location #7-NE corner of property on stop sign Highway 37	<LOQ

KOCH ENVIRONMENTAL HEALTH, INC
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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001B
SAMPLING DATE: 9/17/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM03	PR		08:09	15:08	419	7.0	6.5	6.75	2828.25	3/100	0.001	<LOQ
PM04	PR		08:11	15:14	423	5.0	5.0	5.0	2115	2/100	0.001	<LOQ
PM05	PR		08:14	15:21	427	6.0	5.5	6.25	2668.75	2.5/100	0.001	<LOQ
PM06	PR		08:18	15:27	429	6.0	5.5	5.75	2466.75	4/100	0.001	<LOQ
PM07	PR		08:24	15:34	430	6.0	5.5	5.75	2472.50	1/100	0.001	<LOQ
PM08	PR		08:28	15:39	431	6.0	6.0	6.0	2586	2/100	0.001	<LOQ
PM09	PR		08:30	15:42	432	5.5	5.5	5.5	2376	3/100	0.001	<LOQ
PM10	PR		15:08	19:19	251	5.0	5.0	5.0	1255	1/100	0.002	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building, on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber Storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign High #37	<LOQ
PM10	Location #1-north of Pole Barn, on perimeter	<LOQ

KOCH ENVIRONMENTAL HEALTH, INC
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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001B
SAMPLING DATE: 9/17/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM11	PR		15:14	19:22	248	5.0	5.0	5.0	1240	2/100	0.002	<LOQ
PM12	PR		15:21	19:25	244	5.5	5.5	5.5	1342	1.5/100	0.002	<LOQ
PM13	PR		15:27	19:28	241	5.5	5.5	5.5	1325.50	2.5/100	0.002	<LOQ
PM14	PR		15:34	19:33	239	5.5	5.5	5.5	1314.50	0/100	0.002	<LOQ
PM15	PR		15:39	19:37	238	5.0	5.5	5.25	1190	1/100	0.002	<LOQ
PM16	PR		15:46	19:40	234	5.0	5.0	5.0	1170	2/100	0.002	<LOQ
A17	OWA	*	09:12	19:48	636	2.0	1.9	1.95	1240.20	10/100	0.002	0.004

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
PM11	Location #2-NW of Planer building, on perimeter	<LOQ
PM12	Location #3-west of Planer building, on perimeter	<LOQ
PM13	Location #4-SW of Planer building, on perimeter	<LOQ
PM14	Location #5-south of Warehouse building, on perimeter	<LOQ
PM15	Location #6-NE of Lumber Storage building, on perimeter	<LOQ
PM16	Location #7-NE corner of property, on stop sign High #37	<LOQ
A17	Inside Storage shed clean room	0.004

** storage shed cleaning*

KOCH ENVIRONMENTAL HEALTH, INC
7342 South Moore Court
Littleton, Colorado 80127
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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001B
SAMPLING DATE: 9/18/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									1/100		
B02	FB									1/100		
PM03	PR	-	07:30	16:25	535	6.00	6.00	6.00	3210.00	9/100	0.001	0.001
PM04	PR	-	07:40	16:32	532	5.00	5.00	5.00	2660.00	2/100	0.001	<LOQ
PM05	PR	-	07:44	16:40	536	5.00	5.00	5.00	2680.00	1/100	0.001	<LOQ
PM06	PR	-	08:10	16:49	519	6.00	6.00	6.00	3114.00	5/100	0.001	<LOQ
PM07	PR	-	08:16	16:56	520	6.00	5.50	5.75	2990.00	4/100	0.001	<LOQ
PM08	PR	-	08:18	17:03	525	5.00	5.50	5.25	2756.25	4/100	0.001	<LOQ
PM09	PR	-	08:21	17:07	526	5.50	5.50	5.50	2893.00	2.5/100	0.001	<LOQ
A10	OWA	*	08:00	17:17	557	1.90	1.90	1.90	1058.30	8/100	0.003	0.003
A11	OWA	*	08:41	16:19	458	5.0	5.0	5.0	2290	4.5/100	0.001	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
PM03	Location #1-north of Pole barn on perimeter	0.001
PM04	Location #2-NW of Planer building on perimeter	<LOQ
PM05	Location #3-west of Planer building on perimeter	<LOQ
PM06	Location #4-SW of Planer building on perimeter	<LOQ
PM07	Location #5-south of warehouse building on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building on perimeter	<LOQ
PM09	Location #7-NE corner of property on stop sign Highway 37	<LOQ
A10	Inside storage shed-clean room decon	0.003
A11	SE of pole Barn & north of Storage shed	<LOQ

** storage shed power wash*

KOCH ENVIRONMENTAL HEALTH, INC
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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001B
SAMPLING DATE: 9/19/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM03	PR	*	13:30	17:17	227	7.00	6.50	6.75	1532.25	4/100	0.002	<LOQ
PM04	PR	*	13:35	19:20	345	5.00	5.50	5.25	1811.25	3.5/100	0.001	<LOQ
PM05	PR	*	13:39	19:25	346	6.00	6.00	6.00	2076.00	3/100	0.001	<LOQ
PM06	PR	*	13:44	19:33	249	6.00	6.00	6.00	2094.00	3/100	0.001	<LOQ
PM07	PR	*	13:56	19:38		6.00						**
PM08	PR	*	14:04	19:54	350	6.00	6.00	6.00	2100.00	3.5/100	0.001	<LOQ
PM09	PR	*	14:11	19:59	348	6.00	6.00	6.00	2088.00	4/100	0.001	<LOQ
A10	OWA	*	13:50	19:29	339	5.00	5.00	5.00	1695.00	7/100	0.002	0.002

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
PM03	Location #1-north of Pole barn on perimeter	<LOQ
PM04	Location #2-NW of Planer building on perimeter	<LOQ
PM05	Location #3-west of Planer building on perimeter	<LOQ
PM06	Location #4-SW of Planer building on perimeter	<LOQ
PM07	Location #5-south of warehouse building on perimeter	**
PM08	Location #6-NE of Lumber storage building on perimeter	<LOQ
PM09	Location #7-NE corner of property on stop sign Highway 37	<LOQ
A10	SE of Pole barn & north of storage shed	0.002

** laying down poly in storage shed*
*** void - no power to pump*

KOCH ENVIRONMENTAL HEALTH, INC
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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001B
SAMPLING DATE: 9/20/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB											
B02	FB											
PM03	PR	-	08:30	13:44	314	5.50	5.50	5.50	1727.00	5/100	0.002	<LOQ
PM04	PR	-	08:39	13:52	313	5.00	5.00	5.00	1565.00	3/100	0.002	<LOQ
PM05	PR	-	08:44	13:56	312	5.00	5.00	5.00	1560.00	3.5/100	0.002	<LOQ
PM06	PR	-	08:53	14:02	309	5.00	5.00	5.00	1545.00	2.5/100	0.002	<LOQ
PM07	PR	-	09:30	14:08	269	5.00	5.00	5.00	1345.00	1/100	0.002	<LOQ
PM08	PR	-	09:10	14:14	304	5.00	5.00	5.00	1520.00	1/100	0.002	<LOQ
PM09	PR	-	09:15	14:26	311	5.00	5.50	5.25	1632.75	6/100	0.002	0.002
A10	OWA	-	08:50	14:00	310	5.00	5.00	5.00	1550.00	5/100	0.002	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
PM03	Location #1-north of Pole barn on perimeter	<LOQ
PM04	Location #2-NW of Planer building on perimeter	<LOQ
PM05	Location #3-west of Planer building on perimeter	<LOQ
PM06	Location #4-SW of Planer building on perimeter	<LOQ
PM07	Location #5-south of warehouse building on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building on perimeter	<LOQ
PM09	Location #7-NE corner of property on stop sign Highway #37	0.002
A10	SE of Pole barn & north of storage shed	<LOQ

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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001B
SAMPLING DATE: 9/21/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM03	PR		10:07	17:02	415	6.0	5.0	5.5	2282.50	0.5/100	0.001	<LOQ
PM04	PR		10:28	17:07	399	6.0	5.0	5.5	2194.50	3/100	0.001	<LOQ
PM05	PR		10:25	17:10	405	6.0	5.0	5.5	2227.50	2/100	0.001	<LOQ
PM06	PR		10:34	17:15	401	5.0	5.0	5.0	2005	0/100	0.001	<LOQ
PM07	PR		10:48	17:22	394	5.5	5.0	5.25	2068.50	5.5/100	0.001	<LOQ
PM08	PR		11:03	17:28	385	5.5	6.0	5.75	2213.75	1.5/100	0.001	<LOQ
PM09	PR		11:11	17:32	381	5.0	5.0	5.0	1905	1/100	0.001	<LOQ
A10	OWA		10:39	17:18	399	6.0	5.0	5.5	2194.50	1/100	0.001	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
PM03	Location #1-north of Pole barn on perimeter	<LOQ
PM04	Location #2-NW of Planer building on perimeter	<LOQ
PM05	Location #3-west of Planer building on perimeter	<LOQ
PM06	Location #4-SW of Planer building on perimeter	<LOQ
PM07	Location #5-south of warehouse building on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building on perimeter	<LOQ
PM09	Location #7-NE corner of property on stop sign Highway #37	<LOQ
A10	SE of Pole barn & north of storage shed	<LOQ

KOCH ENVIRONMENTAL HEALTH, INC
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001B
SAMPLING DATE: 9/22/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									2/100		
B02	FB									1/100		
PM03	PR		10:12	15:58	346	7.0	6.5	6.75	2335.50	3/100	0.001	<LOQ
PM04	PR		10:26	16:02	336	5.5	5.5	5.5	1848	2.5/100	0.001	<LOQ
PM05	PR		10:22	16:04	342	5.0	5.0	5.0	1710	4.5/100	0.002	<LOQ
PM06	PR		10:28	16:08	340	5.0	6.0	5.5	1870	3.5/100	0.001	<LOQ
PM07	PR		10:44	16:13	329	5.0	5.0	5.0	1645	8/100	0.002	0.002
PM08	PR		10:53	16:15	322	5.0	5.0	5.0	1610	2/100	0.002	<LOQ
PM09	PR		10:58	16:17	319	5.5	5.0	5.25	1674.75	2/100	0.002	<LOQ
A10	OWA		10:40	16:10	330	5.0	5.0	5.0	1650	5/100	0.002	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
PM03	Location #1-north of Pole barn on perimeter	<LOQ
PM04	Location #2-NW of Planer building on perimeter	<LOQ
PM05	Location #3-west of Planer building on perimeter	<LOQ
PM06	Location #4-SW of Planer building on perimeter	<LOQ
PM07	Location #5-south of warehouse building on perimeter	0.002
PM08	Location #6-NE of Lumber storage building on perimeter	<LOQ
PM09	Location #7-NE corner of property on stop sign Highway #37	<LOQ
A10	SE of Pole barn & north of storage shed	<LOQ

KOCH ENVIRONMENTAL HEALTH, INC
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001B
SAMPLING DATE: 9/29/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB										0/100	
B02	FB										0/100	
PM03	PR		08:48	16:32	464	6.0	6.0	6.0	2784	4.5/100	0.001	<LOQ
PM04	PR		08:59	16:58	479	5.5	5.5	5.5	2634.50	4/100	0.001	<LOQ
PM05	PR		09:05	17:02	477	5.0	5.0	5.0	2385	5/100	0.001	<LOQ
PM06	PR		09:10	17:08	478	5.0	5.0	5.0	2390	2.5/100	0.001	<LOQ
PM07	PR		09:16	17:12	476	5.0	5.0	5.0	2380	2/100	0.001	<LOQ
PM08	PR		09:31	17:15	464	5.0	5.0	5.0	2320	2/100	0.001	<LOQ
PM09	PR		09:45	17:19	454	5.0	5.0	5.0	2270	1/100	0.001	<LOQ
A10	HEX		11:29	17:29	360	2.0	2.0	2.0	720	2/100	0.004	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building, on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign Hwy 37	<LOQ
A10	NW of Warehouse building-by HEPA exhaust	<LOQ

KOCH ENVIRONMENTAL HEALTH, INC.
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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001B
SAMPLING DATE: 9/29/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B03	FB									0/100		
B04	FB									0/100		
PM11	PR	*	16:32	19:11	159	6.0	6.0	6.0	954	2/100	0.003	<LOQ
PM12	PR	*	16:58	19:23	145	5.5	5.5	5.5	797.50	3/100	0.003	<LOQ
PM13	PR	*	17:02	19:26	144	5.0	5.0	5.0	720	0/100	0.004	<LOQ
PM14	PR	*	17:08	19:30	142	5.0	5.5	5.25	710	4/100	0.004	<LOQ
PM15	PR	*	17:12	19:33	141	5.0	5.0	5.0	705	1/100	0.004	<LOQ
PM16	PR	*	17:15	19:37	142	5.0	5.0	5.0	710	2/100	0.004	<LOQ
PM17	PR	*	17:19	19:40	141	5.0	5.0	5.0	705	4.5/100	0.004	<LOQ
A18	IWA	*	17:18	19:17	119	7.0	7.0	7.0	833	1/100	0.003	<LOQ
PM19	IWA	*	17:15	19:19	124	8.0	8.0	8.0	992	6/100	0.003	0.003

Sample Number	Sample Description/Location	Results (f/cc)
B03	FIELD BLANK	
B04	FIELD BLANK	
PM11	Location #1-north of Pole Barn, on perimeter	<LOQ
PM12	Location #2-NW of Planer building, on perimeter	<LOQ
PM13	Location #3-west of Planer building, on perimeter	<LOQ
PM14	Location #4-SW of Planer building, on perimeter	<LOQ
PM15	Location #5-south of Warehouse building, on perimeter	<LOQ
PM16	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM17	Location #7-NE corner of property, on stop sign Hwy 37	<LOQ
A18	75' north of Millwork west office	<LOQ
PM19	50' south of Millwork west office	0.003

** moving millwork, west building*

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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001B
SAMPLING DATE: 9/30/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM03	PR		08:23	13:05	282	6.0	6.0	6.0	1692	2/100	0.002	<LOQ
PM04			08:28	13:06	278	4.0	4.0	4.0	1112	3/100	0.002	<LOQ
PM05			08:35	13:08	273	4.0	4.0	4.0	1092	2/100	0.002	<LOQ
PM06			08:43	13:10	267	4.0	4.0	4.0	1068	0/100	0.003	<LOQ
PM07			08:51	13:21	270	4.0	4.0	4.0	1080	1/100	0.002	<LOQ
PM08			08:56	13:23	267	4.0	4.0	4.0	1068	1/100	0.003	<LOQ
PM09			09:00	13:25	265	4.0	4.0	4.0	1060	1/100	0.003	<LOQ
A10	IWA		08:40	14:00	320	4.0	4.0	4.0	1280	2/100	0.002	<LOQ
A11	IWA		08:45	14:07	322	4.0	4.0	4.0	1288	1/100	0.002	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building, on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign Hwy 37	<LOQ
A10	40' west of Pole Barn	<LOQ
A11	50' south of SE corner of the Pole Barn	<LOQ

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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001B
SAMPLING DATE: 9/30/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
A12	A		08:53	14:15	322	4.0	4.0	4.0	1288	1/100	0.002	<LOQ
PM13	PR		13:05	17:27	262	6.0	6.0	6.0	1572	0/100	0.002	<LOQ
PM14	PR		13:06	17:38	272	4.0	4.0	4.0	1088	1/100	0.002	<LOQ
PM15	PR		13:08	17:47	279	4.0	4.0	4.0	1116	2/100	0.002	<LOQ
PM16	PR		13:10	17:56	286	4.0	4.0	4.0	1144	0/100	0.002	<LOQ
PM17	PR		13:21	18:02	281	4.0	4.0	4.0	1124	1.5/100	0.002	<LOQ
118	PR		13:23	18:06	283	4.0	4.5	4.25	1202.75	1.5/100	0.002	<LOQ
PM19	PR		13:25	18:09	284	4.0	4.0	4.0	1136	0/100	0.002	<LOQ
A20	A		14:00	18:14	254	4.0	4.0	4.0	1016	0.5/100	0.003	<LOQ
A21	A		14:15	18:19	244	4.0	4.0	4.0	976	0/100	0.003	<LOQ
A22	A		14:07	18:24	257	4.0	4.0	4.0	1028	1/100	0.003	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
A12	FIELD BLANK	<LOQ
PM13	Location #1-north of Pole Barn, on perimeter	<LOQ
PM14	Location #2-NW of Planer building, on perimeter	<LOQ
PM15	Location #3-west of Planer building, on perimeter	<LOQ
PM16	Location #4-SW of Planer building, on perimeter	<LOQ
PM17	Location #5-south of Warehouse building, on perimeter	<LOQ
PM18	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM19	Location #7-NE corner of property, on stop sign Hwy 37	<LOQ
A20	40' west of Pole Barn	<LOQ
A21	50' north of NE corner of Warehouse	<LOQ
A22	50' south of SE corner of Pole Barn	<LOQ

KEH PROJECT AIR MONITORING REPORT

Prepared for:

URS RADIAN
707 17th STREET, SUITE 3400
DENVER, CO 80202

Project:

W.R. GRACE EXPORT PLANT
LIBBY, MONTANA

KEH PROJECT NUMBER 21001-001C
September 14, 15, 21, 22, 25, 26, 2000
October 1-31, 2000

EXECUTIVE SUMMARY

Koch Environmental Health, Inc. (KEH) conducted project air sampling and analysis via Phase Contrast Microscopy (PCM) for URS Radian Corporation at the W.R. Grace Export Plant in Libby, Montana from September 14-26, 2000 and October 1-31, 2000. Services were provided at the request of the customer in support of asbestos cleanup and abatement activities being conducted in various work locations of the plant and mine site. Asbestos cleanup activities are being conducted by AC&S, Inc. of Arvada, Colorado.

KEH's scope of work for this project included collection and analysis of ambient air samples by NIOSH 582-trained personnel for determination of airborne asbestos concentrations in identified areas.

Clearance samples were collected in an aggressive manner after an acceptable status visual inspection had been performed by a qualified Air Sampling Professional (ASP) in each applicable work area. Results of all final clearance samples contained in this report were below the project clearance guideline of 0.01 fibers/cubic centimeter (f/cc) for PCM analysis and 70 asbestos structures/square millimeter (s/mm^2) for TEM analysis.

PROJECT INFORMATION

CLIENT:	URS Radian Corporation 707 17th Street, Suite 3400 Denver, CO 80202
PROJECT LOCATION:	W.R. Grace Export Plant Libby, Montana
PROJECT CONTACT:	Jim Stout
WORK AREA:	Export Plant and Mine Site
DESCRIPTION OF SERVICES:	Project air sampling and Analysis Via PCM
LABORATORY SERVICES:	R.J. Lee Group Monroeville, PA Badlands Environmental Consultants, Inc. Bismarck, ND
KEH REPRESENTATIVE:	Patrick McGurren, BEC

PROJECT INTRODUCTION

Koch Environmental Health, Inc. (KEH) conducted project air sampling and analysis via Phase Contrast Microscopy (PCM) for URS Radian Corporation at the W.R. Grace Export Plant in Libby, Montana from September 14-26, 2000 and October 1-31, 2000. Services were provided at the request of the customer in support of asbestos cleanup and abatement activities being conducted in various work locations of the plant and mine site. Asbestos cleanup activities are being conducted by AC&S, Inc. of Arvada, Colorado.

SCOPE OF WORK

KEH's scope of work for this project included collection and analysis of ambient air samples by NIOSH 582-trained personnel for determination of airborne asbestos concentrations in identified areas.

AIR MONITORING

Air samples were collected utilizing a modified NIOSH 7400 Method whereby samples were collected on 25 millimeter (mm) mixed cellulose ester membrane filters with 0.45 micron pore size and analyzed via Phase Contrast Microscopy (PCM).

Sample Collection

Phase Contrast Microscopy (PCM) samples were collected on 25-millimeter (mm) mixed-cellulose ester membrane filters, 0.45-micron pore size, with an effective collection area of 385 mm^2. Transmission Electron Microscopy (TEM) samples, when applicable, were collected on 25 millimeter (mm) mixed-cellulose ester membrane filters, 0.45 micron pore size, with an effective collection area of 385 mm^2. All filters were pre-assembled by the manufacturer in three-stage, conductive sampling cassettes with extension cowls.

Air samples were collected at flow rates between 1.0 and 10.0 liters per minute (L/m). KEH Representatives used professional judgment and expertise in determining sample flow rates and locations based upon project conditions. Flow rates were recorded at the beginning and at the end of the sampling period utilizing a primary flow calibration instrument (e.g. DryCal DC Lite) or an airflow rotameter calibrated against a primary flow calibration instrument. Start times and stop times were recorded for all sampling periods.

PCM Sample Analysis Method

PCM samples were analyzed according to a modified NIOSH 7400 Method, A Counting Rules, although samples were collected on 25 millimeter (mm) mixed cellulose ester membrane filters with 0.45 micron pore size and analyzed via Phase Contrast Microscopy (PCM). Air sample results contained in this report have been calculated with blank sample corrections; sample volumes have not been corrected for altitude. Unused portions of sample filters are maintained in their original three-stage cassettes and archived for a period of three (3) months unless prior arrangements have been made.

Analytical Equipment, PCM

PCM laboratory analysis was performed using a Nikon Alphaphot YS microscope or equivalent with a microscope field area of 0.00785 mm^2 as defined by a Walton-Beckett graticule. Air sample analysis on site was performed by Badlands Environmental Inc. TEM sample analysis was performed by the customer's designated laboratory, the R.J. Lee Group.

SAMPLE RESULTS KEY

S/mm^2	=	TEM concentration
f/cc	=	fibers/cubic centimeter
f/fld.	=	fibers/field
LOQ	=	Limit of Quantitation (the calculated lower limit of quantitation expressed in f/cc; based on a limit of detection of 10/100 fibers/field)
ECA	=	Effective Collection Area, filter
L/min	=	Liters per minute (sample flow rate)
CBR	=	Could Not Be Read (overloaded, etc.)
BAS	=	Below Analytical Sensitivity
BDL	=	Below Detection Limit
ND	=	None Detected

Work Activity/Conditions

SU	=	Setup Operations
REM	=	Removal
GB	=	Glovebag Operations
CU	=	Cleanup (shoveling, bagging, etc.)
PC	=	Pre cleaning
FC	=	Final Cleaning
BO	=	Bag Out Operations
EN	=	Encapsulating
O	=	Occupied
U	=	Unoccupied
L	=	Laundry
ST	=	Storage

Sample Types

OWA	=	Outside Work Area sample
IWA	=	Inside Work Area sample
CL	=	Clearance sample
BAK	=	Background (ambient) sample
P	=	Personal sample
P/Ex	=	Personal sample, excursion
TD	=	Tear-down
PR	=	Perimeter

Reviewed by

11/22/00
Date

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: AC& S, INC.
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001B
SAMPLING DATE: 9/14/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									1/100		
B02	FB									0/100		
A03	A		14:28	16:10	102	1.5	1.3	1.4	143	2/100	0.019	<LOQ
A04	A		14:35	16:13	78	1.5	1.5	1.5	147	1/100	0.018	<LOQ
P05	P		14:13	16:05	112	1.5	1.5	1.5	168	25.5/100	0.016	0.073

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
A03	Mine excavation Glory hole-west	<LOQ
A04	Mine excavation Glory hole-east	<LOQ
P05	Grant Garcia-Glory hole mine excavation	0.073

Worker, SS#	Work Activity	8 Hr. TWA (f/cc)
Grant Garcia	Mine excavation	0.017

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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: AC& S, INC.
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001B
SAMPLING DATE: 9/15/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01a	FB										0/100	
B02a	FB										0/100	
A03a	A	*	08:35	14:42	367	1.5	1.5	1.5	551	0/100	0.005	<LOQ
P04a	A	*	08:46	14:46	360	1.5	1.5	1.5	540	1/00	0.005	<LOQ
P05a	P	*	08:27	14:11	344	1.5	1.5	1.5	516	65.5/100	0.005	0.062

Sample Number	Sample Description/Location	Results (f/cc)
B01a	FIELD BLANK	
B02a	FIELD BLANK	
A03a	Mine excavation-Glory Hole west	<LOQ
P04a	Mine excavation-Glory Hole north	<LOQ
P05a	Grant Garcia, SS # 542-44-9486, Glory Hole	0.062

Worker, SS#	Work Activity	8 Hr.TWA (f/cc)
Grant Garcia, SS # 542-44-9486	excavation	0.44

* *excavation*

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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: AC& S, INC.
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001B
SAMPLING DATE: 9/21/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
A03a			09:00	16:13	433	1.5	0.75	1.13	489	1/100	0.006	<LOQ
PO4a	P		09:10	16:28	438	1.5	1.5	1.5	642	2.5/100	0.004	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
A03a	South of drilling area, near Glory Hole	<LOQ
PO4a	Dave Iliff, SS # 517-86-6436, drilling area near Glory Hole	<LOQ

Worker, SS#	Work Activity	8 Hr.TWA (f/cc)
Dave Iliff, SS # 517-86-6436	Soil drilling near Glory Hole	<LOQ

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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: AC& S, INC.
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001B
SAMPLING DATE: 9/22/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01a	FB									0/100		
B02a	FB									0/100		
A03a	IWA	*	09:04	17:10	486	1.5	1.5	1.5	729	0/100	0.004	<LOQ
A04a	IWA	*	09:07	17:13	486	1.5	1.5	1.5	729	1/100	0.004	<LOQ
PO5a	P	*	09:01	17:08	487	2.0	2.0	2.0	974	100/67	0.003	0.075

Sample Number	Sample Description/Location	Results (f/cc)
B01a	FIELD BLANK	
B02a	FIELD BLANK	
A03a	West of drilling site	<LOQ
A04a	South of drilling site	<LOQ
PO5a	Dave Iliff, SS # 517-86-6436-north of Glory Hole at drilling site	0.075

Worker, SS#	Work Activity	8 Hr. TWA (f/cc)
Dave Iliff, SS # 517-86-6436	Soil drilling near Glory Hole	0.075

* *soil drilling*

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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: AC& S, INC.
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001B
SAMPLING DATE: 9/25/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01a	FB									2/100	2/100	
B02a	FB									0/100	0/100	
A03a	IWA	*	10:49	15:59	310	2.0	2.0	2.0	620	1.5/100	0.004	<LOQ
A04a	IWA	*	10:52	16:02	310	2.0	1.9	1.95	605	1/100	0.004	<LOQ
P05a	Ex	*	10:45	11:15	30	1.9	1.9	1.9	57	10/100	0.047	0.077
P06a	P	*	11:15	15:55	280	1.9	1.9	1.9	532	100/42	0.005	0.217

Sample Number	Sample Description/Location	Results (f/cc)
B01a	FIELD BLANK	
B02a	FIELD BLANK	
A03a	South of drilling site	<LOQ
A04a	West of drilling site	<LOQ
P05a	Dave Iliff, SS # 517-86-6436-driller at drilling site	0.077
P06a	Dave Iliff, SS # 517-86-6436-driller at drilling site	0.217

Worker, SS#	Work Activity	8 Hr. TWA (f/cc)
Dave Iliff, SS # 517-86-6436	Soil drilling	0.131

* *soil drilling*

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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: AC& S, INC. KEH #: 21001-001B
PROJECT: W. R. Grace Export Plant & Mine Site SAMPLING DATE: 9/26/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01a	FB										0/100	
B02a	FB										0/100	
A03a	IWA	*	11:26	17:41	375	2.0	2.0	2.0	750	43/100	0.004	0.028
P04a	Ex	*	13:09	13:39	30	1.8	1.8	1.8	54	37/100	0.050	0.336
P05a	P	*	13:39	17:39	240	1.8	1.8	1.8	432	97/100	0.006	0.110

Sample Number	Sample Description/Location	Results (f/cc)
B01a	FIELD BLANK	
B02a	FIELD BLANK	
A03a	Monitoring well #2-west of drilling location	0.028
P04a	Dave Iliff, SS # 517-86-6436-monitoring well #2	0.336
P05a	Dave Iliff, SS # 517-86-6436-monitoring well #2	0.110

Worker, SS#	Work Activity	8 Hr.TWA (f/cc)
Dave Iliff, SS # 517-86-6436	Monitoring well #2 soil drilling	0.076

- *soil drilling*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/1/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									1/100		
B02	FB									1//100		
PM03	PR	*	09:02	14:45	343	6.0	6.0	6.0	2058	1/100	0.001	<LOQ
PM04	PR	*	09:06	14:47	341	5.0	5.0	5.0	1705	0/100	0.002	<LOQ
PM05	PR	*	09:09	14:50	341	5.0	5.0	5.0	1705	1/100	0.002	<LOQ
PM06	PR	*	09:13	14:52	339	5.0	5.0	5.0	1695	0/100	0.002	<LOQ
PM07	PR	*	09:17	14:54	337	5.0	5.0	5.0	1685	1/100	0.002	<LOQ
PM08	PR	*	09:25	14:57	332	5.0	5.0	5.0	1660	0/100	0.002	<LOQ
PM09	PR	*	09:32	14:59	327	5.0	5.5	5.25	1717	2/100	0.002	<LOQ
A10	A	*	08:20	14:22	362	5.0	5.0	5.0	1810	1/100	0.001	<LOQ
A11	A	*	08:28	14:32	364	5.0	5.0	5.0	1820	3/100	0.001	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign-highway 37	<LOQ
A10	50' north of NE corner of warehouse	<LOQ
A11	40' south of SE corner of Pole Barn	<LOQ

* *cleaning & moving misc lumber*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/1/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
A12	FB		08:35	14:36	361	5.5	5.5	5.5	1986	1/100	0.001	<LOQ
PM13	PR		14:45	19:56	311	6.0	6.0	6.0	1866	1/100	0.001	<LOQ
PM14	PR	*	14:47	19:54	307	5.0	5.5	5.25	1612	0/100	0.002	<LOQ
PM15	PR	*	14:50	19:52	302	5.0	5.0	5.0	1510	3/100	0.002	<LOQ
PM16	PR	*	14:52	19:46	294	5.0	5.0	5.0	1470	0/100	0.002	<LOQ
PM17	PR	*	14:54	19:27	273	5.0	5.0	5.0	1365	0.5/100	0.002	<LOQ
PM18	PR	*	14:57	19:32	275	5.0	5.0	5.0	1375	2/100	0.002	<LOQ
PM19	PR	*	14:59	19:36	277	5.5	5.5	5.5	1524	1/100	0.002	<LOQ
A20	A	*	14:22	19:31	309	5.0	5.5	5.25	1622	1.5/100	0.002	<LOQ
A21	A	*	14:32	19:25	293	5.0	5.0	5.0	1465	1/100	0.002	<LOQ
A22	A	*	14:36	19:21	285	5.0	5.0	5.0	1425	1/100	0.002	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
A12	40' west of Pole Barn	<LOQ
PM13	Location #1-north of Pole Barn, on perimeter	<LOQ
PM14	Location #2-NW of Planer building, on perimeter	<LOQ
PM15	Location #3-west of Planer building-on perimeter	<LOQ
PM16	Location #4-SW of Planer building, on perimeter	<LOQ
PM17	Location #5-south of Warehouse building, on perimeter	<LOQ
PM18	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM19	Location #7-NE corner of property, on stop sign-highway 37	<LOQ
A20	50' north of NE corner of warehouse	<LOQ
A21	40' south of SE corner of Pole Barn	<LOQ
A22	40' west of Pole Barn	<LOQ

* *cleaning & moving misc. lumber*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/2/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									1/100		
B02	FB									0//100		
AM03	PR	*	08:12	17:52	580	6.0	6.0	6.0	3480	4/100	0.001	<LOQ
PM04	PR	*	08:15	17:55	580	5.5	5.5	5.5	3190	2.5/100	0.001	<LOQ
PM05	PR	*	08:17	17:57	580	5.0	5.0	5.0	2900	4/100	0.001	<LOQ
PM06	PR	*	08:21	18:10	589	5.0	5.5	5.25	3092	4/100	0.001	<LOQ
PM07	PR	*	08:27	18:14	587	5.0	5.0	5.0	2935	3/100	0.001	<LOQ
PM08	PR	*	08:30	18:16	586	5.0	5.0	5.0	2930	2/100	0.001	<LOQ
PM09	PR	*	08:33	18:20	587	5.5	5.5	5.5	3229	5/100	0.001	<LOQ
A10	A	*	08:37	17:48	551	5.0	5.0	5.0	2755	2/100	0.001	<LOQ
A11	A	*	08:40	17:45	545	5.0	5.0	5.0	2725	4.5/100	0.001	<LOQ
A12	A	*	08:44									**

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
AM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign-highway 37	<LOQ
A10	50' north of NE corner of warehouse	<LOQ
A11	40' south of SE corner of Pole Barn	<LOQ
A12	40' west of Pole Barn	

*cleaning & moving misc. lumber
** void- circuit interrupt

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/3/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									2/100		
B02	FB									1//100		
PM03	PR	*	08:11	17:18	547	6.0	6.0	6.0	3282	5/100	0.001	<LOQ
PM04	PR	*	08:19	17:22	543	5.5	5.5	5.5	2987	3/100	0.001	<LOQ
PM05	PR	*	08:22	17:25	543	5.0	5.0	5.0	2715	3/100	0.001	<LOQ
PM06	PR	*	08:25	17:28	543	5.0	5.0	5.0	2715	1/100	0.001	<LOQ
PM07	PR	*	08:28	17:31	543	5.0	5.0	5.0	2715	2/100	0.001	<LOQ
PM08	PR	*	08:30	17:34	544	5.0	5.0	5.0	2720	3/100	0.001	<LOQ
PM09	PR	*	08:33	17:37	544	5.5	5.5	5.0	2720	1/100	0.001	<LOQ
A10	A	*	08:36	17:10	514	5.0	5.0	5.0	2570	4.5/100	0.001	<LOQ
A11	A	*	08:40	17:13	513	5.0	5.0	5.0	2565	3.5/100	0.001	<LOQ
A12	A	*	08:53	17:15	502	5.0	5.0	5.0	2510	1.5/100	0.001	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign-highway 37	<LOQ
A10	50' north of NE corner of warehouse	<LOQ
A11	40' south of SE corner of Pole Barn	<LOQ
A12	40' west of Pole Barn	<LOQ

* *cleaning & moving misc. lumber*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/4/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM03	PR	*	08:06	17:53	587	6.0	6.5	6.25	3669	5/100	0.001	<LOQ
PM04	PR	*	08:10	17:56	586	5.5	5.5	5.5	3223	5/100	0.001	<LOQ
PM05	PR	*	08:14	17:59	585	5.0	5.0	5.0	2925	5/100	0.001	<LOQ
PM06	PR	*	08:18	18:00	582	5.0	5.0	5.0	2910	4/100	0.001	<LOQ
PM07	PR	*	08:21	18:03	582	5.0	5.5	5.25	3056	7/100	0.001	<LOQ
PM08	PR	*	08:24	18:05	581	5.0	5.0	5.0	2905	1.5/100	0.001	<LOQ
PM09	PR	*	08:35	18:07	572	5.5	5.5	5.5	3146	2/100	0.001	<LOQ
A10	A	*	08:37	17:50	553	5.0	5.0	5.0	2765	2.5/100	0.001	<LOQ
A11	A	*	08:40	17:48	548	5.5	5.5	5.5	3014	7.5/100	0.001	<LOQ
A12	A	*	08:43	17:45	542	5.0	5.0	5.0	2710	4/100	0.001	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign-highway 37	<LOQ
A10	50' north of NE corner of warehouse	<LOQ
A11	40' south of SE corner of Pole Barn	<LOQ
A12	40' west of Pole Barn	<LOQ

* *cleaning & moving misc. lumber*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/5/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM03	PR	*	09:01	16:45	464	6.0	6.0	6.0	2784	9/100	0.001	0.002
PM04	PR	*	09:07	16:49	462	5.5	5.5	5.5	2541	6/100	0.001	0.001
PM05	PR	*	09:11	16:52	461	5.5	5.5	5.5	2536	11/100	0.001	0.002
PM06	PR	*	09:14	16:55	461	5.0	5.0	5.0	2305	5.5/100	0.001	<LOQ
PM07	PR	*	09:16	16:59	463	5.0	5.5	5.25	2431	3/100	0.001	<LOQ
PM08	PR	*	09:20	17:05	465	5.5	5.0	5.25	2441	4/100	0.001	<LOQ
PM09	PR	*	09:22	17:12	470	5.5	5.5	5.5	2585	1.5/100	0.001	<LOQ
A10	A	*	08:27	16:36	489	5.0	5.0	5.0	2445	4/100	0.001	<LOQ
A11	A	*	08:32	16:40	488	5.0	5.0	5.0	2440	5/100	0.001	<LOQ
A12	A	*	08:36	16:42	486	5.0	5.0	5.0	2430	10/100	0.001	0.002

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
PM03	Location #1-north of Pole Barn, on perimeter	0.002
PM04	Location #2-NW of Planer building, on perimeter	0.001
PM05	Location #3-west of Planer building-on perimeter	0.002
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign-highway 37	<LOQ
A10	50' north of NE corner of warehouse	<LOQ
A11	40' south of SE corner of Pole Barn	<LOQ
A12	40' west of Pole Barn	0.002

* *cleaning & moving misc. lumber*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/6/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM03	PR	*	09:25	16:55	450	6.0	6.0	6.0	2700	1/100	0.001	<LOQ
PM04	PR	*	09:31	16:58	447	5.5	5.5	5.5	2459	2/100	0.001	0.001
PM05	PR	*	09:36	17:00	444	5.0	5.0	5.0	2220	4/100	0.001	<LOQ
PM06	PR	*	09:40	17:04	444	5.0	5.0	5.0	2220	3/100	0.001	<LOQ
PM07	PR	*	09:56	17:07	431	5.0	5.0	5.0	2155	3.5/100	0.001	<LOQ
PM08*	PR	*	09:57	17:17	438	5.0	5.0	5.0	2190	2/100	0.001	<LOQ
PM09	PR	*	10:06	17:20	434	5.0	5.0	5.0	2170	3.5/100	0.001	<LOQ
A10	A	*	09:00	16:45	465	5.0	5.0	5.0	2325	3.5/100	0.001	<LOQ
A11	A	*	09:03	16:48	465	5.0	5.0	5.0	2325	5/100	0.001	<LOQ
A12	A	*	09:06	16:51	465	5.0	5.0	5.0	2325	5/100	0.001	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	0.001
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign-highway 37	<LOQ
A10	50' north of NE corner of warehouse	<LOQ
A11	40' south of SE corner of Pole Barn	<LOQ
A12	40' west of Pole Barn	<LOQ

* *cleaning & moving misc lumber*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/7/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									1/100		
B02	FB									0/100		
PM03	PR	*	09:33	16:28	410	6.0	6.0	6.0	2460	4/100	0.001	<LOQ
PM04	PR	*	09:46	16:31	405	5.0	5.0	5.0	2025	1/100	0.001	<LOQ
PM05	PR	*	09:49	16:35	406	5.0	5.0	5.0	2030	14.5/100	0.001	0.003
PM06	PR	*	09:53	16:38	405	5.0	5.0	5.0	2025	2/100	0.001	<LOQ
PM07	PR	*	09:56	16:41	405	5.0	5.0	5.0	2025	0/100	0.001	<LOQ
PM08	PR	*	10:01	16:48	407	5.0	5.0	5.0	2035	1/100	0.001	<LOQ
PM09	PR	*	10:07	16:52	405	5.0	5.5	5.25	2126	1.5/100	0.001	<LOQ
A10	A	*	09:20	16:20	420	5.0	5.0	5.0	2100	2/100	0.001	<LOQ
A11	A	*	09:24	16:24	420	6.0	6.0	6.0	2520	0/100	0.001	<LOQ
A12	A	*	09:27	16:26	419	5.0	5.0	5.0	2095	0.5/100	0.001	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	0.003
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign-highway 37	<LOQ
A10	50' north of NE corner of warehouse	<LOQ
A11	40' south of SE corner of Pole Barn	<LOQ
A12	40' west of Pole Barn	<LOQ

* *cleaning & bagging up inside Warehouse*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/9/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									1/100		
PM03	PR	*	09:18	17:21	483	6.0	6.0	6.0	2898	6/100	0.001	<LOQ
PM04	PR	*	09:21	17:23	482	5.5	5.5	5.5	2651	3/100	0.001	<LOQ
PM05	PR	*	09:24	17:27	483	5.0	5.0	5.0	2415	8/100	0.001	0.002
PM06	PR	*	09:27	17:30	483	5.0	5.0	5.0	2415	2/100	0.001	<LOQ
PM07	PR	*	09:30	17:33	483	5.0	5.0	5.0	2415	5/100	0.001	<LOQ
PM08	PR	*	09:33	17:48	495	5.0	5.0	5.0	2475	3/100	0.001	<LOQ
PM09	PR	*	09:37	17:53	496	5.0	5.0	5.0	2480	2/100	0.001	<LOQ
A10	A	*	08:58	17:11	493	5.5	5.5	5.5	2712	31/100	0.001	0.006
A11	A	*	09:01	17:13	492	5.5	5.0	5.25	2583	3/100	0.001	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	0.002
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign-highway 37	<LOQ
A10	NW of Warehouse building at HEPA exhaust	0.006
A11	40' south of SE corner of Pole Barn	<LOQ

* *demolishing walls inside Warehouse building*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/9/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
	FB											
	FB											
A12	A	*	09:04	17:17	493	5.5	5.5	5.5	2712	3.5/100	0.001	<LOQ
A13	OWA	*	10:12	17:44	452	2.0	1.8	1.9	859	31.5/100	0.003	0.018
A14	IWA	*	10:03	17:38	455	5.0	5.0	5.0	2275	-	0.001	**

Sample Number	Sample Description/Location	Results (f/cc)
	FIELD BLANK	
	FIELD BLANK	
A12	40' west of Pole Barn	<LOQ
A13	Clean room decon	0.018
A14	Inside Warehouse building, south end near bagout	**

* *demo ing walls inside Warehouse building*
** *void - particulate overload*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/10/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									2/100		
B02	FB									1/100		
PM03	PR		09:19	16:49	450	6.0	6.0	6.0	2700	6/100	0.001	<LOQ
PM04	PR		09:38	16:52	434	5.0	5.0	5.0	2170	3/100	0.001	<LOQ
PM05	PR		09:47	16:56	429	5.0	5.0	5.0	2145	5.5/100	0.001	<LOQ
PM06	PR		09:42	17:00	438	5.0	5.0	5.0	2190	3/100	0.001	<LOQ
PM07	PR		09:12	16:45	453	5.0	5.0	5.0	2265	6/100	0.001	<LOQ
PM08	PR		09:25	17:03	458	5.0	5.0	5.0	2290	7/100	0.001	<LOQ
PM09	PR		10:15	17:20	425	5.5	5.5	5.5	2338	4.5/100	0.001	<LOQ
H10	HEX		09:03	16:38	455	5.0	5.0	5.0	2275	8/100	0.001	0.001
A11	A		09:06	16:41	455	5.0	5.0	5.0	2275	7.5/100	0.001	0.001
A12	OWA	*	10:00	17:11	431	2.0	1.1	1.55	668	12/100	0.004	0.008
A13	IWA	*	09:54	17:08	434	2.0	2.0	2.0	868	100/32	0.003	0.174

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign-highway 37	<LOQ
H10	NE of Warehouse building at HEPA exhaust	0.001
A11	40' NE of small shed	0.001
A12	Clean room decon	0.008
A13	Inside Warehouse building, south end	0.174

* *demo ing walls*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/11/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM03	PR		08:43	16:38	475	6.0	6.0	6.0	2850	7/100	0.001	0.001
PM04	PR		08:50	16:41	471	5.5	5.5	5.5	2591	3/100	0.001	<LOQ
PM05	PR		08:53	16:44	471	5.5	5.0	5.25	2473	25/100	0.001	0.005
PM06	PR		08:56	16:48	472	5.0	5.5	5.25	2478	6/100	0.001	0.001
PM07	PR/A	*	09:12	16:58	466	5.0	5.0	5.0	2330	3.5/100	0.001	>LOQ
PM08	PR		09:32	17:01	449	5.0	5.0	5.0	2245	3/100	0.001	>LOQ
PM09	PR		09:35	16:35	420	5.5	5.5	5.5	2310	2/100	0.001	<LOQ
H10	HEX		08:59	16:55	476	5.0	5.0	5.0	2380	62/100	0.001	0.013
A11	A		09:05	16:51	466	5.0	5.0	5.0	2330	34/100	0.001	0.007
A12	IWA	*	09:26	17:04	458	2.0	3.0	2.5	1145	100/18	0.002	0.238
A13	OWA	*	09:28	17:06	458	2.0	1.5	1.75	802	41/100	0.003	0.025

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
PM03	Location #1-north of Pole Barn, on perimeter	0.001
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	0.005
PM06	Location #4-SW of Planer building, on perimeter	0.001
PM07	Location #5-south of Warehouse building, on perimeter	>LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	>LOQ
PM09	NE corner of property-on stop sign-highway 37	<LOQ
H10	NW of Warehouse building, on perimeter	0.013
A11	40' east of NE corner of small shed	0.007
A12	South end of Warehouse	0.238
A13	Clean room in Warehouse decon building	0.025

* *demo ing walls*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/12/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									1/100		
PM03	PR		08:30	16:23	473	6.0	6.0	6.0	2838	7/100	0.001	0.001
PM04	PR		08:37	16:27	470	5.5	5.5	5.5	2585	4/100	0.001	<LOQ
PM05	PR		08:40	16:30	470	5.5	5.0	5.25	2468	6/100	0.001	<LOQ
PM06	PR		08:45	16:33	468	5.0	5.0	5.0	2340	4/100	0.001	<LOQ
PM07	PR/A	*	08:55	16:42	467	5.0	5.0	5.0	2335	4/100	0.001	<LOQ
PM08	PR		08:58	16:45	467	5.0	5.0	5.0	2335	1/100	0.001	<LOQ
PM09	PR		09:03	16:50	467	5.5	5.5	5.5	2569	2/100	0.001	<LOQ
H10	HEX	*	08:52	16:38	466	5.0	5.0	5.0	2330	12.5/100	0.001	0.003
A11	A	*	08:49	16:36	467	5.0	5.0	5.0	2335	5/100	0.001	<LOQ
A12	IWA	*	09:20	16:54	454	2.0	2.5	2.25	1022	100/49	0.003	0.097
A13	OWA	*	09:23	17:01	458	2.0	2.0	2.0	916	15/100	0.003	0.008

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
PM03	Location #1-north of Pole Barn, on perimeter	0.001
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign Highway 37	<LOQ
H10	NW corner of Warehouse building-at HEPA exhaust	0.003
A11	40' east of NE coner of small shed	<LOQ
A12	South end of Warehouse at bagout	0.097
A13	Clean room decon	0.008

** pressure washing inside Warehouse building*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/13/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM03	PR		08:35	16:34	479	6.0	6.0	6.0	2874	3/100	0.001	<LOQ
PM04	PR		08:40	16:37	477	5.5	5.5	5.5	2624	5/100	0.001	<LOQ
PM05	PR		08:45	16:39	474	5.0	5.0	5.0	2370	3/100	0.001	<LOQ
PM06	PR		09:05	16:42	457	5.0	5.0	5.0	2285	2/100	0.001	<LOQ
PM07	PR/A	*	09:19	16:47	448	5.0	5.5	5.25	2352	3/100	0.001	<LOQ
PM08	PR		09:22	16:52	450	5.0	5.0	5.0	2250	6/100	0.001	0.001
PM09	PR		09:26	16:55	449	5.5	5.5	5.5	2470	3/100	0.001	<LOQ
H10	HEX	*	08:49	16:45	476	5.0	5.0	5.0	2380	7/100	0.001	0.001
A11	A	*	08:54	16:43	469	5.0	5.0	5.0	2345	2/100	0.001	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	0.001
PM09	Location #7-NE corner of property, on stop sign Highway 37	<LOQ
H10	NW corner of Warehouse building-at HEPA exhaust	0.001
A11	40' east of NE corner of small shed	<LOQ

** pressure washing inside Warehouse building*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/13/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
A12	FB		09:11	16:48	457	2.0	2.0	2.0	914	100/26	0.003	0.206
A13	FB		09:15	16:50	455	2.0	1.0	1.5	683	25.5/100	0.004	0.018
P14	P		10:02	17:02	420	2.0	2.0	2.0	840	18/100	0.003	0.011
P15	Ex		09:46	10:16	30	2.0	2.0	2.0	60	4/100	0.045	<LOQ
P16	Ex		09:40	10:10	30	2.0	2.0	2.0	60	3/100	0.045	<LOQ
P17	P		09:55	17:32	457	2.0	1.0	1.5	686	15.5/100	0.004	0.011
P18	P		10:16	15:31	315	2.0	2.0	2.0	630	7.5/100	0.004	0.006
P19	P		11:13	17:33	380	2.0	2.0	2.0	760	100/24	0.004	0.269
P20	P		10:10	17:23	433	2.0	2.0	2.0	866	25/100	0.003	0.014

Sample Number	Sample Description/Location	Results (f/cc)
A12	South end of Warehouse near bagout	0.206
A13	Clean room decon	0.018
P14	Walter Pesicka, SS # 517-58-9284, pressure washing	0.011
P15	Harold Allenbert, SS # 518-56-4694, operating a tractor	<LOQ
P16	Leonard Shoemaker, SS # 529-72-8879, loading & deconning trucks	<LOQ
P17	Vernon Cunningham, SS # 517-70-9213, loading & lunloading truck	0.011
P18	Harold Allenbert, SS # 518-56-4694, operating a tractor	0.006
P19	Mike Stephens, SS # 517-84-2833, unloading trucks	0.269
P20	Leonard Shoemaker, SS # 529-72-8879, loading & deconning trucks	0.014

Worker, SS#	Work Activity	8 Hr.TWA (f/cc)
Walter Pesicka, SS # 517-58-9284	pressure washing	0.010
Harold Allenbert, SS # 518-56-4694,	operating a tractor	0.004
Leonard Shoemaker, SS # 529-72-8879	loading & deconning trucks	0.013
Vernon Cunningham, SS # 517-70-9213	loading & lunloading truck	0.010
Mike Stephens, SS # 517-84-2833	unloading trucks	0.213

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/14/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM03	PR		08:27	12:44	257	6.0	6.0	6.0	1542	2/100	0.002	>LOQ
PM04	PR		08:30	12:46	256	5.5	5.5	5.5	1408	0/100	0.002	<LOQ
PM05	PR		08:34	12:52	258	5.0	5.5	5.25	1354	4/100	0.002	<LOQ
PM06	PR		08:43	12:55	252	5.5	5.5	5.5	1386	0/100	0.002	<LOQ
PM07	PR	*	08:46	12:58	252	6.0	6.0	6.0	1512	2.5/100	0.002	>LOQ
PM08	PR		09:02	13:00	238	6.0	6.0	6.0	1428	1/100	0.002	>LOQ
PM09	PR		09:06	13:05	239	6.0	6.0	6.0	1434	3/100	0.002	>LOQ
H10	HEX	*	08:38	13:24	286	5.0	5.0	5.0	1430	0/100	0.002	<LOQ
A11	A	*	08:40	13:26	286	5.0	5.0	5.0	1430	1/100	0.002	<LOQ
A12	IWA	*	08:57	13:11	254	2.0	2.0	2.0	508	51/100	0.005	0.049
A13	OWA	*	08:59	13:12	253	2.0	2.0	2.0	506	9/100	0.005	0.009

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PM03	Location #1-north of Pole Barn, on perimeter	>LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	>LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	>LOQ
PM09	Location #7-NE corner of property, on stop sign Highway 37	>LOQ
H10	NW corner of Warehouse building-near HEPA exhaust	<LOQ
A11	40' east of NE corner of small shed	<LOQ
A12	South end of Warehouse building	0.049
A13	Clean room decon	0.009

* *pressure washing inside Warehouse building*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/16/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM03	PR		08:23	16:48	505	6.0	6.0	6.0	3030	5/100	0.001	<LOQ
PM04	PR		08:26	16:50	504	5.0	5.0	5.0	2520	3/100	0.001	<LOQ
PM05	PR		08:30	16:53	503	5.0	5.0	5.0	2515	2/100	0.001	<LOQ
PM06	PR		08:34	16:56	502	5.0	5.0	5.0	2510	4/100	0.001	<LOQ
PM07	PR	*	08:39	16:59	500	5.0	5.0	5.0	2500	1.5/100	0.001	<LOQ
PM08	PR		08:55	17:01	486	5.0	5.5	5.25	2552	5/100	0.001	>LOQ
PM09	PR		09:00	17:06	486	5.0	5.0	5.0	2430	1.5/100	0.001	>LOQ
H10	HEX	*	08:37	16:44	487	5.0	5.0	5.0	2435	3.5/100	0.001	>LOQ
A11	A	*	08:38	16:46	488	5.0	5.0	5.0	2440	3/100	0.001	>LOQ
A12	IWA	*	08:50	17:22	512	2.0	2.0	2.0	1024	17.5/100	0.003	0.008
A13	OWA	*	08:52	17:20	508	2.0	0.25	1.13	574	23/100	0.005	0.020

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	>LOQ
PM09	Location #7-NE corner of property, on stop sign Highway 37	>LOQ
H10	NW corner of Warehouse building-near HEPA exhaust	>LOQ
A11	40' east of NE corner of small shed	>LOQ
A12	South end of Warehouse building	0.008
A13	Clean room decon	0.020

* *pressure washing inside Warehouse building*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/17/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM03	PR		08:35	17:50	555	5.5	5.5	5.5	3053	3/100	0.001	<LOQ
PM04	PR		08:38	17:57	559	5.0	5.0	5.0	2795	1/100	0.001	<LOQ
PM05	PR		08:40	17:59	559	5.0	5.0	5.0	2795	2/100	0.001	<LOQ
PM06	PR		08:46	18:01	555	5.0	5.0	5.0	2775	1/100	0.001	<LOQ
PM07	PR	*	08:56	18:03	547	5.0	5.0	5.0	2735	0/100	0.001	<LOQ
PM08	PR		08:59	18:09	550	5.0	5.0	5.0	2750	1/100	0.001	>LOQ
PM09	PR		09:02	18:15	553	5.0	5.0	5.0	2765	2/100	0.001	>LOQ
H10	HEX		09:42	18:08	506	1.5	0.5	1.0	506	1/100	0.005	>LOQ
A11	IWA		09:33	18:05	512	2.0	2.0	2.0	1024		0.003	**

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	>LOQ
PM09	Location #7-NE corner of property, on stop sign Highway 37	>LOQ
H10	NW corner of Warehouse building-near HEPA exhaust	>LOQ
A11	South end of Warehouse building-inside	**

** pressure washing inside Warehouse building*
*** particulate overload*

7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/17/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
A12	OWA	*	09:37	18:06	509	1.5	0.75	1.13	575	9/100	0.005	0.008
P13	Ex	**	08:54	09:24	30	2.0	2.0	2.0	60	5.5/100	0.045	<LOQ
P14	P	**	09:07	15:53	406	2.0	2.0	2.0	812	27/100	0.003	0.016
P15	P	**	09:24	17:55	511	2.0	2.0	2.0	1022	14/100	0.003	0.007

Sample Number	Sample Description/Location	Results (f/cc)
A12	Warehouse building-clean room decon	0.008
P13	Vernon Cunningham, SS # 517-70-9213, in a truck	<LOQ
P14	Ben Cook, SS # 544-40-9834, in a truck	0.016
P15	Vernon Cunningham, SS # 517-70-9213, in a truck	0.007

Worker, SS#	Work Activity	8 Hr TWA (f/cc)
Vernon Cunningham, SS # 517-70-9213	Loading & unloading	0.007
Ben Cook, SS # 544-40-9834	Loading & unloading	0.014

* *cleaning Warehouse building*
** loading and unloading misc. materials
*** *loading at plant & dumping at mine*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/18/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									1/100		
B02	FB									2/100		
PM03	PR		08:45	16:42	477	5.5	5.5	5.5	2624	2/100	0.001	<LOQ
PM04	PR		08:47	16:45	478	5.0	5.0	5.0	2390	2/100	0.001	<LOQ
PM05	PR		08:56	18:15	559	5.0	5.0	5.0	2795	2/100	0.001	<LOQ
PM06	PR		08:58	18:18	560	5.0	5.0	5.0	2800	1/100	0.001	<LOQ
PM07	PR		09:01	17:33	512	5.0	5.0	5.0	2560	3/100	0.001	<LOQ
PM08	PR		09:03	17:39	516	5.0	5.0	5.0	2580	2.5/100	0.001	<LOQ
PM09	PR		09:08	17:44	516	5.0	5.0	5.0	2580	1.5/100	0.001	<LOQ
H10	HEX		09:13	17:36	503	2.0	2.0	2.0	1006	4.5/100	0.003	<LOQ
A11	OWA		09:15	17:54	519	2.0	2.0	2.0	1038	4/100	0.003	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign Highway 37	<LOQ
H10	NW corner of Warehouse building-near HEPA exhaust	<LOQ
A11	Warehouse building clean room decon	<LOQ

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/19/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									1/100		
B02	FB									1/100		
PM03	PR	FC	09:42	16:44	422	6.0	6.0	6.0	2532	3/100	0.001	<LOQ
PM04	PR	FC	09:45	16:46	421	5.0	5.0	5.0	2105	1.5/100	0.001	<LOQ
PM05	PR	FC	09:59	16:49	410	5.5	5.5	5.5	2255	1/100	0.001	<LOQ
PM06	PR	FC	09:56	16:52	416	5.0	5.0	5.0	2080	1/100	0.001	<LOQ
PM07	PR	FC	09:53	16:55	422	5.0	5.0	5.0	2110	0/100	0.001	<LOQ
PM08	PR	FC	10:09	16:59	410	5.0	5.0	5.0	2050	2/100	0.001	<LOQ
PM09	PR	FC	10:13	17:03	410	5.5	5.5	5.5	2255	1/100	0.001	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign Highway 37	<LOQ

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/20/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM03	PR		08:43	16:51	488	6.0	6.0	6.0	2928	3/100	0.001	<LOQ
PM04	PR		08:46	16:53	487	5.0	5.0	5.0	2435	3.5/100	0.001	<LOQ
PM05	PR		09:05	17:05	480	5.5	5.5	5.5	2640	3/100	0.001	<LOQ
PM06	PR		09:01	17:08	487	5.0	5.0	5.0	2435	3/100	0.001	<LOQ
PM07	PR		08:58	17:11	493	5.0	5.0	5.0	2465	0.5/100	0.001	<LOQ
PM08	PR		08:49	16:57	488	5.0	5.0	5.0	2440	2.5/100	0.001	<LOQ
PM09	PR		08:52	17:00	488	5.0	5.0	5.0	2440	4/100	0.001	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign Highway 37	<LOQ

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/21/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM03	PR	*	08:19	16:53	514	6.0	6.0	6.0	3084	5.5/100	0.001	<LOQ
PM04	PR	*	08:21	16:56	515	5.0	5.0	5.0	2575	2/100	0.001	<LOQ
PM05	PR	*	08:24	17:21	537	5.0	5.5	5.25	2819	18/100	0.001	<LOQ
PM06	PR	*	08:42	17:17	515	5.0	5.0	5.0	2575	3/100	0.001	<LOQ
PM07	PR	*	08:40	17:13	513	5.0	5.0	5.0	2565	2/100	0.001	<LOQ
PM08	PR	*	08:30	17:02	512	5.0	5.0	5.0	2560	2/100	0.001	<LOQ
PM09	PR	*	08:34	17:05	511	5.0	5.0	5.0	2555	1.5/100	0.001	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign Highway 37	<LOQ

* *Building decons at Pole Barn & lumber storage buildings*

KOCH ENVIRONMENTAL HEALTH, INC.
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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/21/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB											**
B01EPA	FB											*
FC01	CL	FC	07:16	11:36	260	5.0	5.0	5.0	1300			**
FC01EPA	CL	FC	07:16	11:36	260	5.0	5.0	5.0	1300			*
FC02	CL	FC	07:18	11:38	260	5.0	5.0	5.0	1300			**
FC02EPA	CL	FC	07:18	11:38	260	5.0	5.0	5.0	1300			*
FC03	CL	FC	07:20	11:40	260	5.0	5.0	5.0	1300			**
FC03EPA	CL	FC	07:20	11:40	260	5.0	5.0	5.0	1300			*
FC04	CL	FC	07:22	11:41	259	5.0	5.0	5.0	1295			**
FC04EPA	CL	FC	07:22	11:41	259	5.0	5.0	5.0	1295			*

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	**
B01EPA	Field Blank	*
FC01	Inside Warehouse building, NE corner	**
FC01EPA	Inside Warehouse building, NE corner	*
FC02	Inside Warehouse building, NW corner	**
FC02EPA	Inside Warehouse building, NWcorner	*
FC03	Inside Warehouse building, SW corner	**
FC03EPA	Inside Warehouse building, SW corner	*
FC04	Inside Warehouse building, SE corner	**
FC04EPA	Inside Warehouse building, SE corner	*

** sample submitted to EPA*
*** sample submitted to customer*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/21/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B02	FB											**
B02EPA	FB											*
FC05	CL	FC	07:24	11:44	260	5.0	5.0	5.0	1300			**
FC05EPA	CL	FC	07:24	11:44	260	5.0	5.0	5.0	1300			*

Sample Number	Sample Description/Location	Results (f/cc)
B02	Field Blank	**
B02EPA	Field Blank	*
FC05	Inside Warehouse building, center	**
FC05EPA	Inside Warehouse building, center	*

** sample submitted to EPA*
*** sample submitted to customer*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/23/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM03	PR		08:34	17:43	549	6.0	6.0	6.0	3294	2/100	0.001	<LOQ
PM04	PR		08:37	17:45	548	5.0	5.0	5.0	2740	2/100	0.001	<LOQ
PM05	PR		08:46	17:56	550	5.5	6.0	5.75	3163	6.5/100	0.001	<LOQ
PM06	PR		08:50	18:00	550	5.5	5.0	5.25	2888	0.5/100	0.001	<LOQ
PM07	PR		08:52	18:02	550	5.0	5.0	5.0	2750	1/100	0.001	<LOQ
PM08	PR		08:58	18:10	552	5.0	5.5	5.25	2898	2/100	0.001	<LOQ
PM09	PR		09:00	18:13	553	5.0	5.0	5.0	2765	4/100	0.001	<LOQ
H10	HEX		09:45	16:34	409	2.0	1.0	1.5	614	31/100	0.004	0.025
A11	IWA		09:43									*

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign Highway 37	<LOQ
H10	NW corner of Pole Barn-at HEPA exhaust	0.025
A11	Inside Pole Barn-center	*

*void- pump failure

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/24/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB											
B02	FB											
PM03	PR	*	08:39	16:32	473	6.0	6.0	6.0	2838	0/100	0.001	<LOQ
PM04	PR	*	08:42	16:35	473	5.0	5.0	5.0	2365	0/100	0.001	<LOQ
PM05	PR	*	08:52	16:37	465	5.5	5.5	5.5	2558	1/100	0.001	<LOQ
PM06	PR	*	09:00	16:41	461	5.0	5.0	5.0	2305	2/100	0.001	<LOQ
PM07	PR	*	09:03	16:46	463	5.0	5.0	5.0	2315	0/100	0.001	<LOQ
PM08	PR	*	09:06	16:51	465	5.0	5.0	5.0	2325	2/100	0.001	0.002
PM09	PR	*	09:15	16:53	458	5.0	5.0	5.0	2290	1.5/100	0.001	0.003
H10	HEX	**	10:26	17:10	404	1.8	1.0	1.4	566	8/100	0.005	<LOQ
A11	IWA	**	10:21	17:17	416	2.0	2.0	2.0	832	14.5/100	0.003	0.028

Sample Number	Sample Description/Location	Results (f/cc)
B01		
B02		
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	0.002
PM09	Location #7-NE corner of property, on stop sign Highway 37	0.003
H10	NW corner of Pole Barn-at HEPA exhaust	<LOQ
A11	Inside Pole Barn-NE corner	0.028

* *loading dirt into dump trucks*
** *power washing inside Pole Barn*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/24/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
A12	OWA	*	09:33	16:58	445	1.7	0.5	2.2	979	40/100	0.003	0.020
A13	Ex	*	09:51	10:21	30	2.0	2.0	2.0	60	60/100	0.045	0.049
P14	P	**	10:18	16:19	361	2.0	2.0	2.0	722	77/100	0.004	0.052
P15	P	**	10:32	16:25	353	2.0	2.0	2.0	706	23/100	0.004	0.016
P16	P	**	10:21	17:00	399	2.0	2.0	2.0	798	26/100	0.003	0.016

Sample Number	Sample Description/Location	Results (f/cc)
A12	Shower trailor-clean room decon	0.020
A13	Terry Holthaus, SS # 481-58-4024, inside dump truck	0.049
P14	Ben Cook, SS # 544-40-9834, inside dump truck	0.052
P15	Bob Sanders, SS # 550-44-0403, inside dump truck	0.016
P16	Terry Holthaus, SS # 481-58-4024, inside dump truck	0.016

Worker, SS#	Work Activity	8 Hr.TWA (f/cc)
Terry Holthaus, SS # 481-58-4024,	Loading dump trucks	0.016
Ben Cook, SS # 544-40-9834	Loading dump trucks	0.039
Bob Sanders, SS # 550-44-0403	Loading dump trucks	0.012

** shower trailor-clean room decon*
*** loading dirt into dump trucks @ export plant & dumping it at the mine*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/25/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									3/100		
B02	FB									1/100		
PM03	PR	*	08:50	17:00	490	6.0	6.0	6.0	2940	0/100	0.001	<LOQ
PM04	PR	*	08:53	17:02	489	5.0	5.0	5.0	2445	1.5/100	0.001	<LOQ
PM05	PR	*	09:03	17:13	490	5.0	6.0	5.5	2695	11/100	0.001	0.002
PM06	PR		09:00	17:10	490	5.0	5.0	5.0	2450	1.5/100	0.001	<LOQ
PM07	PR		08:58	17:08	490	5.0	5.0	5.0	2450	1.5/100	0.001	<LOQ
[illegible]08	PR		09:12	17:20	488	5.0	5.0	5.0	2440	0.5/100	0.001	<LOQ
[illegible]M09	PR		09:10	17:22	492	5.0	5.0	5.0	2460	4/100	0.001	<LOQ
H10	HEX	**	10:03	17:38	455	2.0	2.0	2.0	910	1.5/100	0.003	<LOQ
A11	IWA		10:05	17:40	455	2.0	2.0	2.0	910	31/100	0.003	0.016

Sample Number	Sample Description/Location	Results (f/cc)
B01		
B02		
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	0.002
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign Highway 37	<LOQ
H10	NW corner of Pole Barn-at HEPA exhaust	<LOQ
A11	NE corner-inside Pole Barn	0.016

* *loading soil into dump trucks*
** *power washing inside Pole Barn*

KOCH ENVIRONMENTAL HEALTH, INC.
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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/25/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
A12	OWA		09:20	17:03	463	2.0	1.2	1.6	741	15/100	0.004	0.009
P13	Ex	*	08:48	09:23	35	2.0	2.0	2.0	70	3/100	0.039	<LOQ
P14	P	*	08:40	16:58	498	2.0	2.0	2.0	996	20.5/100	0.003	0.009
P15	P	*	09:23									**

Sample Number	Sample Description/Location	Results (f/cc)
A12	West clean room decon	0.009
P13	Fred McDougall, SS # 728-14-3207, inside dump truck	<LOQ
P14	Max Moncur, SS # 520-36-5145, inside dump truck	0.009
P15	Fred McDougall, SS # 728-14-3207, inside dump truck	**

Worker, SS#	Work Activity	8 Hr.TWA (f/cc)
Fred McDougall, SS # 728-14-3207	Loading dump trucks with soil at plant and dumping soil at mine	**
Max Moncur, SS # 520-36-5145	Loading dump trucks with soil at plant and dumping soil at mine	0.009

** loading and dumping soil*
*** void - sample over-ran work shift*

KOCH ENVIRONMENTAL HEALTH, INC.
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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/26/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									1/100		
B02	FB									1/100		
PM03	PR		09:02	16:43	461	6.0	6.0	6.0	2766	2/100	0.001	<LOQ
PM04	PR		09:17	16:45	448	5.0	5.0	5.0	2240	2/100	0.001	<LOQ
PM05	PR		09:25	16:48	443	5.0	6.0	5.5	2437	3/100	0.001	<LOQ
PM06	PR		09:23	16:52	449	5.0	5.0	5.0	2245	0/100	0.001	<LOQ
PM07	PR		09:21	16:54	453	5.0	5.0	5.0	2265	1/100	0.001	<LOQ
PM08	PR		09:41	16:58	437	5.0	5.0	5.0	2185	2/100	0.001	<LOQ
PM09	PR		09:38	17:00	442	5.5	5.0	5.25	2321	7/100	0.001	0.001
H10	HEX		11:14	17:22	368	1.7	1.7	1.7	626	1/100	0.004	<LOQ
A11	IWA		11:12	17:20	368	2.0	2.0	2.0	736	42/100	0.004	0.027

Sample Number	Sample Description/Location	Results (f/cc)
B01		
B02		
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign Highway 37	0.001
H10	NE corner of Pole Barn-at HEPA exhaust	<LOQ
A11	Inside the Pole Barn-north end of building	0.027

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/26/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
A12		*	10:14	16:31	377	2.0	2.0	2.0	754	66.5/100	0.004	0.036
P13	P	*	08:40	16:00	440	2.0	0.5	1.25	550	27/100	0.005	0.023
P14	Ex	*	08:45	09:15	30	1.5	1.5	1.5	45	1.5/100	0.060	<LOQ
P15	P	*	09:15									**
A16	OWA		11:30	16:28	298	2.0	2.7	2.35	700	9.5/100	0.004	0.006

Sample Number	Sample Description/Location	Results (f/cc)
A12	Inside shower trailer past clean room decon	0.036
P13	Fred McDougall, SS # 728-14-3207, inside dump truck	0.023
P14	Jerry Regh, SS # 516-78-0088, inside dump truck	<LOQ
P15	Jerry Regh, SS # 516-78-0088, inside dump truck	**
P16	Inside URS trailer	0.006

Worker, SS#	Work Activity	8 Hr.TWA (f/cc)
Fred McDougall, SS # 728-14-3207	Loading dump trucks with soil at plant and dumping soil at mine	0.021
Jerry Regh, SS # 516-78-0088	Loading dump trucks with soil at plant and dumping soil at mine	**

* *loading and dumping soil*
** *void - pump failure*

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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/27/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM03	PR	*	08:48	16:15	447	6.0	6.0	6.0	2682	0.5/100	0.001	<LOQ
PM04	PR	*	08:51	16:17	446	5.0	5.0	5.0	2230	4/100	0.001	<LOQ
PM05	PR	*	08:59	16:30	451	5.0	6.0	5.5	2481	1/100	0.001	<LOQ
PM06	PR	*	09:02	16:27	445	5.0	5.0	5.0	2225	3/100	0.001	<LOQ
PM07	PR	*	09:05	16:24	439	5.0	5.0	5.0	2195	1/100	0.001	<LOQ
PM08	PR	*	09:10	16:38	448	5.0	5.5	5.25	2352	3.5/100	0.001	<LOQ
PM09	PR	*	09:14	16:41	447	5.0	5.0	5.0	2235	3.5/100	0.001	0.001
H10	HEX	**	09:45	17:10	445	1.8	1.8	1.8	801	1/100	0.003	<LOQ
A11	IWA	**	09:47	17:09	442	2.0	2.0	2.0	884	43.5/100	0.003	0.024

Sample Number	Sample Description/Location	Results (f/cc)
B01		
B02		
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign Highway 37	0.001
H10	NW side of Pole Barn-inside at HEPA exhaust	<LOQ
A11	Inside the Pole Barn-north end	0.024

* *loading trucks with soil*
** *power washing inside the Pole Barn*

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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/27/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
A12	OWA		09:25	16:59	454	2.0	2.0	2.0	908	72.5/100	0.003	0.039
P13	P		10:33	16:25	352	2.0	2.0	2.0	704	47/100	0.004	0.033
P14	Ex		10:03	10:33	30	2.0	2.0	2.0	60	4/100	0.045	<LOQ
P15	P		10:10	17:30	440	2.0	2.0	2.0	880	16.5/100	0.003	0.009

Sample Number	Sample Description/Location	Results (f/cc)
A12	Inside shower trailer-clean room decon	0.039
P13	Bob Sanders, SS # 550-44-0403, inside dump truck	0.033
P14	Bob Sanders, SS # 550-44-0403, inside dump truck	<LOQ
P15	Vernon Cunningham, SS # 517-70-9213, inside dump truck	0.009

Worker, SS#	Work Activity	8 Hr.TWA (f/cc)
Bob Sanders, SS # 550-44-0403		0.024
Vernon Cunningham, SS # 517-70-9213		0.008

* *loading and dumping soil*
** *void - pump failure*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/28/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									1/100		
B02	FB									1/100		
PM03	PR	*	08:42	16:07	445	5.5	6.0	5.75	2559	1/100	0.001	<LOQ
PM04	PR	*	08:44	16:10	446	5.0	5.0	5.0	2230	1/100	0.001	<LOQ
PM05	PR	*	08:54	16:12	438	5.5	6.0	5.75	2519	1/100	0.001	<LOQ
PM06	PR	*	08:51	16:15	444	5.0	5.0	5.0	2220	2/100	0.001	<LOQ
PM07	PR	*	08:49	16:17	452	5.0	5.0	5.0	2260	1/100	0.001	<LOQ
PM08	PR	*	09:04	16:21	437	5.0	6.0	5.5	2404	2/100	0.001	<LOQ
PM09	PR	*	09:02	16:24	442	5.0	5.0	5.0	2210	2.5/100	0.001	<LOQ
H10	HEX	**	09:32	16:45	433	2.0	1.6	1.8	779	0/100	0.003	<LOQ
A11	IWA	**	09:31	16:47	436	2.0	1.6	1.8	785	2/100	0.003	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01		
B02		
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign Highway 37	<LOQ
H10	NW corner of Pole Barn-on perimeter	<LOQ
A11	Inside the Pole Barn-north side	<LOQ

** loading trucks with soil*
*** power washing inside the Pole Barn*

KOCH ENVIRONMENTAL HEALTH, INC.
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Littleton, Colorado 80127
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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/30/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM03	PR		07:43	16:07	504	5.0	5.0	5.0	2520	1.5/100	0.001	<LOQ
PM04	PR		07:45	16:16	511	5.0	5.0	5.0	2555	0/100	0.001	<LOQ
PM05	PR		07:54	16:19	505	5.5	6.0	5.75	2904	0.5/100	0.001	<LOQ
PM06	PR		07:57	16:22	505	5.0	5.0	5.0	2525	2.5/100	0.001	<LOQ
PM07	PR		07:59	16:25	506	5.0	5.0	5.0	2530	0/100	0.001	<LOQ
PM08	PR		08:05	16:28	503	5.0	6.0	5.5	2767	1/100	0.001	<LOQ
PM09	PR		08:08	16:30	502	5.0	5.5	5.25	2636	1/100	0.001	<LOQ
H10	HEX		09:15	17:00	465	2.0	2.0	2.0	930	0/100	0.003	<LOQ
A11	IWA		09:16	17:01	465	2.0	2.0	2.0	930	1.5/100	0.003	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01		
B02		
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign Highway 37	<LOQ
H10	NW corner of HEPA exhaust-inside Pole Barn	<LOQ
A11	Inside the Pole Barn-north side	<LOQ

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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/30/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
A12	OWA		08:45	16:50	485	2.0	2.0	2.0	970	31.5/100	0.003	0.016
P13	P		08:21	16:13	472	2.0	2.0	2.0	944	16/100	0.003	0.008
P14	Ex		08:28	08:58	30	2.0	2.0	2.0	60	0/100	0.045	<LOQ
P15	P		08:58	16:58	480	2.0	2.0	2.0	960	5/100	0.003	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
A12	Inside shower trailer-dirty room decon	0.016
P13	Justin Clemens, SS # 517-88-2847, inside dump truck	0.008
P14	Terry Johnson, SS # 516-78-1150, inside dump truck	<LOQ
P15	Terry Johnson, SS # 516-78-1150, inside dump truck	<LOQ

Worker, SS#	Work Activity	8 Hr.TWA (f/cc)
Justin Clemens, SS # 517-88-2847		0.008
Terry Johnson, SS # 516-78-1150		<LOQ

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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001C
SAMPLING DATE: 10/31/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									2/100		
PM03	PR		07:55	15:56	481	6.0	6.0	6.0	2886	1/100	0.001	<LOQ
PM04	PR		07:58	15:59	481	5.0	5.0	5.0	2405	1/100	0.001	<LOQ
PM05	PR	*	08:05	16:11	486	5.5	6.0	5.75	2795	2/100	0.001	<LOQ
PM06	PR	*	08:07	16:14	487	5.5	5.0	5.25	2557	1.5/100	0.001	<LOQ
PM07	PR		08:10	16:17	487	5.00	5.5	5.25	2557	0/100	0.001	<LOQ
PM08	PR		08:14	16:20	486	5.0	5.5	5.25	2552	0/100	0.001	<LOQ
PM09	PR		08:16	16:24	488	5.5	6.0	5.75	2806	0/100	0.001	<LOQ
P10	EX	**	07:58	08:31	33	2.0	2.0	2.0	66	2.5/100	0.041	<LOQ
P11	P	**	07:45	15:48	483	2.0	0.9	1.45	700	29.5/100	0.004	0.020
P12	FB	**	07:43	15:52	489	2.0	0.5	1.25	611	11.5/100	0.004	0.008
P13	FB	**	08:31	15:47	436	2.0	1.2	1.6	698	15.5/100	0.004	0.010

Sample Number	Sample Description/Location	Results (f/cc)
B01		
B02		
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign Highway 37	<LOQ
P10	Jerry Regh, SS # 516-78-0088, loading and unloading dirt from plant to mine	<LOQ
P11	Justin Clemens, SS # 517-88-2847, loading and unloading dirt from plant to mine	0.020
P12	Max Moncur, SS # 520-36-5145, loading and unloading dirt from plant to mine	0.008
P13	Jerry Regh, SS # 516-78-0088, loading and unloading dirt from plant to mine	0.010

Worker, SS#	Work Activity	8 Hr.TWA (f/cc)
Justin Clemens, SS # 517-88-2847	loading and unloading dirt from plant to mine	0.009
Terry Johnson, SS # 516-78-1150	loading and unloading dirt from plant to mine	0.020

* *soil excavation*
** *loading and unloading dirt from plant to mine*

KEH PROJECT AIR MONITORING REPORT

Prepared for:

URS RADIAN
707 17th STREET, SUITE 3400
DENVER, CO 80202

Project:

W.R. GRACE EXPORT PLANT
LIBBY, MONTANA

KEH PROJECT NUMBER 21001-001D
NOVEMBER - DECEMBER, 2000

EXECUTIVE SUMMARY

Koch Environmental Health, Inc. (KEH) conducted project air sampling and analysis via Phase Contrast Microscopy (PCM) for URS Radian Corporation at the W.R. Grace Export Plant in Libby, Montana from November 1, 2000 through December 4, 2000. Services were provided at the request of the customer in support of asbestos cleanup and abatement activities being conducted in various work locations of the plant and mine site. Asbestos cleanup activities are being conducted by AC&S, Inc. of Arvada, Colorado.

KEH's scope of work for this project included collection and analysis of ambient air samples by NIOSH 582-trained personnel for determination of airborne asbestos concentrations in identified areas.

Clearance samples were collected in an aggressive manner after an acceptable status visual inspection had been performed by a qualified Air Sampling Professional (ASP) in each applicable work area. Results of all final clearance samples contained in this report were below the project clearance guideline of 0.01 fibers/cubic centimeter (f/cc) for PCM analysis and 70 asbestos structures/square millimeter (s/mm^2) for TEM analysis.

PROJECT INFORMATION

CLIENT:	URS Radian Corporation 707 17th Street, Suite 3400 Denver, CO 80202
PROJECT LOCATION:	W.R. Grace Export Plant Libby, Montana
PROJECT CONTACT:	Jim Stout
WORK AREA:	Export Plant and Mine Site
DESCRIPTION OF SERVICES:	Project air sampling and Analysis Via PCM
LABORATORY SERVICES:	R.J. Lee Group Monroeville, PA Badlands Environmental Consultants, Inc. Bismarck, ND
KEH REPRESENTATIVE:	Patrick McGurren, BEC

PROJECT INTRODUCTION

Koch Environmental Health, Inc. (KEH) conducted project air sampling and analysis via Phase Contrast Microscopy (PCM) for URS Radian Corporation at the W.R. Grace Export Plant in Libby, Montana from November 1, 2000 through December 4, 2000. Services were provided at the request of the customer in support of asbestos cleanup and abatement activities being conducted in various work locations of the plant and mine site. Asbestos cleanup activities are being conducted by AC&S, Inc. of Arvada, Colorado.

SCOPE OF WORK

KEH's scope of work for this project included collection and analysis of ambient air samples by NIOSH 582-trained personnel for determination of airborne asbestos concentrations in identified areas.

AIR MONITORING

Air samples were collected utilizing a modified NIOSH 7400 Method whereby samples were collected on 25 millimeter (mm) mixed cellulose ester membrane filters with 0.45 micron pore size and analyzed via Phase Contrast Microscopy (PCM).

Sample Collection

Phase Contrast Microscopy (PCM) samples were collected on 25-millimeter (mm) mixed-cellulose ester membrane filters, 0.45-micron pore size, with an effective collection area of 385 mm^2. Transmission Electron Microscopy (TEM) samples, when applicable, were collected on 25 millimeter (mm) mixed-cellulose ester membrane filters, 0.45 micron pore size, with an effective collection area of 385 mm^2. All filters were pre-assembled by the manufacturer in three-stage, conductive sampling cassettes with extension cowls.

Air samples were collected at flow rates between 1.0 and 10.0 liters per minute (L/m). KEH Representatives used professional judgment and expertise in determining sample flow rates and locations based upon project conditions. Flow rates were recorded at the beginning and at the end of the sampling period utilizing a primary flow calibration instrument (e.g. DryCal DC Lite) or an airflow rotameter calibrated against a primary flow calibration instrument. Start times and stop times were recorded for all sampling periods.

PCM Sample Analysis Method

PCM samples were analyzed according to a modified NIOSH 7400 Method, A Counting Rules, although samples were collected on 25 millimeter (mm) mixed cellulose ester membrane filters with 0.45 micron pore size and analyzed via Phase Contrast Microscopy (PCM). Air sample results contained in this report have been calculated with blank sample corrections; sample volumes have not been corrected for altitude. Unused portions of sample filters are maintained in their original three-stage cassettes and archived for a period of three (3) months unless prior arrangements have been made.

Analytical Equipment, PCM

PCM laboratory analysis was performed using a Nikon Alphaphot YS microscope or equivalent with a microscope field area of 0.00785 mm^2 as defined by a Walton-Beckett graticule. Air sample analysis on site was performed by Badlands Environmental Inc. TEM sample analysis was performed by the customer's designated laboratory, the R.J. Lee Group.

SAMPLE RESULTS KEY

S/mm^2	=	TEM concentration
f/cc	=	fibers/cubic centimeter
f/fld.	=	fibers/field
LOQ	=	Limit of Quantitation (the calculated lower limit of quantitation expressed in f/cc; based on a limit of detection of 10/100 fibers/field)
ECA	=	Effective Collection Area, filter
L/min	=	Liters per minute (sample flow rate)
CBR	=	Could Not Be Read (overloaded, etc.)
BAS	=	Below Analytical Sensitivity
BDL	=	Below Detection Limit
ND	=	None Detected

Work Activity/Conditions

SU	=	Setup Operations
REM	=	Removal
GB	=	Glovebag Operations
CU	=	Cleanup (shoveling, bagging, etc.)
PC	=	Pre cleaning
FC	=	Final Cleaning
BO	=	Bag Out Operations
EN	=	Encapsulating
O	=	Occupied
U	=	Unoccupied
L	=	Laundry
ST	=	Storage

Sample Types

OWA	=	Outside Work Area sample
IWA	=	Inside Work Area sample
CL	=	Clearance sample
BAK	=	Background (ambient) sample
P	=	Personal sample
P/Ex	=	Personal sample, excursion
TD	=	Tear-down
PR	=	Perimeter

Reviewed by

1/10/01
Date

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001D
SAMPLING DATE: 11/1/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									1/100		
PM03	PR		07:48	16:07	499	5.5	6.0	5.75	2869	1/100	0.001	<LOQ
PM04	PR		07:52	16:09	497	5.0	5.0	5.0	2485	3/100	0.001	<LOQ
PM05	PR		08:17	16:12	475	5.5	5.5	5.5	2613	4.5/100	0.001	<LOQ
PM06	PR		08:12	16:16	484	5.0	5.0	5.0	2420	3/100	0.001	<LOQ
PM07	PR		08:08	16:19	491	5.0	5.0	5.0	2455	1/100	0.001	<LOQ
PM08	PR		08:25	16:24	479	5.0	5.0	5.0	2395	1.5/100	0.001	<LOQ
PM09	PR		08:27	16:27	480	5.0	5.0	5.0	2400	2.5/100	0.001	<LOQ
A10	OWA		08:40	07:10	1350	2.0	2.0	2.0	2700		0.001	*
P11	Ex	**	07:58	08:28	30	2.0	2.0	2.0	60	1.5/100	0.045	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign-highway 37	<LOQ
A10	Inside shower trailer-clean room decon	<LOQ
A11	Bob Sanders, SS # 550-44-0403, inside dump truck	<LOQ

Worker, SS#	Work Activity	8 Hr.TWA (f/cc)
Bob Sanders, SS # 550-44-0403	Loading and unloading soil	0.009

* *void - overload*
** *loading and unloading soil*

KOCH ENVIRONMENTAL HEALTH, INC.
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Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001D
SAMPLING DATE: 11/1/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
P12	P	*	08:00	15:51	471	2.0	2.0	2.0	942	28.5/100	0.003	0.015
P13	P	*	08:28	15:52	444	2.0	2.0	2.0	888	19/100	0.003	0.010

Sample Number	Sample Description/Location	Results (f/cc)
P12	Fred McDougal, SS # 728-14-3207, inside dump truck	0.015
P13	Bob Sanders, SS # 550-44-0403, inside dump truck	0.010

Worker, SS#	Work Activity	8 Hr.TWA (f/cc)
Fred McDougal, SS # 728-14-3207	Loading and unloading soil	0.009
Bob Sanders, SS # 550-44-0403	Loading and unloading soil	0.015

* *loading and unloading soil from truck*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: AC& S, INC.
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001D
SAMPLING DATE: 11/1/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
FCB01	FB											
FCB02	FB											
FC03	CL		14:30	18:45	255	5.0	5.0	5.0	1275			*
FC04	CL		14:32	18:47	255	5.0	5.0	5.0	1275			*
FC05	CL		14:34	18:49	255	5.0	5.0	5.0	1275			*
FC06	CL		14:36	18:51	255	5.0	5.0	5.0	1275			*
FC07	CL		14:38	18:53	255	5.0	5.0	5.0	1275			*

Sample Number	Sample Description/Location	Results (f/cc)
FCB01	FIELD BLANK	
FCB02	FIELD BLANK	
FC03	Inside Pole Barn-NE corner	*
FC04	Inside Pole Barn-NW corner	*
FC05	Inside Pole Barn-SW corner	*
FC06	Inside Pole Barn-SE corner	*
FC07	Inside Pole Barn-Center	*

** Sample submitted to customer*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001D
SAMPLING DATE: 11/2/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									2/100		
B02	FB									0/100		
PM03	PR		07:59	16:06	487	5.5	5.5	5.5	2679	2/100	0.001	<LOQ
PM04	PR		08:04	16:08	484	5.0	5.0	5.0	2420	1/100	0.001	<LOQ
PM05	PR		08:15	16:19	484	5.5	5.5	5.5	2662	2/100	0.001	<LOQ
PM06	PR		08:12	16:16	484	5.5	5.0	5.25	2541	0/100	0.001	<LOQ
PM07	PR		08:10	16:14	484	5.0	5.0	5.0	2420	3.5/100	0.001	<LOQ
PM08	PR		08:21	16:27	486	5.0	5.5	5.25	2552	1.5/100	0.001	<LOQ
PM09	PR		08:24	16:30	486	5.5	6.0	5.75	2795	2/100	0.001	<LOQ
A10	OWA		08:51	16:37	466	2.0	2.0	2.0	932	49.5/100	0.003	0.026

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign-highway 37	<LOQ
A10	Inside shower trailer-clean room decon	0.026

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001D
SAMPLING DATE: 11/2/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
P11	Ex	*	08:02	09:15	73	2.0	1.5	1.75	128	5.5/100	0.021	<LOQ
P12	P	*	08:45	15:56	431	2.0	2.0	2.0	862	12/100	0.003	0.006
P13	P	*	08:34	15:42	428	2.0	2.0	2.0	856	8.5/100	0.003	0.004
P14	P	*	09:15	15:41	386	2.0	2.0	2.0	772	13/100	0.003	0.008

Sample Number	Sample Description/Location	Results (f/cc)
P11	Jerry Regh, SS# 516-78-0088, inside truck	<LOQ
P12	Justin Clemons, SS# 517-88-2847, inside truck	0.006
P13	Vernon Cunningham, SS # 517-70-9213, inside truck	0.004
P14	Jerry Regh, SS# 516-78-0088, inside truck	0.008

Worker, SS#	Work Activity	8 Hr TWA (f/cc)
Jerry Regh, SS# 516-78-0088	Loading and unloading soil from trucks	0.007
Justin Clemons, SS# 517-88-2847	Loading and unloading soil from trucks	0.005
Vernon Cunningham, SS # 517-70-9213	Loading and unloading soil from trucks	0.004

* *loading and unloading soil from truck*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: AC& S, INC.
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001D
SAMPLING DATE: 11/3/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM03	PR		07:38	16:16	518	5.0	5.0	5.0	2590	2/100	0.001	<LOQ
PM04	PR		07:40	16:18	518	5.0	5.0	5.0	2590	2.5/100	0.001	<LOQ
PM05	PR		08:02	16:22	500	5.0	6.0	5.5	2750	4/100	0.001	<LOQ
PM06	PR		07:58	16:25	507	5.0	5.0	5.0	2535	1/100	0.001	<LOQ
PM07	PR		07:56	16:27	511	5.0	5.0	5.0	2555	3/100	0.001	<LOQ
PM08	PR		08:12	16:31	499	5.0	5.5	5.25	2620	2/100	0.001	<LOQ
PM09	PR		08:16	16:34	498	5.5	5.5	5.5	2739	3.5/100	0.001	<LOQ
A10	OWA		08:25	16:39	494	2.0	2.0	2.0	988	23/100	0.001	0.011

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign-highway 37	<LOQ
A10	Inside shower trailer-clean room decon	0.011

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001D
SAMPLING DATE: 11/3/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
	FB											
	FB											
P11	P		07:47	16:00	493	2.0	2.0	2.0	986	36/100	0.003	0.018
P12	P		07:49	08:35	46	2.0	2.0	2.0	92	6/100	0.029	0.032
P13	P		08:35	16:02	447	2.0	2.0	2.0	894	22/100	0.003	0.012
P14	P		09:09	16:44	455	2.0	2.0	2.0	910	32/100	0.003	0.017

Sample Number	Sample Description/Location	Results (f/cc)
	Field Blank	
	Field Blank	
P11	Ben Cook, SS # 544-40-9834, inside truck	0.018
P12	Bob Sanders, SS # 550-44-0403, inside truck	0.032
P13	Bob Sanders, SS # 550-44-0403, inside truck	0.012
P14	Leonard Shoemaker, SS # 529-72-8879, inside exclusion area	0.017

Worker, SS#	Work Activity	8 Hr.TWA (f/cc)
Ben Cook, SS # 544-40-9834	Loading and unloading soil	0.016 (9-hr.)
Bob Sanders, SS # 550-44-0403	Loading and unloading soil	0.013 (9-hr.)
Leonard Shoemaker, SS # 529-72-8879	Decontaminating trucks	0.016

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site

KEH #: 21001-001D
SAMPLING DATE: 11/4/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM03	PR		07:48	13:00	312	5.0	5.0	5.0	1560	3/100	0.002	<LOQ
PM04	PR		08:09	13:03	294	5.0	5.0	5.0	1470	3/100	0.002	<LOQ
PM05	PR		08:17	13:05	288	5.5	5.5	5.5	1584	1/100	0.002	<LOQ
PM06	PR		08:19	13:08	289	5.0	5.0	5.0	1445	1/100	0.002	<LOQ
PM07	PR		08:23	13:11	288	5.0	5.0	5.0	1440	3.5/100	0.002	<LOQ
PM08	PR		08:29	13:16	287	5.0	5.0	5.0	1435		0.002	*
PM09	PR		08:32	13:19	287	5.0	5.0	5.0	1435	4/100	0.002	<LOQ
A10	OWA		10:03	13:29	206	2.0	2.0	2.0	412	39/100	0.007	0.046

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	*
PM09	Location #7-NE corner of property, on stop sign-highway 37	<LOQ
A10	Inside shower trailer-clean room decon	0.046

** void – filter damaged*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Lumber Storage Building

KEH #: 21001-001D
SAMPLING DATE: 11/4/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
	FB											
	FB											
P11	Ex		07:25	07:55	30	2.0	2.0	2.0	60	2/100	0.045	0.016
P12	P		07:30	13:15	345	2.0	2.0	2.0	690	16/100	0.004	0.011
P13	P		07:55	13:17	322	2.0	2.0	2.0	644	14/100	0.004	0.011
P14	P		09:20	09:50	30	2.0	2.0	2.0	60	21.5/100	0.045	0.176
P15	P		09:50	13:21	211	2.0	2.0	2.0	422	17.5/100	0.006	0.020

Sample Number	Sample Description/Location	Results (f/cc)
	Field Blank	
	Field Blank	
P11	Terry Hoithaus, SS # 481-58-4024, inside truck	0.016
P12	Ben Cook, SS # 544-40-9834, inside truck	0.011
P13	Terry Hoithaus, SS # 481-58-4024, inside truck	0.011
P14	Leonard Shoemaker, SS # 529-72-8879, decontaminating trucks	0.176
P15	Leonard Shoemaker, SS # 529-72-8879, decontaminating trucks	0.020

Worker, SS#	Work Activity	8 Hr. TWA (f/cc)
Terry Hoithaus, SS # 481-58-4024	decontaminating trucks	0.008
Ben Cook, SS # 544-40-9834	decontaminating trucks	0.008
Leonard Shoemaker, SS # 529-72-8879	decontaminating trucks	0.020

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Lumber Storage Building

KEH #: 21001-001D
SAMPLING DATE: 11/6/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM03	PR		07:31	16:21	530	6.0	5.0	5.5	2915	3/100	0.001	<LOQ
PM04	PR		07:45	16:25	520	5.0	5.5	5.25	2730	1/100	0.001	<LOQ
PM05	PR		08:09	16:32	503	5.5	5.0	5.25	2641	2.5/100	0.001	<LOQ
PM06	PR		08:07	16:35	508	5.0	5.0	5.0	2540	1/100	0.001	<LOQ
PM07	PR		08:05	16:37	512	5.0	5.0	5.0	2560	2/100	0.001	<LOQ
PM08	PR		08:40	16:41	481	5.0	5.0	5.0	2405	3/100	0.001	<LOQ
PM09	PR		08:43	16:44	481	5.5	6.0	5.75	2766	3.5/100	0.001	<LOQ
A10	OWA		09:39	16:52	433	2.0	2.0	2.0	866	45/100	0.003	0.025
H15	HEX		09:25	17:10	465	2.0	1.0	1.5	698	6/100	0.004	0.004

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign-highway 37	<LOQ
A10	Inside shower trailer-clean room decon	0.025
H15	NE corner of Lumber Storage building at HEPA exhaust	0.004

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Lumber Storage Building

KEH #: 21001-001D
SAMPLING DATE: 11/6/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
	FB											
	FB											
P11	P		07:53	17:20								*
P12	P		07:50	17:00	550	2.0	2.0	2.0	1100	12.5/100	0.002	0.006
P13	Ex		07:55	08:25	30	2.0	2.0	2.0	60	1.5/100	0.045	<LOQ
P14	P		08:25	15:54	449	2.0	2.0	2.0	898	19/100	0.003	0.010

Sample Number	Sample Description/Location	Results (f/cc)
	Field Blank	
	Field Blank	
P11	Ben Cook, SS # 544-40-9834, inside truck	*
P12	Max Moncur, SS # 520-36-5145, inside truck	0.006
P13	Bob Sanders, SS # 550-44-0403, inside truck	<LOQ
P14	Bob Sanders, SS # 550-44-0403, inside truck	0.010

Worker, SS#	Work Activity	8 Hr.TWA (f/cc)
Ben Cook, SS # 544-40-9834	Loading and unloading soil from trucks	*
Max Moncur, SS # 520-36-5145	Loading and unloading soil from trucks	0.006
Bob Sanders, SS # 550-44-0403	Loading and unloading soil from trucks	0.009 .

** void – power accidentally shut off by others*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Lumber Storage Building

KEH #: 21001-001D
SAMPLING DATE: 11/7/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									1/100		
B02	FB									1/100		
PM03	PR	*	07:53	16:07	494	5.0	5.5	5.25	2594	3/100	0.001	<LOQ
PM04	PR		08:04	16:09	485	5.0	5.0	5.0	2425	2.5/100	0.001	<LOQ
PM05	PR		08:30	16:23	473	5.0	6.0	5.5	2602	2/100	0.001	<LOQ
PM06	PR		08:27	16:19	472	5.0	5.0	5.0	2360	1/100	0.001	<LOQ
PM07	PR		08:25	16:17	472	5.0	5.0	5.0	2360	1.5/100	0.001	<LOQ
PM08	PR	*	08:40	16:31	471	5.0	5.0	5.0	2355	2/100	0.001	<LOQ
PM09	PR		08:42	16:34	472	5.0	5.5	5.25	2478	2/100	0.001	<LOQ
A10	OWA		09:36	16:49	433	2.0	2.0	2.0	866	50.5/100	0.003	0.028
H11	HEX	**	09:04	15:04	420	2.0	2.0	2.0	840	3.5/100	0.003	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign-highway 37	<LOQ
A10	Inside shower trailer-clean room decon	0.028
H11	ENE corner of Lumber Storage building at HEPA exhaust	<LOQ

** soil excavation*
*** power washing*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Lumber Storage Building

KEH #: 21001-001D
SAMPLING DATE: 11/7/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
	FB											
	FB											
P12	P	*	07:39	16:02	505	2.0	2.0	2.0	1010	84/100	0.003	0.040
P13	P	*	07:50	16:00	490	2.0	0.25	1.13	554	18.5/100	0.005	0.016
P14	Ex	*	07:43	08:19	36	2.0	2.0	2.0	72	1.5/100	0.037	<LOQ
P15	P	*	08:19	16:01	462	2.0	2.0	2.0	924	15.5/100	0.003	0.008

Sample Number	Sample Description/Location	Results (f/cc)
	Field Blank	
	Field Blank	
P12	Fred McDougal, SS # 728-14-3207, inside truck	0.040
P13	Ben Cook, SS # 544-40-9834, inside truck	0.016
P14	Vernon Cunningham, SS # 517-70-9213, inside truck	<LOQ
P15	Vernon Cunningham, SS # 517-70-9213, inside truck	0.008

Worker, SS#	Work Activity	10 Hr.TWA (f/cc)
Fred McDougal, SS # 728-14-3207	Loading and unloading soil from trucks	0.034
Ben Cook, SS # 544-40-9834	Loading and unloading soil from trucks	0.013
Vernon Cunningham, SS # 517-70-9213	Loading and unloading soil from trucks	0.006

** loading and unloading soil from trucks*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Lumber Storage Building

KEH #: 21001-001D
SAMPLING DATE: 11/8/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM03	PR		08:00	14:02	362	5.0	5.0	5.0	1810	1.5/100	0.001	<LOQ
PM04	PR		08:07	14:09	362	5.0	5.0	5.0	1810	2/100	0.001	<LOQ
PM05	PR		08:20	14:12	352	5.5	6.0	5.75	2024	3.5/100	0.001	<LOQ
PM06	PR		08:17	14:14	357	5.0	5.0	5.0	1785	1/100	0.002	<LOQ
PM07	PR		08:15	14:17	362	5.0	5.0	5.0	1810	1/100	0.001	<LOQ
PM08	PR		08:30	14:21	351	5.0	5.0	5.0	1755	0/100	0.002	<LOQ
PM09	PR		08:33	14:25	352	5.5	5.5	5.5	1936	1/100	0.001	<LOQ
A10	OWA		09:50	16:02	372	2.0	2.0	2.0	744	35/100	0.004	0.023
H11	HEX		09:02	15:02	360	1.5	1.5	1.5	540	2.5/100	0.005	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign-highway 37	<LOQ
A10	Inside shower trailer-clean room decon	0.023
H11	ENE corner of Lumber Storage building at HEPA exhaust	<LOQ

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Lumber Storage Building

KEH #: 21001-001D
SAMPLING DATE: 11/8/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
	FB											
	FB											
P12	P	*	07:47	16:04	497	2.0	1.0	1.5	746	1/100	0.004	<LOQ
P13	Ex	*	07:40	08:10	30	2.0	2.0	2.0	60	3.5/100	0.045	<LOQ
P14	P	*	07:53	15:30	457	2.0	2.0	2.0	914	38/100	0.003	0.020
P15	P	*	08:10	16:29	499	2.0	2.0	2.0	998	15.1/100	0.003	0.008

Sample Number	Sample Description/Location	Results (f/cc)
	Field Blank	
	Field Blank	
P12	Max Moncur, SS # 520-36-5145, inside truck	<LOQ
P13	Luis Burrel, inside truck	<LOQ
P14	Jerry Regh, SS # 516-78-0088, inside truck	0.020
P15	Luis Burrel, inside truck	0.008

Worker, SS#	Work Activity	10 Hr.TWA (f/cc)
Max Moncur, SS # 520-36-5145	Loading and unloading soil from trucks	<0.004
Luis Burrel	Loading and unloading soil from trucks	0.007
Jerry Regh, SS # 516-78-0088	Loading and unloading soil from trucks	0.015

** loading and unloading soil from trucks*

KOCH ENVIRONMENTAL HEALTH. INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Lumber Storage Building

KEH #: 21001-001D
SAMPLING DATE: 11/9/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM03	PR		10:18	15:50	332	6.0	6.0	6.0	1992	5.5/100	0.001	<LOQ
PM04	PR		09:38	15:53	315	5.0	5.0	5.0	1575	1/100	0.002	<LOQ
PM05	PR		09:58	15:56	298	6.0	6.0	6.0	1788	1/100	0.002	<LOQ
PM06	PR		09:54	15:59	305	5.0	5.0	5.0	1525	2/100	0.002	<LOQ
PM07	PR		09:50	16:02	372	5.5	5.5	5.5	2046	1.5/100	0.001	<LOQ
PM08	PR		10:08	16:06	298	5.0	5.0	5.0	1490	0/100	0.002	<LOQ
PM09	PR		10:13	16:10	357	6.0	6.0	6.0	2142	3.5/100	0.001	<LOQ
H10	HEX		08:45	14:45	360	2.0	2.0	2.0	720	0.5/100	0.004	<LOQ
A11	OWA		10:28	16:18	350	2.0	2.0	2.0	700	58/100	0.004	0.041

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign-highway 37	<LOQ
H10	ENE corner of Lumber Storage building at HEPA exhaust	<LOQ
A11	Inside shower trailer-clean room	0.041

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Lumber Storage Building

KEH #: 21001-001D
SAMPLING DATE: 11/9/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
	FB											
	FB											
P12	Ex	*	07:56	08:26	30	2.0	2.0	2.0	60	1/100	0.045	<LOQ
P13	P	*	08:10	15:42	452	2.0	2.0	2.0	904	19.5/100	0.003	0.011
P14	P	*	08:02	16:15	493	2.0	2.0	2.0	986	17/100	0.003	0.008
P15	P	*	08:26	16:37	491	2.0	0.5	1.25	614	3/100	0.004	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
	Field Blank	
	Field Blank	
P12	Doug Carr, inside truck	<LOQ
P13	Fred McDougall, SS # 728-14-3207, inside truck	0.011
P14	Luis Burrel, inside truck	0.008
P15	Doug Carr, inside truck	<LOQ

Worker, SS#	Work Activity	10 Hr.TWA (f/cc)
Doug Carr	Loading and unloading soil from trucks	0.001
Fred McDougall, SS # 728-14-3207	Loading and unloading soil from trucks	0.008
Luis Burrel	Loading and unloading soil from trucks	0.007

** loading and unloading soil from trucks*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Lumber Storage Building

KEH #: 21001-001D
SAMPLING DATE: 11/10/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB											
B02	FB											
PM03	PR		08:00	-	-	-	-	-	-	-	-	*
PM04	PR		08:10	16:27	497	5.0	5.0	5.0	2485	3/100	0.001	<LOQ
PM05	PR		08:24	16:29	485	5.5	6.0	5.75	2789	1.5/100	0.001	<LOQ
PM06	PR		08:20	16:33	493	5.0	5.0	5.0	2465	2/100	0.001	<LOQ
PM07	PR		08:17	16:35	498	5.0	5.5	5.25	2415	0.5/100	0.001	<LOQ
PM08	PR		08:34	16:39	485	5.0	5.0	5.0	2425	1/100	0.001	<LOQ
PM09	PR		08:38	16:42	484	5.5	6.0	5.75	2783	5.5/100	0.001	<LOQ
PM10	PR											*
A11	OWA											*

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PM03	Location #1-north of Pole Barn, on perimeter	*
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign-highway 37	<LOQ
H10	Location #8-100' north of NW corner of Pole Barn, on perimeter	*
A11	Shower trailer-clean room	*

** void – power failure*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Lumber Storage Building

KEH #: 21001-001D
SAMPLING DATE: 11/10/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
	FB											
	FB											
P13	P	*	07:50	15:12	442	2.0	2.0	2.0	884	2/100	0.003	<LOQ
P14	Ex	*	07:52	08:25	33	2.0	2.0	2.0	66	7.5/100	0.041	0.052
P15	P	*	07:54	15:03	429	2.0	2.0	2.0	858	19/100	0.003	0.011
P16	P	*	08:25	15:15	410	2.0	2.0	2.0	820	24/100	0.003	0.014

Sample Number	Sample Description/Location	Results (f/cc)
	Field Blank	
	Field Blank	
P13	Terry Holthaus, SS # 481-58-4024, inside truck	<LOQ
P14	Jerry Regh, SS # 516-78-0088, inside truck	0.052
P15	Luis Burrel, inside truck	0.011
P16	Jerry Regh, SS # 516-78-0088, inside truck	0.014

Worker, SS#	Work Activity	8 Hr.TWA (f/cc)
Terry Holthaus, SS # 481-58-4024	Loading and unloading soil from trucks	<0.001
Jerry Regh, SS # 516-78-0088	Loading and unloading soil from trucks	0.016
Luis Burrel	Loading and unloading soil from trucks	0.010

** loading and unloading soil from trucks*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Lumber Storage Building

KEH #: 21001-001D
SAMPLING DATE: 11/11/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM03	PR		09:17	16:12	415	6.0	5.0	5.5	2283	3.5/100	0.001	<LOQ
PM04	PR		09:20	16:17	417	5.0	5.0	5.0	2085	2/100	0.001	<LOQ
PM05	PR		09:33	16:20	407	5.5	6.0	5.75	2340	1/100	0.001	<LOQ
PM06	PR		09:30	16:23	413	5.0	5.0	5.0	2065	3/100	0.001	<LOQ
PM07	PR		09:27	16:25	418	5.0	5.0	5.0	2035	0/100	0.001	<LOQ
PM08	PR		09:43	16:30	407	5.0	5.0	5.0	2035	1/100	0.001	<LOQ
PM09	PR		09:46	16:34	408	5.5	5.5	5.5	2244	3.5/100	0.001	<LOQ
PM10	PR		09:58	16:03	365	2.0	2.0	2.0	730	1/100	0.004	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign-highway 37	<LOQ
PM10	Location #8-100' north of NW corner of Pole Barn, on perimeter	<LOQ

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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Lumber Storage Building

KEH #: 21001-001D
SAMPLING DATE: 11/11/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
	FB											
	FB											
P11	P	*	08:52	10:06	74	2.0	2.0	2.0	148	15.5/100	0.018	0.051
P12	P	*	08:54	15:40	406	2.0	0.5	1.25	508	5/100	0.005	<LOQ
P13	P	*	09:02	15:45	403	2.0	2.0	2.0	806	22/100	0.003	0.013
P14	P	*	10:06	13:47	221	2.0	2.0	2.0	442	15/100	0.006	0.017

Sample Number	Sample Description/Location	Results (f/cc)
	Field Blank	
	Field Blank	
P11	Ben Cook, SS # 544-40-9834, inside truck	0.051
P12	Doug Carr, 101265, inside truck	<LOQ
P13	Bob Sanders, SS # 550-44-0403, inside truck	0.013
P14	Ben Cook, SS # 544-40-9834, inside truck	0.017

Worker, SS#	Work Activity	8 Hr.TWA (f/cc)
Ben Cook, SS # 544-40-9834	Loading and unloading soil from trucks	0.016
Doug Carr, 101265	Loading and unloading soil from trucks	0.001
Bob Sanders, SS # 550-44-0403	Loading and unloading soil from trucks	0.011

** loading and unloading soil from trucks*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Lumber Storage Building

KEH #: 21001-001D
SAMPLING DATE: 11/11/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01FC	FB											
B02FC	FB											
FC03	CL	FC	08:20	13:18	298	5.0	5.0	5.0	1490			*
FC04	CL	FC	08:22	13:20	298	5.0	5.0	5.0	1490			*
FC05	CL	FC	08:25	13:22	297	5.0	5.0	5.0	1485			*
FC06	CL	FC	08:27	13:25	298	5.0	5.0	5.0	1490			*
FC07	CL	FC	08:30	13:27	297	5.0	5.0	5.0	1485			*

Sample Number	Sample Description/Location	Results (f/cc)
B01FC	Field Blank	
B02FC	Field Blank	
FC03	NE corner of containment-inside Lumber storage building	*
FC04	NW corner of containment-inside Lumber storage building	*
FC05	SW corner of containment-inside Lumber storage building	*
FC06	SE corner of containment-inside Lumber storage building	*
FC07	Center of containment-inside Lumber storage building	*

** Samples submitted to customer*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Lumber Storage Building

KEH #: 21001-001D
SAMPLING DATE: 11/13/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM03	PR		08:00	15:56	476	5.0	5.0	5.0	2380	2/100	0.001	<LOQ
PM04	PR		08:03	16:01	478	5.0	5.0	5.0	2390	1/100	0.001	<LOQ
PM05	PR		08:18	16:03	465	5.5	6.0	5.75	2674	1/100	0.001	<LOQ
PM06	PR		08:15	16:07	472	5.5	5.0	5.25	2478	1/100	0.001	<LOQ
PM07	PR		08:12	16:09	477	5.0	5.0	5.0	2385	2/100	0.001	<LOQ
PM08	PR		08:27	16:13	466	5.0	5.0	5.0	2330	2.5/100	0.001	<LOQ
PM09	PR		08:30	16:16	466	5.5	5.5	5.5	2563	2/100	0.001	<LOQ
PM10	PR		09:57	15:25	328	5.0	5.0	5.0	1640		0.002	*
PM11	PR		09:33	15:22	349	5.0	5.0	5.0	1745		0.002	*
PM12	PR		09:04	15:17	373	5.0	5.0	5.0	1865	0/100	0.001	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign-highway 37	<LOQ
PM10	Location #8-100' north of NW corner of Pole Barn, on perimeter	*
PM11	@ SW corner of Pole Barn	*
PM12	@ West end of Lumber storage building	<LOQ

** void – power failure-Millwork west unplugged the power*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Lumber Storage Building

KEH #: 21001-001D
SAMPLING DATE: 11/13/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
	FB											
	FB											
P13	P	*	07:45	08:47	62	2.0	2.0	2.0	124			**
P14	P	*	07:38	15:27	469	2.0	2.0	2.0	938	16/100	0.003	0.008
P15	P	*	07:42	15:56	494	2.0	2.0	2.0	988	21.5/100	0.003	0.011

Sample Number	Sample Description/Location	Results (f/cc)
	Field Blank	
	Field Blank	
P13	Ben Cook, SS # 544-40-9834, inside truck	**
P14	Doug Carr, 101265, inside truck	0.008
P15	Bob Sanders, SS # 550-44-0403, inside truck	0.011

Worker, SS#	Work Activity	10 Hr.TWA (f/cc)
Doug Carr, 101265	Loading and unloading soil from trucks	**
Ben Cook, SS # 544-40-9834	Loading and unloading soil from trucks	0.006
Luis Burrel	Loading and unloading soil from trucks	0.009

** loading and unloading soil from trucks*
*** void - truck malfunction*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
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(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Lumber Storage Building

KEH #: 21001-001D
SAMPLING DATE: 11/14/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									2/100		
B02	FB									0/100		
PM03	PR		07:51	16:25	514	5.0	5.5	5.25	2698	3.5/100	0.001	<LOQ
PM04	PR		08:00	16:30	510	5.0	5.0	5.0	2550	6/100	0.001	0.001
PM05	PR		08:13	16:32	461	5.5	5.0	5.25	2420	7.5/100	0.001	0.001
PM06	PR		08:10	16:35	505	5.0	5.0	5.0	2525	5/100	0.001	<LOQ
PM07	PR		08:07	16:37	510	5.0	5.0	5.0	2550	2/100	0.001	<LOQ
PM08	PR		08:27	16:41	494	5.0	5.0	5.0	2470	0/100	0.001	<LOQ
PM09	PR		08:30	16:43	493	5.5	6.0	5.75	2835	5/100	0.001	<LOQ
PM10	PR		08:44	15:56	432	5.0	5.0	5.0	2160	4.5/100	0.001	<LOQ
PM11	PR		08:46	16:58	492	5.0	5.0	5.0	2460	2/100	0.001	<LOQ
PM12	PR		08:34	17:08	514	5.0	5.0	5.0	2570	1.5/100	0.001	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	0.001
PM05	Location #3-west of Planer building-on perimeter	0.001
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign-highway 37	<LOQ
PM10	Location #8-100' north of NW corner of Pole Barn, on perimeter	<LOQ
PM11	@ SW corner of Pole Barn	<LOQ
PM12	@ West end of Lumber storage building	<LOQ

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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Lumber Storage Building

KEH #: 21001-001D
SAMPLING DATE: 11/14/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
	FB											
	FB											
P01	Ex	*	07:36	08:06	30	2.0	2.0	2.0	60	2/100	0.045	<LOQ
P02	P	*	07:44	15:08	444	2.0	2.0	2.0	888	15.5/100	0.003	0.008
P03	P	*	08:06	15:52	466	2.0	0.5	1.25	583	63.5/100	0.005	0.053
P04	P	*	07:33	15:46	493	2.0	0.5	1.25	616	54/100	0.004	0.042

Sample Number	Sample Description/Location	Results (f/cc)
	Field Blank	
	Field Blank	
P01	Fred McDougall, SS # 728-14-3207, inside truck	<LOQ
P02	Jerry Regh, SS # 516-78-0088, inside truck	0.008
P03	Fred McDougall, SS # 728-14-3207, inside truck	0.053
P04	Justin Clemmons, SS # 517-88-2847, inside truck	0.042

Worker, SS#	Work Activity	10 Hr.TWA (f/cc)
Fred McDougall, SS # 728-14-3207	Loading and unloading soil from trucks	0.041
Jerry Regh, SS # 516-78-0088	Loading and unloading soil from trucks	0.006
Justin Clemmons, SS # 517-88-2847	Loading and unloading soil from trucks	0.035

** loading and unloading soil from trucks*

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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Lumber Storage Building

KEH #: 21001-001D
SAMPLING DATE: 11/15/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									1/100		
B02	FB									1/100		
PM03	PR		08:11	16:06	475	5.5	5.5	5.5	2613	3/100	0.001	<LOQ
PM04	PR		08:14	16:17	483	5.0	5.0	5.0	2415	2/100	0.001	<LOQ
PM05	PR		08:17	16:19	482	5.5	6.0	5.75	2772	1/100	0.001	<LOQ
PM06	PR		08:21	16:27	486	5.5	5.0	5.25	2552	0/100	0.001	<LOQ
PM07	PR		08:24	16:29	485	5.0	5.5	5.25	2546	3.5/100	0.001	<LOQ
PM08	PR		08:38	16:33	475	5.0	5.5	5.25	2494	8/100	0.001	0.001
PM09	PR		08:42	16:36	474	5.5	6.0	5.75	2726	4/100	0.001	<LOQ
PM10	PR		08:50	15:28	398	5.0	5.0	5.0	1990	5/100	0.001	<LOQ
PM11	PR		08:53	15:30	397	5.0	5.0	5.0	1985	2/100	0.001	<LOQ
PM12	PR		09:05	15:52	407	5.0	5.0	5.00	2035	1/00	0.001	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	0.001
PM05	Location #3-west of Planer building-on perimeter	0.001
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	0.001
PM09	Location #7-NE corner of property, on stop sign-highway 37	<LOQ
PM10	Location #8-100' north of NW corner of Pole Barn, on perimeter	<LOQ
PM11	@ SW corner of Pole Barn	<LOQ
PM12	40' SW of Lumber storage building	<LOQ

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Lumber Storage Building

KEH #: 21001-001D
SAMPLING DATE: 11/15/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
	FB											
	FB											
P13	Ex	*	07:42	08:12	30	2.0	2.0	2.0	60	0/100	0.045	<LOQ
P14	P	*	07:50	16:09	499	2.0	2.0	2.0	998	23/100	0.003	0.011
P15	P	*	07:39	15:24	465	2.0	2.0	2.0	930	5/100	0.003	<LOQ
P16	P	*	08:12	15:15	423	2.0	2.0	2.0	846	4/100	0.003	<LOQ
PM05	BRC		08:17	16:19	482	5.5	6.0	5.75	2772	5/100	0.001	>LOQ

Sample Number	Sample Description/Location	Results (f/cc)
	Field Blank	
	Field Blank	
P13	Luis Burrell, # 061138, inside truck	<LOQ
P14	Ben Cook SS # 544-40-9834, inside truck, inside truck	0.011
P15	Doug Carr, # 101265, inside truck	<LOQ
P16	Luis Burrell, # 061138, inside truck	<LOQ
		<LOQ

Worker, SS#	Work Activity	10 Hr. TWA (f/cc)
Luis Burrell, # 061138	Loading and unloading soil from trucks	<0.001
Ben Cook SS # 544-40-9834	Loading and unloading soil from trucks	0.009
Doug Carr, # 101265	Loading and unloading soil from trucks	<0.001

** loading and unloading soil from trucks*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Lumber Storage Building

KEH #: 21001-001D
SAMPLING DATE: 11/15/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									1/100		
B02	FB									1/100		
PM03	PR		08:11	16:06	475	5.5	5.5	5.5	2613	3/100	0.001	<LOQ
PM04	PR		08:14	16:17	483	5.0	5.0	5.0	2415	2/100	0.001	<LOQ
PM05	PR		08:17	16:19	482	5.5	6.0	5.75	2772	1/100	0.001	<LOQ
PM06	PR		08:21	16:27	486	5.5	5.0	5.25	2552	0/100	0.001	<LOQ
PM07	PR		08:24	16:29	485	5.0	5.5	5.25	2546	3.5/100	0.001	<LOQ
PM08	PR		08:38	16:33	475	5.0	5.5	5.25	2494	8/100	0.001	0.001
PM09	PR		08:42	16:36	474	5.5	6.0	5.75	2726	4/100	0.001	<LOQ
PM10	PR		08:50	15:28	398	5.0	5.0	5.0	1990	5/100	0.001	<LOQ
PM11	PR		08:53	15:30	397	5.0	5.0	5.0	1985	2/100	0.001	<LOQ
PM12	PR		09:05	15:52	407	5.0	5.0	5.00	2035	1/00	0.001	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	0.001
PM05	Location #3-west of Planer building-on perimeter	0.001
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	0.001
PM09	Location #7-NE corner of property, on stop sign-highway 37	<LOQ
PM10	Location #8-100' north of NW corner of Pole Barn, on perimeter	<LOQ
PM11	@ SW corner of Pole Barn	<LOQ
PM12	40' SW of Lumber storage building	<LOQ

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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Lumber Storage Building

KEH #: 21001-001D
SAMPLING DATE: 11/15/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
	FB											
	FB											
P13	Ex	*	07:42	08:12	30	2.0	2.0	2.0	60	0/100	0.045	<LOQ
P14	P	*	07:50	16:09	499	2.0	2.0	2.0	998	23/100	0.003	0.011
P15	P	*	07:39	15:24	465	2.0	2.0	2.0	930	5/100	0.003	<LOQ
P16	P	*	08:12	15:15	423	2.0	2.0	2.0	846	4/100	0.003	<LOQ
PM05	BRC		08:17	16:19	482	5.5	6.0	5.75	2772	5/100	0.001	>LOQ

Sample Number	Sample Description/Location	Results (f/cc)
	Field Blank	
	Field Blank	
P13	Luis Burrell, # 061138, inside truck	<LOQ
P14	Ben Cook SS # 544-40-9834, inside truck, inside truck	0.011
P15	Doug Carr, # 101265, inside truck	<LOQ
P16	Luis Burrell, # 061138, inside truck	<LOQ
		<LOQ

Worker, SS#	Work Activity	10 Hr.TWA (f/cc)
Luis Burrell, # 061138	Loading and unloading soil from trucks	<0.001
Ben Cook SS # 544-40-9834	Loading and unloading soil from trucks	0.009
Doug Carr, # 101265	Loading and unloading soil from trucks	<0.001

** loading and unloading soil from trucks*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Plant wide

KEH #: 21001-00D
SAMPLING DATE: 11/16/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0//100		
PM03	PR		09:18	16:03	405	5.0	5.0	5.0	2025	4/100	0.001	<LOQ
PM04	PR		09:27	16:09	402	5.0	5.0	5.0	2010	2/100	0.001	<LOQ
PM05	PR		09:30	16:11	401	5.5	6.0	5.75	2306	1/100	0.001	<LOQ
PM06	PR		09:34	16:18	404	5.5	5.0	5.25	2121	3/100	0.001	<LOQ
PM07	PR		09:47	16:21	394	5.0	5.5	5.25	2069	3.5/100	0.001	<LOQ
PM08	PR		09:44	16:27	403	5.0	5.0	5.0	2015	1.5/100	0.001	<LOQ
PM09	PR		09:41	16:30	409	5.5	5.5	5.5	2250	2/100	0.001	<LOQ
PM10	PR		09:00	14:45	345	5.0	5.0	5.0	1725	2/100	0.002	<LOQ
PM11	PR		08:50	14:48	358	5.0	5.0	5.0	1790	1/100	0.002	<LOQ
PM12	PR		08:56	15:09	373	5.0	5.0	5.0	1865	3/100	0.001	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	FIELD BLANK	
B02	FIELD BLANK	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign-highway 37	<LOQ
PM10	100' north of NW corner of Pole Barn	<LOQ
PM11	SW corner of Pole Barn	<LOQ
PM12	40' SW of Lumber storage building	<LOQ

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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Plant wide

KEH #: 21001-001D
SAMPLING DATE: 11/16/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
	FB											
	FB											
P13	Ex		07:38	08:08	30	2.0	2.0	2.0	60	1/100	0.045	<LOQ
P14	P		07:42	15:27	465	2.0	2.0	2.0	930	8/100	0.003	0.004
P15	P		07:49	15:49	480	2.0	1.6	1.8	864	58/100	0.003	0.033
P16	P		08:08	16:34	506	2.0	1.0	1.5	759	7.5/100	0.004	0.005
P15	BRC		07:49	15:49	480	2.0	1.6	1.8	864	65/100	0.003	0.037

Sample Number	Sample Description/Location	Results (f/cc)
P13	Max Moncur, SS # 520-36-5145, inside truck	<LOQ
P14	Jerry Regh, SS # 516-78-0088, inside truck	0.004
P15	Ben Cook SS # 544-40-9834, inside truck	0.033
P16	Max Moncur, SS # 520-36-5145, inside truck	0.005
P15	Ben Cook SS # 544-40-9834, inside truck	0.037

Worker, SS#	Work Activity	10 Hr.TWA (f/cc)
Max Moncur, SS # 520-36-5145,		0.004
Jerry Regh, SS # 516-78-0088		0.003
Ben Cook SS # 544-40-9834		0.026

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CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Plant wide

KEH #: 21001-001D
SAMPLING DATE: 11/17/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM03	PR		08:53	16:02	479	5.0	5.5	5.25	2515	4/100	0.001	<LOQ
PM04	PR		08:06	16:07	481	5.5	5.5	5.5	2646	2/100	0.001	<LOQ
PM05	PR		08:09	16:09	480	6.0	6.0	6.0	2880	3/100	0.001	<LOQ
PM06	PR		08:16	16:16	480	5.0	5.5	5.25	2520	1/100	0.001	<LOQ
PM07	PR		08:19	16:18	479	5.0	5.5	5.25	2515	2/100	0.001	<LOQ
PM08	PR		08:24	16:29	485	5.0	5.0	5.0	2425	1.5/100	0.001	<LOQ
PM09	PR		08:27	16:23	476	5.5	6.0	5.75	2737	3/100	0.001	<LOQ
PM10	PR		09:15	15:35	380	5.0	5.0	5.0	1900	8/100	0.001	0.002
PM11	PR		09:30	15:40	370	5.0	5.0	5.0	1850	3.5/100	0.001	<LOQ
PM12	PR		09:40	15:52	372	5.0	5.0	5.0	1860	9/100	0.001	0.002

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign-highway 37	<LOQ
PM10	100' north of NW corner of Pole Barn	0.002
PM11	SW corner of Pole Barn	<LOQ
PM12	40' SW of Lumber storage building	0.002

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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Plant wide

KEH #: 21001-001D
SAMPLING DATE: 11/17/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
	FB											
	FB											
P13	P	*	07:45	14:45	420	2.0	0.5	1.25	525	4/100	0.005	<LOQ
P14	P	*	07:49	14:49	420	2.0	2.0	2.0	840	5.5/100	0.003	<LOQ
P15	P	*	07:47	14:47	420	2.0	0.5	1.25	525	3/100	0.005	<LOQ
P16	Ex	*	14:49	15:19	30	2.0	2.0	2.0	60	3/100	0.045	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
P13	Vernon Cunningham, SS # 517-70-9213, inside truck	<LOQ
P14	Terry Holthous, SS # 481-58-4024, inside truck	<LOQ
P15	Ben Cook SS # 544-40-9834, inside truck	<LOQ
P16	Terry Holthous, SS # 481-58-4024, inside truck	<LOQ

Worker, SS#	Work Activity	8 Hr.TWA (f/cc)
Vernon Cunningham, SS # 517-70-9213	Loading and unloading soil from trucks	<0.004
Terry Holthous, SS # 481-58-4024	Loading and unloading soil from trucks	<0.005
Ben Cook SS # 544-40-9834	Loading and unloading soil from trucks	<0.004

** loading and unloading soil from trucks*

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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Plant wide

KEH #: 21001-001D
SAMPLING DATE: 11/18/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM03	PR		08:18	14:26	368	5.5	5.0	5.25	1932	4/100	0.001	<LOQ
PM04	PR		08:22	14:32	370	5.0	5.0	5.0	1850	1/100	0.001	<LOQ
PM05	PR		08:25	14:35	370	5.5	6.0	5.75	2128	4.5/100	0.001	<LOQ
PM06	PR		08:38	14:39	361	5.0	5.5	5.25	1895	6/100	0.001	0.002
PM07	PR		08:41	14:42	361	5.0	5.5	5.25	1895	3/100	0.001	<LOQ
PM08	PR		08:46	14:47	361	5.0	5.0	5.0	1805	3.5/100	0.001	<LOQ
PM09	PR		08:49	14:49	360	5.5	6.0	5.75	2070	6/100	0.001	0.001
PM10	PR		08:53	13:54	301	5.0	5.0	5.0	1505	0/100	0.002	<LOQ
PM11	PR		08:57	13:58	301	5.0	5.0	5.0	1505	5/100	0.002	<LOQ
PM12	PR		09:07	14:12	305	5.0	5.0	5.0	1525	4.5/100	0.002	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	0.002
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign-highway 37	0.001
PM10	100' north of NW corner of Pole Barn	<LOQ
PM11	SW corner of Pole Barn	<LOQ
PM12	40' SW of Lumber storage building	<LOQ

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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Plant wide

KEH #: 21001-001D
SAMPLING DATE: 11/18/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
	FB											
	FB											
P13	Ex	*	07:45	08:15	30	2.0	2.0	2.0	60	1.5/100	0.045	<LOQ
P14	P	*	08:31	14:27	356	2.0	2.0	2.0	712	3.5/100	0.004	<LOQ
P15	P	*	08:29									**
P16	P	*	08:15	13:51	336	2.0	2.0	2.0	672	15/100	0.004	0.011
PM09	BRC		08:49	14:49	360	5.5	6.0	5.75	2070	3/100	0.001	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
P13	Max Moncur, SS # 520-36-5145, inside truck	<LOQ
P14	Terry Johnson, 516-78-1150, inside truck	<LOQ
P15	Doug Carr, SS # 101265, inside truck	**
P16	Max Moncur, SS # 520-36-5145, inside truck	0.011
PM09	Location # 7-NE corner of property, on stop sign Highway 37	<LOQ

Worker, SS#	Work Activity	8 Hr.TWA (f/cc)
Max Moncur, SS # 520-36-5145	Loading and unloading soil from trucks	0.008
Terry Johnson, 516-78-1150	Loading and unloading soil from trucks	<0.003
Doug Carr, SS # 101265.	Loading and unloading soil from trucks	**

** loading and unloading soil from trucks*
*** void – sample overran shift*

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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Plant wide

KEH #: 21001-001D
SAMPLING DATE: 11/28/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									1/100		
PM03	PR		08:03	15:38	455	5.0	5.0	5.0	2275	5/100	0.001	LOQ
PM04	PR		08:07	15:44	457	5.0	5.0	5.0	2285	8/100	0.001	0.002
PM05	PR		08:09	15:46	457	5.5	6.0	5.75	2628	4/100	0.001	LOQ
M06	PR		08:24	15:53	449	5.0	5.0	5.0	2245	1.5/100	0.001	<LOQ
PM07	PR		08:27	15:56	449	5.0	5.5	5.25	2357	2/100	0.001	<LOQ
PM08	PR		08:30	16:03	453	5.0	5.0	5.0	2265	3/100	0.001	LOQ
PM09	PR		08:33	16:05	452	6.0	6.0	6.0	2712	6.5/100	0.001	0.001
PM10	PR		09:00	16:16	436	5.0	5.0	5.0	2180	4.5/100	0.001	LOQ
PM06	BRC		08:24	15:53	449	5.0	5.0	5.0	2245	2/100	0.001	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PM03	Location #1-north of Pole Barn, on perimeter	LOQ
PM04	Location #2-NW of Planer building, on perimeter	0.002
PM05	Location #3-west of Planer building-on perimeter	LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	LOQ
PM09	Location #7-NE corner of property, on stop sign-highway 37	0.001
PM10	Temporary west perimeter 100' north of NW corner of Pole Barn	LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ

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Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Plant wide

KEH #: 21001-001D
SAMPLING DATE: 11/28/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									1/100		
PM11	PR	*	09:03	16:21	438	5.0	5.5	5.25	2300	2.5/100		<LOQ
PM12	PR	*	09:40	16:44	424	5.0	5.0	5.0	2120	2/100		<LOQ
PM13	PR	*	09:27	16:40	433	5.5	5.5	5.5	2382	1.5/100		<LOQ
PM14	PR	*	09:46	16:52	426	5.0	5.0	5.0	2130	0/100		<LOQ
PM15	PR	*	09:44	16:50	426	5.5	5.5	5.5	2343	1/100		<LOQ
PM12	BRC		09:03	16:21	438	5.0	5.5	5.25	2300	2.5/100	0.001	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PM11	SW corner of Planer building-temporary south perimeter	<LOQ
PM12	Temporary inside work area sample-20' SW of Lumber storage	<LOQ
PM13	Temporary inside sample adjacent to fire hydrant	<LOQ
PM14	Temporary perimeter sample @ SW corner of Warehouse	<LOQ
PM15	Temporary perimeter sample between Lumber storage and Warehouse building	<LOQ
PM12	SW corner of Planer building	<LOQ

** Loading trucks with soil*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Plant wide

KEH #: 21001-001D
SAMPLING DATE: 11/28/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									1/100		
PO3	P	*	07:50	16:09	499	2.0	2.0	2.0	998	1/100	0.003	<LOQ
PO4	P	*	07:42	16:27	525	2.0	2.0	2.0	1050	31.5/100	0.003	0.014
PO5	Ex	*	07:47	08:17	30	2.0	2.0	2.0	60	2/100	0.045	<LOQ
PO6	P	*	08:17	16:26	489	2.0	2.0	2.0	978	5/100	0.003	<LOQ
-04	BRC		07:42	16:27	525	2.0	2.0	2.0	1050	25/100	0.003	0.011

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PO3	Max Moncur, SS # 520-36-5145, inside truck	<LOQ
PO4	Justin Clemons, SS # 517-88-2847, inside truck	0.014
PO5	Vernon Cunningham, SS # 517-70-9213, inside truck	<LOQ
PO6	Vernon Cunningham, SS # 517-70-9213, inside truck	<LOQ
P04	Justin Clemons, SS # 517-88-2847, inside truck	0.011

Worker, SS#	Work Activity	10 Hr.TWA (f/cc)
Max Moncur, SS # 520-36-5145	Loading and unloading soil from trucks	<0.002
Justin Clemons, SS # 517-88-2847	Loading and unloading soil from trucks	0.012
Vernon Cunningham, SS # 517-70-9213	Loading and unloading soil from trucks	<0.005

** loading trucks with soil @ plant & dumped trucks @ mine*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Plant wide

KEH #: 21001-001D
SAMPLING DATE: 11/29/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									1/100		
PM03	PR		07:55	12:23	268	5.0	5.0	5.0	1340	3/100	0.002	<LOQ
PM04	PR		08:05	12:27	262	5.5	5.5	5.5	1441	2/100	0.002	<LOQ
PM05	PR		08:09	12:30	261	5.5	5.5	5.5	1436	0/100	0.002	<LOQ
PM06	PR		08:17	12:39	262	5.0	5.0	5.0	1310	1.5/100	0.002	<LOQ
PM07	PR		08:20	12:43	263	5.0	5.0	5.0	1315	0/100	0.002	<LOQ
PM08	PR		08:25	12:52	267	5.0	5.0	5.0	1335	1.5/100	0.002	<LOQ
PM09	PR		08:27	12:58	271	5.0	5.0	5.0	1355	5/100	0.002	LOQ
PM10	PR		08:36	13:09	273	5.0	5.0	5.0	1365	2.5/100	0.002	<LOQ
PM06	BRC		08:17	12:39	262	5.0	5.0	5.0	1310	2/100	0.002	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign-highway 37	LOQ
PM10	100' north of NW corner of Pole Barn-temporary west perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ

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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Plant wide

KEH #: 21001-001D
SAMPLING DATE: 11/29/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									1/100		
PM11	PR		08:40	13:12	272	5.5	5.5	5.5	1496	1/100	0.002	<LOQ
PM12	PR		09:03	13:30	267	5.5	5.0	5.25	1402	7/100	0.002	0.002
PM13	PR		09:21	13:44	263	2.0	2.0	2.0	526	1.5/100	0.005	<LOQ
PM14	PR		09:09	13:34	265	5.0	5.0	5.0	1325	0/100	0.002	<LOQ
PM15	PR		09:12	13:42	270	5.0	5.0	5.0	1350	3/100	0.002	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PM11	SW corner of Pole barn-temporary south perimeter	<LOQ
PM12	Temporary inside work area sample @ fire hydrant	0.002
PM13	Temporary inside work area sample-SW of Lumber storage building	<LOQ
PM14	Temporary inside perimeter sample-between Lumber storage & Warehouse buildings	<LOQ
PM15	Temporary inside work area sample @ SW corner of Warehouse	<LOQ

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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Plant wide

KEH #: 21001-001D
SAMPLING DATE: 11/29/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									1/100		
PO3	P	*	07:32	15:45	493	2.0	2.0	2.0	986	13/100	0.003	0.006
PO4	Ex	*	07:27	07:47	20	2.0	2.0	2.0	40	2/100	0.067	<LOQ
PO5	P	*	07:34	14:47	433	2.0	2.0	2.0	866	30/100	0.003	0.017
PO6	P	*	07:47	13:50	363	2.0	2.0	2.0	726	6.5/100	0.004	0.004
B01	BRC									0/100		

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PO3	Fred McDougall, SS # 728-14-3207, inside truck	0.006
PO4	Bob Sanders, SS # 550-44-0403, inside truck	<LOQ
PO5	Jerry Regh, SS # 516-78-0088, inside truck	0.017
PO6	Bob Sanders, SS # 550-44-0403, inside truck	0.004
B01	Blind Recount	

Worker, SS#	Work Activity	10 Hr.TWA (f/cc)
Fred McDougall, SS # 728-14-3207	Loading and unloading soil from trucks	0.005
Bob Sanders, SS # 550-44-0403	Loading and unloading soil from trucks	<0.002
Jerry Regh, SS # 516-78-0088	Loading and unloading soil from trucks	0.012

** loading trucks with soil @ plant & dumped trucks @ mine*

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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Plant wide

KEH #: 21001-001D
SAMPLING DATE: 11/30/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									2/100		
PM03	PR		08:09	16:51	522	5.0	5.0	5.0	2610	2/100	0.001	<LOQ
PM04	PR		08:16	16:54	518	5.0	5.0	5.0	2590	1/100	0.001	<LOQ
PM05	PR		08:21	16:57	516	5.5	5.5	5.5	2838	7/100	0.001	0.001
PM06	PR		08:32	17:05	513	5.0	5.0	5.0	2565	3/100	0.001	<LOQ
PM07	PR		08:35	17:03	508	5.0	5.5	5.25	2667	2.5/100	0.001	<LOQ
PM08	PR		08:46	17:09	503	5.0	5.0	5.0	2515	1/100	0.001	<LOQ
PM09	PR		08:51	17:19	508	5.5	5.5	5.5	2794	2/100	0.001	<LOQ
PM10	PR		08:56	16:34	458	5.5	5.5	5.5	2519	0/100	0.001	<LOQ
PM09	BRC		08:51	17:19	508	5.5	5.5	5.5	2794	2/100	0.001	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	0.001
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign-highway 37	<LOQ
PM10	100' north of NW corner of Pole Barn-temporary west perimeter	<LOQ
PM06	Location #7-NE corner of property, on stop sign-highway 37	<LOQ

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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Plant wide

KEH #: 21001-001D
SAMPLING DATE: 11/30/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									2/100		
PM11	PR	*	09:00	16:30	450	5.5	5.0	5.25	2363	3/100	0.001	<LOQ
PM12	PR	*	09:37	16:16	399	2.0	2.0	2.0	798	0/100	0/100	<LOQ
PM13	PR	*	09:34	16:13	399	5.0	5.0	5.0	1995	5.5/100	0.001	0.001
PM14	PR	*	09:40	16:21	401	5.5	5.5	5.5	2206	1/100	0.001	<LOQ
PM15	PR	*	09:43	16:25	402	5.0	5.0	5.0	2010	3/100	0.001	<LOQ
PM12	BRC	*	09:37	16:16	399	2.0	2.0	2.0	798	2/100	0.003	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PM11	SW corner of Pole barn-temporary south perimeter	<LOQ
PM12	50' SW Lumber storage building-temporary IWA sample	<LOQ
PM13	Adjacent to fire hydrant-temporary IWA sample	0.001
PM14	Between Lumber storage building & Warehouse building-temporary perimeter	<LOQ
PM15	SW corner of Warehouse building-temporary perimeter sample	<LOQ
PM12	50' SW of Lumber storage building-temporary IWA perimeter sample	<LOQ

** loading trucks with soil*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Plant wide

KEH #: 21001-001D
SAMPLING DATE: 11/30/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									2/100		
PO3	P	*	07:25	15:30	485	2.0	2.0	2.0	970	4.5/100	0.003	<LOQ
PO4	P	*	07:29	15:40	491	2.0	0.5	1.25	614	13/100	0.004	0.010
PO5	P	*	07:23	07:45	22	2.0	2.0	2.0	44	2/100	0.061	<LOQ
PO6	P	*	07:45	15:38	473	2.0	0.75	1.38	653	1/100	0.004	<LOQ
B01	BRC									0/100		

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PO3	Max Moncur, SS # 520-36-5145, inside truck	<LOQ
PO4	Justin Clemons, SS # 517-88-2847, inside truck	0.010
PO5	Doug Carr, # 101265, inside truck	<LOQ
PO6	Doug Carr, # 101265, inside truck	<LOQ
B02	Blind Recount	

Worker, SS#	Work Activity	10 Hr.TWA (f/cc)
Max Moncur, SS # 520-36-5145	Loading and unloading soil from trucks	<0.002
Justin Clemons, SS # 517-88-2847	Loading and unloading soil from trucks	0.008
Doug Carr, # 101265	Loading and unloading soil from trucks	<0.005

** loading trucks with soil @ plant & dumped trucks @ mine*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Plant wide

KEH #: 21001-001D
SAMPLING DATE: 12/1/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM03	PR		08:09	16:20	491	5.0	5.0	5.0	2455	4.5/100	0.001	<LOQ
PM04	PR		08:13	16:27	494	5.0	5.0	5.0	2470	4/100	0.001	<LOQ
PM05	PR		08:15	16:30	495	5.5	5.5	5.5	2723	3/100	0.001	<LOQ
PM06	PR		08:33	16:35	482	5.0	5.0	5.0	2410	1/100	0.001	<LOQ
PM07	PR		08:35	16:38	483	5.0	5.0	5.0	2415	1/100	0.001	<LOQ
PM08	PR		08:40	16:42	482	5.0	5.0	5.0	2410	0/100	0.001	<LOQ
PM09	PR		08:46	16:50	484	5.5	5.5	5.5	2662	0/100	0.001	<LOQ
PM10	PR		08:20	15:50	450	5.0	5.0	5.0	2250	0/100	0.001	<LOQ
PM06	BRC		08:33	16:35	482	5.0	5.0	5.0	2410	3/100	0.001	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign-highway 37	<LOQ
PM10	100' north of NW corner of Pole Barn-temporary west perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ

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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Plant wide

KEH #: 21001-001D
SAMPLING DATE: 12/1/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM11	PR	*	09:23	15:54	391	5.0	5.0	5.0	1955	1/100	0.001	<LOQ
PM12	PR	*	09:27	15:38	371	2.0	2.0	2.0	742	0/100	0.004	<LOQ
PM13	PR	*	07:47	15:32	465	5.0	5.0	5.0	2325	4/100	0.001	<LOQ
PM14	PR	*	09:07	15:40	393	5.0	5.0	5.0	1965	2/100	0.001	<LOQ
M15	PR	*	09:12	15:44	392	5.0	5.0	5.0	1960	0/100	0.001	<LOQ
PM15	BRC	*	09:12	15:44	392	5.0	5.0	5.0	1960	0/100	0.001	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PM11	SW corner of Pole barn-temporary south perimeter	<LOQ
PM12	50' SW Lumber storage building-temporary IWA sample	<LOQ
PM13	Temporary inside work area perimeter @ fire hydrant	<LOQ
PM14	Between Lumber storage building & Warehouse building-temporary perimeter	<LOQ
PM15	SW corner of Warehouse building-temporary inside perimeter	<LOQ
PM12	SW corner of Warehouse building	<LOQ

** loading trucks with soil*

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AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Plant wide

KEH #: 21001-001D
SAMPLING DATE: 12/1/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PO3	P	*	07:31	07:53	22	2.0	2.0	2.0	44	4/100	0.061	<LOQ
PO4	P	*	07:29	15:13	464	2.0	2.0	2.0	928	2.5/100	0.003	<LOQ
PO5	P	*	07:36	16:09	513	2.0	0.5	1.25	641	2/100	0.004	<LOQ
PO6	P	*	07:53	15:15	442	2.0	1.7	1.85	818	3/100	0.003	<LOQ
B01	BRC									0/100		

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PO3	Luis Burrell, #061138, inside truck	<LOQ
PO4	Vernon Cunningham, SS # 517-70-9213, inside truck	<LOQ
PO5	Ben Cook, SS # 544-40-9834, inside truck	<LOQ
PO6	Luis Burrell, #061138, inside truck	<LOQ
B02	Blind Recount	

Worker, SS#	Work Activity	10 Hr.TWA (f/cc)
Luis Burrell, #061138	Loading and unloading soil from trucks	<0.004
Vernon Cunningham, SS # 517-70-9213	Loading and unloading soil from trucks	<0.003 (8-hr.)
Ben Cook, SS # 544-40-9834	Loading and unloading soil from trucks	<0.003

** loading trucks with soil @ plant & dumped trucks @ mine*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Plant wide

KEH #: 21001-001D
SAMPLING DATE: 12/2/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM03	PR		08:22	16:18	476	5.0	5.0	5.0	2380	4.5/100	0.001	<LOQ
<lo	PR		08:24	16:22	478	5.0	5.0	5.0	2390	1/100	0.001	<LOQ
PM05	PR		08:26	16:33	487	5.0	6.0	5.75	2800	0/100	0.001	<LOQ
M06	PR		08:33	16:30	477	5.0	5.0	5.0	2385	1/100	0.001	<LOQ
M07	PR		08:30	16:27	477	5.0	5.5	5.25	2504	0/100	0.001	<LOQ
PM08	PR		08:35	16:40	485	5.0	5.0	5.0	2425	0/100	0.001	<LOQ
PM09	PR		08:46	16:42	476	5.0	5.0	5.0	2380	0/100	0.001	<LOQ
PM10	PR		09:03	15:47	404	5.0	5.0	5.0	2020	7.5/100	0.001	<LOQ
PM09	BRC		08:46	16:42	476	5.0	5.0	5.0	2380	1/100	0.001	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign-highway 37	<LOQ
PM10	Temporary inside perimeter @ fire hydrant	<LOQ
PM09	Location #7-NE corner of property, on stop sign-highway 37	<LOQ

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Plant wide

KEH #: 21001-001D
SAMPLING DATE: 12/2/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM11	PR	*	09:09	15:49	400	2.0	2.0	2.0	800	0/100	0.003	<LOQ
PM12	PR	*	09:17	15:51	394	5.0	5.0	5.0	1970	0/100	0.001	<LOQ
PM13	PR	*	09:14	15:53	399	5.0	5.0	5.0	1995	1/100	0.001	<LOQ
PM12	BRC		09:17	15:51	394	5.0	5.0	5.0	1970	1/100	0.001	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PM11	Temporary perimeter @ SW of Lumber storage building	<LOQ
PM12	Temporary perimeter between Lumber storage & Warehouse building	<LOQ
PM13	Temporary perimeter @ SW corner of Warehouse	<LOQ
PM12		<LOQ

** loading trucks with soil*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Plant wide

KEH #: 21001-001D
SAMPLING DATE: 12/2/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PO3	P	*	07:37	15:40	483	2.0	2.0	2.0	966	3/100	0.003	<LOQ
PO4	P	*	07:39	08:00	21	2.0	2.0	2.0	42	0.5/100	0.064	<LOQ
PO5	P	*	07:41	15:56	495	2.0	2.0	2.0	990	19.5/100	0.003	0.010
PO6	P	*	08:00	16:09	489	2.0	2.0	2.0	978		0.003	**
B01	BRC											

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PO3	Terry Holthaus, SS #481-58-4024, inside truck	<LOQ
PO4	Doug Carr, # 101265, inside truck	<LOQ
PO5	Fred McDougall, SS # 728-14-3207, inside truck	0.010
PO6	Doug Carr, # 101265, inside truck	**
B02	Blind Recount	

Worker, SS#	Work Activity	10 Hr.TWA (f/cc)
Terry Holthaus, SS #481-58-4024	Loading and unloading soil from trucks	<0.003
Doug Carr, # 101265	Loading and unloading soil from trucks	<0.003 (8-hr.)
Fred McDougall, SS # 728-14-3207	Loading and unloading soil from trucks	0.008

** loading soil @ plant and dumping @ mine*
*** void – particulate overload*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Plant wide

KEH #: 21001-001D
SAMPLING DATE: 12/4/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM03	PR		09:06	15:48	402	5.0	5.0	5.0	2010	1/100	0.001	<LOQ
PM04	PR		09:09	15:55	406	5.0	5.0	5.0	2030	2.5/100	0.001	<LOQ
PM05	PR		09:14	16:03	409	5.5	6.0	5.75	2352	2/100	0.001	<LOQ
PM06	PR		09:16	16:09	413	5.0	5.0	5.0	2065	0.5/100	0.001	<LOQ
PM07	PR		09:19	16:11	412	5.5	5.5	5.5	2266	0/100	0.001	<LOQ
PM08	PR		09:27	16:15	408	5.0	5.0	5.0	2040	1.5/100	0.001	<LOQ
PM09	PR		09:31	16:17	406	5.0	5.0	5.0	2030	2/100	0.001	<LOQ
PM10	PR		08:53	15:09	376	5.0	5.0	5.0	1880	3/100	0.001	<LOQ
PM04	BRC		09:09	15:55	406	5.0	5.0	5.0	2030	1/100	0.001	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign-highway 37	<LOQ
PM10	Temporary inside perimeter @ fire hydrant	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Plant wide

KEH #: 21001-001D
SAMPLING DATE: 12/4/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM11	PR	*	08:33	15:16	403	2.0	2.0	2.0	806	2/100	0.003	<LOQ
PM12	PR	*	08:38	15:19	401	2.0	0.5	1.25	501	3/100	0.005	<LOQ
PM13	PR	*	08:47	15:25	398	5.0	5.0	5.0	1990	2/100	0.001	<LOQ
PM11	BRC		08:33	15:16	403	2.0	2.0	2.0	806	1/100	0.003	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PM11	SW of Lumber storage building-temporary inside perimeter	<LOQ
PM12	Between Lumber storage building & Warehouse building- temporary inside perimeter	<LOQ
PM13	SW corner of Warehouse building-temporary inside perimeter	<LOQ
PM11	SW of Lumber storage building	

** loading trucks with soil*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Plant wide

KEH #: 21001-001D
SAMPLING DATE: 12/4/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PO3	P	*	07:21	07:45	24	2.0	2.0	2.0	48	1/100	0.056	<LOQ
PO4	P	*	07:24	16:27	543	2.0	1.0	1.5	815			**
PO5	P	*	07:15	16:33	558	2.0	1.0	1.5	837	3.5/100	0.003	<LOQ
PO6	P	*	07:45	16:35	530	2.0	1.0	1.5	795	5/100	0.003	<LOQ
B01	BRC											

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PO3	Luis Burrel, # 061138, inside truck	<LOQ
PO4	Doug Carr, # 101265, inside truck	**
PO5	Vernon Cunningham, SS # 517-70-9213, inside truck	<LOQ
PO6	Luis Burrel, # 061138, inside truck	<LOQ
B02	Blind Recount	

Worker, SS#	Work Activity	10 Hr.TWA (f/cc)
Luis Burrel, # 061138	Loading and unloading soil from trucks	<0.005
Doug Carr, # 101265	Loading and unloading soil from trucks	**
Vernon Cunningham, SS # 517-70-9213	Loading and unloading soil from trucks	<0.003

** loading soil @ plant and dumping @ mine*
*** void – particulate overload*

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Plant wide

KEH #: 21001-001D
SAMPLING DATE: 12/5/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01	FB									0/100		
B02	FB									0/100		
PM03	PR		08:33	15:57	44	5.0	5.0	5.0	2220	1/100	0.001	<LOQ
PM04	PR		08:35	16:00	445	5.0	5.0	5.0	2225	0/100	0.001	<LOQ
PM05	PR		08:38	16:03	445	5.0	6.0	5.5	2448	0/100	0.001	<LOQ
PM06	PR		08:46	16:09	443	5.0	5.0	5.0	2215	0/100	0.001	<LOQ
PM07	PR		08:49	16:11	442	5.0	5.0	5.0	2210	0/100	0.001	<LOQ
PM08	PR		08:52	16:13	441	5.0	5.0	5.0	2205	1/100	0.001	<LOQ
PM09	PR		08:54	16:15	441	5.0	5.0	5.0	2205	1/100	0.001	<LOQ
PM10	PR											<LOQ
PM07	BRC		08:49	16:11	442	5.0	5.0	5.0	2210	1/100	0.001	<LOQ

Sample Number	Sample Description/Location	Results (f/cc)
B01	Field Blank	
B02	Field Blank	
PM03	Location #1-north of Pole Barn, on perimeter	<LOQ
PM04	Location #2-NW of Planer building, on perimeter	<LOQ
PM05	Location #3-west of Planer building-on perimeter	<LOQ
PM06	Location #4-SW of Planer building, on perimeter	<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ
PM08	Location #6-NE of Lumber storage building, on perimeter	<LOQ
PM09	Location #7-NE corner of property, on stop sign-highway 37	<LOQ
		<LOQ
PM07	Location #5-south of Warehouse building, on perimeter	<LOQ

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, Colorado 80127
(303) 932-8484

AIR MONITORING & SAMPLE ANALYSIS REPORT

CLIENT: URS Radian Corporation
PROJECT: W. R. Grace Export Plant & Mine Site-Plant wide

KEH #: 21001-001D
SAMPLING DATE: 12/6/00

Sample Number	Sample Type	Work Activity	Time (24 Hr. Clock) Start	Stop	Minutes	Start	Stop	AVG	Liters (L)	Fibers/ Field	LOQ (f/cc)	Results f/cc
B01EPA	FB											*
B02EPA	FB											*
PM03EPA	BAK/CL		08:14	15:46	452	5.0	5.0	5.0	2260		0.001	*
PM04EPA	BAK/CL		08:18	15:50	452	5.5	5.5	5.5	2486		0.001	*
PM05EPA	BAK/CL		08:21	15:53	452	5.0	5.0	5.0	2260		0.001	*
PM06EPA	BAK/CL		08:24	15:56	452	5.0	5.0	5.0	2260		0.001	*
PM07EPA	BAK/CL		08:27	15:59	452	5.0	5.0	5.0	2260		0.001	*
PM08EPA	BAK/CL		08:30	16:03	453	5.0	5.0	5.0	2265		0.001	*
PM09EPA	BAK/CL		08:33	16:06	453	5.0	5.0	5.0	2265		0.001	*

Sample Number	Sample Description/Location	Results (f/cc)
B01EPA	Field Blank	*
B02EPA	Field Blank	*
PM03EPA	Location #1-north of Pole Barn, on perimeter	*
PM04EPA	Location #2-NW of Planer building, on perimeter	*
PM05EPA	Location #3-west of Planer building-on perimeter	*
PM06EPA	Location #4-SW of Planer building, on perimeter	*
PM07EPA	Location #5-south of Warehouse building, on perimeter	*
PM08EPA	Location #6-NE of Lumber storage building, on perimeter	*
PM09EPA	Location #7-NE corner of property, on stop sign-highway 37	*

** Samples submitted to customer*

CERTIFICATES

ARL LABORATORIES, INC.

Analysis, Research and Consulting

1323 9th Avenue South - Grand Forks, North Dakota 58201 (701)-772-6496

Certifies That

Patrick T.C. McGurren

has successfully completed the course

ASBESTOS FIBER COUNTING/PROJECT MONITOR

(NIOSH 582E - Sampling and Evaluating Airborne Asbestos Dust Equivalent)

and passed the exam

Nov. 15th thru Nov. 18th, 1999

(Certificate # 502-92-7003)

Instructors:

Joseph J. Worman
President

Art Ruud
Senior Staff Chemist

APPENDIX F-4

HEALTH AND SAFETY PERSONAL AIR MONITORING

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE: 8/6/00 ~~8/5/00~~	CLIENT: AC & S PROJECT #: 01001-043	PROJECT CONTACT: Chuck Shaw	PROJECT LOCATION: WR Grace Vermiculite, Libby, MT WORK AREA:	SAMPLING REP: Patrick McGurren ANALYSIS BY:

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☐ ID _____ Other: DC Lite Dry Cal	X 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other	___ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. _____	X 385 mm² _____ mm² ___ NA	X 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ___ F/cc ___ other ___ ppm ___ mg/M³
	Field Blank												
	Field Blank												
P5	P	Inside Planer building worn by Jose G. Aguilar	Prep	0846	1130	166	1.46	1.45	1.46	242.36		41.0/100	0.08
P6	P	Inside Planer building worn by Cayetano Montoya	Prep	0847	1134	167	1.82	1.70	1.76	293.92		78.5/100	0.13
Blind Recount													

Key:

Sample Type: P = Personal; Ex = Excursion; IWA = Inside Work Area; OWA = Outside Work Area; BAK = Background; A = Ambient Air; HEX = HEPA Exhaust; CL = Clearance Sample

Activity: PREP = Work Area Preparation; REM - Removal; GB - Glovebag; FC - Final Cleaning; BO = Bagout; TD = Tear Down; PP - Paint Prep

URS COPY

Project No. 805169
File Code No. 4.5.6.2.5
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
8/7/00	AC & S PROJECT #: 01001-043	Chuck Shaw	W.R. Grace Vermiculite, Libby, MT WORK AREA:	Patrick McGuiren ANALYSIS BY: Patrick McGuiren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☒ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☐ ID _____ Other: DC Lite Dry Cal	X 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other	___ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. _____ Lot No. _____	X 385 mm² _____ mm² ___ NA	X 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ___ F/cc ___ other ___ ppm ___ mg/M³
	Field Blank												
	Field Blank												
P7	P	Inside Planer building work by Jose Perez	Prep	0810	0953	103	1.49	1.21	1.35	139.05		20.0/100	0.07
P8	P	Inside Planer building work by Margarito Rivera		0809	0953	104	1.13	0.24	0.99	102.96		19.0/100	0.09
Blind Recount													

Key:

Sample Type: P = Personal; Ex = Excursion; IWA = Inside Work Area; OWA = Outside Work Area; BAK = Background; A = Ambient Air; HEX = HEPA Exhaust; CL = Clearance Sample

Activity: PREP = Work Area Preparation; REM - Removal; GB - Glovebag; FC - Final Cleaning; BO = Bagout; TD = Tear Down; PP - Paint Prep

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Project No. 805169
File Code No. 4.5.5.2.8
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
8/9/00	AC & S PROJECT #: ~~21001-001~~ 01001-043 (prem)	Chuck Shaw	W.R. Grace Vermiculite Plant, Libby, MT WORK AREA: Plant wide	Patrick McGuire ANALYSIS BY: Patrick McGuire

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☒ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☐ ID _____ Other: DC Lite Dry Cal DC-2 739	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other	X MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. _____	X 385 mm² _____ mm² ___ NA	X 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION X F/cc ___ other ___ ppm ___ mg/M³
34	Field Blank											3.0/100	
34A	Field Blank											–	
P9	P	Inside Planer building worn by - Jose Perez ~~Moving material~~ *	Prep	0927	pump died	–	2.72	pump died	pump died	–	–	–	The pump died
P10	↓	Inside Planer building ~~worn by~~ - Jose G. ~~Moving material~~ Aguilar *	↓	0925	1309	224	2.67	2.73	2.70	604.8		38.0/100	0.03
P11	↓	Inside Planer building worn by Jose G. Aguilar *	↓	1325	1544	139	2.71	2.62	2.67	371.13		28.5/100	0.04
P12	↓	Inside Planer building worn by Guillermo Martinez *	↓	1329	1619	170	2.57	2.31	2.44	414.8		28.0/100	0.03
P13	EX	Inside Planer building worn by Jose G. Aguilar	↓	1545	1616	31	2.51	2.39	2.45	75.95		6.5/100	0.04
Blind Recount													

* Pre-cleaning and preparing decon

Key:

Sample Type:			Activity:		
	P = Personal	BAK = Background		PREP = Work Area Preparation	BO = Bagout
	Ex = Excursion	A = Ambient Air		REM - Removal	TD = Tear Down
	IWA = Inside Work Area	HEX = HEPA Exhaust		GB - Glovebag	PP - Paint Prep
	OWA = Outside Work Area	CL = Clearance Sample		FC - Final Cleaning	

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Project No. 805169
File Code No. 4.5.6.2.11
Doc No. _____

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
8/10/00	AC & S PROJECT #: 01001-043	Chuck Shaw	W.R. Grace Vermiculite Plant, Libby, MT WORK AREA:	Patrick McGurran ANALYSIS BY: Patrick McGurran

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☒ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☐ ID _____ Other: DC-Lite Dry Cal DC-L 739	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. _____ Lot No. _____	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B00	Field Blank	–	–	–	–	–	–	–	–	–	–	1.0/100	Field blank
B01	Field Blank	–	–	–	–	–	–	–	–	–	–	1.0/100	Field blank
P01	Ex	Planer building-constructing worn by-inside decon unit Victor Rojas *		0822	0852	30	1.45	1.72	1.59	47.7	0.056	1.0/100	0.01
P02	P	Planer building inside worn by Fernando Juarez *		0818	1636	498	1.46	2.32	1.89	941.22	0.003	34.5/100	0.02
P03	P	Planer building-inside worn by Victor Rojas *		0853	1633	460	2.09	0.28	1.19	545.1	0.005	29.5/100	0.03
Blind Recount													

* Shower Facility/decon unit construction.

Key:

Sample Type:			Activity:		
	P = Personal	BAK = Background		PREP = Work Area Preparation	BO = Bagout
	Ex = Excursion	A = Ambient Air		REM - Removal	TD = Tear Down
	IWA = Inside Work Area	HEX = HEPA Exhaust		GB - Glovebag	PP - Paint Prep
	OWA = Outside Work Area	CL = Clearance Sample		FC - Final Cleaning	

URS

Project No. 805169
File Code No. 4.5.5.2.14
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
8/11/00	ACES PROJECT #: 01001-043	Chuck Shaw	W.R. Grace Vermiculite Plant, Libby, MT WORK AREA:	Patrick McGuiver ANALYSIS BY: Patrick McGuiver

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☒ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☐ ID _____ Other: DC-Lite Dry Cal DC-L 739	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other	X MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1337	X 385 mm² _____ mm² ___ NA	X 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ___ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02	Field Blank											1.5/100	Field Blank
P01	Ex	Planer building cleaning machinery worn by Cayetano Montoya	Prep	0828	0858	30	1.18	1.15	1.17	35.1	0.075	1.5/100	< LOQ
P02	P	Planer building cleaning machinery worn by Margarito Rivelez		0830	1120	170	1.54	1.89	1.72	292.4	0.009	20.5/100	0.03
P03	P	Planer building cleaning machinery worn by Cayetano Montoya		0858	1121	139	1.20	1.53	1.37	190.43	0.014	19.5/100	0.05
P04	P	Planer building cleaning machinery worn by Margarito Rivelez		1247	1702	255	1.17	0.30	0.99	252.45	0.011	12.5/100	0.02
P05	P	Planer building cleaning machinery worn by Cayetano Montoya		1249	1704	255	1.65	0.72	1.19	303.45	0.009	18.5/100	0.03
Blind Recount													

Key:

Sample Type:			Activity:		
	P = Personal	BAK = Background		PREP = Work Area Preparation	BO = Bagout
	Ex = Excursion	A = Ambient Air		REM - Removal	TD = Tear Down
	IWA = Inside Work Area	HEX = HEPA Exhaust		GB - Glovebag	PP - Paint Prep
	OWA = Outside Work Area	CL = Clearance Sample		FC - Final Cleaning	

URS COPY
Project No. 805169
Code No. 4.5.6.2.17
No. _____

KEH\FORMS\ RM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
8/12/00	AC&S PROJECT #: 01001-043	Chuck Shaw	W.R. Grace Vermiculite Plant Libby, MT WORK AREA:	Patrick McGurren ANALYSIS BY: Patrick McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☒ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☐ ID _____ Other: DC-Lite Dry Cal DC-L 739	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	X MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1337	X 385 mm² _____ mm² ___ NA	X 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION X F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	–	–	–	–	–	–	–	–	–	–	0.5/100	Field Blank
B02	Field Blank	–	–	–	–	–	–	–	–	–	–	0.5/100	Field Blank
P01	EX	Inside Planer building - cleaning machinery - work by Guillermo Martinez	Prep	0817	0847	30	1.39	1.41	1.40	42.0	0.064	7.5/100	0.09
P02	P	Inside Planer building - cleaning machinery - work by - Jose Ibarra	Prep	0825	1501	396	1.83	0.69	1.26	498.96	0.005	4.5/100	< LOQ
P03	P	Inside Planer building - cleaning machinery - work by Guillermo Martinez	Prep	0847	1500	373	1.25	1.21	1.23	458.79	0.006	33.0/100	0.04
Blind Recount													

Key:

Sample Type: P = Personal; Ex = Excursion; IWA = Inside Work Area; OWA = Outside Work Area; BAK = Background; A = Ambient Air; HEX = HEPA Exhaust; CL = Clearance Sample

Activity: PREP = Work Area Preparation; REM - Removal; GB - Glovebag; FC - Final Cleaning; BO = Bagout; TD = Tear Down; PP - Paint Prep

URS ORIGINAL

Project No. 805169

File Code No. 4.5.8.2.20

Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

1.13

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
8/14/00	AC & S PROJECT #: 01001-043	Chuck Shaw	W.R. Grace Vermiculite Plant, Libby, MT WORK AREA:	Patrick McGurren ANALYSIS BY: Patrick McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☐ ID _____ Other: DC-Lite Dry Cal DC-L 739	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 13357	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	–	–	–	–	–	–	–	–	–	–	5.0/100	Field Blank
B02	Field Blank	–	–	–	–	–	–	–	–	–	–	4.0/100	Field Blank
P03	Ex	Planer building - inside planer head room * Jose G. Aguilar	Prep	0815	0945	30	1.24	1.21	1.23	36.9	0.067	17.0/100	0.23
P04	P	Planer building - inside planer head room Jose G. Perez *		0817	1154	217	1.89	1.95	1.42	416.64	0.006	11.0/100	0.01
P05	P	Planer building - inside Planer head room * Jose G. Aguilar		0815	1152	217	1.15	1.36	1.26	273.42 ~~217.0~~	0.010	16.0/100	0.03
P06	P	Jose G. Perez		1315	1707	232	1.13	1.27	1.20	278.4	0.010	14.5/100	0.03
P07	P	Jose G. Aguilar		1318	1711	233	1.96	1.50	1.73	403.09	0.007	4.5/100	< LOQ
Blind Recount													

* cleaning equipment

Key:

Sample Type:			Activity:		
	P = Personal	BAK = Background		PREP = Work Area Preparation	BO = Bagout
	Ex = Excursion	A = Ambient Air		REM - Removal	TD = Tear Down
	IWA = Inside Work Area	HEX = HEPA Exhaust		GB - Glovebag	PP - Paint Prep
	OWA = Outside Work Area	CL = Clearance Sample		FC - Final Cleaning	

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Project No. 805169
File Code No. 4.5.h.2.23
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT: ~~URS~~ Ac & S	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
8/15/00	PROJECT #: 01001-043	Chuck Shaw	W.R. Grace Vermiculite Plant WORK AREA: Libby MT	Patrick McGurren ANALYSIS BY: Patrick McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☒ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☐ ID _____ Other: DC-Lite Dry Cal DC-L739	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfl. _____ Lot No. 13377	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	–	–	–	–	–	–	–	–	–	–	60/100	Field Blank
B02	Field Blank	–	–	–	–	–	–	–	–	–	–	3.5/100	Field Blank
P03	Ex	Planer building - Planer head room * worn by Fernando Juarez	Prep	0819	0850	31	1.44	1.40	1.42	44.02	0.061	27.0/100	0.30
P04	P	Planer building - Planer head room * worn by Victor Rojas		0823	1204	221	2.01	1.99	2.00	442.00	0.006	52.0/100	0.06
P05	P	Planer building - Planer head room * worn by ~~Victor Rojas~~ Fernando Juarez		0850	1206	196	1.15	1.19	1.17	229.32	0.021	14.5/100	0.03
P06	P	Planer building - Planer head room * worn by Fernando Juarez		1325	1716	231	1.93	1.88	1.91	441.21	0.006	16.5/100	0.02
P07	P	Planer building - Planer head room * worn by Victor Rojas		1316	1715	239	1.04	1.16	1.10	262.9	0.010	37.5/100	0.07
Blind Recount													

* Cleaning Planer heads.

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

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Project No. 805169
File Code No. 4.5.b.2.26
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
8/16/00	AC&S PROJECT #: 01001-043	Chuck Shaw	WR Grace Vermiculite Plant WORK AREA: Libby, MT	Patrick McGurra ANALYSIS BY: Patrick McGurra

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☒ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☐ ID _____ Other: DC-Lite Dry Cal DC-L739	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. _____ Lot No. 1337	✓ 385 mm² ___ mm² ___ NA	✓ 0.00785 mm² ___ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm mg/M³
B01	Field Blank	–	–	–	–	–	–	–	–	–	–	~~0~~ 0/100	Field Blank
B02	Field Blank	–	–	–	–	–	–	–	–	–	–	3/100	Field Blank
P03 ptem ~~P03~~	Ex	Planer building-inside cleaning planer heads Cayetano Montoya	Prep	0808	0842 ptem	34 ptem ~~30~~	1.96	2.03	2.0	68.0	0.040	5.5/100	LOQ
P04 ptem ~~P04~~	P	Inside Planer building cleaning planer heads Margarito Rivera	Prep	0810	1203	233	1.27	1.76	1.52	354.16	0.008	15.0/100	0.02
P05 ptem ~~P05~~	P	Planer building-inside cleaning planer heads Cayetano Montoya	Prep	0842	1202	200	2.03	1.92	1.98	396.0	0.007	5.5/100	<LOQ
P06 ptem ~~P06~~	P	Inside Planer building-cleaning lumber Margarito Rivera	Prep	1320	1713	233	2.00	0.44	1.22	284.26	0.009	100/84	0.21
P07	P	Inside Planer building-cleaning lumber Cayetano Montoya	Prep	1322	1715	233	1.88	dead pump	–	–	–	–	pump died
Blind Recount													

Key:

Sample Type:			Activity:		
	P = Personal	BAK = Background		PREP = Work Area Preparation	BO = Bagout
	Ex = Excursion	A = Ambient Air		REM - Removal	TD = Tear Down
	IWA = Inside Work Area	HEX = HEPA Exhaust		GB - Glovebag	PP - Paint Prep
	OWA = Outside Work Area	CL = Clearance Sample		FC - Final Cleaning	

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Project No. 805169
File Code No. 4.5.6.2.29
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
8/17/00	AC&S PROJECT #: 01001-043	Tim Gish	WR Grace Vermiculite Plant WORK AREA: Libby, MT	Patrick McGurren ANALYSIS BY: Patrick McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☒ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☐ ID _____ Other: DC-Lite Dry Cal DC-L 739	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. _____ Lot No. 1337	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ___ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	1.0/100	FIELD BLANK
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	FIELD BLANK
P03	Ex	Planer building - inside Demoing walls - worn by Jose Ibarra	DEMO	0827	0857	30	1.94	2.01	1.98	59.4	0.046	36.5/100	0.30
P04	P	Planer building - inside Demoing walls - worn by Jose G. Aguilar		0827	1338	311	1.89	2.15	2.02	628.22	0.004	—	particulate overload
P05	P	Planer building - inside Demoing walls - worn by Jose Ibarra		0857	1347	290	2.0	1.13	1.57	455.30	0.006	100/37	0.29
P06	P	Planer building - inside Demoing walls - worn by Jose G. Aguilar		1338	1711	213	1.71	1.67	1.69	359.97	0.008	100/36	0.38
P07	P	Planer building - inside Demoing walls - worn by Margarito Rivera		1347	1714	207	1.60	2.14	1.87	387.09	0.007	100/74	0.17
Blind Recount													

* Lots of work-created sawdust in the air. Demoing walls since 8/15/00

Key:

Sample Type:			Activity:		
	P = Personal	BAK = Background		PREP = Work Area Preparation	BO = Bagout
	Ex = Excursion	A = Ambient Air		REM - Removal	TD = Tear Down
	IWA = Inside Work Area	HEX = HEPA Exhaust		GB - Glovebag	PP - Paint Prep
	OWA = Outside Work Area	CL = Clearance Sample		FC - Final Cleaning	

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Project No. 895169
File Code No. 4.5.6.2.33
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
8/18/00	AC&S PROJECT #: 01001-043	Chuck Shaw	W.R. Grace Vermiculite Plant WORK AREA: Libby, MT	Patrick McGurren ANALYSIS BY: Patrick McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☒ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☐ ID _____ Other: DC-Lite Dry Cal DC-L 739	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1337	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	–	–	–	–	–	–	–	–	–	–	0/100	FIELD BLANK
B02	Field Blank	–	–	–	–	–	–	–	–	–	–	0/100	FIELD BLANK
P03/7318	EX-	Planer Building - inside Demoing walls - worn by - Guillermo Martinez	Demo	0900	0930	30	2.24	2.12	2.18	65.4	0.041	93.5/100	0.70
P04/4125	P	Planer Building - inside Demoing walls - worn by - Jose Perez	↓	0905	1318	253	1.68	1.68	1.68	425.04	0.006	94.0/100	0.11
P05/7318	P	Planer Building - inside Demoing walls - worn by - Guillermo Martinez	↓	0930	1319	229	1.58	Dead pump	–	VOID			Pump died
P06/7351	P	Planer building - inside Demoing walls - worn by - Jose Perez	↓	1318	1715	237	2.06	Dead pump	–				Pump died
P07/4729	P	Planer building - inside Demoing walls - worn by - Guillermo Martinez	↓	1319	1716	237	2.03	0.73	1.38	327.06	0.008	90.0/100	0.13
Blind Recount													

Key:

Sample Type: P = Personal; Ex = Excursion; IWA = Inside Work Area; OWA = Outside Work Area; BAK = Background; A = Ambient Air; HEX = HEPA Exhaust; CL = Clearance Sample

Activity: PREP = Work Area Preparation; REM - Removal; GB - Glovebag; FC - Final Cleaning; BO = Bagout; TD = Tear Down; PP - Paint Prep

URS

Project No. 805169
File Code No. 4.5.6.2.35
Doc No. _____

KEH\FORMS\AI... KM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT: AC & S	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
8/19/00	PROJECT #: 01001-043	Chuck Shaw	WR Grace Vermiculite Plant WORK AREA: Libby, MT	Patrick McGurren ANALYSIS BY: Patrick McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☐ ID _____ Other: DC-Lite Dry Cal DC-L739	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other	___ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. _____	___ 385 mm² _____ mm² ___ NA	___ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ___ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	–	–	–	–	–	–	–	–	–	–	0/400	FIELD BLANK
B02	Field Blank	–	–	–	–	–	–	–	–	–	–	1/100	FIELD BLANK
P03	EX ~~OWA~~	Inside Planer building – ~~building~~ Demoing walls worn by: VICTOR ROJAS	DEMO	0858	0931	33	2.08	2.18	2.13	70.29	0.039	100.0/82	0.851
P04	P	Inside Planer building – Demoing walls – worn by: CAYETANO MONTOYA		0926	1322	236	2.11	2.01	2.06	509.76	0.005	100.0/54	0.178
P05	P	Inside Planer building – worn by: Demoing walls VICTOR ROJAS	–	0931	1323	232	2.18	2.13	2.16	501.12	0.005	100.0/64	0.153
P06/7318	P	Inside Planer building – Demoing walls – worn by: CAYTANO MONTOYA		1322	1725	243	1.65	0.64	1.15	279.45	0.010	100.0/58	0.303
P07/4125	P	inside Planer building Demoing walls – worn by: VICTOR ROJAS		1323	pump died	–	1.67	pump died	–	–	–	–	pump died
Blind Recount													

Key:

Sample Type: P = Personal; Ex = Excursion; IWA = Inside Work Area; OWA = Outside Work Area; BAK = Background; A = Ambient Air; HEX = HEPA Exhaust; CL = Clearance Sample

Activity: PREP = Work Area Preparation; REM - Removal; GB - Glovebag; FC - Final Cleaning; BO = Bagout; TD = Tear Down; PP - Paint Prep

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Project No. 805169
File Code No. 4.5.6.2.~~37~~38 (PP)
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
8/21/00	AC & S PROJECT #: 01001 - 043	Chuck Shaw	W.R. Grace Vermiculite Plant WORK AREA: Libby, MT	Patrick McGurren ANALYSIS BY: Patrick McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☐ ID _____ Other: DC-Lite Dry Cal DC-L 739	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1337	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ___ cF/cc ___ other ___ ppm ___ mg/M³
	Field Blank	–	–	–	–	–	–	–	–	–	–	1.0/100	Field Blank
	Field Blank	–	–	–	–	–	–	–	–	–	–	1.0/100	Field Blank
+ 4125 P03	EX	Inside Planer building worn by Demoing walls Margarito Rivera	DEMO	0836	0907	31	1.56	1.71	1.64	50.84	0.054	86.0/100	0.330
+ 7318 P04	P	Inside Planer building Demoing walls - worn by Isabel Herrera		0837	1156	199	2.28	1.93	2.11	419.89	0.006	100/42	0.278
+ 4125 P05	P	Inside Planer building Demoing walls - worn by Margarito Rivera		0907	1158	171	1.76	1.83	1.80	307.8	0.009	100/46	0.346
+ 7351 P06	P	Inside Planer building Demoing walls - worn by Isabel Herrera		1306	1715	249	2.11	2.32	2.22	552.78	0.005	100/56	0.158
+ 7318 P07	P	Inside Planer building Demoing walls worn by Margarito Rivera		1320	1717	237	2.28	2.32	2.30	545.1	0.005	100/34	0.265
Blind Recount													

+ pump #'s.

Key:

Sample Type:			Activity:		
	P = Personal	BAK = Background		PREP = Work Area Preparation	BO = Bagout
	Ex = Excursion	A = Ambient Air		REM - Removal	TD = Tear Down
	IWA = Inside Work Area	HEX = HEPA Exhaust		GB - Glovebag	PP - Paint Prep
	OWA = Outside Work Area	CL = Clearance Sample		FC - Final Cleaning	

URS COPY

Project No. 865169
File Code No. 4.5.b.2.41
Doc No. _____

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
8/22/00	AC & S PROJECT #: 01001-043	Chuck Slaw	WR Grace Vermiculite Plant WORK AREA: Libby, MT	Patrick McGurren ANALYSIS BY: Patrick McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☐ ID _____ Other: DC-Lite Dry Cal DC-L 739	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. _____ Lot No. 1337	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ f/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	20/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	9/100	Field Blank
P03/~~A6~~4125	EX	Planer building - inside Demoing walls - worn by Jose Perez	DEMO	0800	0832	32	1.82	1.79	1.81	57.92	0.047	100.0/53	1.598
P04/02018	P	Inside Planer building Demoing walls - worn by Jose Aguilar	↓	0801	1301	300	1.36	Dead pump	1.36	408.00	0.007	100.0/50	0.240
P05/4125	P	Inside Planer building Demoing walls - worn by Jose Perez	-	0832	1300	268 (pm) ~~468~~	1.74	1.79	1.77	474.36 (pm) ~~828.36~~	0.006 (pm) ~~0.003~~	100.0/37	0.279
P06/	P	Inside Planer building Demoing walls - worn by Guillermo Martinez		1316 (pm) ~~1.70~~	1728 (pm) ~~2.00~~	252	1.76	2.06	1.91	481.32	0.006	100.0/47	0.105
P07/1318	P	Inside Planer building Demoing walls - worn by Jose G. Perez		1315	1727	252	2.06	1.41	1.74	438.48	0.006	100.0/70	0.160
Blind Recount													

Key:

Sample Type:			Activity:		
	P = Personal	BAK = Background		PREP = Work Area Preparation	BO = Bagout
	Ex = Excursion	A = Ambient Air		REM - Removal	TD = Tear Down
	IWA = Inside Work Area	HEX = HEPA Exhaust		GB - Glovebag	PP - Paint Prep
	OWA = Outside Work Area	CL = Clearance Sample		FC - Final Cleaning	

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Project No. 805169
File Code No. 4.5.b.2.44
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT: ~~URS~~ ~~Radian~~ Ace S	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
8/23/00	PROJECT #: 01001-043	Chuck Shaw	WR Grace Vermiculite Plant WORK AREA: Libby, MT	Patrick McGowne ANALYSIS BY: Patrick McGowne

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☐ ID _____ Other: DC-Lite Dry Cal DC-L 739	✓ ~~0.8 um 25~~ mm MCE ___ charcoal tubes ___ Silica Gel Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1337	✓ 385 mm² ___ mm² ___ NA	✓ 0.00785 mm² ___ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
P03/7318	EX	Inside Planer building Demoing walls - worn by VICTOR ROJAS	DEMO	0800	0835	35	1.73	1.79	1.76	61.60	0.044	34.5/100	0.275
P04/4125	P	Inside Planer building Demoing walls - worn by FERNANDO JUAREZ	↓	0801	1324	313	1.76	1.79	1.78	557.14	0.005	100/41	0.215
P05/7318	P	Inside Planer building Demoing walls - worn by VICTOR ROJAS	↓	0835	1325	290	1.56	dead pump	~~1.56~~ —	—	—	—	pump failure - no power V010
P06/	P	Inside Planer building Demoing walls - worn by FERNANDO JUAREZ	↓	1314	1714	240	1.60	dead pump	—	—	—	—	pump failure - no power V010
P07/	P	Inside Planer building Demoing walls - worn by VICTOR ROJAS	↓	1325	1713	228	1.31	dead pump	—	—	—	—	pump failure - no power V010
Blind Recount													

Key:

Sample Type: P = Personal; Ex = Excursion; IWA = Inside Work Area; OWA = Outside Work Area; BAK = Background; A = Ambient Air; HEX = HEPA Exhaust; CL = Clearance Sample

Activity: PREP = Work Area Preparation; REM - Removal; GB - Glovebag; FC - Final Cleaning; BO = Bagout; TD = Tear Down; PP - Paint Prep

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Project No. 805169
File Code No. 4.5.6.2.47
Doc No. _____

KEH\FORM FRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
8/24/00	AC & S PROJECT #: 01001-043	Chuck Shaw	WR Grace Vermiculite Plant WORK AREA: Libby, MT	Patrick McGowan ANALYSIS BY: Patrick McGowan

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☐ ID _____ Other: DC-Lite Dry Cal DC-L 739	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1337	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	FIELD BLANK
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	FIELD BLANK
+ 7326 P03	EX	inside Planer building prepping for powerwash worn by MARGARITO RIVERA	Prep	0814	0844	30	1.18	1.07	1.13	33.9	0.082	6.0/100	0.087
+ 7324 P04	P	Inside planer building prepping for powerwash worn by CAYETANO MONTOYA		0815	—	—	1.90	Dead pump	—	VOID		—	Dead pump
P05/7326 ~~7318~~	P	inside planer building prepping for powerwash worn by Margarito Rivera		0844	1209	205	1.00	1.08	1.04	213.20	0.013	38.5/100	0.089
P06/7318	P	Inside planer building prepping for powerwash worn by Cayetano Montoya		1330	1730	240	1.70	1.70	1.70	408.00	0.007	32.0/100	0.038
P07/7326	P	inside Planer building prepping for powerwash worn by Margarito Rivera		1332	—	pump died	1.17	dead pump	—	VOID	—	—	pump battery died.
~~P08/P08~~ / ~~pm~~	P (pm) EX	Outside planer building east side - pulling weeds worn by Rick Rowe (URS)		1800	1830	30	1.60	1.74	1.67	50.10	0.054	1.0/100	< LOQ
Blind Recount													

Key:

Sample Type: P = Personal; Ex = Excursion; IWA = Inside Work Area; OWA = Outside Work Area; BAK = Background; A = Ambient Air; HEX = HEPA Exhaust; CL = Clearance Sample

Activity: PREP = Work Area Preparation; REM - Removal; GB - Glovebag; FC - Final Cleaning; BO = Bagout; TD = Tear Down; PP - Paint Prep

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Project No. 805169
File Code No. 4.5.6.2.50
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
8/25/00	AC & S PROJECT #: 01001-043	Chuck Shaw	WR Grace Vermiculite Plant WORK AREA: Libby, MT	Patrick McGuire ANALYSIS BY: Patrick McGuire

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☐ ID _____ Other: DC-Lite Dry Cal DC-L 739	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. _____ Lot No. 13337	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ___ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	9/100	Field Blank
P03/4125	P	Inside Planer building setting up decon-work by: JOSE G. PEREZ	Blower installation	0956	1156	180	1.85 ~~1.62~~	1.90 ~~1.00~~	1.88	338.40	0.008	50.0/100	0.072
P04/7351	EX	Inside Planer building setting up decon-work by: JOSE G. AGUILAR		0902	0932	30	1.75	1.73	1.74	52.20	0.052	12.5/100	0.117
P05/7351	P	Inside Planer building setting up decon-work by: JOSE G. AGUILAR		0932	1152	140	1.75	1.71	1.73	242.20	0.011	14.0/100	0.028
P06/7351	P	Inside Planer building VICTOR ROJAS		1310	1650	220	1.69	1.90	1.80	396.00	0.007	100.0/37	0.335
P07/4125	P	Inside Planer building JOSE G. PEREZ		1308	1651	223	1.62	1.00	1.31	292.13	0.009	—	Particulate overload
Blind Recount													

Key:

Sample Type: P = Personal; Ex = Excursion; IWA = Inside Work Area; OWA = Outside Work Area; BAK = Background; A = Ambient Air; HEX = HEPA Exhaust; CL = Clearance Sample

Activity: PREP = Work Area Preparation; REM - Removal; GB - Glovebag; FC - Final Cleaning; BO = Bagout; TD = Tear Down; PP - Paint Prep

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Project No. 805169
File Code No. 4.5.6.2.53
Doc No. _____

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
9/12/00	AC & S PROJECT #: 01001-043	Chuck Shaw	WR Grace Vermiculite Plant WORK AREA: Libby, MT	Patrick McGurren ANALYSIS BY: Patrick McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☐ ID _____ Other: DC-Lite Dry Cal DC-L 739	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 13137	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
P10	P	Inside Millwork West office - worn by - Guillermo Martinez	office cleaning	1437	1643	126	2.08	2.05	2.07	260.82	0.010	12.0/100	0.023
P11	P	Inside Millwork West office - worn by - Margarito Rivera	office cleaning	1439	1645	126	~~1.95~~ 1.95	1.94	1.95	245.70	0.011	13.0/100	0.026
Blind Recount													

Key:

Sample Type: P = Personal; Ex = Excursion; IWA = Inside Work Area; OWA = Outside Work Area; BAK = Background; A = Ambient Air; HEX = HEPA Exhaust; CL = Clearance Sample

Activity: PREP = Work Area Preparation; REM - Removal; GB - Glovebag; FC - Final Cleaning; BO = Bagout; TD = Tear Down; PP - Paint Prep

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Project No. 805169
File Code No. 4.5.b.2.55
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
9/15/00	AC & S PROJECT #: 01001-043	Chuck Shaw	WR Grace Vermiculite Plant- Storage Shed WORK AREA: Libby, MT	Patrick McGurran ANALYSIS BY: Patrick McGurran

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1337	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank												Field Blank
B02	Field Blank												Field Blank
P03	P	Inside Storage shed - worn by - Guillermo Martinez	Storage shed cleaning	1823	2115	172	1.5	1.5	1.5	258.00	0.011	52.5/100	0.094
P04	↓	Inside Storage shed worn by - Cayetano Montaño	↓	1827	2015	108	1.5	1.5	1.5	162.00	0.017	23.5/100	0.070
P05	Ex	↓	↓	2015	2045	30	1.5	1.5	1.5	45.00	0.060	10.0/100	0.104
P06	P	↓	↓	2045	2115	30	1.5	1.5	1.5	45.00	0.060	5.0/100	< LOQ
Blind Recount													

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

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Project No. 805169
File Code No. 4.5.6.2.58
Doc No. _____

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
9/16/00	ACS PROJECT #: 01001-043	Chuck Shaw	WR Grace Vermiculite Plant - Storage shed WORK AREA: Libby, MT	Patrick McGuire ANALYSIS BY: Patrick McGuire

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other 45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1337	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	1.0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
P03	Ex	Inside storage shed worn by - Margarito Rivera	storage shed cleaning	1531	1606	35	1.30	1.30	1.30	45.5	0.060	3.5/100	<LOQ
P04	P	Inside storage shed worn by - Isabel Herrera ~~[illegible]~~	↓	1530	2101	331	1.30	1.10	1.20	397.20	0.007	100/72	0.171
P05	↓	Inside storage shed worn by - Margarito Rivera	↓	1606	2102	296	1.30	1.30	1.30	384.80	0.007	50.0/100	0.063
Blind Recount													

Key:

Sample Type:			Activity:		
	P = Personal	BAK = Background		PREP = Work Area Preparation	BO = Bagout
	Ex = Excursion	A = Ambient Air		REM - Removal	TD = Tear Down
	IWA = Inside Work Area	HEX = HEPA Exhaust		GB - Glovebag	PP - Paint Prep
	OWA = Outside Work Area	CL = Clearance Sample		FC - Final Cleaning	

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Project No. 805169
File Code No. 4.5.6.2.61
Doc No. _____

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KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
4/17/00	AC & S PROJECT #: 01001-043	Chuck Shaw	W.R. Grace Vermiculite Plant WORK AREA: Libby, MT	Patrick McGurna ANALYSIS BY: Patrick McGurna

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1337	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
P03	P	Inside Storage Shed worn by Victor Rojas	Storage Shed power wash	0841	1209	208	1.3	1.3	1.3	270.40	0.010	90.0/100	0.163
P04	EX	Inside Storage Shed worn by Fernando Juarez	↓	0843	0913	30	1.3	1.3	1.3	39.00	0.069	8.5/100	0.107
P05	P	Inside Storage Shed worn by Fernando Juarez		0913	1210	177	1.3	1.3	1.3	230.10	0.012	100.0/94	0.227
P06	↓	Inside Storage Shed worn by Victor Rojas		1323	1958	395	1.3	1.3	1.3	513.50	0.005	100.0/84	0.114
P07	↓	Inside Storage Shed worn by Fernando Juarez	↓	1316	2002	406	1.3	1.3	1.3	527.80	0.005	63.0/100	0.059
Blind Recount													

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

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Project No. 805169
File Code No. 4.5.6.2.64
Doc No. _____

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
9/18/00	Acq S PROJECT #: 01001-043	Chuck Shaw	W.R. Grace Vermiculite Plant Storage Shed WORK AREA: Libby, MT	Patrick McGurner ANALYSIS BY: Patrick McGurner

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other 45 T.E.M	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. _____ Lot No. 1337	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	1.0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	1.0/100	Field Blank
P03	EX	Inside Storage Shed building - worn by Cayetano Montoya	Storage shed power wash	0803	0838	35	1.30	1.30	1.30	45.50	0.060	8.0/100	0.075
P04	P	inside storage shed building - worn by Margarito Rivera	↓	0805	1700	535	1.30	1.00	1.15	615.25	0.004	28.5/100	0.022
P05	↓	inside storage shed building - worn by Cayetano Montoya	↓	0838	1700	502	1.30	1.10	1.20	602.40	0.004	21.5/100	0.017
Blind Recount													

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

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Project No. 805169
File Code No. 4.5.6.2.67
Doc No. _____

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KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT: AC&S	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
9/19/00	PROJECT #: 01001-001	Chuck Shaw	WR Grace Vermiculite Plant - Storage shed WORK AREA: Libby, MT	Patrick McGurren ANALYSIS BY: Patrick McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. _____	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
P03	P	On tractor - worn by Fernando Suarez	Moving ~~equip~~ lumber	1516	1916	240	2.0	2.0	2.0	480.00	0.006	31.0/100	0.032
P04	↓	Inside storage shed - laying poly. Guillermo Martinez	↓	1515	1915	240	2.0	2.0	2.0	480.00	0.006	19.0/100	0.019
P05	EX	Outside storage shed - cleaning up outside Guillermo Martinez property	↓	1915	1945	30	2.0	2.0	2.0	60.00	0.045	11.0/100	0.090
Blind Recount													

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

URS

Project No. 805169
File Code No. 4.5.6.2.70
Doc No. _____

KEH\F( )\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
9/20/00	AC&S PROJECT #: 01001-043	Chuck Shaw	W.R. Grace Vermiculite Plant - Warehouse WORK AREA: Libby, MT	Patrick McGurren ANALYSIS BY: Patrick McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1337	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
P03	EX	Inside Warehouse - worn by - Margarito Rivera	Cleaning material	0906	0936	30	2.00	2.00	2.00	60.00	0.045	94.0/100	0.768
P04	P	Inside Warehouse - worn by Cayetano Montoya	↓	0907	1700	473	2.00	2.00	2.00	946.00	0.003	45.5/100	0.024
P05	P	Inside Warehouse worn by - Margarito Rivera	↓	0936	1700	444	2.00	2.00	2.00	888.00	0.003	33.0/100	0.018
Blind Recount													

Key:

Sample Type:			Activity:		
	P = Personal	BAK = Background		PREP = Work Area Preparation	BO = Bagout
	Ex = Excursion	A = Ambient Air		REM - Removal	TD = Tear Down
	IWA = Inside Work Area	HEX = HEPA Exhaust		GB - Glovebag	PP - Paint Prep
	OWA = Outside Work Area	CL = Clearance Sample		FC - Final Cleaning	

URS

Project No. 805169
File Code No. 4.5.b.2.73
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
9/2/00	ACES PROJECT #: 01001-043	Chuck Shaw	W.R. Grace Vermiculite Plant - Warehouse building WORK AREA: Libby, MT	Patrick McGuirre ANALYSIS BY: Patrick McGuire

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. _____ Lot No. 1337	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
P03	P	Inside warehouse building worn by Jose G. Aguilar	Cleaning miscellaneous materials	1050	1410	200	2.00	2.00	2.00	400.00	0.007	98.00/100	0.120
P04	↓	Inside warehouse building worn by Guillermo Martinez	↓	1052	1656	364	2.00	2.00	2.00	728.00	0.004	—	particulate overload
P05	Ex	Inside warehouse building worn by Jose G. Aguilar		1410	1440	30	2.00	2.00	2.00	60.00	0.045	44.50/100	0.364
P06	P	Inside warehouse building worn by Jose G. Aguilar	↓	1440	1655	135	2.00	2.00	2.00	270 (pm) ~~135.00~~	0.020	51.00/100	0.093 ~~0.185~~ (pm)
Blind Recount													

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

FILE COPY
Project No. 805169
File Code No. 4.5.b.2.76
Doc No.

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
9/22/00	Ac & S PROJECT #: 01001-043	Chuck Shaw	WR Grace Vermiculite Plant Warehouse WORK AREA: Libby, MT	Patrick McGuire ANALYSIS BY: Patrick McGuire

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other 0.45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1337	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ f/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	2.0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	1.0/100	Field Blank
P03	2X	Warehouse building - cleaning lumber - work by Victor Rojas	cleaning miscellaneous materials	0957	1033	36	1.50	1.50	1.50	54.00	0.050	4.5/100	< LOQ
P04	P	Warehouse building - cleaning misc. materials work by Margarito Rivera		0958	1553	355	2.00	2.00	2.00	710.00	0.004	72.0/100	0.049
P05	↓	warehouse building - cleaning misc. materials work by Victor Rojas	↓	1033	1352	199	1.50	1.50	1.50	298.50	0.009	29.0/100	0.045
P06		warehouse building - cleaning misc. materials work by Margarito Rivera		1353	1603	130	2.00	2.00	2.00	260.00	0.010	76.0/100	0.141
P07	↓	warehouse building - cleaning misc. materials work by Victor Rojas	↓	1352	1602	130	1.50	1.50	1.50	195.00	0.014	96.5/100	0.243
Blind Recount													

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

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Project No. 805169
File Code No. 4.5.6.2.79
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
9/29/00	AC&S PROJECT #: ~~21001-001~~ 01001-043	Chuck Show	WR Grace Vermiculite Plant-Warehouse WORK AREA: Libby, MT	Patrick McGurren ANALYSIS BY: Patrick McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1337	✓ 385 mm² ___ mm² ___ NA	✓ 0.00785 mm² ___ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
P03/305	Ex	inside warehouse building worn by: Guillermo Martinez ~~Cayetano Montoya~~	cleaning miscellaneous materials	1120	1150	30	1.90	1.90	1.90	57.00	0.047	30/100	< LOQ
P04/	P	Inside warehouse building worn by - Margarito Rivera	↓	1121	1151	30	2.00	2.00	2.00	60.00	0.045	2.0/100	< LOQ
P05/305	↓	Inside warehouse building worn by - Guillermo Martinez	↓	1312	1632	200	1.90	1.90	1.90	380.00	0.007	22.0/100	0.028
P06/	↓	Inside warehouse building worn by - Margarito Rivera	↓	1313	1633	200	2.00	1.90	1.95	390.00	0.007	12.0/100	0.015
Blind Recount													

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

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Project No. 805169
File Code No. 4.5.5.2.82
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
9/30/00	AC&S PROJECT #: 01001-043	Chuck Shaw	W.R. Grace Vermiculite Plant - Millwork West WORK AREA: Libby, MT	Patrick McGovern ANALYSIS BY: Patrick McGovern

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1337	✓ 385 mm² ___ mm² ___ NA	✓ 0.00785 mm² ___ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B03	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B04	Field Blank	—	—	—	—	—	—	—	—	—	—	2.0/100	Field Blank
P03	Ex	Inside Millwork West exclusion zone - worn by Chuck Shaw	Cleaning & moving lumber	0915	0945	30	2.00	2.00	2.00	60.00	0.045	2.0/100	< LOQ
P04	P	Inside Millwork West exclusion zone - worn by Victor Rojas	↓	0916	1424	308	1.50	1.50	1.50	462.00	0.006	12.0/100	0.012
P05	P	Inside Millwork West exclusion zone - worn by Chuck Shaw		0945	1425	280	2.00	1.80	1.90	532.00	0.005	4.0/100	< LOQ
P06	P	Inside Millwork West exclusion zone - worn by Chuck Shaw		1425	1922	297	2.00	2.00	2.00	594.00	0.005	15.0/100	0.012
P07	P	Inside Millwork West exclusion zone - worn by Victor Rojas		1424	1921	297	1.50	1.50	1.50	445.50	0.006	7.0/100	0.007
Blind Recount													

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

URS

Project No. 805165
File Code No. 4.5.5.2.85
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
10/1/00	AC & S PROJECT #: 01001-043	Chuck Show	WR Grace Vermiculite Plant - Millwork West WORK AREA: Libby, MT	Patrick McGurran ANALYSIS BY: Patrick McGurran

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other 45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B03	Field Blank	–	–	–	–	–	–	–	–	–	–	0/	Field Blank
B04	Field Blank	–	–	–	–	–	–	–	–	–	–	0/	Field Blank
P03	EX	inside Millwork West building - worn by Cayetano Montoya	cleaning & moving misc. lumber	0856	0920	30	2.00	2.00	2.00	60.00	.045	2.0/100	<LOQ
P04	P	outside - cleaning lumber around the property - worn by Jose G. Aguilar		0852	1337	285	1.50	1.50	1.50	427.50	0.006	4.0/100	<LOQ
P05		inside Millwork West building - worn by Cayetano Montoya		0920	1334	254	2.00	2.00	2.00	508.00	0.005	6.0/100	0.006
P06		inside Millwork West building - worn by Cayetano Montoya		1334	1604	150	2.00	2.00	2.00	300.00	0.009	1.0/100	<LOQ
P07		outside - cleaning lumber around the property - worn by Jose G. Aguilar		1337	1602	145	1.50	1.50	1.50	217.50	0.012	6.0/100	0.014
P08		inside Millwork West building - worn by Cayetano Montoya		1604	1942	218	2.00	2.00	2.00	436.00	0.006	6.0/100	0.018
P09		outside - cleaning lumber around the property - worn by Jose G. Aguilar		1602	1943	221	1.50	1.50	1.50	331.50	0.008	2.0/100	<LOQ
–	–	–	–	–	–	–	–	–	–	–	–	–	–
Blind Recount	–	–	–	–	–	–	–	–	–	–	–	–	–

Key:

Sample Type:			Activity:		
	P = Personal	BAK = Background		PREP = Work Area Preparation	BO = Bagout
	Ex = Excursion	A = Ambient Air		REM - Removal	TD = Tear Down
	IWA = Inside Work Area	HEX = HEPA Exhaust		GB - Glovebag	PP - Paint Prep
	OWA = Outside Work Area	CL = Clearance Sample		FC - Final Cleaning	

URS

Project No. 805168
File Code No. 4.5.6.2.88
Doc No. _____

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KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
10/2/00	AC & S PROJECT #: 01001-043	Chuck Shaw	WR Grace Vermiculite Plant - Millwork West WORK AREA: Libby, MT building	Patrick McGuire ANALYSIS BY: Patrick McGuire

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other 45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. _____ Lot No. 15066	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ___ ~~f/cc~~ ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	10/100	Field Blank
B02	Field Blank											0/100	Field Blank
P03	Ex	Inside Millwork West building - work by Fernando Juarez	cleaning & moving misc. lumber	0850	0920	30	2.00	2.00	2.00	60.00	0.045	3.0/100	<LOQ
P04	P	Around the property - on a tractor - work by Isabel Herrera		VOID						DAMAGED FILTER ON CASSETTE			VOID
P05	↓	Inside Millwork West building - work by Fernando Juarez	↓	0920	1759	519	2.00	1.90	1.95	1012.05	0.003	10.0/100	0.005
Blind Recount													

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

URS

Project No. 805169
File Code No. 4.5.6.2.41
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
10/3/00	AC&S PROJECT #: 01001-043	Chuck Shaw	W.R. Grace Vermiculite Plant - Millwork West WORK AREA: Libby, MT	Patrick McGovern ANALYSIS BY: Patrick McGovern

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	2.0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	1.0/100	Field Blank
P03	EX	Inside Millwork West Pole Barn - worn by Guillermo Martinez		0905	0935	30	2.00	2.00	2.00	60.00	0.045	4.0/100	< LOQ
P04	P	Inside Millwork West Pole Barn - worn by - Margarito Rivera		0906	1741	515	2.00	2.00	2.00	1030.00	0.003	18.0/100	0.008
P05	P	Inside Millwork West Pole Barn - worn by - Guillermo Martinez		0935	1740	485	2.00	2.00	2.00	970.00	0.003	17.0/100	0.008
Blind Recount													

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

URS

Project No. 805169
File Code No. 4.5.6.2.94
Doc No. _____

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
10/4/00	ACES PROJECT #: 01001-043	Chuck Show	W.R. Grace Vermiculite Plant - Millwork West Pole Barn & Lumber Storage WORK AREA: Libby, MT	Patrick McGuire ANALYSIS BY: Pat McGuire

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	9/100	Field Blank
P03	EX	Inside Lumber storage building - worn by Cayetano Montoya	cleaning & moving misc. lumber	0845	0915	30	2.00	2.00	2.00	60.00	0.045	11.0/100	0.090
P04	P	Inside Millwork West Pole Barn - worn by Victor Rojas	↓	0847	1740	547	2.00	2.00	2.00	1094.00	0.002	16.5/100	0.007
P05	↓	Inside Lumber storage building - worn by Cayetano Montoya	↓	0915	1741	506	2.00	2.00	2.00	1012.00	0.003	25.0/100	0.012
Blind Recount													

Key:

Sample Type:			Activity:		
	P = Personal	BAK = Background		PREP = Work Area Preparation	BO = Bagout
	Ex = Excursion	A = Ambient Air		REM - Removal	TD = Tear Down
	IWA = Inside Work Area	HEX = HEPA Exhaust		GB - Glovebag	PP - Paint Prep
	OWA = Outside Work Area	CL = Clearance Sample		FC - Final Cleaning	

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Project No. 805169
File Code No. 4.5.6.2.97
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT: ~~URS Radiance~~ AC&S	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
10/5/00	PROJECT #: 01001-043-(PM)	Chuck Shaw	WR Grace Vermiculite Plant-~~Warehouse~~ Millwork West Building WORK AREA: Libby, MT Pole Barn	Patrick McGurren ANALYSIS BY: Patrick McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
P03/314	EX	Inside Millwork West Pole Barn - worn by Isabel Herrera	on tractor-moving misc. lumber	0852	0925	33	2.00	2.00	2.00	66.00	0.041	1.0/100	< LOQ
P04/359	P	Inside Millwork West Pole Barn - worn by Jose G. Aguilar	cleaning & moving misc. lumber	0855	1725	510	2.00	2.00	2.00	1020.00	0.003	15.5/100	0.007
P05/314	↓	Inside Millwork West Pole Barn - worn by Isabel Herrera	on tractor-moving misc. lumber	0925	1726	481	2.00	2.00	2.00	962.00	0.003	12.0/100	0.006
Blind Recount													

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

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Project No. 805169
File Code No. 4.5.6.2.100
Doc No. _____

KEH\FORM FRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT: URS Radian	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
10/4/00	PROJECT #: 21001-001	Jim Stout	WR Grace Vermiculite Mine WORK AREA: Libby, MT	Patrick McGurren ANALYSIS BY: Patrick McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
—	Field Blank	—	—	—	—	—	—	—	—	—	—	—	—
—	Field Blank	—	—	—	—	—	—	—	—	—	—	—	—
P01a	EX	worn by Dave Iliff	installing a well	1445	1540	55	2.00	2.00	2.00	110.00	0.025	0/100	< LOQ
Blind Recount													

here they are

Key:

Sample Type:			Activity:		
	P = Personal	BAK = Background		PREP = Work Area Preparation	BO = Bagout
	Ex = Excursion	A = Ambient Air		REM - Removal	TD = Tear Down
	IWA = Inside Work Area	HEX = HEPA Exhaust		GB - Glovebag	PP - Paint Prep
	OWA = Outside Work Area	CL = Clearance Sample		FC - Final Cleaning	

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No. 805169

4.5.b.2.103

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
10/6/00	AC&S PROJECT #: 01001-043	Chuck Shaw	W.R. Grace Vermiculite Plant Millwork WORK AREA: Libby, MT West Pole Barn	Patrick McGuire ANALYSIS BY: Patrick McGuire

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
☑ Asbestos (NIOSH 7400) ☐ Lead (NIOSH 7082) ☐ Other _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
P03	EX	Inside Millwork West Pole Barn - worn by Margarito Rivera	Cleaning & moving misc. lumber	0949	1025	36	2.00	2.00	2.00	72.00	0.037	16.0/100	0.109
P04	P	Inside Millwork West Pole Barn - worn by Guillermo Martinez	↓	0956	1405	249	1.90	1.90	1.90	473.10	0.006	20.5/100	0.021
P05	↓	Inside Millwork West Pole Barn - worn by Margarito Rivera	↓	1025	1403	218	2.00	2.00	2.00	436.00	0.006	24.0/100	0.077
P06	↓	Inside Millwork West bldg & around the property - worn by Margarito Rivera	↓	1403	1725	202	2.00	2.00	2.00	404.00	0.007	17.0/100	0.021
P07	↓	Inside Millwork West Building & around the property - worn by Guillermo Martinez	↓	1405	1709	184	2.00	2.00	2.00	368.00	0.007	8.0/100	0.011
Blind Recount													

Key:

Sample Type:			Activity:		
	P = Personal	BAK = Background		PREP = Work Area Preparation	BO = Bagout
	Ex = Excursion	A = Ambient Air		REM - Removal	TD = Tear Down
	IWA = Inside Work Area	HEX = HEPA Exhaust		GB - Glovebag	PP - Paint Prep
	OWA = Outside Work Area	CL = Clearance Sample		FC - Final Cleaning	

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Project No. 805169
Task Code No. 4.5.6.2.106
Log No. _____

KEH MS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
10/9/00	ACES PROJECT #: 01001-043	Chuck Show	WR Grace Vermiculite Plant warehouse building WORK AREA: Libby, MT	Patrick McGuire ANALYSIS BY: Patrick McGuire

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	1.0/100	Field Blank
P03	EX	Inside warehouse building worn by Jose G. Aguilar	Demoing walls	0944	1014	30	2.00	2.00	2.00	60.00	0.045	91.5/100	0.744
P04	P	Inside warehouse building worn by Isabel Herrera	↓	0946	1216	150	2.00	2.00	2.00	300.00	0.009	100/34	0.478
P05	↓	Inside warehouse building worn by Jose G. Aguilar	↓	1014	1215	121	2.00	2.00	2.00	242.00	0.011	100/44	0.458
P06	↓	Inside warehouse building worn by Isabel Herrera	↓	1216	1743	327	2.00	2.00	2.00	654.00	0.004	100/23	0.324
P07	↓	Inside warehouse building worn by Jose G. Aguilar	↓	1215	1740	325	2.00	2.00	2.00	650.00	0.004	100/19	0.395
Blind Recount													

Key:

Sample Type:			Activity:		
	P = Personal	BAK = Background		PREP = Work Area Preparation	BO = Bagout
	Ex = Excursion	A = Ambient Air		REM - Removal	TD = Tear Down
	IWA = Inside Work Area	HEX = HEPA Exhaust		GB - Glovebag	PP - Paint Prep
	OWA = Outside Work Area	CL = Clearance Sample		FC - Final Cleaning	

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Project No. 805169
File Code No. 4.5.b.2 112
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
10/7/00	AC & S PROJECT #: 01001-043	Chuck Shaw	WR Grace Vermiculite Plant - Millwork WORK AREA: Libby, MT West Pole Barn Warehouse Building	Patrick McGuire ANALYSIS BY: Patrick McGuire

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	1.0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
P03	P	Inside Warehouse building - worn by - Gaetano Montagna	Cleaning & bagging up inside warehouse	1016	1527	311	2.00	2.00	2.00	622.00	0.004	100/25	0.315
P04	↓	Inside Warehouse building - Worn by Victor Rojas	↓	1015	1455	280	2.00	2.00	2.00	560.00	0.005	100/32	0.274
P05	EX	Inside warehouse building - worn by Victor Rojas	↓	1455	1525	30	2.00	2.00	2.00	60.00	0.045	100/76	1.076
Blind Recount													

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

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Project No. 805169
File Code No. 4.5.6.2.109
Doc No. _____

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
10/10/00	AC&S PROJECT #: 01001-043	Chuck Shaw	WR Grace Vermiculite Plant - warehouse bldg. WORK AREA: Libby, MT	Patrick McGovern ANALYSIS BY: P. McGovern

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other +45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	2.0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	1.0/100	Field Blank
P03	EX	inside warehouse building worn by Cayetano Montoya	Demoing walls	1008	1038	30	2.00	2.00	2.00	60.00	0.045	56.0/100	0.445
P04	P	Inside warehouse building worn by Guillermo Martinez		1007	1205	118	2.00	2.00	2.00	236.00	0.011	100/23	0.890
P05		Inside warehouse building worn by Cayetano Montoya		1038	1202	84	2.00	2.00	2.00	168.00	0.016	100/46	0.625
P06		Inside warehouse building worn by Cayetano Montoya		1305	1715	250	2.00	2.00	2.00	500.00	0.005	100/73	0.132
P07		Inside warehouse building worn by Guillermo Martinez		1303	1713	250	2.00	1.90	1.95	487.50	0.006	100/77	0.129
Blind Recount													

Key:

Sample Type:			Activity:		
	P = Personal	BAK = Background		PREP = Work Area Preparation	BO = Bagout
	Ex = Excursion	A = Ambient Air		REM - Removal	TD = Tear Down
	IWA = Inside Work Area	HEX = HEPA Exhaust		GB - Glovebag	PP - Paint Prep
	OWA = Outside Work Area	CL = Clearance Sample		FC - Final Cleaning	

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Project No. 805169
File Code No. 4.5.b.2.115
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
10/11/00	ACS PROJECT #: 01001 - 043	Chuck Shaw	WR Grace Vermiculite Plant - warehouse building WORK AREA: Libby, MT	Patrick McGurran ANALYSIS BY: P. McGurran

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ f/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
E02	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
P03	EX	inside warehouse building worn by - Margarito Rivera		0925	0955	30	2.00	2.00	2.00	60.00	0.045	4.0/100	< LOQ
P04	P	inside warehouse building worn by - Jose G. Aguilar		0927	1203	156	2.00	2.00	2.00	312.00	0.009	88.5/100	0.139
P05	↓	Inside warehose building worn by Margarito Rivera		0955	1201	126	2.00	2.00	2.00	252.00	0.011	100/52	0.374
P06	↓	Inside Warehose building worn by Jose G. Aguilar		1323	1728	245	2.00	2.00	2.00	490.00	0.006	100/20	0.500
P07	↓	Inside warehose building worn by Margarito Rivera		1322	1729	247	2.00	2.00	2.00	494.00	0.005	100/16	0.621
Blind Recount													

Key:

Sample Type:			Activity:		
	P = Personal	BAK = Background		PREP = Work Area Preparation	BO = Bagout
	Ex = Excursion	A = Ambient Air		REM - Removal	TD = Tear Down
	IWA = Inside Work Area	HEX = HEPA Exhaust		GB - Glovebag	PP - Paint Prep
	OWA = Outside Work Area	CL = Clearance Sample		FC - Final Cleaning	

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Project No. 805169
File Code No. 4.5.6.2.118
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
10/12/00	ACES PROJECT #: 01001 - 043	Chuck Shaw	WR Grace Vermiculite Plant - Warehouse building WORK AREA: Libby, MT	Patrick McGowan ANALYSIS BY: P. McGowan

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other: 45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 15010	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	1.0/100	Field Blank
P03	EX	Inside warehouse building worn by- Cayetano Montoya	pouring inside warehouse building	0914	0944	30	2.00	2.00	2.00	60.00	0.045	305/100	0.245
P04	P	Inside warehouse building worn by- Victor Rojas		0915	1202	167	2.00	2.00	2.00	334.00	0.008	98.5/100	0.144
P05		Inside warehouse building worn by- Cayetano Montoya		0944	1203	139	2.00	2.00	2.00	278.00	0.010	100/70	0.251
P06		Inside warehouse building worn by- Victor Rojas		1315	1721	246	2.00	2.00	2.00	492.00	0.005	100/27	0.367
P07		Inside warehouse building worn by Cayetano Montoya		1316	1733	257	2.00	2.00	2.00	514.00	0.005	100/33	0.288
Blind Recount													

Key:

Sample Type:			Activity:		
	P = Personal	BAK = Background		PREP = Work Area Preparation	BO = Bagout
	Ex = Excursion	A = Ambient Air		REM - Removal	TD = Tear Down
	IWA = Inside Work Area	HEX = HEPA Exhaust		GB - Glovebag	PP - Paint Prep
	OWA = Outside Work Area	CL = Clearance Sample		FC - Final Cleaning	

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Project No. 805169
File Code No. 4.5.6.2.121
Doc No. _____

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
10/13/00	URS Radian PROJECT #: 21001-001	Tim Gish	W.R. Grace Vermiculite Plant - Warehouse building WORK AREA: Libby, MT	Patrick McGurren ANALYSIS BY: P. McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
A12	~~Field Blank~~ IWA	South end of warehouse near bagout	pressure washing	0911	1648	457	2.00	2.00	2.00	914.60	0.003	~~100/26~~	~~Field Blank~~ 0.204
A13	~~Field Blank~~ OWA	clean room decon	warehouse building	0915	1650	455	2.00	1.00	1.50	682.50	0.004	255/100	~~Field Blank~~ 0.018
P14	P	within the perimeter line - on the tractor - worn by Walter Pesicka	operating a tractor	1002	1702	420	2.00	2.00	2.00	840.00	0.003	8/100	0.011
P15	Ex	within the perimeter line on the tractor - worn by Harold Allenberg	operating a tractor	0946	1016	30	2.00	2.00	2.00	60.00	0.045	4/100	< LOQ
P16	↓	within the perimeter line - loading & deconning trucks worn by - Leonard Shoemaker	loading & deconning trucks	0940	1010	30	2.00	2.00	2.00	60.00	0.045	3/100	< LOQ
P17	P	Between the export plant & the mine - worn by Vernon Cunningham	loading & un-loading his truck	0955	1732	457	2.00	1.00	1.50	685.50	0.004	15.5/100	0.011
P18	↓	within the perimeter line - on the tractor - worn by Harold Allenberg	operating a tractor	1016	1531	315	2.00	2.00	2.00	630.00	0.004	7.5/100	0.006
P19	↓	At the mine site - dumping materials from trucks worn by Mike Stephens	un-loading trucks	1113	1733	380	2.00	2.00	2.00	760.00	0.004	100/24	0.269
P20	↓	within the perimeter line - loading & deconning trucks - worn by Leonard Shoemaker	loading & deconning trucks	1010	1723	433	2.00	2.00	2.00	866.00	0.003	25/100	0.014
Blind Recount													

Key:

Sample Type:			Activity:		
	P = Personal	BAK = Background		PREP = Work Area Preparation	BO = Bagout
	Ex = Excursion	A = Ambient Air		REM - Removal	TD = Tear Down
	IWA = Inside Work Area	HEX = HEPA Exhaust		GB - Glovebag	PP - Paint Prep
	OWA = Outside Work Area	CL = Clearance Sample		FC - Final Cleaning	

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Project No. 805169
File Code No. 4.5.5.2.124
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT: ~~URS Radian~~ AC&S	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
10/14/00	PROJECT #: 01001-043	Chuck Shaw	W.R. Grace Vermiculite Plant-Warehouse Building WORK AREA: Libby, MT	Patrick McGurren ANALYSIS BY: P. McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. _____ Lot No. 150ie	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	9/100	Field Blank
P03	EX	Inside Warehouse Building - worn by - Guillermo Martinez	power washing inside warehouse building	0850	0920	30	2.00	2.00	2.00	60.00	0.045	15.5/100	0.127
P04	P	Inside warehouse Building - worn by Victor Rojas	↓	0851	1712	501	2.00	2.00	2.00	1002.00	0.003	100/77	0.064
P05	↓	Inside warehouse building worn by Guillermo Martinez	↓	0920	1714	474	2.00	0.75	1.38	654.12	0.004	100/49	0.153
Blind Recount													

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

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Project No. 805169
File Code No. 4.5.b.2.128
Doc No. _____

KEH\FOR .RFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
10/16/00	AC&S PROJECT #: 01001-043	Chuck Shaw	WR Grace Vermiculite Plant - Warehouse Building WORK AREA: Libby, MT	Patrick McGurren ANALYSIS BY: Patrick McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER ECA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1506	✓ 385 mm² ___ mm² ___ NA	✓ 0.00785 mm² ___ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ f/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
P03	P	Inside Warehouse Building - worn by Guillermo Martinez	Power washing inside warehouse Building	0847	1727	520	2.00	1.00	1.50	780.00	0.003	100/98	0.064
P04	EX	Inside Warehouse Building - worn by Isabel Herrera		0849	0919	30	2.00	2.00	2.00	60.00	0.045	4/100	0.033
P05	P	Inside Warehouse Building - worn by Isabel Herrera		0919	1728	489	2.00	0.50	1.25	611.25	0.004	17/100	0.014
Blind Recount													

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

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Project No. 805169
File Code No. 4.5.6.2.131
Doc No.

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
10/17/00	Ac & S PROJECT #: 01001-043	Chuck Shaw	WR Grace Vermiculite Plant - Warehouse Building WORK AREA: Libby, MT	Patrick McGurren ANALYSIS BY: D. McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
P03	EX	Inside Warehouse Building worn by - Victor Rojas		0917	0947	30	2.00	2.00	2.00	60.00	0.045	1/100	0.008
P04	P	Inside Warehouse Building worn by - Victor Rojas		0947	1807	500	2.00	2.00	2.00	1000.00	0.003	6/100	0.003
Blind Recount													

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

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Project No. 805169
File Code No. 4.5.6.2.
Doc No. _____

KEH\FOR .RFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
10/23/00	ACES PROJECT #: 01001-043	Chuck Shaw	WR Grace Vermiculite Plant - Pole Barn WORK AREA: Libby, MT	Patrick McGuire ANALYSIS BY: P. McGuire

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
P03	P	Inside Pole Barn worn by - Gonzalo Moncada	pressure washing inside	0940	1630	410	2.00	2.00	2.00	820.00	0.003	100/62	0.096
P04	EX	Inside Pole Barn worn by - Guillermo Martinez	Pole Barn ↓	0938	1008	30	2.00	2.00	2.00	60.00	0.045	4.5/100	< LOQ
P05	P	Inside Pole Barn worn by - Guillermo Martinez	↓	1008	1634	386	2.00	2.00	2.00	772.00	0.003	100/70	0.091
Blind Recount													

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

RS

Project No. 805169
File Code No. 4.5.5.2.137
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
10/23/00	PROJECT #: Z1001-001	Tim Gish	W.R. Grace Vermiculite Plant. Pole Barn WORK AREA: Libby, MT	Patrick McGurren ANALYSIS BY: P. McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
P12	~~Field Blank~~ EX	on excavator - worn by Walt Pesicka	moving & hauling	0951	1021	30	2.00	2.00	2.00	60.00	0.045	1.0/100	< LOQ
P13	~~Field Blank~~ P	on excavator worn by Will Vincent	soil	0952	1648	416	2.00	2.00	2.00	832.00	0.003	3.0/100	< LOQ
P14	P	on excavator - worn by Walt Pesicka	↓	1021	1640	379	2.00	2.00	2.00	758.00	0.004	5.0/100	< LOQ
Blind Recount													

Key:

Sample Type:			Activity:		
	P = Personal	BAK = Background		PREP = Work Area Preparation	BO = Bagout
	Ex = Excursion	A = Ambient Air		REM - Removal	TD = Tear Down
	IWA = Inside Work Area	HEX = HEPA Exhaust		GB - Glovebag	PP - Paint Prep
	OWA = Outside Work Area	CL = Clearance Sample		FC - Final Cleaning	

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Project No. 805169
File Code No. 4.5.6.2.140
Doc No _____

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
10/24/00	AC&S PROJECT #: 01001-043	Chuck Show	WR Grace Vermiculite Plant - Pole Barn WORK AREA: Libby, MT	Patrick McGurren ANALYSIS BY: P. McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
P03	P	Inside Pole Barn - worn by Guillermo Martinez ~~Gonzalo Moncado~~	Powerwashing inside	1009	1713	424	2.00	2.00	2.00	848.00	0.003	—	DAMAGED FILTER DUE TO FILTER GETTING WET.
P04	EX	Inside Pole Barn worn by Gonzalo Moncado	Pole Barn	1010	1040	30	2.00	2.00	2.00	60.00	0.045	4.5/100	< LOQ
P05	P	Inside Pole Barn worn by Gonzalo Moncado	↓	1040	1715	395	2.00	2.00	2.00	790.00	0.003	61.0/100	0.038
Blind Recount													

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

URS COPY

Project No. 805167
File Code No. 4.5.6.2.143
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
10/24/00	URS Radian PROJECT #: 21001-001	Tim Gish	W.R. Grace Vermiculite Plant - Pole Barn WORK AREA: Libby, MT	Patrick McGuire ANALYSIS BY: P. McGuire

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm mg/M³
A12	~~Field Blank~~ BKG	Shower trailer - clean room decon	—	0933	1658	445	1.7	0.5	2.20	979.00	0.003	42.0/100	0.020
P13	~~Field Blank~~ 3X	Inside truck-dump truck worn by Terry Holthaus	Loading dump trucks with dirt @ export plant & dumping it at the mine	0951	1021	30	2.0	2.0	2.00	60.00	0.045	60/100	0.049
P14	P	Inside Dump Truck - worn by Ben Cock		1018	1619	361	2.0	2.0	2.00	722.00	0.004	77.0/100	0.052
P15	↓	Inside Dumptruck - worn by Bob Sanders		1032	1625	353	2.0	2.0	2.00	706.00	0.004	23.0/100	0.016
P16	↓	Inside Dumptruck - worn by Terry Holthaus	↓	1021	1700	399	2.0	2.0	2.00	798.00	0.003	26.0/100	0.016
Blind Recount													

Key:

Sample Type: P = Personal; Ex = Excursion; IWA = Inside Work Area; OWA = Outside Work Area; BAK = Background; A = Ambient Air; HEX = HEPA Exhaust; CL = Clearance Sample

Activity: PREP = Work Area Preparation; REM - Removal; GB - Glovebag; FC - Final Cleaning; BO = Bagout; TD = Tear Down; PP - Paint Prep

URS COPY

Project No. 805169
File Code No. 4.5.6.2.147
Doc No. 146 (1)

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
10/25/00	ACES PROJECT #: 01001-043	Chuck Shaw	WR Grace Vermiculite Plant - Pile Burn WORK AREA: Libby, MT	Patrick McGuire ANALYSIS BY: P McGuire

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other, 45 TEM	___ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfl. _____ Lot No. _____	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ___F/cc ___other ___ppm ___mg/M³
B01	Field Blank	–	–	–	–	–	–	–	–	–	–	2/100	Field Blank
B02	Field Blank	–	–	–	–	–	–	–	–	–	–	1/100	Field Blank
P03	Ex	Decon station - work by Fernando Juarez	Decoiling Trucks	0952	1022	30	2.0	2.0	2.00	60.00	0.045	1/100	< LOQ
P04	P	Decon Station - work by Enrique Razo	↓	0953	1700	427	2.0	1.0	1.50	854.00	0.003	0/100	< LOQ
P05	↓	Decon Station - work by Fernando Juarez	↓	1022	1700	382	2.0	1.50	1.75	668.50	0.004	0/100	< LOQ
Blind Recount													

Key:

Sample Type:			Activity:		
	P = Personal	BAK = Background		PREP = Work Area Preparation	BO = Bagout
	Ex = Excursion	A = Ambient Air		REM - Removal	TD = Tear Down
	IWA = Inside Work Area	HEX = HEPA Exhaust		GB - Glovebag	PP - Paint Prep
	OWA = Outside Work Area	CL = Clearance Sample		FC - Final Cleaning	

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Project No. 805169
File Code No. 4.5.6.2.149
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
10/25/00	URS Radian PROJECT #: 21001-001	Tim Gish	W.R. Grace Vermiculite Plant - Pole Barn WORK AREA: Libby, MT	Patrick McGuire ANALYSIS BY: P. McGuire

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ f/cc ___ other ___ ppm ___ mg/M³
A12	~~Field Blank~~ OWA	west clean room decon	—	0920	1703	463	2.00	1.20	1.60	740.80	0.004	15/100	0.009
P13	~~Field Blank~~ EX	Inside dump truck-worn by-Fred McDougall	Loading up trucks with	0848	0923	35	2.00	2.00	2.00	70.00	0.039	3/100	< LOQ
P14	P	Inside dump truck-worn by-Max Moncur	soil @ the export plant & dumping	0840	1658	498	2.00	2.00	2.00	996.00	0.003	20.5/100	0.009
P15	↓	Inside dump truck-worn by-Fred McDougall	them @ the mine. ↓	0923	- VOID -		2.00	- VOID -		- VOID -	VOID	- VOID	The sample over-ran the work shift.
Blind Recount													

Key:

Sample Type:			Activity:		
	P = Personal	BAK = Background		PREP = Work Area Preparation	BO = Bagout
	Ex = Excursion	A = Ambient Air		REM - Removal	TD = Tear Down
	IWA = Inside Work Area	HEX = HEPA Exhaust		GB - Glovebag	PP - Paint Prep
	OWA = Outside Work Area	CL = Clearance Sample		FC - Final Cleaning	

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Project No. 8051169
File Code No. 4.5.6.2.152
Doc No. _____

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
10/26/00	AC&S PROJECT #: 01001-043	Tim Gish	WR Grace Vermiculite Plant - Pole Barn WORK AREA: Libby, MT	Patrick McGurren ANALYSIS BY: P. McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other ✓ 45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	1/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	1/100	Field Blank
P03	Ex	Inside Pole Barn - worn by Jose G. Aguilar	Power-washing inside	1024	1054	30	2.0	2.0	2.00	60.00	0.045	5.0/100	< LOQ
P04	P	Inside Pole Barn - worn by - Isabel Herrera	the Pole Barn	1025	1638	373	2.20	0.50	1.35	503.55	0.005	35.0/100	0.033
P05	↓	Inside Pole Barn - worn by Jose G. Aguilar	↓	1054	1644	350	2.0	1.0	1.50	525.00	0.005	25.0/100	0.022
Blind Recount													

Key:

Sample Type:			Activity:		
	P = Personal	BAK = Background		PREP = Work Area Preparation	BO = Bagout
	Ex = Excursion	A = Ambient Air		REM - Removal	TD = Tear Down
	IWA = Inside Work Area	HEX = HEPA Exhaust		GB - Glovebag	PP - Paint Prep
	OWA = Outside Work Area	CL = Clearance Sample		FC - Final Cleaning	

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Project No. 805169
File Code No. 4.5.6.2.155
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
10/27/00	AC&S PROJECT #: 01001-043	Chuck Shaw	W.R. Grace Vermiculite Plant - Pole Barn WORK AREA: Libby, MT	Patrick McGowan ANALYSIS BY: P. McGowan

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other, 457EM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
P03	P	Inside Pole Barn - worn by - Jose G. Aguilar	power washing inside Pole Barn	0935	1706	451	2.0	2.0	2.00	902.00	0.003	VOID DUE TO CASSETTE	DAMAGED FILTER BECAUSE OF TOO MUCH WATER
P04	P	Inside Pole Barn - worn by - Isabel Herrera	↓	0940	1707	447	2.0	2.0	2.00	894.00	0.003	62/100	0.034
Blind Recount													

Key:

Sample Type: P = Personal; Ex = Excursion; IWA = Inside Work Area; OWA = Outside Work Area; BAK = Background; A = Ambient Air; HEX = HEPA Exhaust; CL = Clearance Sample

Activity: PREP = Work Area Preparation; REM - Removal; GB - Glovebag; FC - Final Cleaning; BO = Bagout; TD = Tear Down; PP - Paint Prep

URS COPY

Project No. 805169
File Code No. 4.5.6.2.158
Doc No. _____

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
10/27/00	URS Radian PROJECT #: 21001-001	Tim Gish	WR Grace Vermiculite Plant - Pole Barn WORK AREA: Libby, MT	Patrick McGurren ANALYSIS BY: P McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfl. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ___ ~~f/cc~~ ___ other ___ ppm ___ mg/M³
A12	~~Field Blank~~ OWA	Inside shower trailer - clean room decon		0925	1659	454	2.0	2.0	2.00	908.00	0.003	72.5/100	0.039
P13	~~Field Blank~~ P	Inside dump truck - worn by Bob Sanders		1033	1625	352	2.0	2.0	2.00	704.00	0.004	470/100	0.033
P14	EX	Inside dump truck - worn by Bob Sanders		1003	1033	30	2.0	2.0	2.00	60.00	0.045	4.0/100	< LOQ
P15	P	Inside dump truck - worn by Vernon Cunningham		1010	1730	440	2.0	2.0	2.00	880.00	0.003	1615/100	0.009
Blind Recount													

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

URS

Project No. 805169
File Code No. 4.5.6.2.161
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT: URS Radian-	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
10/29/00	PROJECT #: Z1001-001	Tim Gish	WR Grace Vermiculite Plant - Pole Barn WORK AREA: Libby, MT	Patrick McGurren ANALYSIS BY: P. McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	✓ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other - 45. TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
A12	~~Field Blank~~ OWA	Inside shower trailer - clean room decon		0914	1637	443	2.0	2.0	2.00	886.00	0.003	90/100	0.049
~~A13~~ P13	~~Field Blank~~ P	Inside dump truck - worn by Max Mencer		1023	1614	351	2.0	1.8	1.90	666.90	0.004	39/100	0.028
P14	EX	Inside dump truck - worn by Max Mencer		0953	1023	30	2.0	2.0	2.00	60.00	0.045	1/100	<LOQ
P15	P	Inside dump truck - worn by Ben Cook		1005	1631	386	2.0	2.0	2.00	772.00	0.003	25/100	0.015
~~P16~~													
Blind Recount													

Key:

Sample Type: P = Personal; Ex = Excursion; IWA = Inside Work Area; OWA = Outside Work Area; BAK = Background; A = Ambient Air; HEX = HEPA Exhaust; CL = Clearance Sample

Activity: PREP = Work Area Preparation; REM - Removal; GB - Glovebag; FC - Final Cleaning; BO = Bagout; TD = Tear Down; PP - Paint Prep

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Project No. 805169
File Code No. 4.5 .164
Doc No. _____

FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
10/29/00	ACS PROJECT #: 01001-043	Chuck Shaw	WR Grace Vermiculite Plant - Pole Barn WORK AREA: Libby, MT	Patrick McGurren ANALYSIS BY: P McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other 4/5 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	1/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	1/100	Field Blank
P03	EX	inside Pole Barn - worn by Guillermo Martinez		0924	0954	30	2.0	2.0	2.00	60.00	0.045	0/100	< LOQ
P04	P	inside Pole Barn - worn by Victor Rojas		0927	1644	437	2.00	2.00	2.00	874.00	0.003	2.0/100	< LOQ
P05	P	Inside Pole Barn - worn by Guillermo Martinez		0954	1642	408	2.00	1.00	1.50	612.00	0.004	2.0/100	< LOQ
Blind Recount													

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

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Project No. 605169
File Code No. 4.5.6.2.167
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
10/30/00	AC&S PROJECT #: 01001-043	Chuck Shaw	WR Grace Vermiculite Plant - Pole Barn WORK AREA: Libby, MT	Patrick McGurren ANALYSIS BY: P. McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other 45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1506	✓ 385 mm² ___ mm² ___ NA	✓ 0.00785 mm² ___ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
P03	EX	Inside Pole Barn worn by Jose G. Aguilar	Final Cleaning	0916	0946	30	2.00	2.00	2.00	60.00	0.045	0/100	<LOQ
P04	P	Inside Pole Barn worn by Isabel Herrera	FC	0917	1702	465	2.00	2.00	2.00	930.00	0.003	7.0/100	0.004
P05	P	Inside Pole Barn worn by Jose G. Aguilar	FC	0946	1701	435	2.00	2.00	2.00	870.00	0.003	5.0/100	LOQ
Blind Recount													

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

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Project No. 805169
File Code No. 4.5.b.2.170
Doc No. _____

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
10/30/00	URS Radian PROJECT #: 21001-001	Tom Gish	WR Grace Vermiculite Plant - Pole Barn WORK AREA: Libby, MT	Patrick McGovern ANALYSIS BY: P. McGovern

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
A12	~~Field Blank~~ OWA	inside shower trailer - dirty from decon		0845	1650	485	2.00	2.00	2.00	970.00	0.003	51.5/100	0.016
P13	~~Field Blank~~ P	inside dump truck - worn by - Justin Clemens		0821	1613	472	2.0	2.00	2.00	944.00	0.003	16.5/100	0.008
P14	EX	inside dump truck - worn by - Terry Johnson		0828	0858	30	2.00	2.00	2.00	60.00	0.045	0/100	<LOQ
P15	P	inside dump truck. worn by - Terry Johnson		0858	1658	480	2.00	2.00	2.00	960.00 ~~940.00~~ gm	0.003	5.0/100	LOQ
Blind Recount													

Key:

Sample Type:			Activity:		
	P = Personal	BAK = Background		PREP = Work Area Preparation	BO = Bagout
	Ex = Excursion	A = Ambient Air		REM - Removal	TD = Tear Down
	IWA = Inside Work Area	HEX = HEPA Exhaust		GB - Glovebag	PP - Paint Prep
	OWA = Outside Work Area	CL = Clearance Sample		FC - Final Cleaning	

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Project No. 805169
File Code No. ~~HS~~ 4.5.6.2.17
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
10/31/00	URS Radian PROJECT #: 21001-001	Tim Gish	WR Grace Vermiculite Plant - Pole Barn WORK AREA: Libby, MT	Patrick McGurren ANALYSIS BY: P. McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfl. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm mg/M³
P12	Field Blank	inside dump truck - worn by Max Mercer	Loading soil @ export plant	0743	1552	4/89	2.00	0.50	1.25	611.25	0.004	11.5/100	0.008
P13	Field Blank	inside dump truck - worn by Jerry Regh	unloading it @ the mine	0831	1547	436	2.00	1.20	1.60	697.60	0.004	15.5/100	0.010
Blind Recount													

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

URS

Project No. 805169
File Code No. 4.5.6.2.176
Doc No. _____

H\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
11/1/00	URS Radian PROJECT #: 21001-001	Tim Gish	WR Grace Vermiculite Plant - Pole Barn WORK AREA: Libby, MT	Patrick McGurren ANALYSIS BY: P. McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfl. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
P12	~~Field Blank~~ P	inside dump truck - worn by Fred McDougal	loading truck & un-loading	0800	1551	471	2.00	2.00	2.00	942.00	0.003	28.5/100	0.015
P13	~~Field Blank~~ P	inside dump truck - worn by Bob Sanders	with soil	0828	1552	444	2.00	2.00	2.00	888.00	0.003	14.8/100	0.010
Blind Recount													

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

URS

Project No. 805169
File Code No. 4.5.6.2.179
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT: URS Radion	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
11/2/00	PROJECT #: 21001-001	Tim Gish	WR Grace Vermiculite Plant WORK AREA:	Patrick McGurren ANALYSIS BY: P. McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
P11	~~Field Blank~~ (PM) EX	inside truck - worn by Jerry Regh		0802	0915	73	2.00	1.50	1.75	127.75	0.021	5.5/100	< LOQ
P12	~~Field Blank~~ P	inside truck - worn by Justin Clemons		0845	1556	431	2.00	2.00	2.00	862.00	0.003	12.0/100	0.006
P13	P	inside truck worn by Vernon Cunningham		0834	1542	428	2.00	2.00	2.00	856.00	0.003	8.5/100	0.004
P14	P	inside truck worn by Jerry Regh		0915	1541	386	2.00	2.00	2.00	772.00	0.003	13.0/100	0.008
Blind Recount													

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

URS

Project No. 805169
File Code No. 4.5.6.2.182
Doc No. _____

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
11/3/00	ACES PROJECT #: 01001-043	Chuck Shaw	W.R. Grace Vermiculite Plant - Lumber WORK AREA: Libby, MT storage building	Patrick McGowan ANALYSIS BY: P. McGowan

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other 145 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfl. _____ Lot No. 15066	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	0/cc	Field Blank
P03	P	Inside Lumber storage building - worn by - Benzalo Moncado	Demolizing walls	0903	1725	—	2.0	2.0	2.00	—	—	—	particulate overload
P04	EX	Inside Lumber storage building - worn by Guillermo Martinez		0900	0930	30	2.0	2.0	2.00	60.00	0.045	19.5/100	0.159
P05	P	Inside Lumber storage building - worn by Guillermo Martinez		0930	1725	—	2.0	2.0	2.00	—	—	—	Particulate overload
Blind Recount													

Key:

Sample Type:			Activity:		
	P = Personal	BAK = Background		PREP = Work Area Preparation	BO = Bagout
	Ex = Excursion	A = Ambient Air		REM - Removal	TD = Tear Down
	IWA = Inside Work Area	HEX = HEPA Exhaust		GB - Glovebag	PP - Paint Prep
	OWA = Outside Work Area	CL = Clearance Sample		FC - Final Cleaning	

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Project No. 805169
File Code No. 4.5.6.2.185
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
11/3/00	URS Radian PROJECT #: 21001-001	Tim Gish	WR Grace Vermiculite Plant - Lumber Storage Building WORK AREA: Libby, MT	Patrick McGurren ANALYSIS BY: P. McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
—	Field Blank	—	—	—	—	—	—	—	—	—	—	—	—
—	Field Blank	—	—	—	—	—	—	—	—	—	—	—	—
P11	P	Inside truck - worn by - Ben Cook	Loading soil @ export plant & dumping it @ the mine	0747	1600	493	2.00	2.00	2.00	986.00	0.003	36/100	0.018
P12	EX	Inside truck - worn by - Bob Sanders		0749	0835	46	2.00	2.00	2.00	92.00	0.029	6/100	0.032
P13	P	Inside truck - worn by - Bob Sanders		0835	1602	447	2.00	2.00	2.00	894.00	0.003	22/100	0.012
P14	P	Inside ~~truck - worn by~~ exclusion area - worn by - Leonard Shoemaker	deconning trucks	0909	1644	455	2.00	2.00	2.00	910.00	0.003	32/100	0.017
Blind Recount													

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

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Project No. 805169
File Code No. 4.5.16.2.188
Doc No. _____

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
11/4/00	AC&S PROJECT #: 01001-043	Chuck Shaw	WR Grace Vermiculite Plant - Lumber storage building WORK AREA: Libby, MT	Patrick McGurren ANALYSIS BY: P. McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
P03	Ex	Inside Lumber Storage building - worn by Victor Rojas		0801	0840	39	2.0	2.0	2.00	78.00	0.035	20.0/100	0.126
P04	P	Inside Lumber storage building - worn by Gonzalo		0803	1257	294	2.0	2.0	2.00	588.00	0.005	48.5/100	0.040
P05	↓	Inside Lumber storage building - worn by Victor Rojas		0840	1255	255	2.0	2.0	2.00	510.00	0.005	51.0/100	0.049
Blind Recount													

Key:

Sample Type: P = Personal; Ex = Excursion; IWA = Inside Work Area; OWA = Outside Work Area; BAK = Background; A = Ambient Air; HEX = HEPA Exhaust; CL = Clearance Sample

Activity: PREP = Work Area Preparation; REM - Removal; GB - Glovebag; FC - Final Cleaning; BO = Bagout; TD = Tear Down; PP - Paint Prep

URS

Project No. 805169
File Code No. 4.5.6.2.191
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
11/4/00	URS Radian PROJECT #: 21001-001	Tim Gish	WR Grace Vermiculite Plant - Lumber Storage building WORK AREA: Libby, MT	Patrick McGuire ANALYSIS BY: P. McGuire

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☒ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
—	Field Blank	—	—	—	—	—	—	—	—	—	—	—	~~Field~~
—	Field Blank	—	—	—	—	—	—	—	—	—	—	—	—
P11	EX	Inside Truck - worn by Terry Holthaus		0725	0755	30	2.0	2.0	2.00	60.00	0.045	2/100	0.016
P12	P	Inside Truck - worn by Ben Cook		0730	1315	345	2.0	2.0	2.00	690.00	0.004	16/100	0.011
P13	↓	Inside Truck - worn by Terry Holthaus		0755	1317	322	2.0	2.0	2.00	644.00	0.004	14/100	0.011
P14	↓	~~Inside~~ Decanning Trucks worn by Leonard Shoemaker		0920	0950	30	2.0	2.0	2.00	60.00	0.045	21.5/100	0.176
P15	↓	Decanning trucks - worn by Leonard Shoemaker		0950	1321	211	2.0	2.0	2.00	422.00	0.006	17.5/100	0.020
Blind Recount													

Key:

Sample Type:			Activity:		
	P = Personal	BAK = Background		PREP = Work Area Preparation	BO = Bagout
	Ex = Excursion	A = Ambient Air		REM - Removal	TD = Tear Down
	IWA = Inside Work Area	HEX = HEPA Exhaust		GB - Glovebag	PP - Paint Prep
	OWA = Outside Work Area	CL = Clearance Sample		FC - Final Cleaning	

URS

Project No. 805169
File Code No. 4.2.194
Doc No. _____

KEHFORM RM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
11/6/00	ACS PROJECT #: 01001-043	Chuck Show	WR Grace Vermiculite Plant - Lumber WORK AREA: Libby, MT Storage building	Patrick McGuire ANALYSIS BY: P. McGuire

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
P03	EX	Inside Lumber storage building - worn by - Guillermo Martinez	Power washing inside Lumber storage building	0900	0930	30	2.0	2.0	2.00	60.00	0.045	0.5/100	< LOQ
P04	P	Inside Lumber storage building - worn by - Gonzalo Mancado	↓	0903	1704	481	2.0	2.0	2.00	962.00 ~~1,202.00~~	0.003	55/100	0.022
P05	↓	Inside Lumber storage building - worn by - Guillermo Martinez	↓	0930	1706	456	2.0	2.0	2.00	912.00	0.003	62.5/100	0.034
Blind Recount													

Key:

Sample Type:			Activity:		
	P = Personal	BAK = Background		PREP = Work Area Preparation	BO = Bagout
	Ex = Excursion	A = Ambient Air		REM - Removal	TD = Tear Down
	IWA = Inside Work Area	HEX = HEPA Exhaust		GB - Glovebag	PP - Paint Prep
	OWA = Outside Work Area	CL = Clearance Sample		FC - Final Cleaning	

URS

Project No. 805169
File Code No. 4.5.6.2.197
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
11/6/00	URS Radian PROJECT #: 21001-001	Tim Gish	WR Grace Vermiculite Plant - Lumber WORK AREA: Library storage building	Patrick McGurran ANALYSIS BY: P. McGurran

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
—	~~Field Blank~~ PM	—	—	—	—	—	—	—	—	—	—	—	—
—	~~Field Blank~~ PM	—	—	—	—	—	—	—	—	—	—	—	—
P11	P	Inside truck - worn by Ben Cook VOID	VOID	0753	1720	V	O	I	D	VOID	VOID	VOID	Power was accidentally shut off - VOID
P12	P	inside the truck - worn by - Max Mercer	loading trucks with soil @ export	0750	1700	550	2.0	2.0	2.00	1100.00	0.002	12.5/100	0.006
P13	EX	Inside truck - worn by - Bob Sanders	plant & unloading them @	0755	0825	30	2.0	2.0	2.00	60.00	0.045	1.5/100	< LOQ
P14	P	Inside the truck - worn by Bob Sanders	the mine ↓	0825	1554	449	2.0	2.0	2.00	898.00	0.003	19/100	0.010
Blind Recount													

Key:

Sample Type:			Activity:		
	P = Personal	BAK = Background		PREP = Work Area Preparation	BO = Bagout
	Ex = Excursion	A = Ambient Air		REM - Removal	TD = Tear Down
	IWA = Inside Work Area	HEX = HEPA Exhaust		GB - Glovebag	PP - Paint Prep
	OWA = Outside Work Area	CL = Clearance Sample		FC - Final Cleaning	

KEH\FORMS RM97

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Project No. 80516

File Code No. 4.5.6 2 20

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
11/7/00	ACS PROJECT #: 01001-043	Chuck Shaw	W.R. Grace Vermiculite Plant - Lumber storage building WORK AREA: Libby, MT	Patrick M. Gurren ANALYSIS BY: P. McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other: 45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	1/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	1/100	Field Blank
P03	EX	Inside Lumber storage building - worn by Victor Rojas	power washing walls	0900	0930	30	2.00	2.00	2.00	60.00	0.045	7/100	0.049
P04	P	Inside Lumber storage building - worn by Guillermo Martinez	↓	0901	1701	480	2.00	2.00	2.00	960.00	0.003	26.5/100	0.013
P05	P	Inside Lumber storage building - worn by Victor Rojas	↓	0930	1700	450	2.00	2.00	2.00	900.00	0.003	37.0/100	0.020
Blind Recount													

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

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Project No. 805164
File Code No. ~~4.6~~ 4.5.6.2.203
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
11/7/00	URS Radian PROJECT #: 21001-001	Tim Bish	W.R. Grace Vermiculite Plant - Lumber storage building WORK AREA: Libby, MT	Patrick McGowan ANALYSIS BY: P. McGowan

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. _____ Lot No. 15016	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
—	~~Field Blank~~ Qm	—	—	—	—	—	—	—	—	—	—	—	—
—	~~Field Blank~~	—	—	—	—	—	—	—	—	—	—	—	—
P12	P	Inside truck - worn by Fred McDougal	loading trucks @ the plant & unloading them @ the mine	0739	1602	505	2.00	2.00	2.00	1010.00	0.003	84/100	0.040
P13	P	Inside truck - worn by Ben Cook		0750	1600	~~570~~ 490	2.00	0.25	1.13	553.70	0.005	18.5/100	0.016
P14	EX	Inside truck - worn by Vernon Cunningham		0743	0819	36	2.00	2.00	2.00	72.00	0.037	1.5/100	<LOQ
P15	P	Inside truck - worn by Vernon Cunningham		0819	1601	462	2.00	2.00	2.00	924.00	0.003	15.5/100	0.008
Blind Recount													

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

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Project No. 805169
File Code No. 4.5.6.2.206
Doc No. _____

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
1/3/00	AC & S PROJECT #: 01001-013	Tim Gish	W.R. Grace Vermiculite Plant & Lumber WORK AREA: Libby, MT Storage building	Patrick McGowan ANALYSIS BY: P. McGowan

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other 145 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
P03	Ex	Inside Lumber storage building - worn by Jose G. Aguilar	Cleaning inside Lumber	0850	0920	30	2.00	2.00	2.00	60.00	0.045	6.5/100	0.053
P04	P	Inside Lumber storage building - worn by - Isabel Herrera	Storage building	0853	1636	463	2.00	2.00	2.00	926.00	0.003	44/100	0.023
P05	P	Inside Lumber storage building - worn by Jose G. Aguilar	↓	0920	1638	438	2.00	2.00	2.00	876.00	0.003	100/74	0.076
Blind Recount													

Key:

Sample Type: P = Personal; Ex = Excursion; IWA = Inside Work Area; OWA = Outside Work Area; BAK = Background; A = Ambient Air; HEX = HEPA Exhaust; CL = Clearance Sample

Activity: PREP = Work Area Preparation; REM - Removal; GB - Glovebag; FC - Final Cleaning; BO = Bagout; TD = Tear Down; PP - Paint Prep

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Project No. 805169
File Code No. 4.5.6.2.20
Doc No. _____

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KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT: URS Radian	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
11/8/00	PROJECT #: 21001-001	Tim Gish	WR Grace Vermiculite Plant - Lumber, WORK AREA: Libby, MT Storage bldg.	Patrick McGurren ANALYSIS BY: P. McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other 45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. _____ Lot No. 1506	✓ 385 mm² ___ mm² ___ NA	✓ 0.00785 mm² ___ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
—	~~Field Blank~~ (PM)	—	—	—	—	—	—	—	—	—	—	—	—
—	~~Field Blank~~ (PM)	—	—	—	—	—	—	—	—	—	—	—	—
P12	P	Inside truck - worn by Mark Moore	Loading trucks with soil @ export plant	0747	1604	497	2.0	1.0	1.50	745.50	0.004	1/100	< LOQ
P13	EX	Inside truck - worn by Luis Burrell	& dumping it @ the mine	0740	0810	30	2.0	2.0	2.00	60.00	0.045	3.5/100	< LOQ
P14	P	Inside truck - worn by Jerry Regh		0753	1530	457	2.0	2.0	2.00	914.00	0.003	38/100	0.020
P15	P	Inside truck - worn by Luis Burrell		0810	1629	499	2.0	2.0	2.00	998.00	0.003	15.5/100	0.008
Blind Recount													

Key:

Sample Type: P = Personal; Ex = Excursion; IWA = Inside Work Area; OWA = Outside Work Area; BAK = Background; A = Ambient Air; HEX = HEPA Exhaust; CL = Clearance Sample

Activity: PREP = Work Area Preparation; REM - Removal; GB - Glovebag; FC - Final Cleaning; BO = Bagout; TD = Tear Down; PP - Paint Prep

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Project No. 805169

File Code No. 4.5.4 212

Doc No. _____

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
11/9/00	AC&S PROJECT #: 01001-043	Chuck Shaw	WR Grace Vermiculite Plant - Lumber storage building WORK AREA: Libby, MT	Patrick McGurren ANALYSIS BY: P. McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1500	___ 385 mm² ___ mm² ___ NA	✓ 0.00785 mm² ___ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
P03	P	Inside Lumber storage building - worn by Jose G. Aguilar	Laying down racks	0850	1632	462	2.0	2.0	2.00	924.00	0.003	5.5/100	LOQ
P04	EX	Inside Lumber storage building - worn by Guillermo Martinez		0853	0923	30	2.0	2.0	2.00	60.00	0.045	0.5/100	<LOQ
P05	P	Inside Lumber storage building - worn by Guillermo Martinez		0923	1634	431	2.0	2.0	2.00	862.00	0.003	3.5/100	<LOQ
Blind Recount													

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

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Project No. 805169

File Code No. 4.5.6.2.215

Doc No. _____

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KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
11/9/00	URS Radian PROJECT #: 21001-001	Tim Gish	WR Grace Vermiculite Plant - Lumber WORK AREA: Libby, MT Storage building	Patrick McGurren ANALYSIS BY: P McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
—	Field Blank	—	—	—	—	—	—	—	—	—	—	—	—
—	Field Blank	—	—	—	—	—	—	—	—	—	—	—	—
P12	EX	Inside truck - worn by - Doug Carr	Loading trucks with soil @ export plant	0756	0826	30	2.00	2.00	2.00	60.00	0.045	1/100	< LOQ
P13	P	Inside truck - worn by - Fred McDougall	& dumping @ the mine	0810	1542	452	2.00	2.00	2.00	904.00	0.003	19.5/100	0.011
P14	↓	Inside truck. worn by - Levis Burrell	↓	0902	1615	493	2.00	2.00	2.00	986.00	0.003	17/100	0.008
P15	↓	Inside truck - worn by - Doug Carr	↓	0826	1637	491	2.00	0.50	1.25	613.75	0.004	3/100	< LOQ
Blind Recount													

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

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COPY

Project No. 805169

File Code No. 4 2.218

Doc No. _____

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT: URS Radian	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
11/10/00	PROJECT #: 21001-001	Tim Gish	WR Grace Vermiculite Plant - Lumber WORK AREA: storage building, Libby, MT	Patrick McGowan ANALYSIS BY: R McGowan

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. _____ Lot No. 15506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm mg/M³
—	Field Blank	—	—	—	—	—	—	—	—	—	—	—	—
—	Field Blank	—	—	—	—	—	—	—	—	—	—	—	—
P13	P	Inside truck - worn by Jerry Holthaus	loading trucks @ the export plant & dumping them @ the mine	0750	1512	442	2.0	2.0	2.00	884.00	0.003	8/100	< LOQ
P14	EX	Inside truck - worn by Jerry Regh		0752	0825	33	2.0	2.0	2.00	66.00	0.041	7.5/100	0.052
P15	P	Inside truck - worn by Luis		0754	1503	429	2.0	2.0	2.00	858.00	0.003	19/100	0.011
P16	P	Inside truck - worn by Jerry Regh		0925	1515	410	2.0	2.0	2.00	820.00	0.003	24/100	0.014
Blind Recount													

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

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Project No. 805169

File Code No. 4.5.6.2.221

Doc No. _____

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
11/11/00	URS Radian PROJECT #: 21001-001	Tim Gish	WR Grace Vermiculite Plant - Lumber Storage WORK AREA: Libby, MT building	Patrick McGerrer ANALYSIS BY: P McGerrer

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfl. _____ Lot No. 15016	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
—	~~Field Blank~~	—	—	—	—	—	—	—	—	—	—	—	—
—	~~Field Blank~~ Pm	—	—	—	—	—	—	—	—	—	—	—	—
P11	2X	Inside truck - worn by - Ben Cook	Loading soil @ export plant & dumping it @ the mine	0852	1006	74	2.0	2.0	2.00	148.00	0.018	15.5/100	0.051
P12	P	Inside truck worn by - Doug Carr		0854	1540	406	2.0	0.5	1.25	507.50	0.005	5.9/100	LOQ
P13	↓	Inside truck worn by - Bob Sanders		0902	1545	403	2.0	2.0	2.00	806.00	0.003	22/100	0.013
P14	↓	Inside truck worn by - Ben Cook		1006	1347	221	2.0	2.0	2.00	442.00	0.006	15/100	0.017
Blind Recount													

Key:

Sample Type: P = Personal; Ex = Excursion; IWA = Inside Work Area; OWA = Outside Work Area; BAK = Background; A = Ambient Air; HEX = HEPA Exhaust; CL = Clearance Sample

Activity: PREP = Work Area Preparation; REM - Removal; GB - Glovebag; FC - Final Cleaning; BO = Bagout; TD = Tear Down; PP - Paint Prep

URS

Project No. 805169
File Code No. 5.6.2.224
Doc No.

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
11/13/00	URS Radian PROJECT #: 21001-001	Tim Gish	W.R. Grace Vermiculite Plant - Lumber WORK AREA: Libby, MT Storage Building	Patrick McGinnis ANALYSIS BY: P. McGinnis

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
—	Field Blank	—	—	—	—	—	—	—	—	—	—	—	—
—	Field Blank	—	—	—	—	—	—	—	—	—	—	—	—
* P13	P	Inside Truck - worn by Doug Carr	loading trucks with soil & dumping them @ the mine	0745	0847	62	2.00	2.00	2.00	124.00	0.022	VOID	VOID - Sample was pulled early due to vehicle problems.
P14	↓	Inside Truck - worn by Ben Cook	↓	0738	1527	469	2.00	2.00	2.00	938.00	0.003	14/100	0.008
P15	↓	Inside Truck - worn by - Luis Burrell	↓	0742	1556	494	2.00	2.00	2.00	988.00	0.003	21.5/100	0.011
Blind Recount													

* Truck broke down — pulled sample early. VOID

Key:

Sample Type:			Activity:		
P = Personal	BAK = Background		PREP = Work Area Preparation	BO = Bagout
Ex = Excursion	A = Ambient Air		REM - Removal	TD = Tear Down
IWA = Inside Work Area	HEX = HEPA Exhaust		GB - Glovebag	PP - Paint Prep
OWA = Outside Work Area	CL = Clearance Sample		FC - Final Cleaning	

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Project No. 805169
File Index No. 4.5.6.2.227
Doc No.

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
11/14/00	URS Radian PROJECT #: 21001-001	Tim Gish	W.R. Grace Vermiculite Plant - Plant Wide WORK AREA: Libby, MT	Patrick McGurren ANALYSIS BY: P. McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other, 45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ Fcc ___ other ___ ppm ___ mg/M³
—	~~Field Blank~~	—	—	—	—	—	—	—	—	—	—	—	—
—	~~Field Blank~~	—	—	—	—	—	—	—	—	—	—	—	—
P01	EX	Inside truck - worn by Fred McDougall	Loading trucks with soil @ the export plant & unloading it @ the mine	0736	0806 ~~0805~~	30	2.0	2.0	2.00	60.00	0.045	2/100	<LOQ
P02	P	Inside truck - worn by Jerry Regh		0744	1508	444	2.0	2.0	2.00	888.00	0.003	15.5/100	0.008
P03	↓	Inside truck - worn by Fred McDougall		0806	1552	466	2.0	0.50	1.25	582.50	0.005	63.5/100	0.053
P04	↓	Inside truck - worn by - Justin Clemmons	↓	0733	1546	493	2.0	0.50	1.25	616.25	0.004	54/100	0.042
Blind Recount													

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

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Project No. 805169
File Code No. 4.5.b, 230
Doc No. _____

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT: URS Radian	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
11/15/00	PROJECT #: 21001-001	Tim Gish	WR Grace Vermiculite Plant - Plant wide WORK AREA: Libby, MT	Patrick McGovern ANALYSIS BY:

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☐ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☐ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other	___ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfl. _____ Lot No. _____	___ 385 mm² _____ mm² ___ NA	___ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ___ F/cc ___ other ___ ppm ___ mg/M³
—	Field Blank	—	—	—	—	—	—	—	—	—	—	—	—
—	Field Blank	—	—	—	—	—	—	—	—	—	—	—	—
P13	EX	Inside truck - worn by - Luis Burrell	loading truck with soil @ export plant & dumping it @ the mine	0742	0812	30	2.0	2.0	2.00	60.00	0.045	0/100	< LOQ
P14	P	Inside truck - worn by Ben Cook		0750	1609	499	2.0	2.0	2.00	998.00	0.003	23/100	0.011
P15	P	Inside truck - worn by Doug Carr		0739	1524	465	2.0	2.0	2.00	930.00	0.003	5/100	< LOQ
P16	P	inside truck - worn by - Luis Burrell		0812	1515	423	2.0	2.0	2.00	846.00	0.003	4/100	< LOQ
Blind Recount P105	Recount	Location #3 - West of Planer building - on perimeter	—	0817	1619	482	5.50	6.00	5.75	2771.50	0.001	5/100	LOQ

Key:

Sample Type:			Activity:		
	P = Personal	BAK = Background		PREP = Work Area Preparation	BO = Bagout
	Ex = Excursion	A = Ambient Air		REM - Removal	TD = Tear Down
	IWA = Inside Work Area	HEX = HEPA Exhaust		GB - Glovebag	PP - Paint Prep
	OWA = Outside Work Area	CL = Clearance Sample		FC - Final Cleaning	

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Project No. 805169
File Code No. 4.5.6.2.233
Doc No. _____

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KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
11/16/00	CLIENT: URS Radian PROJECT #: 21001-001	Tim Gish	W.R. Grace Vermiculite Plant - Plant Wide WORK AREA: Libby, MT	Patrick McGurren ANALYSIS BY: P. McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. _____ Lot No. 1506	✓ 385 mm² ___ mm² ___ NA	✓ 0.00785 mm² ___ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
—	Field Blank	—	—	—	—	—	—	—	—	—	—	—	—
—	Field Blank	—	—	—	—	—	—	—	—	—	—	—	—
P13	EX	Inside Truck - worn by - Max Mercer		0738	0808	30	2.00	2.00	2.00	60.00	0.045	1/100	< LOQ
P14	P	Inside Truck - worn by - Jerry Regh		0742	1527	465	2.00	2.00	2.00	930.00	0.003	8/100	0.004
P15	↓	Inside Truck worn by - Ben Cook		0749	1549	480	2.00	1.60	1.80	864.00	0.003	58/100	0.033
P16	↓	Inside Truck worn by - Max Mercer		0808	1634	506	2.00	1.00	1.50	759.00	0.004	7.5/100	0.005
Blind Recount P15	Recount	Inside Truck - worn by Ben Cook		0749	1549	480	2.00	1.60	1.80	864.00	0.003	85/100	0.037

Key:

Sample Type: P = Personal; Ex = Excursion; IWA = Inside Work Area; OWA = Outside Work Area; BAK = Background; A = Ambient Air; HEX = HEPA Exhaust; CL = Clearance Sample

Activity: PREP = Work Area Preparation; REM - Removal; GB - Glovebag; FC - Final Cleaning; BO = Bagout; TD = Tear Down; PP - Paint Prep

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Project No. 805169

File Code No. 4.9 2.235

Doc No. 236

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT: URS Radian	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
1/17/00	PROJECT #: 21001-001	Tim Gish	W.R. Grace Vermiculite Plant - Plant wide WORK AREA: Libby, MT	Patrick M. Curran ANALYSIS BY: P. McGurran

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ✓ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method _____	Rotameter ✓ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. _____ Lot No. 1500	✓ 385 mm² ___ mm² ___ NA	✓ 0.00785 mm² ___ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
—	Field Blank	—	—	—	—	—	—	—	—	—	—	—	—
—	Field Blank	—	—	—	—	—	—	—	—	—	—	—	—
P13	P	Inside Truck - worn by Vernon Cunningham	loading trucks @ export plant & dumping them at the mine.	0745	1445	420	2.0	0.50	1.25	525.00	0.005	4/100	< LOQ
P14	P	Inside Truck - worn by Terry Heithaus		0749	1449	420	2.0	2.0	2.00	840.00	0.003	5.5/100	LOQ
P15	P	Inside Truck - worn by Ben Cook		0747	1447	420	2.0	0.50	1.25	525.00	0.005	3/100	< LOQ
P16	EX	Inside Truck - worn by Terry Heithaus		1449	1519	30	2.0	2.0	2.00	60.00	0.045	3/100	< LOQ
Blind Recount													

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

URS

Project No. 805169
File Code No. 4.5.6, 2.239
Doc No. _____

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
11/18/00	URS Radian PROJECT #: 21001-001	Tim Gish	W.R. Grace Vermiculite Plant - Plant wide WORK AREA: Libby, MT	Patrick McGuire ANALYSIS BY: P. McGuire

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfl. _____ Lot No. 15506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ f/cc ___ other ___ ppm ___ mg/M³
—	Field Blank	—	—	—	—	—	—	—	—	—	—	—	—
—	Field Blank	—	—	—	—	—	—	—	—	—	—	—	—
P13	EX	Inside truck - worn by Max Moncur	loading trucks @ exfoit plant & unloading them @ the mine	0745	0815	30	2.00	2.00	2.00	60.00	0.045	1.5/100	< LOQ
P14	P	Inside truck - worn by - Terry Johnson		0831	1427	356	2.00	2.00	2.00	712.00	0.004	3.5/100	< LOQ
P15	↓	Inside truck - worn by Doug Carr	↓	0829	VOID	—	2.00	VOID	VOID	VOID	VOID		VOID - DUE TO The sample over-running the shift.
P16	↓	Inside truck - worn by Max Moncur	↓	0815	1351	336	2.00	2.00	2.00	672.00	0.004	15.0/100	0.011
Blind Recount P1109	Recount	Location #7 - NE corner of property - on stop sign Highway 37	—	0849	1449	360	5.50	6.00	5.75	2070.00	0.001	3/100	LOQ

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

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Project No. 805164
File Code No. 4.5.5 242
Doc No.

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
11/20/00	URS Radian PROJECT #: 21001-001	Tim Gish	WR Grace Vermiculite Plant Plant wide WORK AREA: Libby, MT	Patrick McGurren ANALYSIS BY: P. McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mft. _____ Lot No. 1506	✓ 385 mm² ___ mm² ___ NA	✓ 0.00785 mm² ___ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
—	~~Field Blank~~	—	—	—	—	—	—	—	—	—	—	—	—
—	~~Field Blank~~	—	—	—	—	—	—	—	—	—	—	—	—
P13	EX	Inside Truck - worn by - Doug Carr	Loading trucks with soil @ the export plant & dumping them @ the mine.	0715	0743	32	2.00	2.00	2.00	64.00	0.042	1/100	<LOQ
P14	P	Inside Truck - worn by Fred McDougall		0727	1653	566	2.00	2.00	2.00	1132.00	0.002	12/100	0.005
P15	↓	Inside truck - worn by - Luis Bueno	↓	0726	1641	555	2.00	0.50	1.25	693.75	0.004	14/100	0.010
P16	↓	Inside truck - worn by - Doug Carr	↓	0743	1643	540	2.00	2.00	2.00	1080.00	0.002	15/100	0.007
Blind Recount BO	Recount	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

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Project No. 805169
File Code No. 4.5.5.2.245
Doc No. _____

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
11/21/00	PROJECT #: 21001-001	Tim Gish	W.R. Grace Vermiculite Plant - Plant wide WORK AREA: Libby, MT	Patrick McGurren ANALYSIS BY: P. McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	✓ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. _____ Lot No. 15066	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
—	~~Field Blank~~	—	—	—	—	—	—	—	—	—	—	—	—
—	~~Field Blank~~	—	—	—	—	—	—	—	—	—	—	—	—
P13	P	Inside Truck worn by - Bob Sanders	loading trucks with soil @ export plant & dumping them @ mine.	0842	1518	396	2.00	2.00	2.00	792.00	0.003	5.0/100	< LOQ
P14	P	Inside truck - worn by - Ben Cook		0935	1521	406	2.00	1.50	1.75	710.50	0.004	100.0/58	0.118
P15	P	Inside truck - worn by - Wolfgang Jackson	↓	0845	1519	394	2.00	0.50	1.25	492.50	0.005	6.0/100	0.005
~~P16~~ ~~P17~~ RM													
Blind Recount													

Key:

Sample Type: P = Personal; Ex = Excursion; IWA = Inside Work Area; OWA = Outside Work Area; BAK = Background; A = Ambient Air; HEX = HEPA Exhaust; CL = Clearance Sample

Activity: PREP = Work Area Preparation; REM = Removal; GB = Glovebag; FC = Final Cleaning; BO = Bagout; TD = Tear Down; PP = Paint Prep

URS

Project No. 805169

File Code No. 4.5.6.2.248

Doc No. _____

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT: URS Radian	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
11/28/00	PROJECT #: 21001-001	Tim Gish	WR Grace Vermiculite Plant - Plant wide WORK AREA: Libby, MT	Patrick McGurren ANALYSIS BY: P. McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfl. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	1/100	Field Blank
P03	P	Inside Truck worn by - Max Moncur	Loaded Trucks with soil @ export plant	0750	1609	499	2.0	2.0	2.00	998.00	0.003	1/100	< LOQ
P04	↓	Inside Truck worn by - Clemons Justin ~~Clemons~~	& dumped the trucks @ the mine	0742	1627	525	2.0	2.0	2.00	1050.00	0.003	31.5/100	0.014
P05	EX	Inside Truck worn by - Vernon Cunningham	↓	0747	0817	30	2.0	2.0	2.00	60.00	0.045	2/100	< LOQ
P06	P	Inside Truck worn by - Vernon Cunningham	↓	0817	1626	489	2.0	2.0	2.00	978.00	0.003	5/100	< LOQ
Blind Recount P04	P Recount	Inside Truck worn by Justin Clemons	Loading trucks w/ soil & dumping @ the mine	0742	1627	525	2.0	2.0	2.00	1050.00	0.003	25/100	0.011

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

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Project No. 805169
File Code No. 4.5.6.2.251
Doc No. _____

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
11/29/00	URS Radian PROJECT #: 21001-001	Tim Gish	WR Grace Vermiculite Plant - Plant wide WORK AREA: Libby, MT	Patrick McGuire ANALYSIS BY: P. McGuire

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other: 45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ___ f/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	1/100	Field Blank
P03	P	Inside truck - worn by Fred McDougall	Loading trucks with soil @ export plant	0732	1545	493	2.0	2.0	2.00	986.00	0.003	13/100	0.006
P04	EX	Inside truck worn by Bob Sanders	& dumping them @ the mine	0727	0747	20	2.0	2.0	2.00	40.00	0.067	2/100	<LOQ
P05	P	Inside truck worn by Jerry Rogh		0734	1447	433	2.0	2.0	2.00	866.00	0.003	30/100	0.017
P06	P	Inside truck worn by Bob Sanders		0747	1350	363	2.0	2.0	2.00	726.00	0.004	6.5/100	0.004
~~Blind~~ Recount B01	Recount	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank

Key:

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

URS

Project No. 805169
File Code No. 4.8 2.254
Doc No. _____

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
11/30/00	URS Radian PROJECT #: 21001-001	Tim Bish	W.R. Grace Vermiculite Plant - Plant wide WORK AREA: Libby, MT	Patrick McGuire ANALYSIS BY: P. McGuire

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. _____ Lot No. 15006	✓ 385 mm² ___ mm² ___ NA	✓ 0.00785 mm² ___ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	2/100	Field Blank
P03	P	Inside Truck - worn by - Max Moncur	Loading trucks with soil @ export	0725	1530	485	2.00	2.00	2.00	970.00	0.003	4.5/100	< LOQ
P04	P	Inside Truck - worn by - Justin Clemons	Plant & dumping them @ the mine	0729	1540	491	2.00	0.50	1.25	613.75	0.004	13/100	0.010
P05	EX	Inside Truck - worn by Doug Carr		0723	0745	22	2.00	2.00	2.00	44.00	0.061	2/100	< LOQ
P06	P	Inside Truck worn by - Doug Carr		0745	1538	473	2.00	0.75	1.38	652.74	0.004	1/100	< LOQ
Blind Recount B02	Recount/ Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank

Key:

Sample Type: P = Personal; Ex = Excursion; IWA = Inside Work Area; OWA = Outside Work Area; BAK = Background; A = Ambient Air; HEX = HEPA Exhaust; CL = Clearance Sample

Activity: PREP = Work Area Preparation; REM - Removal; GB - Glovebag; FC - Final Cleaning; BO = Bagout; TD = Tear Down; PP - Paint Prep

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Project No. 805169

File Code No. 4.5.5.2.257

Doc No. _____

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
12/1/00	URS Radian PROJECT #: 21001-001	Tim Gish	WR Grace Vermiculite Plant - Plant wide WORK AREA: Libby, MT	Patrick McGurren ANALYSIS BY: P. McGurren

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ____ Method: ____	Rotameter ✓ ID ____ Other: ____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other: 45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. ____ Lot No. 1506	✓ 385 mm² ___ mm² ___ NA	✓ 0.00785 mm² ___ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
P03	2X	Inside truck worn by - Luis Burrell	Loading trucks w/ soil @ export plant	0731 ~~200~~	0753	22	2.00	2.00	2.00	44.00	0.061	4/100	< LOQ
P04	P	Inside truck worn by - Vernon Cunningham	& dumping them @ the mine	0729	1513	464	2.00	2.00	2.00	928.00	0.003	2.5/100	< LOQ
P05	P	Inside truck worn by - Ben Cook	↓	0736	1609	513	2.00	0.50	1.25	641.25	0.004	2/100	< LOQ
P06	P	Inside truck worn by Luis Burrell		0753	1515	442	2.00	1.70	1.85	817.70	0.003	3/100	< LOQ
Blind Recount B02	Recount/ Perimeter	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank

Key:
Sample Type: P = Personal; Ex = Excursion; IWA = Inside Work Area; OWA = Outside Work Area; BAK = Background; A = Ambient Air; HEX = HEPA Exhaust; CL = Clearance Sample
Activity: PREP = Work Area Preparation; REM - Removal; GB - Glovebag; FC - Final Cleaning; BO = Bagout; TD = Tear Down; PP - Paint Prep

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Project No. 805169
File Code No. 4.5.6.2.260
Doc No. ____

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT: URS Radian	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
12/2/00	PROJECT #: 21001-001	Tim Gish	WR Grace Vermiculite Plant - Plant wide WORK AREA: Libby, MT	Patrick McGuire ANALYSIS BY: P. McGuire

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ☑ (NIOSH 7400) Lead ☐ (NIOSH 7082) Other ☐ _____ Method: _____	Rotameter ☑ ID _____ Other: _____	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other .45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfl. _____ Lot No. 1506	✓ 385 mm² _____ mm² ___ NA	✓ 0.00785 mm² _____ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ f/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
P03	P	Inside truck - worn by - Terry Holthaus	Loading trucks with soil @ export plant	0737	1540	483	2.00	2.00	2.00	966.00	0.003	3/100	< LOQ
P04	EX	Inside truck worn by - Doug Carr	& dumping them @ the mine	0739	0800	21	2.00	2.00	2.00	42.00	0.064	0.5/100	< LOQ
P05	P	Inside truck worn by Fred McDougall	↓	0741	1556	495	2.00	2.00	2.00	990.00	0.003	19.5/100	0.010
* P06	P	Inside truck worn by - Doug Carr	↓	0800	1609	489	2.00	2.00	2.00	978.00	0.003	VOID	Particulate overload
Blind Recount B02	Recount/ Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank

* Cassette filter appeared to have some sort of smoke particulate overload, & is un-readable.

Key:

Sample Type:			Activity:		
	P = Personal	BAK = Background		PREP = Work Area Preparation	BO = Bagout
	Ex = Excursion	A = Ambient Air		REM - Removal	TD = Tear Down
	IWA = Inside Work Area	HEX = HEPA Exhaust		GB - Glovebag	PP - Paint Prep
	OWA = Outside Work Area	CL = Clearance Sample		FC - Final Cleaning	

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Project No. 805169
File Code No. 4.5.6.2.263
Doc No. _____

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT: URS Radian	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
12/4/00	PROJECT #: 21001-001	Tim Gish	WR Grace Vermiculite Plant-Plant wide WORK AREA: Libby, MT	Patrick McGowan ANALYSIS BY: P McGowan

SAMPLE TYPE:	PUMP CALIBRATION:	FILTER TYPE:	TEM FILTER:	FILTER FCA:	MICROSCOPE FIELD AREA:
Asbestos ✓ (NIOSH 7400) Lead ( ) (NIOSH 7082) Other ( ) Method:	Rotameter ✓ ID Other:	___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel ___ Other 45 TEM	✓ MCE <0.45um 25mm ___ PC <0.45um 37mm Mfr. Lot No. 15016	✓ 385 mm² ___ mm² ___ NA	✓ 0.00785 mm² ___ mm² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK) Start	Stop	Total	FLOW RATE (L/MIN) Start	Stop	Avg.	AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³
B01	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
P03	EX	Inside truck worn by- Luis Burrell	loading trucks w/ soil @	0721	0745	24	2.00	2.00	2.00	48.00	0.056	1/100	< LOQ
* P04	P	Inside truck worn by Doug Carr	export plant & dumping them @	0724	1627	543	2.00	1.00	1.50	814.50	0.003	VOID	Particulate overload
P05	P	Inside Truck worn by Vernon Cunningham	the mine	0715	1633	558	2.00	1.00	1.50	837.00	0.003	3.5/100	< LOQ
P06	P	Inside truck worn by- Luis Burrell	↓	0745	1635	530	2.00	1.00	1.50	795.00	0.003	5.0/100	LOQ
Blind Recount B01	Recount/ Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank

* Cassette filter appeared to have some sort of smoke particulate overload, & is un-readable.

Key:

Sample Type:			Activity:		
	P = Personal	BAK = Background		PREP = Work Area Preparation	BO = Bagout
	Ex = Excursion	A = Ambient Air		REM - Removal	TD = Tear Down
	IWA = Inside Work Area	HEX = HEPA Exhaust		GB - Glovebag	PP - Paint Prep
	OWA = Outside Work Area	CL = Clearance Sample		FC - Final Cleaning	

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Project No. 805169
File Code No. 4.5.6.2.266
Doc No.

APPENDIX G

PROJECT ADDENDA

URS

Project No. 805169
File Code No. 1.3.6.1
Doc No. 02-1/2

ADDENDUM NO. 1

Work Plan – Removal of Asbestos and Vermiculite at the Libby Asbestos Site

28 July 2000

This addendum to the 28 July 2000 Work Plan for the removal of asbestos and vermiculite at the Libby Asbestos Site is issued to amend the sequence of performing cleaning activities for the Planer Shop, while maintaining the safety of the public and contractor personnel.

On 1 August 2000, the EPA, Millwork West and WR Grace reached an agreement that the planing operations can be immediately shut down until September 4, 2000. This enables an early start on the cleaning of the planer shop, shed, and planer provided that the building (shop and shed) be prepared and isolated as a restricted zone from all other parts of the property and public use and access.

URS proposes to accomplish this in strict adherence to the Work Plan Health and Safety procedures, Air Monitoring procedures and documentation reporting to assure the EPA that the early start in cleaning operations were performed in a manner protecting the public and allowing Millwork West to continue other site operations until relocated to the new temporary pole barn structures (Section 2.1.6 of the Work Plan) off Highway 2 scheduled for installation completion 1 September 2000.

To accomplish the cleaning, URS and its subcontractors ACandS and Koch Environmental Health, Inc. (KEH) will isolate the planer shop and shed from all other site areas and activities by installing critical barriers at all openings of the planer shop and shed per the building cleanup/decontamination procedures (Appendix D, Section 3.5). The personnel decontamination unit (Appendix D, Section 2.1) will be constructed and personnel access and egress will be restricted to this one entrance. Street clothes will be doffed and donned in the clean room.

The building exterior walls will become the boundary of an isolated restricted zone in the western portion of the site (Figure 2.1). This will not restrict Millwork West's utilization of access roads or other property areas.

In accordance with Appendix A (Sampling and Analysis Plan), KEH will implement for the Planer Shop cleanup operations, appropriate removal area and monitoring point (i.e., clean

rooms, exhaust fans, etc.) sampling activities. ACandS and KEH will also monitor personnel per the Health and Safety Plan.

Upon completion of cleaning, all critical barriers will be left in place and the negative air machines (Appendix D, Section 3.7) will be left in operation. Final clearance sampling will not be conducted (Appendix A, Section 2.3) until after exterior soils in the western area are removed and the EPA agrees that exterior operations should not result in recontamination with asbestos or vermiculite particles.

All materials removed will be bagged and/or contained in sealed containers per Appendix D and left on site for later removal after set-up of the full site exclusion zone. At that time per all other applicable procedures of the Work Plan, transportation for disposal would begin.

This early start on the planer and planer shop, in lieu of the small shed, enables WR Grace to proceed rapidly with work activities, assuring completion per the schedule limits, not adversely affecting the Millwork West retail business, and protects the health and safety of the public, agency, or contractor personnel.

Activities initiating containment will begin 4 August 2000. Complete cleaning of Planer, Planer Shop and shed internals are scheduled for 2 September 2000.

APPROVED

URS

Project No. 805769
File Code No. 1.3.5.1
Doc No. pg 2/2

ADDENDUM NO. 2

AWAITING EXECUTED COPY FROM PAUL PERONARD, USEPA REGION VIII

ADDENDUM NO. 3
Work Plan – Removal of Asbestos and Vermiculite
at the Export Plant, Libby Asbestos Site
18 August 2000

This addendum to the 28 July 2000 Work Plan for the removal of asbestos and vermiculite at the Libby Asbestos Site is issued to amend the sequence of cleaning activities for the Planer Shop, while maintaining the safety of the public and contractor personnel.

To finish the cleaning of the Planer Shop, URS and its subcontractor AcandS will do the following:

1. After 5:00 p.m. on August 18, 2000, URS and AcandS employees, in full PPE including respirators and Tyvek, will hand shovel and grub the Planer Shop foundation as needed for installation of a membrane to collect power wash overspray. The soil next to the Planer Shop foundation will be thoroughly wet to minimize dust prior to hand digging. Also, a source appearing to be vermiculite, leaking from the east wall of the Planer Shop, will be plugged and the loose material cleaned up prior to hand digging. (All activities relating to No. 1 must be performed after 5:00 p.m. after August 18, 2000, if necessary.
2. Building materials that have been decontaminated from inside the Planer Shop will be taken outside of the proposed exclusion zone to a staging area near the URS decontamination trailer and covered, if necessary.
3. Bagged asbestos impacted materials, including used PPE, will be removed from inside the Planer Shop and staged in the bed of a 12 cubic yard dump truck parked on the west side of the Planer Shop and covered with a tarp until approved for disposal at the mine.

To the extent that URS is able to continue work on the removal action each day without interruption, we anticipate that the September 4, 2000 deadline for completion of Planer Shop decontamination can be met.

Signature: [signature] Date: 8/25/00

DUC NGUYEN (OSC)
Printed Name of Signer

URS ORIGINAL
Project No. 805169
File Code No. 1.3.6.3
Doc No.

URS

August 18, 2000

Mr. Paul Peronard
US EPA
EPR-SA
999 18th St, Suite 500
Denver, CO 80202

Mr. Paul Peronard
US EPA
501 Mineral Avenue
Libby, Montana 59923

Re: **Addendum 4 to Approved Work Plan dated July 28, 2000**
Libby Asbestos Site (#8-BC), Libby, Lincoln County, Montana

Dear Mr. Peronard:

Please find attached, for your review and approval, Addendum No. 4, to amend cleaning activities for the small shed.

Thank you in advance for your immediate attention with this matter. Please call if you have any questions concerning this submittal.

Sincerely,

Jim Stout

Jim Stout
Project Coordinator
Libby Asbestos Site

cc: Jon Constan, Montana Department of Environmental Quality (3 copies)
Ken Lund, Holme Roberts & Owen
Bob Mariam, WR Grace
David Cleary, WR Grace
Karen Brown, WR Grace
Matthew Cohn, US EPA

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Project No. 805168
File Code No. 1.3.b.2
Doc No. 1/3

URS Corporation
707 17th Street, Suite 3400
Denver, CO 80202
Tel: 303.292.0800
Fax: 303.292.5860

URS

Project No. 805169
File Code No. 1.3.5.2
Doc No. 2/3

ADDENDUM NO. 4
Work Plan – Removal of Asbestos and Vermiculite at the Export Plant, Libby Asbestos Site
28 July 2000

This addendum to the 28 July 2000 Work Plan for the removal of asbestos and vermiculite at the Libby Asbestos Site is issued to amend the sequence of performing cleaning activities for the small shed, while maintaining the safety of the public and contractor personnel.

On 16 August 2000, the EPA and WR Grace reached an agreement that cleaning of the small shed may be initiated prior to full site enclosure and movement of Millwork West retail operation, providing that it will be prepared as an isolated and restricted zone from all other parts of the property and public use and access. This enables an early start on the cleaning of the small shed in an effort to complete building cleanup before severe winter weather.

URS proposes to accomplish this in strict adherence to the Work Plan Health and Safety procedures, Air Monitoring procedures and documentation reporting to assure the EPA that the early start in cleaning operations were performed in a manner protecting the public and allowing Millwork West to continue other site operations until relocated to the new temporary pole barn structures (Section 2.1.6 of the Work Plan) off Highway 2 scheduled for completion on 30 September 2000.

To accomplish the cleaning, URS and its subcontractors ACandS and Koch Environmental Health, Inc. (KEH) will isolate the small shed from all other site areas and activities by installing critical barriers at all openings of the small shed per the building cleanup/decontamination procedures (Appendix D, Section 3.5). The personnel decontamination unit (Appendix D, Section 2.1) will be constructed and personnel access and egress will be restricted to this one entrance. Street clothes will be doffed and donned in the clean room.

The building exterior walls will become the boundary of an isolated restricted zone in the western portion of the site (Figure 2.1). This will not restrict Millwork West's utilization of access roads or other property areas. The necessary exterior work will be accomplished as follows:

1. After 5:00 p.m. on the day(s) approved by the EPA, URS and ACandS employees, in full PPE including respirators and Tyvek®, will hand shovel and grub the small shed

foundation as needed for installation of a membrane to collect power wash overspray. The soil next to the small shed foundation will be thoroughly wet to minimize dust prior to hand digging.

2. Bagged asbestos impacted materials, including used PPE, will be removed from inside the small shed and staged in the bed of a 12-cubic yard dump truck parked on the west side of the property and covered with a tarp until approved for disposal at the mine.

In accordance with Appendix A (Sampling and Analysis Plan), KEH will implement for the small shed cleanup operations, appropriate removal area and monitoring point (i.e., clean rooms, exhaust fans, etc.) sampling activities. ACandS and KEH will also monitor personnel per the Health and Safety Plan.

Upon completion of cleaning, all critical barriers will be left in place and the negative air machines (Appendix D, Section 3.7) will be left in operation. Final clearance sampling will not be conducted (Appendix A, Section 2.3) until after exterior soils in the immediate area are removed and the EPA agrees that exterior operations should not result in recontamination with asbestos or vermiculite particles.

All materials removed will be bagged and/or contained in sealed containers per Appendix D and left on site for later removal after set-up of the full site exclusion zone. At that time per all other applicable procedures of the Work Plan, transportation for disposal would begin.

This early start on the small shed enables WR Grace to proceed rapidly with work activities, assuring completion per the revised schedule limits, not adversely affecting the Millwork West retail business, and protects the health and safety of the public, agency, or contractor personnel.

Activities initiating containment will begin as soon as possible. Complete cleaning of small shed internals is scheduled for 30 September 2000.

Signature

PAUL R. PERONARD
Printed Name of Signer

15 Sept 2000
Date

Approval for work to start on 15 Sept 2000
JN

URS

Project No. 805169
File Code No. 1.3.b.2
Doc No. 3/3

URS

August 18, 2000

Mr. Paul Peronard
US EPA
EPR-SA
999 18th St, Suite 500
Denver, CO 80202

Mr. Paul Peronard
US EPA
501 Mineral Avenue
Libby, Montana 59923

Re: **Addendum 5 to Approved Work Plan dated July 28, 2000**
Libby Asbestos Site (#8-BC), Libby, Lincoln County, Montana

Dear Mr. Peronard:

File no 1.3.b.5

Please find attached, for your review and approval, Addendum No. 5 to the above referenced work plan. URS is planning to begin implementing the revisions to the Appendix E, Traffic Control Plan described in the attached Addendum No. 5 and to begin the hauling of cleaning/demolition materials from the Planer Shop to the disposal level 12 on August 22, 2000. Therefore, please call me with any comments or fax your approval to me by noon on August 21.

Thank you in advance for your immediate attention with this matter. Please call if you have any questions concerning this submittal.

Sincerely,

Jim Stout

Jim Stout
Project Coordinator
Libby Asbestos Site

cc: Jon Constan, Montana Department of Environmental Quality (3 copies)
Ken Lund, Holme Roberts & Owen
Bob Mariam, WR Grace
David Cleary, WR Grace
Karen Brown, WR Grace
Matthew Cohn, US EPA

URS
Project No. 805169
File Code No. 3.6.a.27
Doc No.

URS Corporation
707 17th Street, Suite 3400
Denver, CO 80202
Tel: 303.292.0800
Fax: 303.292.5860

URS

Project No. 805169
File Code No. 1.3.6.5
Doc No. 1/2

ADDENDUM NO. 5
Work Plan – Removal of Asbestos and Vermiculite at the Export Plant, Libby Asbestos Site
28 July 2000

This addendum to the 28 July 2000 Work Plan for the removal of asbestos and vermiculite at the Libby Asbestos Site is issued to amend Appendix E – Traffic Control Plan. The following items are proposed changes to the current Traffic Control Plan:

1. Calcium chloride, in lieu of magnesium chloride, will be applied to Rainy Creek Road as part of the dust control measures taken for this removal action. The application of calcium chloride is an effective dust control measure which will minimize the amount of water required for dust suppression.

2. Once soil removal activities begin at the Export Plant site, wheel washing of trucks will begin as they leave the Export Plant site per the original plan.

3. The route to the mine has not been altered.

4. The mine decontamination pad will be constructed for wheel washing of exiting trucks at the last turnout exiting the mine road near the "locked gate," rather than adjacent to the well (See revised **Figure E-3**).

5. One flagger at the mine will now provide traffic control for all trucks hauling soil and debris to the mine disposal site. The location of this flagger will be at the mine gate (locked gate). This flagger will be in radio contact with all truck traffic and will control ingress and egress to all traffic within the former Vermiculite Mountain Mine Site during operations. The gate will be locked at other times.

6. Several turnouts have been identified between the mining gate and mine disposal site where trucks can pull over to wait for oncoming traffic , therefore allowing restricted two-way traffic in this portion of the haul route. The turnouts will each be numbered so that a vehicle's location can be monitored. If more than one vehicle is between the mine gate and the mine disposal site, they can be directed by the flagger via radio communications to pull over and wait for the uphill traffic to pass before proceeding, thereby improving the overall flow of trucks through this segment of the haul route.

7. Daily truck count passing the flagger will be maintained.

8. The Traffic Operations Foreman position will be eliminated. The duties of the Traffic Operations Foreman will be assumed by the Construction Supervisor.

9. The revised disposal locations for soil and debris traffic patterns are shown on the revised **Figure E-3.**

Signature

13 Sept 2000
Date

PAUL R. PERONARD
Printed Name of Signer

This was verbally approved on 18 August 2000, GRACE/URS implemented actions accordingly

URS COPY

Project No. 805169
File Code No. 1.3.6.5
Doc No. pg 2/2

URS

EPA REGION VIII
INFRASTRUCTURE/8TMS-I
00 AUG 38 PM 3:31

September 6, 2000

Mr. Paul Peronard
USEPA
EPR-SA
999 18th St, Suite 500
Denver, CO 80202

Mr. Paul Peronard
USEPA
501 Mineral Avenue
Libby, Montana 59923

Re: **Addendum 6 to Approved Work Plan dated July 28, 2000**
Libby Asbestos Site (#8-BC), Libby, Lincoln County, Montana

Dear Mr. Peronard:

File no. 1.3.6.4

Please find attached, for your review and approval, Addendum No. 6, revising Appendix J, Restoration Plan, in the above referenced work plan.

Thank you in advance for your immediate attention with this matter. Please call if you have any questions concerning this submittal.

Sincerely,

For Jim Stout
Project Coordinator
Libby Asbestos Site

cc: Jon Constan, Montana Department of Environmental Quality (3 copies)
Ken Lund, Holme Roberts & Owen
Bob Mariam, WR Grace
David Cleary, WR Grace
Karen Brown, WR Grace
Matthew Cohn, US EPA
Pete Pendrak, URS
File

Approved
13 Sept 2000

URS Corporation
707 17th Street, Suite 3400
Denver, CO 80202
Tel: 303.292.0800
Fax: 303.292.5860

URS COPY
Project No. 805167
File Code No. 3.6.4.26
Doc No.

ADDENDUM NO. 6

Work Plan - Removal of Asbestos and Vermiculite at the Export Plant, Libby Asbestos Site

06 September 2000

URS

Project No. 805169
File Code No. 1.3.5.4
Doc No.

1.0 INTRODUCTION

This addendum to the 28 July 200 Work Plan for the removal of asbestos and vermiculite at the Libby Asbestos Site is issued to amend Appendix J - Disposal Site Restoration Plan. The locations for debris and soil disposal have now been identified. This addendum addresses restoration of the two disposal areas at the mine site following completion of the Export Plant cleanup.

W.R. Grace, Inc. (Grace) plans to dispose of asbestos impacted soil, vermiculite, debris, and building abatement residue generated during decontamination of the Export Plant at the vermiculite mine. Grace currently has an access agreement with the owner of the mine and has cooperated with the regulatory agencies involved in the cleanup actions to select appropriate disposal areas. Placement of the asbestos impacted material and restoration of the disposal areas will be conducted according to the procedures specified within this plan.

The vermiculite mine is located approximately 8 miles to the north and east of the Export Plant as shown on Figure J-1. Since mining operations ceased in 1990 the mine property was reclaimed by Grace and subsequently sold to Kootenai Development Company. Previous restoration activities included regrading operations and planting of native vegetation.

2.0 REFERENCE TO OTHER PLANS

The restoration activities described in this plan are associated with work described in several other plans, as amended, including: Health and Safety Plan (Appendix B); Traffic Control Plan (Appendix E and Addendum No. 5); Dust Control Plan (Appendix F and Addendum No. 5); and Erosion Control Plan (Appendix G). Several activities specified in the plans noted will support the restoration actions as well. The Traffic Control Plan describes the route trucks will use to access the disposal areas and the operations to decontaminate those vehicles. Dust and erosion control measures will be undertaken during the disposal of the

material as described in the respective plans to alleviate dispersion of the materials via wind or water runoff.

All of the disposal activities will be closely monitored and coordinated to insure the safety of the public and contractor personnel and to minimize environmental impacts. Health and safety precautions will be emphasized throughout the disposal and restoration work. Only properly trained and qualified individuals will be assigned to the disposal and site restoration tasks. At a minimum, personnel working at the mine site will have OSHA 40-hour HAZMAT and respirator training. Access to the disposal areas will be restricted to authorized personnel.

3.0 MINE SITE RESTORATION TECHNICAL PROTOCOL

As agreed upon with the appropriate project regulatory representatives (Paul Peronard-EPA; and John Constan-Montana DEQ), two areas at the mine site have been identified for disposal of soil and debris associated with the Export Plant cleanup. The two areas are shown on Figure J-2 and noted as the "Soil Staging" area and the "Planned Debris Disposal" area. Soil excavated from the Export Plant will be staged in an area directly west of a large depression known as the Glory Hole. Cleaning debris and non-salvageable material will be placed in a depression known as the Level 12 Toe, directly west of a large mound of dirt and mined material. Photographs of the selected disposal areas are presented as Figures J-3 through J-6.

3.1 Soil Disposal and Site Restoration

Up to 16,000 cubic yards of surface soil, gravel, and road base are estimated to be removed from the Export Plant site. The soil will be transported to the mine site in tarp-covered end-dumps and placed in the soil staging area. A dozer will be operated at the soil staging area to manage deposited soil. In addition, dust suppression will be maintained throughout the soil dumping activities using water trucks and hoses.

The staged soil piles will be left in place until all of the removal activities at the Export Plant are complete and all of the debris resulting from the cleanup has been transported to the mine site for disposal. The soil piles will be monitored and moistened as necessary to minimize blowing dust.

The staged soil will be used for two purposes: 1) as final cover for the Planned Debris Disposal area; and 2) as fill for the Glory Hole. URS will place approximately 24 inches of the

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File Code No. 1.3.5.4

soil as a final cover over the Planned Debris Disposal area. The soil will provide a base for revegetation of this area.

The remaining soil and gravel will be used to fill the Glory Hole, eliminating this depression and recontouring the area to match the surrounding grade. This recontouring activity will be completed after appropriate consultation with Montana DEQ and in accordance with the mine site permit requirements as may be amended. The area will be revegetated once filling and grading is complete.

3.2 Debris Disposal Area

Debris from the Export Plant building abatement activities and vermiculite removal will be hauled to the debris disposal area in trucks and placed in a depression on Level 12 near the toe of a small hill as shown on Figure J-2. It is anticipated that most of the debris material from the abatement will be wrapped in plastic or bagged. If necessary to control wind blown litter, periodic soil cover will be pushed over the top of the debris using a dozer operating at the top of the hill. The cover will consist of existing soil scraped by the dozer off the hill above the disposal area. Alternatively, the material will be moistened daily to control wind dispersal.

Scraping the natural material off the top of the hill above the disposal location (at the toe of the hill) will also allow URS to reduce the steep slope of the hill and recontour this area to prevent erosion and ponding of precipitation. Once all of the debris has been hauled and disposed of in this area, the area will be covered with 2 to 3 feet of additional natural material and tracked with the dozer. Soil from the soil staging area will then be brought in and a minimum 12-inch lift will be placed over the disposal area and revegetated.

3.3 Revegetation

Once the final grades have been established and the final soil cover placed, the Glory Hole and the Debris Disposal Area will be hydroseeded using a seed mixture selected in consultation with forest service personnel. The reseeded areas will be inspected weekly throughout the first growing season to ensure that adequate moisture is available for establishing germination and growth. The inspections will also be used to identify potential erosion areas if present so that they can be addressed.

3.4 Site Security

The area used for disposal of the Export Plant cleanup debris will be posted with signs indicating the areal extent of the disposal area. The signs will also indicate the nature of the

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File Code No. 1.3.b.4

disposed material and provide a telephone number for additional information. As necessary a deed restriction will be made for the area of the debris disposal.

4.0 COMPLIANCE WITH STATE SOLID WASTE DISPOSAL REQUIREMENTS

The potentially applicable requirements for construction, operation, and closure of landfill units in Montana are provided in ARM 17.50.501 to 17.50.540. This section reviews requirements as they may potentially apply to the disposal of the soil and cleanup debris generated at the Export Plant.

4.1 Facility Classification

The waste generated during the cleanup is considered "construction and demolition waste". Asbestos is not considered to be a hazardous waste under RCRA regulations. The areas at the mine site selected for disposal of the material will not receive any other waste and will not meet the definition of a "municipal solid waste landfill" unit (MSWLF). The debris to be placed in the disposal area at the mine meets the definition of Group III wastes as defined in ARM 17.50.503. Group III wastes include:

> "wood wastes and non-water soluble solids. These wastes are characterized by their general inert nature and low potential for adverse environmental impacts. Examples include, but are not limited to, the following:
>
> - Inert solid waste such as unpainted brick, dirt, rock and concrete;
> - Clean, untreated, unglued wood materials, brush, unpainted or untreated lumber, and vehicle tires; and
> - Industrial mineral wastes which are essentially inert and non-water soluble and do not contain hazardous waste constituents."

It is anticipated that the disposal area would fall within the definition of a Class III or Class IV landfill according to ARM 17.50.504(2)(b) and (c).

4.2 Facility Standards

The selected disposal locations meet all of the standards for solid waste management facilities identified in ARM 17.50.505. Criteria specified in ARM 17.50.506 pertaining to liners and leachate collection do not apply to the mine site disposal areas since they are not a Class II landfill unit and since there is no opportunity for affecting the uppermost aquifer with the chemicals listed in Table 1 of the regulation. Since the contaminant of concern in the debris and

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Project No. 805169
File Code No. 1.3.5.4
Disp. No.

soils to be disposed is asbestos (non-soluble) and the disposal location is within a vermiculite mine containing extensive deposits of naturally occurring asbestos, there is minimal potential to adversely affect any existing aquifers due to disposal of the material.

4.3 Operation and Maintenance

The operation and maintenance procedures for the disposal areas will adhere to the applicable requirements for Class III landfills as specified in ARM 17.50.510 and 511. Access to the mine disposal areas will be strictly controlled. No open burning will take place and control of litter will be accomplished through frequent inspections and placement of periodic cover. Although daily cover is not required for Class III and IV landfills, Grace may provide for cover in the debris area using naturally occurring soils from nearby the disposal area if necessary to prevent debris from blowing across the site.

4.4 Closure Requirements

Closure requirements for Class III and Class IV landfills are specified in ARM 17.50.530(2) and 17.50.530(3) respectively. The requirements for closure of a Class III landfill include:

- Two feet of final cover;
- Grading and seeding to prevent erosion; and
- A deed notation.

The plan for closing the waste disposal areas will include each of these requirements. Closure requirements for a Class IV landfill include the placement of a final cover designed to minimize infiltration using an 18-inch earthen layer with a permeability of 10^{-5} cm/sec or less and revegetation. Grace plans a 24-inch earthen layer as final cover, although a permeability specification is not planned. As noted previously, the waste that will be placed in the disposal area will not pose a threat to groundwater and the minimal infiltration into the disposal layer is not expected to threaten human health or the environment.

4.5 Post-Closure Care

The subchapter 17 regulations currently do not contain requirements for post closure care of Class III and IV landfills. Grace plans to conduct periodic inspections of the disposal area until the revegetation efforts are successful.

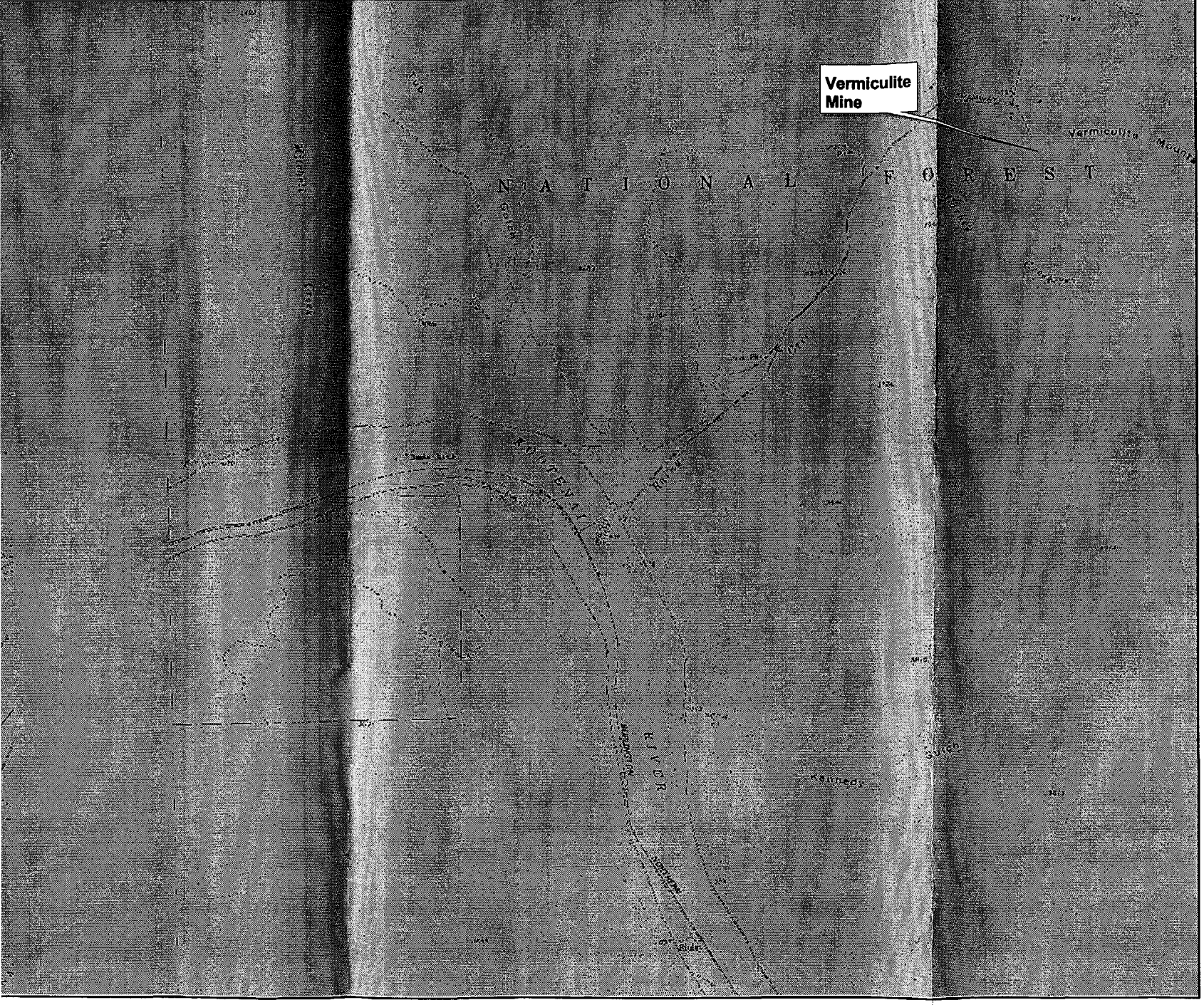
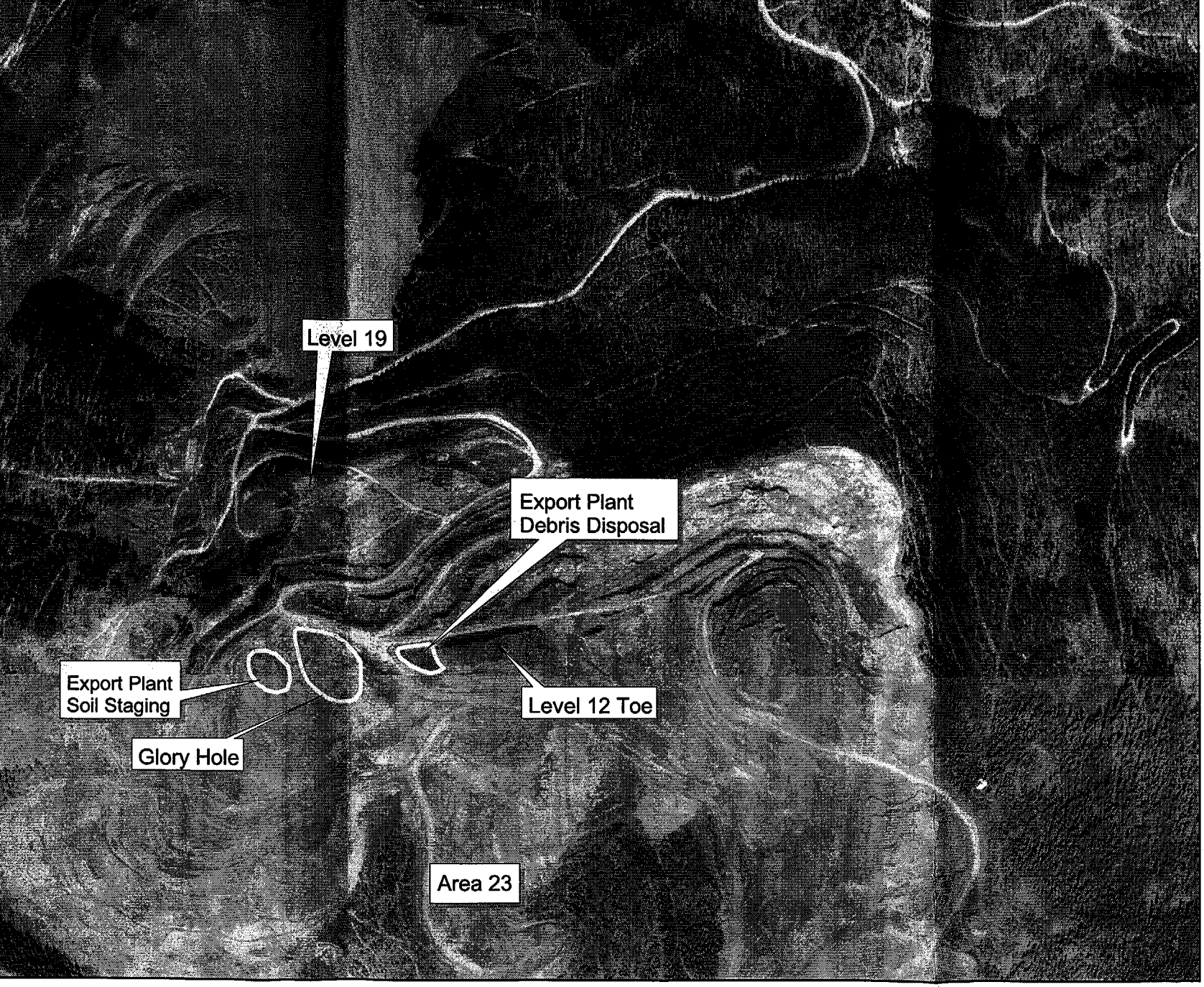


Figure J-1. Site Locations



Reference: U.S. Geological Survey,
Libby and Vermiculite Mountain Quadrangles, Montana

Figure J-2. Proposed Soil and Debris Disposal Locations Vermiculite Mine Site

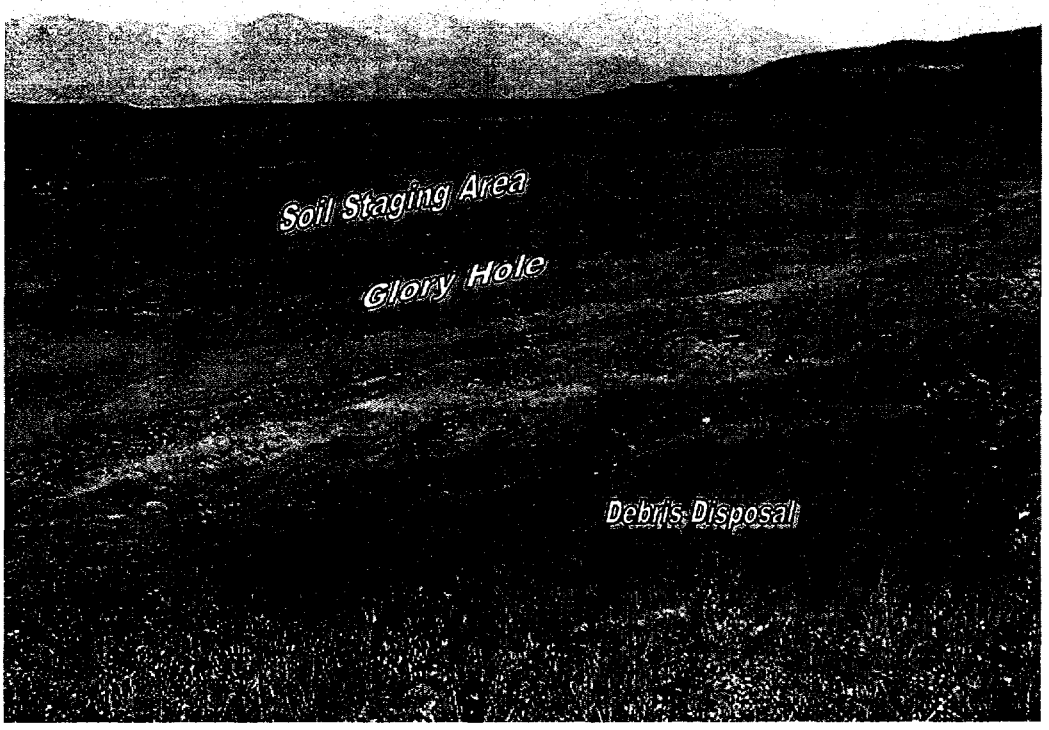


Figure J-3. View Looking West from Top of Level 12

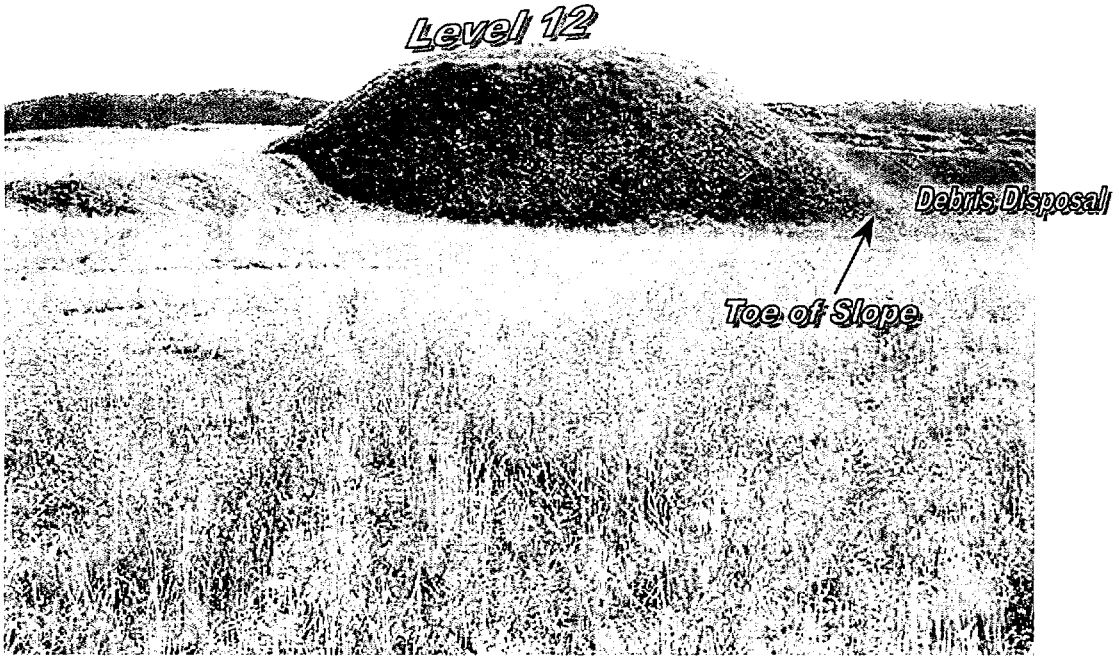


Figure J-4. View of Debris Disposal Location from Northeast

Figure J-5. View of Debris Disposal Location from East

Figure J-6. View of Glory Hole

ADDENDUM NO. 7

AWAITING EXECUTED COPY FROM PAUL PERONARD, USEPA REGION VIII

DENVER FILE

URS

Project No. 805169
File Code No. 6.13
Doc No. 12

COPY

ADDENDUM NO. 8
Work Plan – Removal of Asbestos and Vermiculite
at the Export Plant, Libby Asbestos Site
28 July 2000

This addendum to the 28 July 2000 Work Plan for the removal of asbestos and vermiculite at the Libby Asbestos Site is issued to amend the sequence of performing surface debris removal for the western portion of the site, while maintaining the safety of the public and contractor personnel.

On 20 September 2000, the EPA and WR Grace reached an agreement that debris on the western portion of the site, consisting of lumber and materials to be disposed of at the mine may be initiated prior to full site enclosure and movement of Millwork West retail operation, providing that all activities be performed after the daily closure of Millwork West retail sales. This time—after 5:00 p.m. on the day(s) approved by EPA—will allow removal after public use. This enables an early start on the property surface debris removal in an effort to complete surface excavation before severe winter weather.

URS proposes to accomplish this in strict adherence to the Work Plan Health and Safety procedures, Air Monitoring procedures and documentation reporting to assure the EPA that the early start in removal operations were performed in a manner protecting the public and allowing Millwork West to continue daily site operations until relocated to the new temporary pole barn structures (Section 2.1.6 of the Work Plan) off Highway 2 scheduled for completion on 30 September 2000.

To accomplish the removal, URS and Koch Environmental Health, Inc. (KEH) will isolate activities to the west end of the property. One person will be stationed outside the work area to keep unauthorized personnel from entering the work zone. All work will cease if unauthorized persons enter the work zone. The personnel decontamination trailer unit will be utilized for personnel access and egress. Street clothes will be doffed and donned in the clean room.

Work will be accomplished as follows:

1. After 5:00 p.m. removal activities on the day(s) approved by the EPA, URS employees, in full PPE including respirators and Tyvek®, using a fork lift and by

hand, will load debris into 12 cubic yard dump trucks for transportation and disposal at the mine. Dust will be controlled by keeping the ground thoroughly wet.

2. Impacted materials, debris for disposal, including used PPE, will be removed from the west side of the property in 12 cubic yard trucks covered with a tarp as approved for disposal at the mine.

In accordance with Appendix A (Sampling and Analysis Plan), KEH will implement perimeter monitoring during operations. KEH will also monitor personnel per the Health and Safety Plan.

This surface debris removal action does not result in a final surface cleaning. There will be no clearance sampling involved in this activity.

All other applicable procedures of the Work Plan relating to transportation for, and disposal at the mine, apply.

This early start on surface removal enables WR Grace to proceed rapidly with work activities, assuring completion per the revised schedule limits, not adversely affecting the Millwork West retail business, and protects the health and safety of the public, agency, or contractor personnel.

Activities initiating removal will begin as soon as possible. Complete west sided debris removal is scheduled for 7 October 2000.

Signature _____ Date _____

Printed Name of Signer _____

Following Final CL of Planer Bldg - URS Asked To Start Clean up of West Field - Paul Refused Any Further Work Until Millwork West is Moved

URS

November 02, 2000

US EPA Region VIII
Attn. Mr. Paul Peronard, 8EPR-EP
On-Scene Coordinator
999 18th Street, Suite 300
Denver, CO. 80202-2466

RE: US EPA Region VIII Unilateral Administrative Order (UAO) No. CERCLA-8-2000-10, Libby, Mt. Export Plant Removal Action, Addendum No. 9

Dear Mr. Peronard:

Please find attached Addendum No. 9 to the above referenced UAO for your review and approval. Thank you in advance for your immediate attention with this matter.

Please call if you have any questions concerning this submittal.

Sincerely,

Mr. Jim Stout
Site Project Manager

Attachment

cc: Ken Lund, Esq. — Holme, Roberts & Owen
Karen Brown — W. R. Grace
Ray Lidstrom — URS

URS Corporation
707 17th Street, Suite 3400
Denver, CO 80202
Tel: 303.292.0800
Fax: 303.292.5860

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Project No. 805169
File Code No. 1.3.6.7
Doc No. pg 1/3

ADDENDUM NO. 9
Work Plan – Removal of Asbestos and Vermiculite at the Libby Asbestos Site
02 November 2000

This addendum to the 28 July 2000 Work Plan for the removal of asbestos and vermiculite at the Libby Asbestos Site is issued to reduce the size of the current Exclusion Zone (see Figure 1 attached). The reduced size of the exclusion zone will allow Millwork West to operate in the Planer Building by November 13, 2000. URS will have perimeter air monitoring samples taken daily at three locations (see Figure 1 attached) along the new west boundary of the Exclusion Zone.

When the planer run begins, URS will excavate soils at the east end of the property. URS will reduce perimeter air monitoring along the new west boundary to one location when the planer run has been completed.

Signature

11/7/00
Date

PAUL R. PERONARD
Printed Name of Signature

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Project No. 805169
File Code No. 1.3.5.7
Doc No. pg 2/3

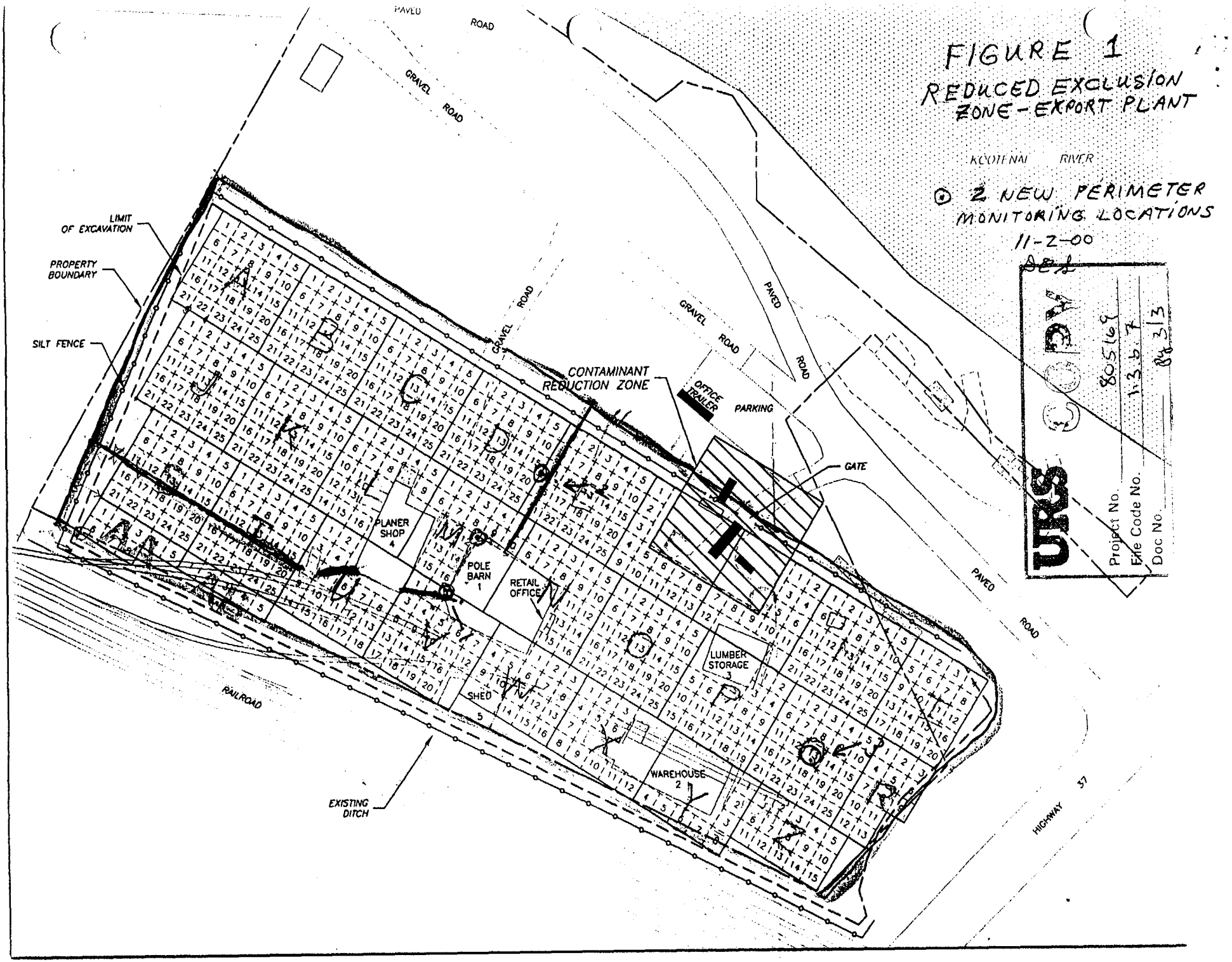
FIGURE 1
REDUCED EXCLUSION ZONE - EXPORT PLANT
KOOTENAI RIVER
⊙ 2 NEW PERIMETER MONITORING LOCATIONS
11-2-00
URS
Project No.
File Code No.
Doc No.
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1.3.5.7
PAVED ROAD
GRAVEL ROAD
LIMIT OF EXCAVATION
PROPERTY BOUNDARY
SILT FENCE
CONTAMINANT REDUCTION ZONE
OFFICE TRAILER
PARKING
GATE
PLANER SHOP 4
POLE BARN 1
RETAIL OFFICE
LUMBER STORAGE 3
SHED 5
WAREHOUSE 2
RAILROAD
EXISTING DITCH
HIGHWAY 37

ADDENDUM NO. 10
Work Plan – Removal of Asbestos and Vermiculite at the Libby Asbestos Site
07 November 2000

This addendum to the 28 July 2000 Work Plan for the removal of asbestos and vermiculite at the Libby Asbestos Site is issued to amend Task 15 – Backfill and Compaction. The following items are proposed changes to the current Task 15 – Backfill and Compaction (per Jim Stout – URS and Paul Peronard – USEPA, November 7, 2000 discussion):

- Backfill material to be used for the Export Plant restoration will originate from the Plum Creek gravel pit as per USEPA approval.
- Backfill material at the Export Plant site will meet ninety percent compaction requirements based on visual inspection per USEPA by wheel rolling with heavy construction equipment.

Signature

12/1/2000
Date

PAUL R. PERONARD
Printed Name

Note: Also need to ensure grading/compaction allows for drainage away from building.

URS

Project No. 805169
File Code No. 1.3.5.9
Doc No.

URS

November 20, 2000

Mr. Paul Peronard
US EPA
EPR-SA
999 18th St, Suite 500
Denver, CO 80202

Mr. Paul Peronard
US EPA
501 Mineral Avenue
Libby, Montana 59923

Re: **US EPA Region VIII Unilateral Administrative Order (UAO) No. CERCLA-8-2000-10, Libby, Montana Export Plant Removal Action, Addendum No. 11**

Dear Mr. Peronard:

Please find attached Addendum No. 11 to the above referenced UAO for your review and approval.

Thank you in advance for your immediate attention with this matter. Please call if you have any questions concerning this submittal.

Sincerely,

Jim Stout
Project Coordinator
Libby Asbestos Site

JS/nm

cc: Ken Lund, Holme Roberts & Owen
Bob Mariam, WR Grace
David Cleary, WR Grace
Karen Brown, WR Grace
Jon Constan, Montana Department of Environmental Quality
Ray Lidstrom, URS
File
Matthew Cohn, US EPA

URS Corporation
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Fax: 303.292.5860

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Project No. 805169
File Code No. 1.3.5.8
Doc No. pg 1/3

ADDENDUM NO. 11

Work Plan – Removal of Asbestos and Vermiculite

at the Export Plant, Libby Asbestos Site

20 November 2000

This addendum to the 28 July 2000 Work Plan for the removal of asbestos and vermiculite at the Libby Asbestos Site is issued to reduce the size of the current Exclusion Zone (see Figure 1 attached). The reduced size of the exclusion zone will allow backfill to start on the east end of the Export Plant. URS will have perimeter air monitoring samples taken daily at three locations (see Figure 1 attached) along the new west boundary of the Exclusion Zone.

Signature _____ Date 11/20/2-0

PAUL R. PERONARD

Printed Name of Signature

URS ORIGINAL

Project No. 805169

File Code No. 1.3.5.8

Doc No. 19 2/3

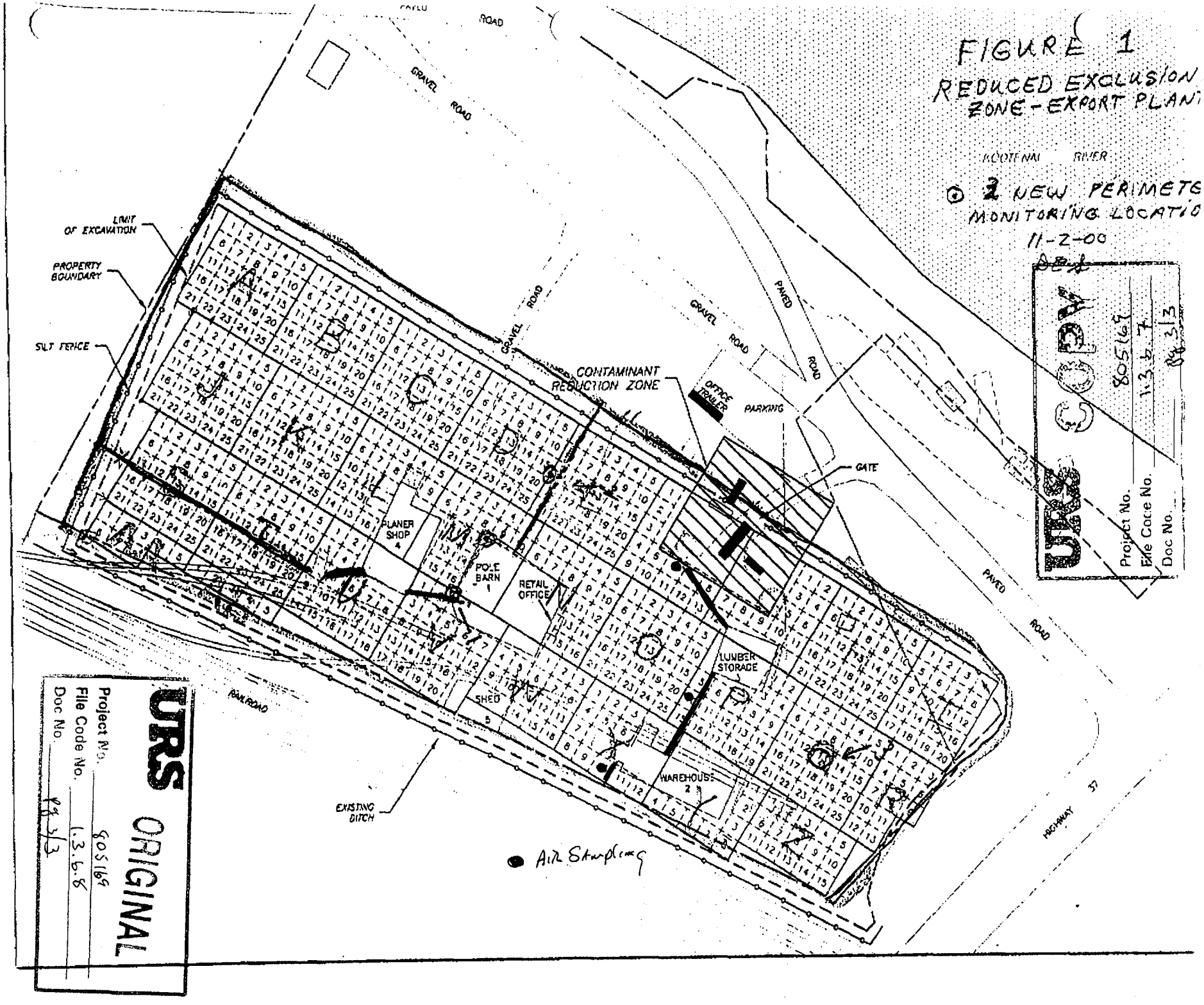
FIGURE 1
REDUCED EXCLUSION ZONE - EXPORT PLANT
KOOTENAI RIVER
2 NEW PERIMETE MONITORING LOCATIO
11-2-00
LIMIT OF EXCAVATION
PROPERTY BOUNDARY
SILT FENCE
GRAVEL ROAD
PAVED ROAD
CONTAMINANT REDUCTION ZONE
OFFICE TRAILER
PARKING
GATE
PLANER SHOP 4
POLE BARN 1
RETAIL OFFICE
LUMBER STORAGE
SHED 5
WAREHOUSE 2
RAILROAD
EXISTING DITCH
HIGHWAY 37
Air Sampling
URS
Project No. 805169
File Code No. 1.3.6.7
Doc No. pg 3/3
URS ORIGINAL
Project No. 805169
File Code No. 1.3.6.8
Doc No. pg 3/3

APPENDIX H

INVENTORY

APPENDIX H-1

APPRAISAL REPORT

EXPORT PLANT
SOUTHWEST CORNER HIGHWAY 37 AND THOMAS STREET
LIBBY, LINCOLN COUNTY, MONTANA

E. NELSON BOWES, MAI, CRE, PE
J. VIRGINIA MESSICK, MAI
REAL ESTATE APPRAISERS AND COUNSELORS
1020 FIFTEENTH STREET - 38E
DENVER, COLORADO 80202

COMPLETE, SELF-CONTAINED APPRAISAL REPORT

EXPORT PLANT
SOUTHWEST CORNER HIGHWAY 37 AND THOMAS STREET
LIBBY, LINCOLN COUNTY, MONTANA

Prepared For

Mr. James Stout
URS Radian
707 Seventeenth Street
Suite 3400
Denver, CO 80202

Prepared By

E. Nelson Bowes, MAI, CRE, PE
J. Virginia Messick, MAI
1020 15th Street, #38E
Denver, Colorado 80202

Date of Value

June 22, 2000

Date of Report

July 10, 2000

E. NELSON BOWES, MAI, CRE, PE
J. VIRGINIA MESSICK, MAI
REAL ESTATE APPRAISERS AND COUNSELORS
1020 FIFTEENTH STREET, #38E
DENVER, COLORADO 80202
***
(303) 623-4908 FAX (303) 629-0491

July 10, 2000

Mr. James Stout
URS Radian
707 Seventeenth Street
Suite 3400
Denver, CO 80202

Dear Mr. Stout:

As you requested, we have inspected and appraised the Export Plant located on the southwest corner of Highway 37 and Thomas Street in Libby, Lincoln County, Montana.

The legal description is in Exhibit A.

Executive summary:

PROPERTY:	Export Plant Southwest corner Highway 37 and Thomas Street Libby, Lincoln County, Montana Occupied by Milllwork West, Inc. and Phil Spencer	
ASSESSOR'S CODE:	0000009890 0000003377 (lease)	
LAND SIZE:	10.936 acres gross 9.917 acres net of undedicated roadway	
BUILDING DESCRIPTION:	A - Planer shop	4,520 sq.ft.
	B - Pole Barn	7,000 sq.ft.
	C - Vermiculite storage warehouse	3,800 sq.ft.
	D - Lumber warehouse	2,490 sq.ft.
	E - Small shed	1,725 sq.ft.
	Total	19,535 sq.ft.
FIXTURES AND PERSONAL PROPERTY:	Lumber, leasehold improvements, trade fixtures, building fixtures/equipment, trade equipment	

INTEREST APPRAISED:	Fee simple value of the real estate. Allocation of real estate value between leasehold and leased fee. Use value of trade fixtures, equipment, and inventory (i.e., value as these items contribute to the value of the business).
NOT VALUED:	Goodwill/intangible portion of business (not to be taken), losses due to interruption of business.
ZONING:	Industrial
HIGHEST AND BEST USE:	Industrial
STRENGTHS:	1,075.64 feet of frontage on the Kootenai River. Excellent rail. Good access, visibility. Useful improvements.
WEAKNESSES:	Age of improvements Undedicated rights-of-way. Poor economy.
DATE OF VALUE:	June 22, 2000

	VALUE ALLOCATED TO	
	LEASED FEE (LANDLORD)	**LEASEHOLD (TENANT)**
Land (page 17)	$ 88,000	
Plus buildings (page 19)	32,000	
Other property:		
1a Lumber Racks (page 22)		$ 21,300
1b Extension Shed (page 22)		5,600
1c Rail Ramps (page 24)		4,300
1d Office (page 25)		8,300
2a Planer (page 29)		100,000
2b Trucks (page 30)		13,700
2c Forklifts (page 30)		30,000
2d Fairbanks Scale (page 31)	2,500	
3 Retail product (page 32)		357,000
4 Supplies (page 33)		48,900
Total	**$ 122,500**	**$ 589,100**

These values are all cash or its equivalent and subject to the Standard Conditions and Certification in the report.

The purpose of this appraisal is to estimate market values of the subject property. The various interests are defined beginning on page 1 of the following report. The use of this report is for making business decisions.

Market value is defined as:

> Market Value means the most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller, each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:
>
> 1. Buyer and seller are typically motivated;
>
> 2. Both parties are well informed or well advised, and acting in what they consider their own best interests;
>
> 3. A reasonable time is allowed for exposure in the open market;
>
> 4. Payment is made in terms of cash in U.S. dollars or in terms or financial arrangements comparable thereto; and
>
> 5. The price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.

Source: Federal Register, Volume 55, No. 165, Page 34696, August 20, 1990.

Our analysis, opinions, and conclusions were developed and this self-contained report has been prepared in conformity with the Uniform Standards of Professional Appraisal Practice as promulgated by the Appraisal Standard's Board of the Appraisal Foundation; and the Code of Professional Ethics and Standards of Professional Appraisal Practice of the Appraisal Institute.

Data and reasoning applied in arriving at the value conclusions are summarized in the report that follows.

Respectfully submitted,

E. Nelson Bowes, MAI, CRE, PE
Certified General Appraiser
Montana #607

J. Virginia Messick

J. Virginia Messick, MAI
Certified General Appraiser
Montana #606

ENB/JVM:ljs

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PHOTOGRAPHS OF OTHER PROPERTY

PREFACE

PROPERTY IDENTIFICATION

The subject of this appraisal is a facility known as the Export Plant in Libby, Montana. It has five buildings totaling 19,535 square feet supported by 10.936 acres (9.917 acres net of undedicated roadway). It is located on the southwest corner of Highway 37 and Thomas Street in Libby, Lincoln County, Montana. The legal description is in Exhibit A.

PURPOSE AND USE OF THE APPRAISAL

The purpose of this appraisal is to estimate market values of the subject property. The use of this report is for making business decisions.

DEFINITIONS

Market Value

Market Value means the most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller, each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

1. Buyer and seller are typically motivated;

2. Both parties are well informed or well advised, and acting in what they consider their own best interests;

3. A reasonable time is allowed for exposure in the open market;

4. Payment is made in terms of cash in U.S. dollars or in terms or financial arrangements comparable thereto; and

5. The price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.

Source: Federal Register, Volume 55, No. 165, Page 34696, August 20, 1990.

Fee Simple – Property Right Appraised

Absolute ownership unencumbered by any other interest or estate, subject only to the limitations imposed by the governmental powers of taxation, eminent domain, police power, and escheat.

Leased Fee

An ownership interest held by a landlord with the rights of use and occupancy conveyed by lease to others. The rights of the lessor (the leased fee owner) and the leased fee are specified by contract terms contained within the lease. In this instance the lease terms show that the value of the leased fee is equal to the value of the fee simple.

Leasehold

The interest held by the lessee (the tenant or renter) through a lease conveying the rights of use and occupancy for a stated term under certain conditions. The tenant does not have a marketable leasehold value in the *real estate*. Leasehold improvements are treated as a separate item below.

Use Value

The value a specific property has for a specific use. Included are:

- leasehold improvements/trade fixtures
- equipment/vehicles
- retail product
- supplies

Most of this value is in personal property. The value of the items of personal property that are not in use or are not part of the operation become market value.

STATEMENT OF OWNERSHIP AND HISTORY OF THE SUBJECT PROPERTY

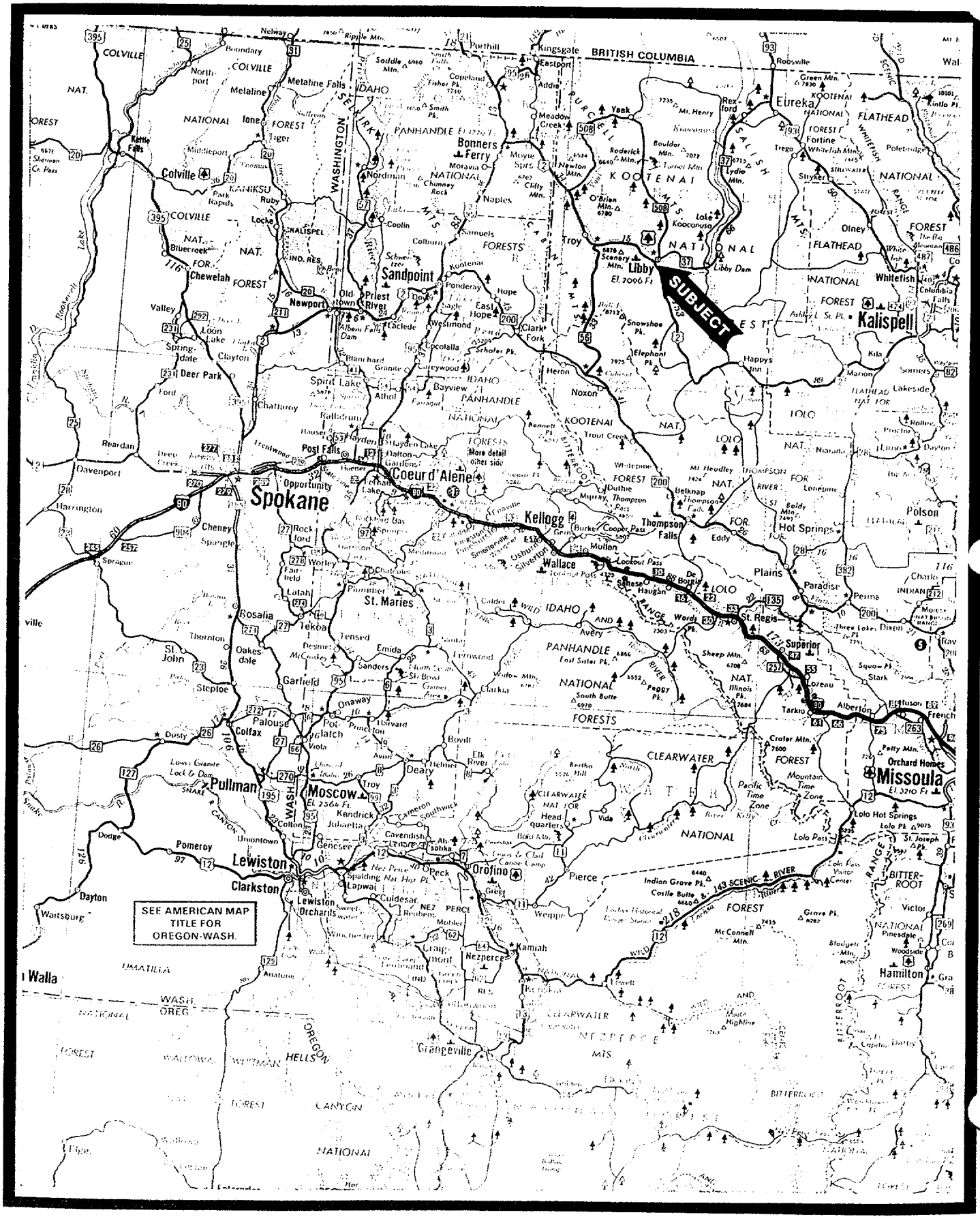
W.R. Grace & Company conveyed the subject property to the City of Libby, Montana on May 12, 1994 as recorded in Lincoln County Deed Book 200 at Page 838. This was reported to be a gift.

In October 1994, the City of Libby leased a 1-acre site plus buildings to Millwork West, Inc. for 1 year for a monthly rental of $400. Currently, Millwork West, Inc. is on a month-to-month lease at $600 per month. However, the tenant now uses four buildings and about 3.5 acres. The fifth building is leased to Phil Spencer for $100 per month. Mr. Spencer is 5 months in arrears on the rent, and the City of Libby has requested that he vacate the premises.

EFFECTIVE DATE OF APPRAISAL/DATE OF INSPECTION

The effective date of this appraisal is June 22, 2000. Inspections and inventory took place from June 21 through June 24, 2000.

FIGURE 1
SUBJECT LOCATION



SUBJECT LOCATION

The subject property is located in Libby in Lincoln County, situated in the northwest corner of Montana. Libby is about 25 miles east of the Idaho border and 40 miles south of the Canadian border. Access is provided by State Highway 2 and Highway 37. Please refer to Figure 1, Subject Location, facing.

Estimated population of Lincoln County as of July 1, 1998 was 18,696. Libby's population was 2,675, up 143 people from April 1, 1990.

Lincoln's economy is dependent upon lumber, wood products, and government. Thirty-six percent of annual wages comes from the government which is primarily due to the forest service. Only 7% of the land in Lincoln County is in private ownership. Lumber manufacturing declined 12.81% from 1986 to 1995. It is anticipated to continue to decline 10% more between 1996 and 2006. This does not bode well for the area.

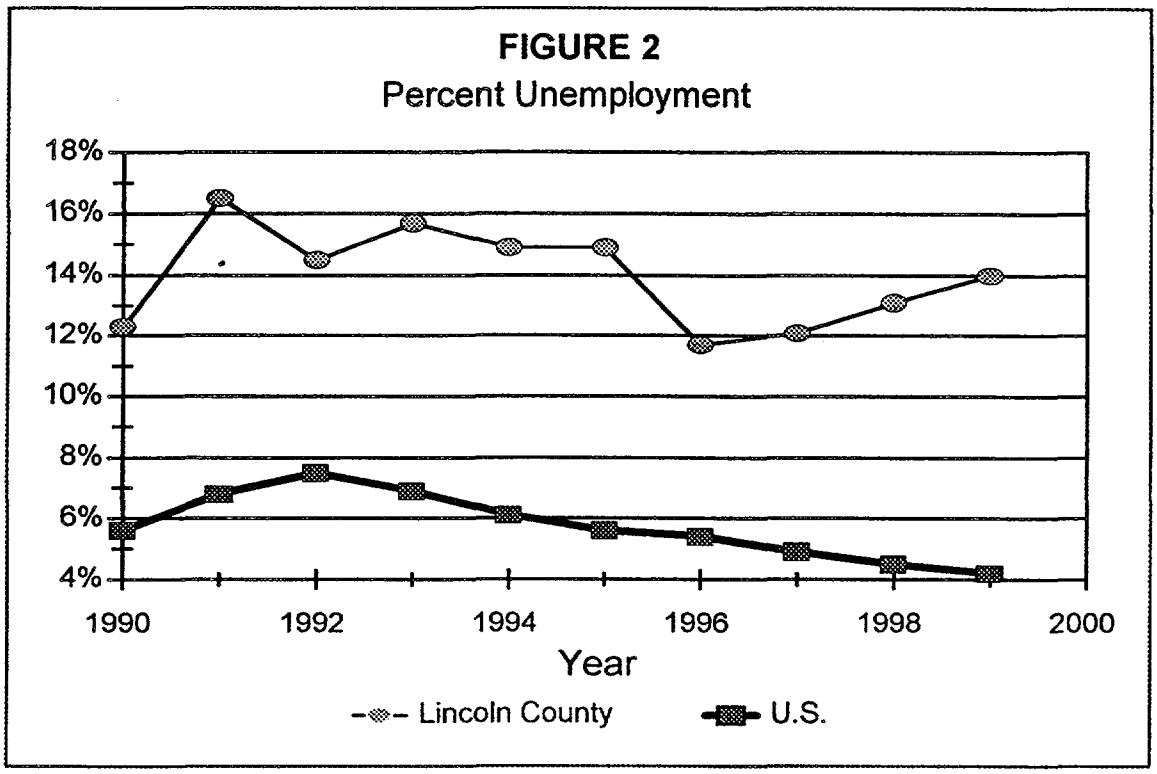


FIGURE 2
Percent Unemployment
18%
16%
14%
12%
10%
8%
6%
4%
1990
1992
1994
1996
1998
2000
Year
Lincoln County
U.S.

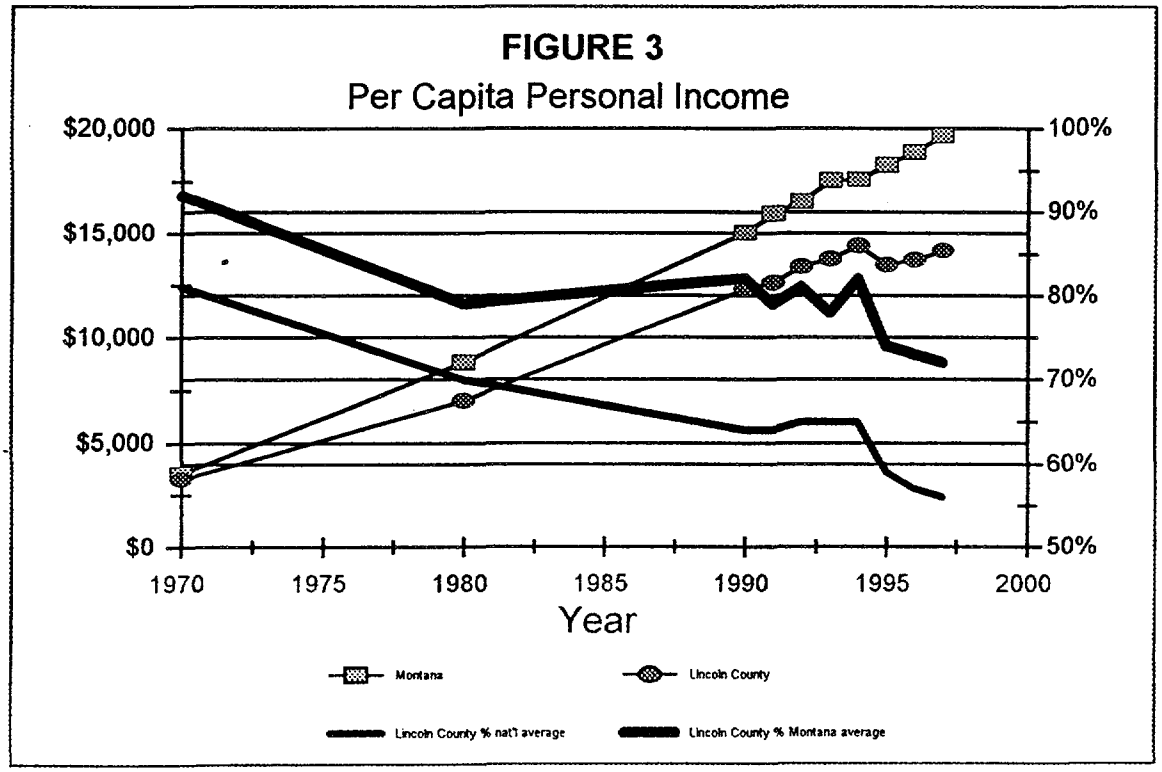


FIGURE 3
Per Capita Personal Income
$20,000
$15,000
$10,000
$5,000
$0
100%
90%
80%
70%
60%
50%
1970
1975
1980
1985
1990
1995
2000
Year
Montana
Lincoln County
Lincoln County % nat'l average
Lincoln County % Montana average

The unemployment rate of Lincoln County has been:

UNEMPLOYMENT RATE		
YEAR	LINCOLN COUNTY	U.S.
1990	12.3%	5.6%
1991	16.5%	6.8%
1992	14.5%	7.5%
1993	15.7%	6.9%
1994	14.9%	6.1%
1995	14.9%	5.6%
1996	11.7%	5.4%
1997	12.1%	4.9%
1998	13.1%	4.5%
1999	14.0%	4.2%

Please refer to Figure 2, Percent Unemployment, facing. It is interesting to note that as the U.S. unemployment rate has declined, Lincoln County's unemployment rate has increased. It appears that Lincoln County's employment is counter-cyclical to the United States.

Per capita personal income has been:

PER CAPITA PERSONAL INCOME										
	1970	1980	1990	1991	1992	1993	1994	1995	1996	1997
Montana	$ 3,558	$ 8,842	$ 15,038	$ 15,947	$ 16,541	$ 17,571	$ 17,590	$ 18,286	$ 18,872	$ 19,660
Percent of national average	87%	88%	79%	81%	81%	83%	80%	79%	78%	78%
Lincoln County	$ 3,289	$ 7,026	$ 12,313	$ 12,639	$ 13,400	$ 13,759	$ 14,415	$ 13,497	$ 13,750	$ 14,190
Percent of national average	81%	70%	64%	64%	65%	65%	65%	59%	57%	56%
Lincoln County percent of Montana average	92%	79%	82%	79%	81%	78%	82%	74%	73%	72%

Source: U.S. Department of Commerce Bureau of Economic Analysis, Regional Economic Information System. Released May 1999.

Please refer to Figure 3, Per Capita Personal Income, facing.

Lincoln County's per capita income remained relatively stable since 1990. However, during that period:

- Lincoln County's income went down when the CPI is considered
- Lincoln County's income went down relative to the rest of Montana
- Lincoln County's income went down relative to the rest of the country

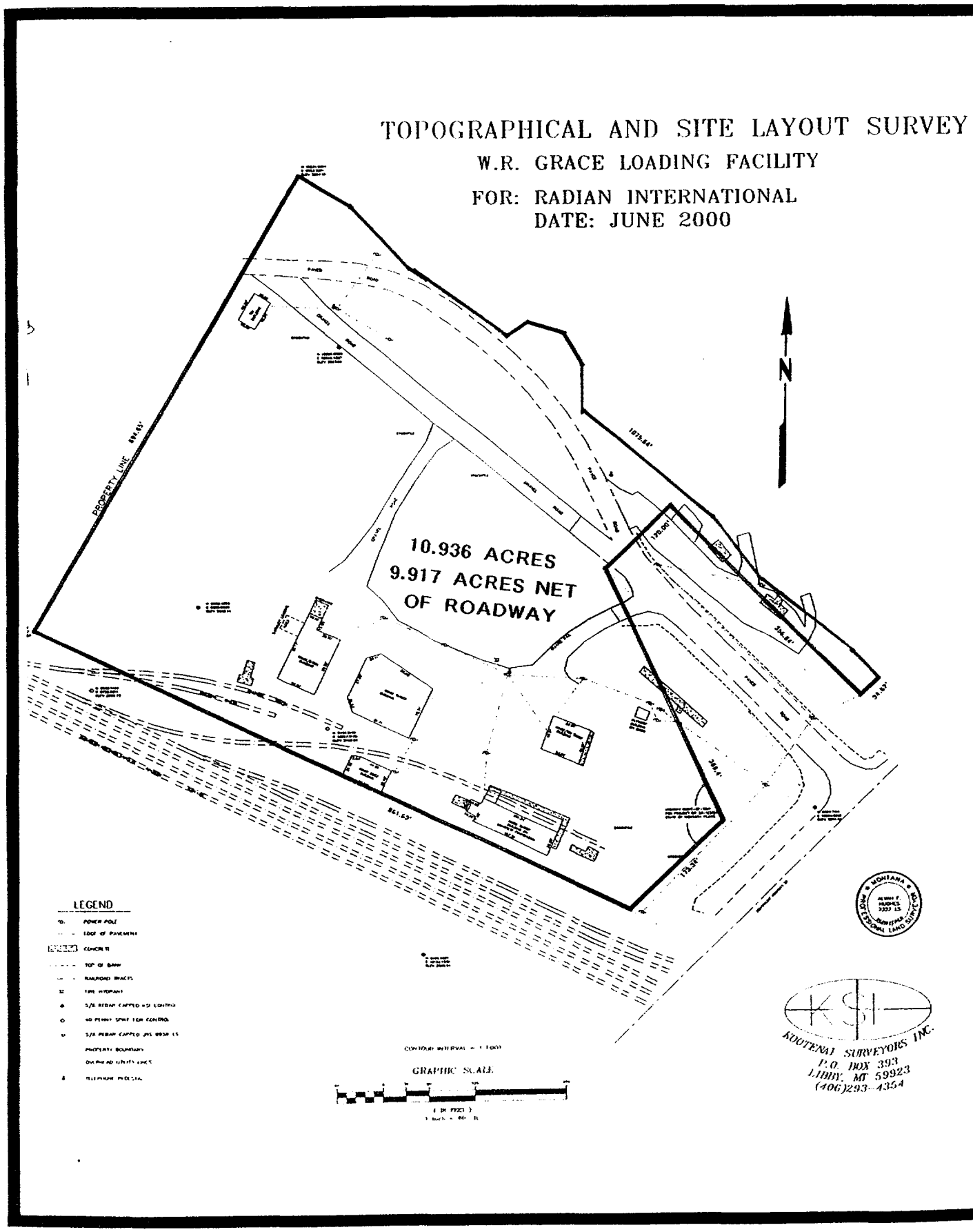
Examples of a soft real estate market in Libby are:

- Average time on market of single-family residences is over 1 year
- Single-family sites that permit mobile homes sell for more than otherwise similar sites that do not permit mobile homes. The resulting mobile home residence is less expensive than stick built.
- Widespread non-payment of rent.
- A medical office sale at 60% to 65% of listing price and over 4 years on market.
- Use of commercial buildings which would be considered dilapidated or uninhabitable in a healthy market.

CONCLUSION

The economy in Libby is poor, the market is weak, and values are not increasing.

FIGURE 4
SUBJECT SITE



SUBJECT SITE

The subject site contains 10.936 acres. After netting out the undedicated road, size is 9.917 acres. This irregularly-shaped site fronts 1,075.64 feet on the south side of the Kootenai River and 861.63 feet on the north side of the Burlington Northern Railroad. It extends to a maximum depth of 694.65 feet. The site is level throughout but about 28 feet below State Highway 37 that abuts the property to the east. It is not in a flood plain. Please refer to Figure 4, Subject Site, facing, and to Exhibit A for photographs.

Utilities

Public water, electricity, and telephone services are available and connected to the subject site. Sewage disposal is provided by a septic system. The property has three rail spurs off the Burlington Northern Railroad. However, only one spur is functioning.

Easements

There is a paved road and a gravel road running through the site. Neither is dedicated, and both serve the same purpose, i.e., provide the only access to the properties northwest of the subject. There is surely a prescriptive right to access (only one road, not two) and this access is imputed in this appraisal.

The access will require 60 by 740 feet, or 1.019 acres. Net size is 9.917 acres.

Access

Access to the subject property is by way of California Street (State Highway 37) and Thomas Street.

Soil Conditions

We know of no engineering studies regarding soils at the subject. However, within the subject property as well as adjoining properties, the buildings are not cracked, streets are not heaving, etc. We conclude that there are no peculiarly difficult soil problems at the subject property.

Nuisances, Hazards, or Hazardous Substances

The subject property suffers from asbestos contamination which is suspected to be the result of historical vermiculite mining, storing, processing, and transportation conducted on and around the property.

Our value conclusion is as if clean.

Zoning

The subject is zoned industrial which provides for manufacturing process, business, or treatment. Wood may be stored on any unoccupied property in this area. No use permitted in any residence district or business district shall be excluded from the industrial district.

TAX ASSESSMENT

As stated by the Lincoln County Assessor's Office, the 2000 tax assessment for the subject property is:

ASSESSOR'S CODE: 0000003377 (LEASE)		
	ACTUAL VALUE	ASSESSED VALUE
Land	$ 7,000	$ 4,652
Improvements	51,000	33,891
Total	**$ 58,000**	**$ 38,543**
Times tax rate		x 0.037105
		$ 1,430.14
Times mill levy		x 0.419970
		$ 600.62
Plus refuse tax		85.00
Total taxes		**$ 685.62**

Please note this assessment is based on the Millwork West lease only.

According to the Lincoln County Treasurer's office, the taxes are paid in full. There are no prior or special taxes due.

DESCRIPTION OF THE IMPROVEMENTS

The subject site is improved with five buildings. The assessor's records indicate that the buildings were constructed in 1930. The improvements are in fair to poor condition, typical for buildings this age. Please refer to Exhibit A for photographs.

BLDG	DESIGNATION	DESCRIPTION	DIMENSION	AREA IN SQ.FT.
A	Planer shop	Wood framed with metal siding. Two rooms, used for lumber storage and planing. Roof corrugated steel. Built on concrete slab with concrete piers.	52 x 80 feet	4,520
B	Pole barn	Wood framed open-faced structure with corrugated steel siding and roof. Built on steel reinforced concrete slab.	82 x 85 feet	7,000
C	Vermiculite storage warehouse	Wood framed with wood siding and roof covered with corrugated steel. Built on concrete slab with concrete piers supporting beams and girders.	33 x 107 feet	3,800
D	Lumber warehouse	Wood framed with corrugated metal siding on interior and exterior walls. Roof is corrugated metal on wood joists. Built on concrete slab.	53 x 46 feet	2,490
E	Small shed	Wood frame with wood siding and roof. Corrugated steel roof. Concrete slab including a "filled" 6- x 6-foot sump.	32 x 56 feet	1,725
Total sq.ft.				**19,535**

Additional improvements to the site include three railroad spurs, one of which is operable. About half of the site has crushed aggregate base material placed and compacted into access roads and parking areas. The remainder of the site is covered in grass.

HIGHEST AND BEST USE

Highest and best use is defined in the Eleventh Edition of *The Appraisal of Real Estate* as:

> The reasonably probable and legal use of vacant land or improved property, which is physically possible, appropriately supported, financially feasible, and that results in the highest value.

Highest and best use of land as though vacant identifies the use that will produce the highest land value. Within this analysis, uses must be physically possible, legally permissible, and financially feasible. Analysis of highest and best use of property as improved evaluates the present and anticipated productivity of the existing improvements. Given the existing market trends, this can lead to a conclusion of remaining economic life, if any, and could even lead to a conclusion that the present improvements should be razed. If so, the site would convert to a new use that represents the highest and best use.

AS IF VACANT

Physically Possible

The subject site contains 9.917 acres (net) and fronts 1,075.64 feet along the south side of the Kootenai River. It extends to a maximum depth of 694.65 feet to the Burlington Northern Railroad where it extends 861.63 feet along the railroad right-of-way. The site is level throughout but about 28 feet below State Highway 37 that abuts the property to the east. It is not in a flood plain.

Public utilities available and connected include water, electricity, telephone, and rail. Sewage is provided by a septic system.

Access to the site is by way of State Highway 37 and Thomas Street.

There are no physical limitations to the development of the site.

Legally Permissible

The subject is zoned industrial which provides for manufacturing process, business, or treatment. Uses allowed in the residential and business districts are permitted in the industrial zone.

Financially Feasible

There is a spirit of peaceful co-existence among uses in Libby that is not typical in other markets. An example is the area northwest of the subject. It is a pleasant residential area that is entered through old, poor-condition industrial (the subject) and ends in old, poor-condition industrial and the city sewage treatment plant. In most markets, this residential area would be a slum. Uses that would not be near each other in most markets are okay here.

The Burlington Northern Railroad abuts the subject to the south. This is an active rail line that creates extensive noise. The existence of a rail line is a plus for an industrial site, and a minus for residential, although there are residences abutting the railroad in Libby.

The northern boundary abuts the Kootenai River which is an amenity, especially for residential use. The rail line follows the river. Therefore, in Libby, water frontage includes a rail line nearby.

As previously discussed in the area description, there is minimal population growth, high unemployment, and a declining timber industry. There is no identifiable development for this ground now. It is probable that:

- The buyer would be a gambler with patient cash.
- The anticipated hold would be long term, say greater than 5 years.
- There would be some anticipation of residential use near the river and industrial near the tracks.
- It is likely the road would be moved to the southwest to create more riverfront ground.

Conclusion

The highest, best, and most productive use of the subject land is a long-term gamble on a future turn around.

AS IMPROVED

The subject site is improved with five buildings totaling 19,535 square feet on about 3.5 acres. Built in 1930, the improvements are in fair to poor condition, typical for their age.

A Lincoln County assessor mentioned that if a building has a roof in Libby, it will be used regardless of the age. It certainly seems to be true. The fact that the subject property has been leased since 1994 from the city, and W.R. Grace before that, is a testament to this statement. The lumber yard can sell product at retail (and use the planer) about as profitably in these buildings as in newer, better-looking buildings.

Legally Permissible

The existing improvements conform to the industrial zoning.

Financially Feasible

As improved, the five buildings on about 3.5 acres are financially feasible. However, the remaining 6.417 acres (net) is excess land.

Maximally Productive

The maximally-productive use of the subject property is to continue in its current use until such time the land value is equal to or greater than the value of the buildings as supported by the 3.5 acres. At such time, the property will be ready for redevelopment.

The maximally-productive use of the remaining site is to hold until demand prompts new construction.

APPRAISAL METHODS/SCOPE (REAL ESTATE)

The three traditional appraisal approaches to value are the cost approach, sales comparison approach, and income capitalization approach. They are described as:

Cost approach. Based on the premise that the value of a property is indicated by the current cost to construct a replacement for the improvements, minus the amount of depreciation from all causes evident in the improvements, plus the value of the land.

> The land value is vital, but the rest of the cost approach is omitted. The depreciation (physical and obsolescence) is almost 100%, and there is no point going through the exercise.

Sales comparison approach. Based on elements of direct comparison. Adjustments are made to the sale price of each comparative property to reflect the differences between the sale and subject property.

> The sales comparison approach will be used to value the land.

Income capitalization approach. Based on measuring the present value of future benefits of an ownership. Income streams and reversionary values are capitalized/discounted into a lump-sum value.

> There are some aspects of the income approach that will be applied to find improvement value.

Data needed for this assignment include:

- land comparables
- improved comparables
- income data

The data were gathered primarily from the Libby area. All pertinent data gathered have been presented, discussed, and considered. All sales were confirmed to assure an understanding of the actions of the market.

LAND VALUE BY COMPARISON

In order to estimate market value of the subject site, we surveyed the Libby area for comparable land sales. Locations of the comparable land sales are shown in Figure 5, page 15, and pertinent details are summarized in Table I, facing page 15. Photographs of the comparables are in Exhibit B.

The 12 comparables indicate a price range of $4,858 to $54,461 per acre before adjustments. This seems to be a huge range, but the comparables make good sense after analysis.

We analyzed the comparables based on the following items of comparability:

Property Rights. All sales were fee simple, 100% interest.

Financing. All sales were cash to the seller except for Comparables 4, 9, and 10 which were land installment contracts. However, the confirmations suggest that these contracts did not affect the sales price. Therefore, no cash-equivalency adjustment is made.

Conditions of Sale. All sales were arm's-length transactions. However, Comparable 7 was purchased for the U.S. Forestry Service. The buyer then improved the land with an office building and leased it back to the Forestry Service. Since the buyer's lease payment would be based upon total cost, the cost of the land was insignificant. When using other people's money (U.S. citizens) it is easier to be cavalier. Also we are told the buyer did not know that the property did not have city sewer until after construction. Up until this time, the highest priced property on U.S. Highway 2 was for the land for the Asian restaurant just north of Comparable 7. It sold for $40,000 for the 1-acre site.

We presented Comparable 7 because we are aware of it. No consideration was given to this sale due to the conditions of sale.

TABLE I LAND COMPARABLES										
COMP	LOCATION	GRANTOR/GRANTEE	DATE	SALE PRICE	SIZE IN ACRES	$ PER ACRE	FRONT FEET	$ PER FRONT FOOT	DEED BK/PG	COMMENTS
1	E/S Hwy 2S at Poplar St	Stimson Lumber Company/ Anthony J Berget	11/95	$ 125,000	25.7300	$ 4,858	1,000	$125	218/421	Cash. Well and septic. Property improved with 3 airplane hangars totaling 174,000 sq.ft. Estimated cost to turn on power was $10,000. Cost to tear down hangars was $125,000.
2	E/S Hwy 2S at Poplar St	Universal Land, Inc (Berget)/ Montana Timberline, Inc	8/96	60,000	6.8300	8,785	none	NA	227/331	Cash. Well and septic. Buyer was planning to store logs in the 174,000-sq.ft. hangars and then roof caved in due to heavy snow.
3	E/S Hwy 2S at Poplar St	Montana Timberline, Inc/ David A Strand & Brian D Leisz	1/97	50,000	6.8300	7,321	none	NA	232/187	Cash. Well and septic. The lower sales price from Comparable 2 reflects the collapse of buildings. Buyer is currently salvaging the building and selling the timber.
4	E/S Hwy 2S at Poplar St	John Riewoldt/ David L & Kendra Gaustad	1/98	40,000	1.0000	40,000	150	267	245/523	Land installment contract. City water and sewer. Since purchase, buyer built Graybear Trading Post, a retail center.
5	500 Hwy 37N	W R Grace & Co/ Melvin G & Lerah Parker	12/93	126,000	21.1000	5,972	2,000	63	195/628	Cash. Well and septic. Fronts on river. Property improved with large sheds. Buyer purchased for nursery.
6	NEC Hwy 37N & Kootenai River Rd	Champion Realty Corp/ Randall C & Linda R Remp	12/95	40,000	1.7800	22,472	191	209	218/767	Cash. Well and septic. Since purchase buyer improved site with a 2,434-sq.ft. metal building used as a retail store for Dream Marine.
7	1101 Hwy 2N	Willie R & Sandra A Watson/ Mountain States Leasing (Wayne Paffhausen)	3/98	199,600	3.6650	54,461	445	449	247/311	Cash. City water and septic. Since purchase the buyer improved site with a U.S. Forestry Service building.
8	Between Hwy 37N & Airfield Rd	Frank Fahland/ Connie Shwartzendruber	6/99	33,500	2.2300	15,022	207	162	257/573	Cash. Well and septic. Since purchase buyer has built a sports therapy center.
9	1485 W Wisconsin Ave N	Lois G Post/ Robert E Strehlow	5/99	150,000	11.5900	12,942	none	NA	256/872	Land installment contract. Well and septic. Mobile home park.
10	E/S 1200 block Hwy 2N	Elmer T & Verda I Higdem/ David A & Peggy Strand	6/96	75,000	3.3900	22,124	422	178	224/968	Land installment contract. City water and septic. Since purchase property is being used as a mobile home sales lot.
11	SWC Kootenai River Rd & Hwy 37N	Champion Realty Corp/ Jehovah's Witnesses	12/95	45,000	2.5770	17,462	252	179	218/964	Cash. Well and septic. Purchaser plans to build a church.
12	N/S Kootenai River Rd, 230' W of Hwy 37N	Michael E Goodman, Ralph E Goodman, Judith Goodman/ Christian Church of Libby	11/98	70,000	5.0955	13,738	335	209	254/217	Cash. Well and septic. Purchaser plans to build a church.

FIGURE 5
LAND COMPARABLES

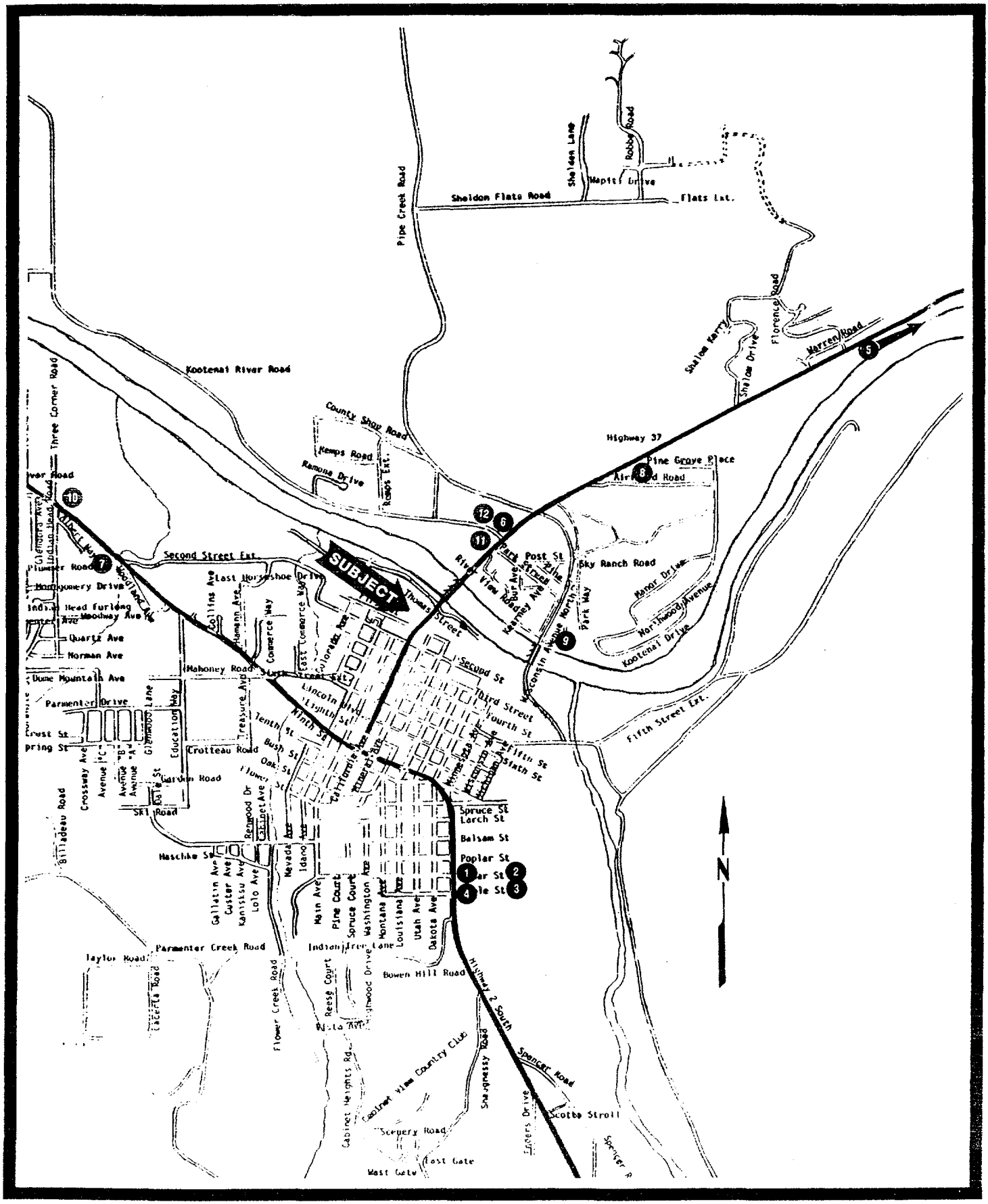


FIGURE 6A

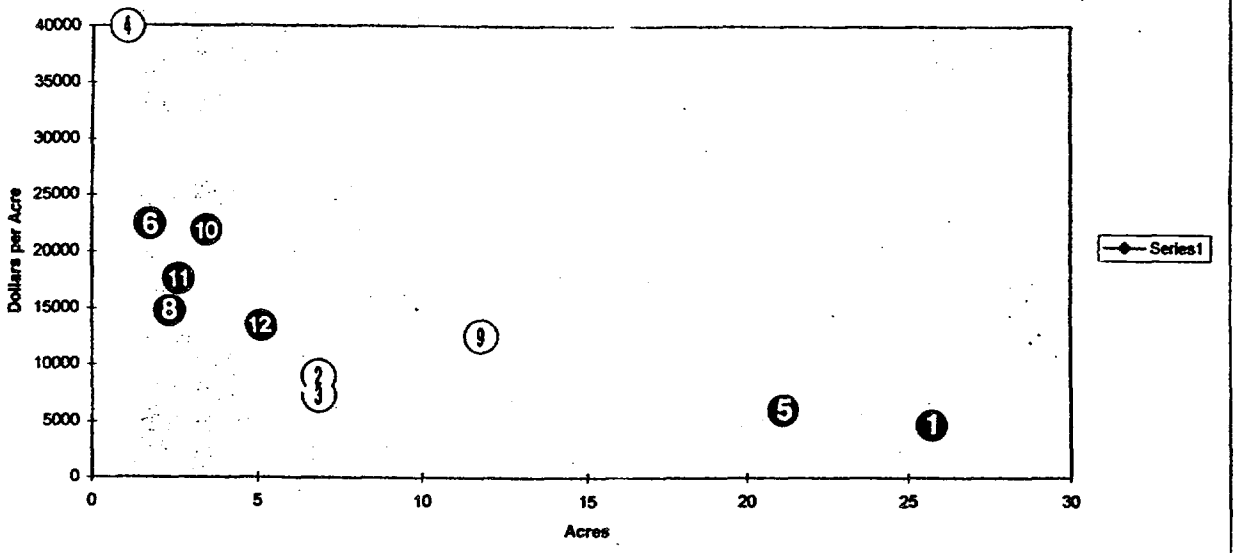


FIGURE 6B

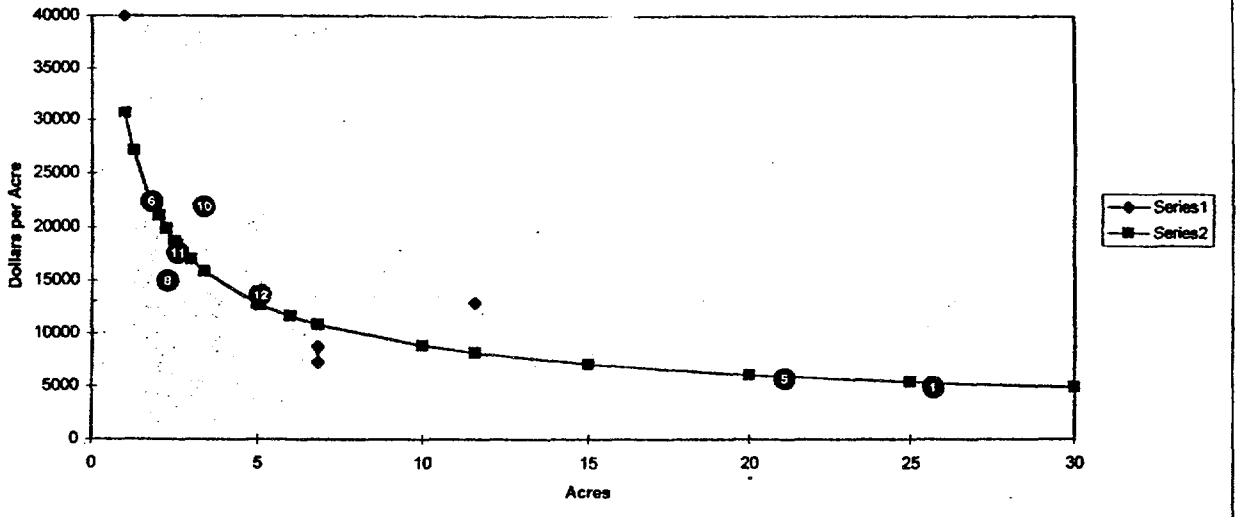
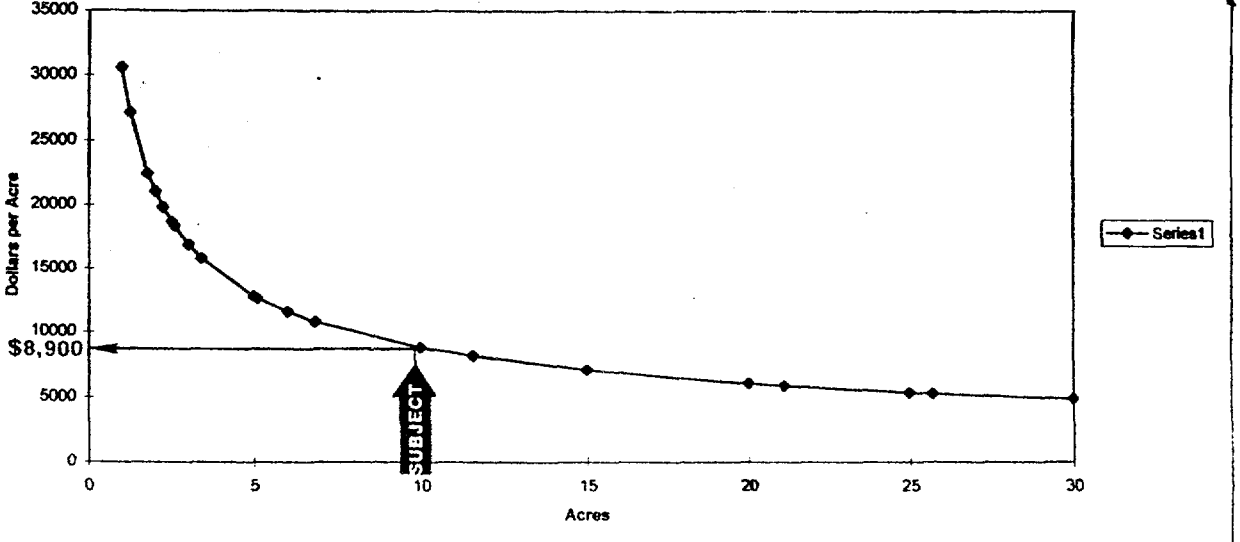


FIGURE 6C



Market Conditions. We arrayed the comparables according to date of sale to see if there was a trend over time for price paid:

COMP	DATE OF SALE	$ PER ACRE
5	12/93	$ 5,972
1	11/95	4,858
6	12/95	22,472
11	12/95	17,462
10	6/96	22,124
2	8/96	8,785
3	1/97	7,321
4	1/98	40,000
12	11/98	13,738
9	5/99	12,942
8	6/99	15,022

There is no trend shown. Other factors are affecting price paid. As previously discussed, other economic factors point to a flat real estate market in Libby, and the December 1993 sale took place in about the same market conditions as the June 1999 sale. Also, as shown in Figure 6B, facing, the earlier sales are not all above or below the trend line, suggesting no down or up change in value over the period.

Size. We graphed the comparables in Figure 6A, facing. Typically, the smaller the site, the higher price paid per acre. As can be seen in Figure 6B, a trend line emerges that has a predictable shape in that it declines early and flattens out as the site becomes larger. (Comparables 2, 3, 4, and 9 will be discussed further.) This means that:

- A 2-acre site is worth material less per acre than a 1-acre site.
- A 26-acre site is not worth materially less per acre than a 25-acre site.

As the single additional acre becomes less important, the trend line flattens out more.

Location. Comparables 2 and 3 fall well below the trend line. These two comparables are set back from U.S. Highway 2 South. Comparable 4 has frontage on U.S. Highway 2 South within the city limits. It also has public sewer which makes use of 1 acre easier.

Improvements. Comparables 1 and 5 were improved at the time of sale. However, the improvements did not appear to add significant value. Comparable 3 was an unimproved resale of Comparable 2. The slight difference might logically be attributed to the building. Comparable 3 is helpful in another way. The collapsed building is being dismantled for its wood. This is an excellent comparable situation for Subject Building C which is wood.

Comparable 9 has a mobile home park. The improvements appeared to add about $4,900 per acre. This will be addressed later.

CONCLUSION

There is commercial activity in Libby. Entrepreneurs are buying, selling, and taking risks. The larger the property, the fewer the risk takers. Figure 6 clearly shows the decline in price per acre with size.

The subject site contains 9.917 acres (net) and falls on the trend line in Figure 6C at about $8,900 per acre for a total value of:

9.917 acres	x $8,900/acre =	$ 88,261
	Rounded to	**$ 88,000**

We relied upon the income capitalization approach to estimate the contributory value of the improvements. The City of Libby has a month-to-month lease with Millwork West, Inc. The rental rate is $600 per month, triple net.

Mr. Phil Spencer leases the small storage building for $100 per month, triple net, on a month-to-month lease. However, Mr. Spencer is 5 months in arrears and has been sent a notice to vacate.

Relying upon these two leases as representing market rent, total annual rent is $8,400 ($700 x 12).

Vacancy is a difficult number in Libby. On several occasions when we were asking about rents, people wold respond that it does not really matter; no one pays the rent anyway. The subject is both an example and a counter argument:

- Spencer has not paid in awhile. That is a lot like not having a tenant at all.

- Burnett does not appear to have missed a rent payment in the years he has been there. That is a lot like having a AAA tenant.

We will apply 10% for vacancy.

Unfortunately, we were told by the assessor's office as well as a local real estate appraiser that there are no overall capitalization rates to be found in Libby. This turned out to be true; we could not find one. Therefore, we had to rely on logic and our experience.

Typically buildings of this age and condition would have high capitalization rates applied to the net operating income. As discussed earlier in this report, real estate is depressed in Libby. The result is that the future is up; no one knows how far away the future is, but it is up. This would tend to lower the capitalization rates. We will apply a range of 10% to 12%.

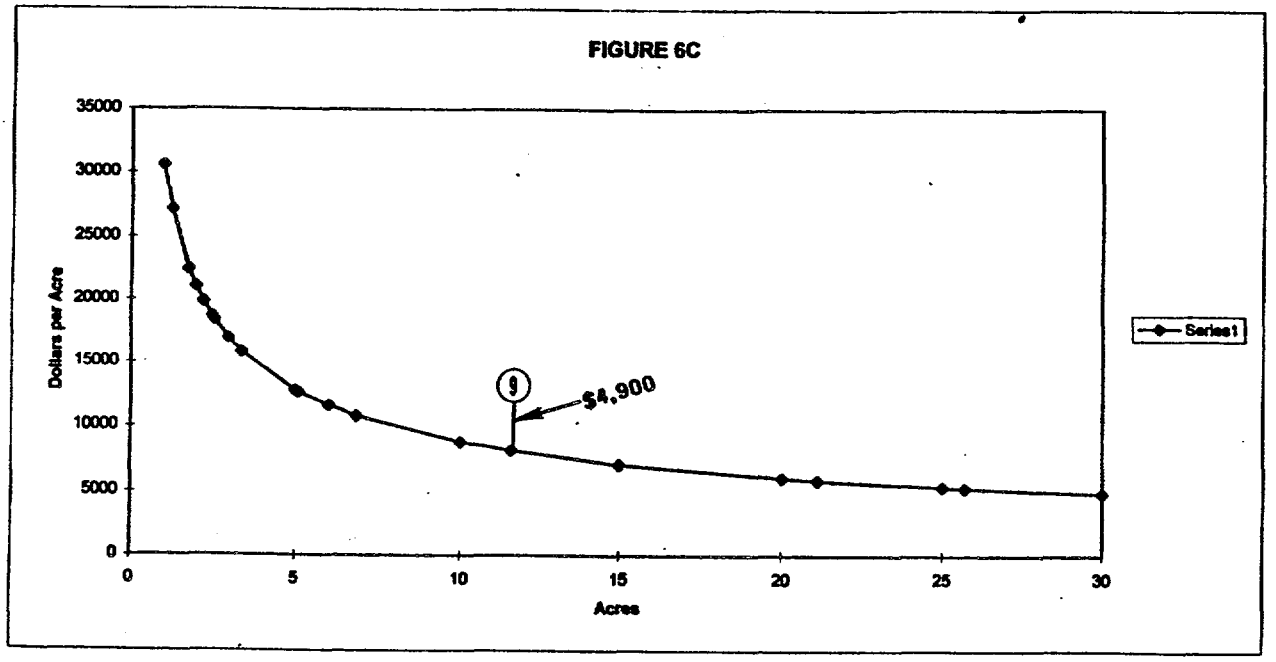


FIGURE 6C
35000
30000
25000
20000
15000
10000
5000
0
Dollars per Acre
0
5
10
15
20
25
30
Acres
$4,900
Series1

The indications appear as follows:

Gross potential income - $700 per month times 12 =	$ 8,400	
Less vacancy at 10%	-840	
Effective gross income	**$ 7,560**	
Less expenses	net rent	
Net operating income	**$ 7,560**	
Capitalized at	10%	12%
Indicated value	**$ 75,600**	**$ 63,000**

In the land valuation section we estimated land value at $8,900 per acre. About 3.5 acres are supporting the buildings or about $31,150 (3.5 acres times $8,900) of land value. Subtracting the land value from the total improved value.

Indicated value	$ 75,600	to	$ 63,000
Less 3.5 acres land value	-31,150	to	-31,150
Improved value	$ 44,450	to	$ 31,850
Rounded to	**$ 44,000**	**to**	**$ 32,000**

An additional estimate of improvement value can be made from Figure 6C (repeated on facing page). The spread between Comparable 9 (improved) and the trend line (unimproved) is about $4,900. This would suggest that the improvements on Comparable 9 are worth $4,900 per acre. Applied to 3.5 acres:

3.5 acres x $4,900/acre improvements = $17,150

This is not a good estimate. Its improvements are mobile home pads and there are no commercial or above ground buildings. However, it does clearly show that improvements are worth something.

The comparable shows a positive improvement value and the income suggests $32,000 to $44,000. The income numbers were not tight, and we believe that a prudent purchaser would go to the lower end. We will apply **$32,000**.

CONCLUSION (REAL ESTATE)

The indicated value of the subject is:

Land (page 17) 9.917 acres at $8,900/acre, rounded	**$ 88,000**
Plus buildings (page 19)	**$ 32,000**
Rounded	**$120,000**

This value is all cash or its equivalent and subject to the Standard Conditions and Certification that follow this report.

The following subheadings will be used:

1. **Leasehold Improvements.** These are real estate-type items. They are:

   a) The lumber racks in the pole barn, Building B.

   b) The extension shed in the planer building, Building A.

   c) The rail loading ramp.

   d) The office, next to Building B.

2. **Equipment/Vehicles.** Items are:

   a) planer and related equipment

   b) trucks

   c) forklifts

   d) Fairbanks scale

3. **Retail Product.** The wood, insulation, etc. for sale.

4. **Supplies.** These are items of personal property used on site. Most are used by the business (e.g., the roofs used to cover the outside wood). A few are just items that happen to be lying about (e.g., the swing saw in the mezzanine of Building A).

Photographs are in Exhibit C. The photographs will be identified with the outline numbers. For instance, the Fairbanks scale will be shown as 2.d.

1. LEASEHOLD IMPROVEMENTS

The locations of the following four items are in Figure 7, Site Plan, page 23.

a) Lumber Racks

Items such as the containers for nails. Estimated size 13,600 square feet. The 4,000-square-foot upper level structured for heavier weight although not completely used for high weight at the time of inspection. Cost estimate is in square feet.

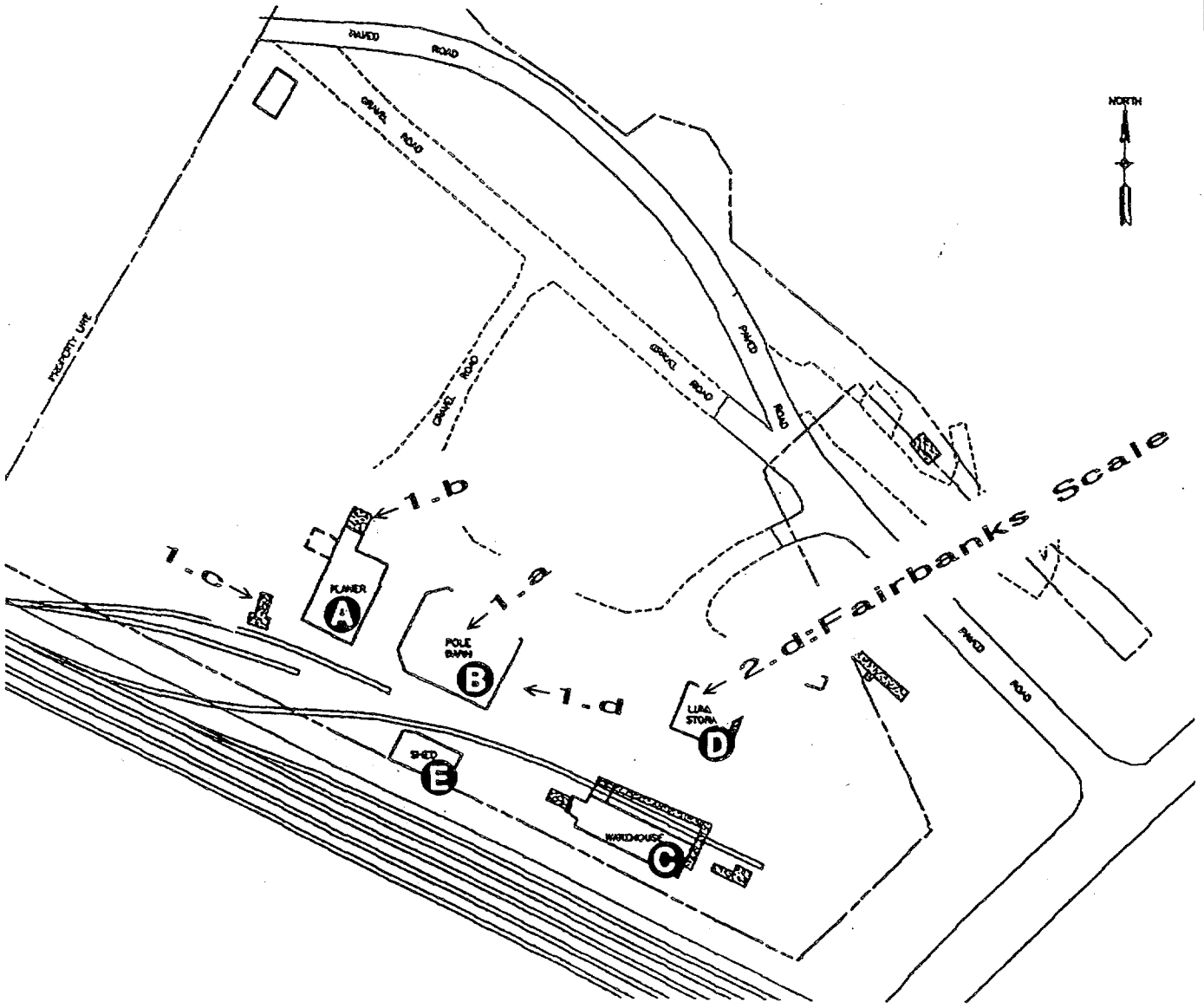
Average 1.67 bd.ft. lumber per sq.ft. at average $1.25/bd.ft. =	$ 2.09 per sq.ft.
Labor	0.25
Total	$ 2.34 per sq.ft.
x 13,600 sq.ft. =	$31,824
Depreciation: 10-year age of 30-year life = 33%	-10,502
Value of racks	$21,322
Rounded to	**$21,300**

b) Extension Shed

Photograph is in Exhibit A. Good steel frame structure, concrete floors, approximately 15-foot height. Approximately 600 square feet of which 180 are enclosed. Adding up trusses, concrete, poles, siding, and roof comes to $7,405. This is $12.34 per square foot which appears reasonable.

Cost	$7,405
Depreciation Age unknown, effective age probably approaching 20 years Life 80 years Depreciation (25%)	-1,851
Value	$5,554
Round to	**$5,600**

FIGURE 7
SITE PLAN



c) Rail Ramp

Easy build, non-technical construction, estimated total 1,440 cubic feet reinforced concrete. Our estimate is $3 per cubic foot cost.

$3 x 1,440 cb.ft.	$ 4,320
Depreciation Effective age zero Life infinite	0
Value	$ 4,320
Round to	**$ 4,300**

d) The Office

Photographs in Exhibit A. Building is:

- 224 square feet
- insulated cedar siding
- asphalt roof
- tile floor
- tongue and grove ceiling
- steel skids on concrete pads
- no plumbing

Similar in function and cost to a high-quality prefabricated building. From Marshall.

Section 64, page 8	Base cost	$ 44.05	
Section 99, page 3		x 1.00	
Section 99, page 8		x 0.95	
		$ 41.85	
	x 224 sq.ft. =		$ 9,374
Less plumbing (our estimate) 5 fixtures at $175 installed			-875
			$ 8,499
Depreciation Age 6 years, life 60 years Depreciation Marshall Section 97, page 6 = 3%			-170
Value			$ 8,329
Round to			**$ 8,300**

2. EQUIPMENT/VEHICLES

a) Planer and Related Equipment

The planer is a 1938 Woods, 133-bm, 5-head, 5-motor moulder/planer. Speed is 160 feet per minute.

This heading also includes related equipment. We will not list every related part here. Examples are:

- The heads – between 300 and 400 total. Photograph 2.a.1.
- Benches and tools for setting heads. Photograph 2.a.2.
- Sharpeners. Photograph 2.a.3.

These items are not hard to identify. The scissor lift, the electrical panel, the knives, are all required to make the planer work. The value of the planer is based on what it does for this business set up by this business owner. On the open market:

1. It is bigger than a competitive substitute.
2. It has more ancillary parts.
3. It requires more people to run.
4. It needs much more set-up time per run.
5. It is an OSHA nightmare.

Our research suggests that commercial equipment dealers would be unwilling to take possession, and the value of the planer in the open market is zero. The planer is not, however, in the open market; it definitely adds value to this operation.

The current state of the art equipment is Weinig moulders (German). Weinig has 75% of this total market. Weinig makes moulders up to $750,000 and special orders higher. The two that we looked at for comparables are:

- 5-head, 5-motor, 50 feet per minute, fast set up. Estimate of 5 minutes may have been salesman's hyperbole, but certainly not the hours required by the subject. Cost $60,000 installed. One person operation. Trained by Weinig. Good but not highest skill level. Digital readouts on calibration. Machine intended for use by carpenter or small homebuilders; process their own wood, smaller runs, perhaps baseboards for one house, and so on.
- Larger commercial machine. One- and sometimes two-person operation, 250 feet per minute. Cost $200,000.

The subject planer is somewhere in between these two machines. It does more than a small amount of contractor work, but it is not a full-time commercial operation anymore.

Comparing the subject to these Weinig machines:

The subject has a labor cost per hour as follows:

– 4 people
– $7 per hour
– 50% payroll expense
= 4 x 7 x 1.5 = $42 per hour

vs.

1 $15-per-hour person for Weinig
= $15 x 1.5 = $22.50 per hour

Disadvantage = $19.50 per hour

The subject moulding operation grosses around $8,000 per month. Average typical is 7 days (56 hours) per month. Compared to the $200,000 machine:

1. The Weinig works a typical 45-week year at 40 hours or 150 hours per month. Therefore, the subject is only being used at 56/150ths of capacity or 37.33%. This suggests:

37.33% x $200,000 = $74,660

2. Based on speed, the Weinig can do the same work in 36 hours. Therefore, the subject is only using 36/56ths of the Weinig or 64.29%. This suggests:

64.29% x $74,660 = $47,999

3. The subject spends $42 per hour x 56 hours or $2,352 per month. The Weinig would spend $22.50 x 36 hours or $810 per month. The subject has a $1,542-per-month disadvantage.

Labor difference per month	$ 1,542 per month
x 12 =	$18,504 per year

Capitalized at a relatively high business risk rate (note: a 20% capitalization rate in real estate terms means ÷ 0.20. Engineering terminology tends to use a multiplier and this would be called a 5 cap). Using a 4 to 5 cap, we have::

Disadvantage =	$ 18,504
@ 4 cap	$ 74,016
@ 5 cap	$ 92,520
middle (4.5 cap)	$ 83,268

4. The value of the subject planer appears as:

	$ 47,999	comparative value
Less	-83,268	capitalized value of labor disadvantage
	negative $ 35,269	

Obviously, the subject planer is not worth minus $35,269. It does, however, come up very short compared to the $200,000 Weinig.

If we make the same series of adjustments to the $60,000 moulder, we have:

1. 56/150ths of capacity
   37.33% x $60,000 = $22,398

2. The subject works faster; therefore this Weinig would require 179.2 hours to do the 56 hours of the subject's work. The subject does (179.2 ÷ 56) 3.2 times as much work. This suggests:

$22,398	x 320% =	$ 71,674

3. During the 179.2 hours the Weinig spends $22.50 per hour or $4,032 per month. The subject spends $2,352 per month. The difference is a $1,680-per-month advantage for the subject.

Subject advantage	= $	1,680	per month
x 12	=$	20,160	per year
Value at 4.5 cap	=$	90,720	

1. The value of the subject planer appears as:

	$ 71,674	
Plus	90,720	capitalized value of labor advantage
Total	**$ 162,394**	

As noted earlier, the Woods planer is not marketable separate from this business. However, the numbers clearly show:

a. The subject cannot compete with the $200,000 Weinig.

b. The subject can compete with and beat the $60,000 Weinig.

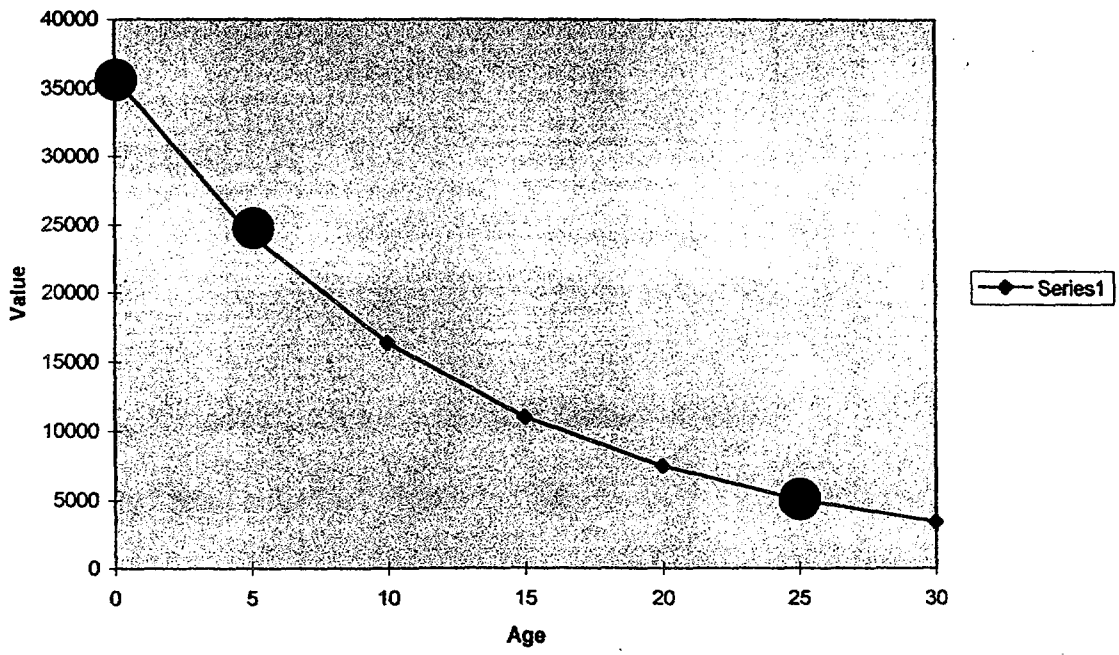
We must exercise some judgment. For instance:

- The subject would not get the full $20,160 annual labor savings. The Weinig can set up in minutes to do cuts that will take hours to set up on the Woods.

- The Woods is not expensive to maintain. However, any prospective purchaser would look at this 1938 machine and think it might be on its last legs.

In place the Woods is worth more than the $60,000 Weinig. It is not worth $162,394. We will apply $100,000.

FIGURE 8


40000
35000
30000
25000
20000
15000
10000
5000
0
Value
0
5
10
15
20
25
30
Age
Series1

b) The Trucks

1. 1989 Chevrolet, 3/4 ton, 4 wheel. Bluebook $10,175. Rounded to $10,200.

2. Trailer – shown behind the 1989 Chevy. Our estimate is $1,500.

3. 1978 Ford F600, 20-yard box. Bluebook does not go this far back. Estimates from classified ads for 1970s to early 1980s, 3/4- and 1-ton. Estimate, as retrofitted, $2,000.

c) The Forklifts

1. Hyster, 1995, 8,000-pound

2. Hyster, 1975, 8,000-pound

We contacted Hyster offices in Spokane, Missoula, and Denver. We found there is a regular market in used forklifts. The 8,000-pound machines cost about $35,000 new. They estimated the 5-year-old would be worth $25,000 and the 25-year-old at $5,000.

These three numbers produce the trend line shown in Figure 8, facing. This is common and expected for automotive equipment, i.e., steeper drops early and leveling off when older.

These values are what the owner could replace them for, not value in use. In this instance, he has and needs two forklifts. If these two were taken away, he can buy two more (unlike the moulder). Values are:

- 5-year-old - $25,000
- 25-year-old - $ 5,000

d) Fairbanks Scale

This is a Type S scale, 30,000-pound, measures to 1 pound, 12 x 24 platform, patent June 26, 1921, #7132C.

Scales this size are not used much for trucks; the weight and especially the platform are too small. These will tend to be used for cattle, some off-loaded freight, and so on.

This scale new would cost:

Platform	$10,516
Balance beam	4,600
Installation	8,000
	$23,116

This scale is not in use and has not been used for many many years. It has no value in use. Its value is "as is" installed. A buyer would salvage it, rehabilitate it, and either sell or use it.

Note that it can and would be rehabilitated. Fairbanks has made the Type S since well before the 20th century. Many of the oldest are still in use. Their mechanics are simple, a few levers and very few friction parts.

The Fairbanks office in Denver said it was worth $2,000 to $3,000 in Libby in place. It could be removed, rehabilitated, and resold profitably at that price.

We thought that there might be antique value. As shown in the photograph, it is an interesting piece, old lettering, and so on. What we found was that something this large does not fit well in office or living room, and the arm is not all brass. If it were, there would have been antique value, but the dealers we interviewed said they had no need for this one.

The value of the scale is $2,500.

FIGURE 9

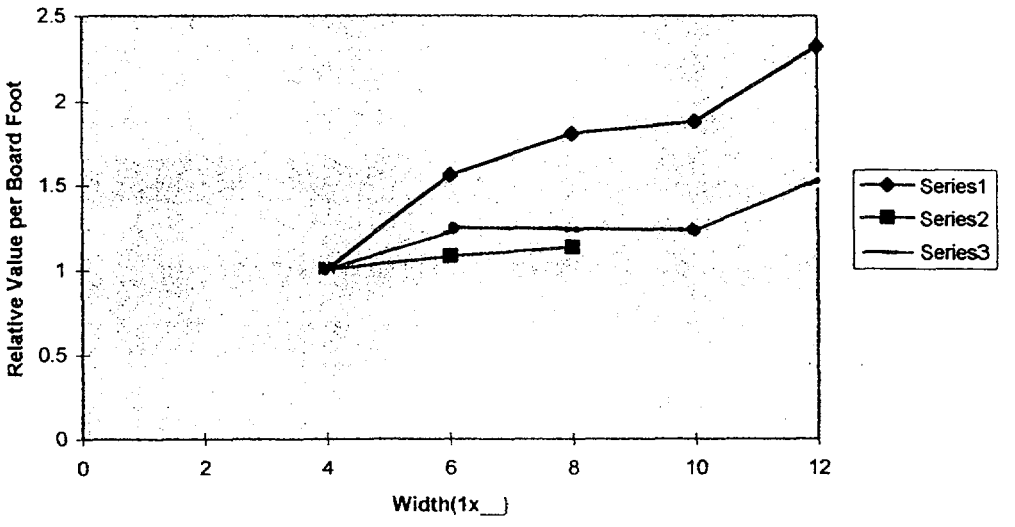
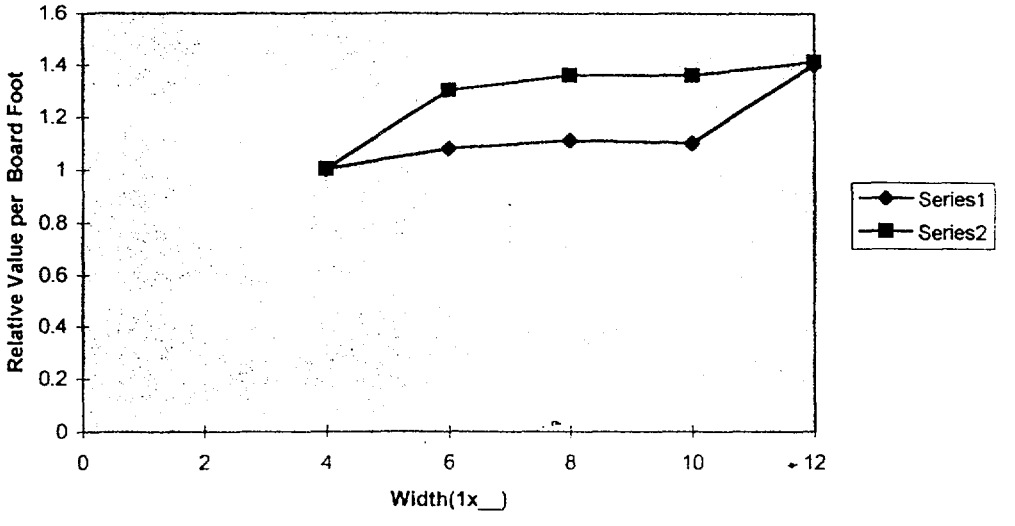


FIGURE 10



3) RETAIL PRODUCT

We had correspondence with Mr. Burnett. He shared his pricing with us and we compared them with prices we gathered in Denver.

The prices do not and will not, track exactly. Every yard has specials, loss leaders, bargains on product that was bought cheaply, and so on. However, Burnett's numbers and ours came close.

The two facing graphs show an interesting pricing trend. Figure 9 shows how some prices per board foot in Denver rise as dimensions increase. Figure 10 is the same graph except it has Mr. Burnett's prices instead of Denver. Please note:

- A board-foot is a 1-inch-thick piece of wood, 1-foot square, i.e., 144 cubic inches of wood.
- It is more difficult to get a wider, thicker piece. For instance, the "select" wood comes from the middle of the tree. It is easier to get a 1 x 4 than a 1 x 6 or a 1 x 8 or a 2 x 4, etc.
- Length does not matter. The prices per *foot* are the same, all else being equal, whether 6- or 16-foot. Usually anything longer than 16 feet will be two boards put together with finger joists.

The calculation sheets are in Exhibit C. We grouped items whenever possible and at the end we put some pages of very minor items into one lump sum.

The summary of our value estimate is:

	NO. OF PIECES	TOTAL VALUE
Pine	15,835	$ 108,715
Fir and larch	10,938	124,362
Cedar	3,156	31,143
Insulation	338	9,328
Other product	±64,000	83,334
Total		$ 356,882
Rounded to		**$ 357,000**

4. SUPPLIES

For this valuation we have divided the trade personal property into six categories:

$1 Items: Examples are partial cans of turpentine or an old screwdriver.

$5 Items: Examples are containers of lubricant or a better hand tool.

$10 Items: Examples are a tool belt or a box of heavy staples.

$25 Items: Examples are the sawhorses or an old saw.

$50 Items: Examples are the ladders or the telephone wire.

$100 Items: Examples are the rooftops or the swing saw in the attic.

We did look at some comparables (e.g., there were ladders at the lumber yard and skil saws at Weinig distributor), but we did not actively seek a comparable for each item. Even exclusive of the planer/moulder there are somewhere around 1,000 supply items on site. There is no purpose served by digging into each of them.

The printouts are in Exhibit C. Results are:

64	items at	$ 1	= $	64
154	items at	5	=	770
44	items at	10	=	440
44	items at	25	=	1,100
38	items at	50	=	1,900
446	items at	100	=	44,600
Total				$ 48,874
Rounded to				**$ 48,900**

This is a complete appraisal presented in a self-contained report format which complies with the reporting requirements set forth under Standards Rule 2-2(a) of the Uniform Standards of Professional Appraisal Practice for a self-contained appraisal report. This report presents a comprehensive level of detail in the presentation of information that was used in the appraisal process to develop our opinion of value.

We have no responsibility for legal matters, questions of survey, or opinions of title.

We appraised the property as though:

3. It has marketable title

4. there are neither hidden nor unapparent conditions relating to the real estate, soil, subsoil, or structures located on the real estate which would affect our analysis, opinions, and conclusions with respect to the real estate

5. free and clear of all leases, mortgages, liens, or other encumbrances (fee simple), except as may be discussed in this report

6. it had responsible ownership and competent management

Legal, engineering, or other technical advice as may be required has been, or will be, obtained by others from others, and that the appraisal report will not be used for guidance in matters which are legal or technical in nature.

Drawings in this report are intended as visual aids and should not be construed as engineering reports or surveys.

Loss or removal of any part of this report invalidates the entire appraisal.

No court attendance or testimony regarding this appraisal is required unless prior arrangements have been made.

This report may be distributed by the client for whom it was prepared, in its entirety, to such third parties as may be selected by the client; however, selected portions of this report may not be given to third parties without our prior written consent and approval. Neither all nor any part of this report, or a copy thereof, may be conveyed by anyone, including the client, to the public through advertising, public relations, news or sales media, or other public means of communication without our prior written consent and approval.

The data gathered (except data furnished by the client) and this report belong to us. With respect to the data provided by the client, we will not violate the confidential nature of the appraiser-client relationship by improperly disclosing any confidential information furnished to us. However, we are authorized by the client to disclose all or any portion of the report and the related data to appropriate representatives of professional institutes and/or societies with which we are affiliated if such disclosure is required to enable us to comply with the bylaws and regulations of such organizations now or hereafter in effect.

The forecasts or projections included in this report are used to assist in the valuation process and are based upon buyers' and sellers' response to current market conditions and anticipated supply and demand factors. Future conditions may change in a manner not currently anticipated by buyers and sellers.

The Americans with Disabilities Act (ADA) became effective January 26, 1992. We have not made a specific compliance survey and analysis of this property to determine whether or not it is in conformity with the various detailed requirements of the ADA. It is possible that a compliance survey of the property together with a detailed analysis of the requirements of the ADA could reveal that the property is not in compliance with one or more of the requirements of the act. If so, this fact could have a negative affect upon the value of the property. Since we have no direct evidence relating to this issue, we did not consider possible noncompliance with the requirements of ADA in estimating the value of the property.

CERTIFICATION

We certify that:

(a) We have no present or contemplated interest in the property that is the subject of this report.

(b) We have no personal interest or bias with respect to the subject matter of this assignment or the parties involved.

(c) Our compensation is not contingent upon the reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value estimate, the attainment of a stipulated result, or the occurrence of a subsequent event. The appraisal assignment was not based on a requested minimum valuation, a specific valuation, or the approval of a loan. Similarly, future employment prospects are not dependent upon this appraisal producing a specified value.

(d) To the best of our knowledge and belief, the statements of fact contained in this report are true and correct, and no important factors affecting the properties have been withheld or overlooked.

(e) The reported analyses, opinions, and conclusions are limited only by the reported Standard Conditions, and are our personal, unbiased professional analyses, opinions, and conclusions.

(f) Our analysis, opinions, and conclusions were developed and this self-contained report has been prepared in conformity with the Uniform Standards of Professional Appraisal Practice as promulgated by the Appraisal Standard's Board of the Appraisal Foundation, and the Code of Professional Ethics and Standards of Professional Appraisal Practice of the Appraisal Institute.

(g) The use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.

(h) As of the date of this report, we have completed the requirements of the continuing education program of the Appraisal Institute.

(i) We made a personal inspection of the property that is the subject of this report.

(j) No one else provided professional assistance in preparing the analyses, opinions, and conclusions contained in this report.

E. Nelson Bowes, MAI, CRE, PE
Certified General Appraiser
Montana #607

J. Virginia Messick, MAI
Certified General Appraiser
Montana #606

APPRAISAL AND COUNSELING QUALIFICATIONS
OF
E. NELSON BOWES

EDUCATION:

* University of Denver, Bachelor of Science in Civil Engineering
* University of Denver, Master of Science in Engineering

MEMBER:

* Member, Appraisal Institute (MAI)
* American Society of Real Estate Counselors (CRE)
* National Society of Professional Engineers
* Professional Engineers of Colorado
* National Association of Realtors
* Colorado Association of Realtors
* Denver Board of Realtors
* American Arbitration Association Panel of Arbitrators
* Certified General Appraiser in Colorado No. CG 01313674
* Certified General Appraiser in Montana No. 607

EXPERIENCE:

* Appraisal, counseling, research, purchase, sale, leasing, financing, and management regarding special purpose, retail, commercial, industrial, recreational, and other investment real estate in Colorado and the Western States beginning in 1966.

* Instructor: University of Denver, College of Engineering; University of Colorado, School of Business; Denver Public Schools; Colorado Tax Commission; American Institute of Real Estate Appraisers; Appraisal Institute.

* Qualified as an expert witness in Colorado District Courts; United States Bankruptcy Court; New York Superior Court; and County Boards of Equalization.

APPRAISAL AND COUNSELING ASSIGNMENTS FROM:

Insurance Companies * Banks * Savings and Loan Associations * Public Utilities * Government Entities * Universities * Industrial, Service, and Retailing Organizations * Developers * Investors * Charities * Trusts * Foundations * Attorneys * Estates * Individual Clients

APPRAISAL AND COUNSELING QUALIFICATIONS
OF
J. VIRGINIA MESSICK

PROFESSIONAL MEMBERSHIP:

* Appraisal Institute (MAI)
  American Institute of Real Estate Appraisers (through 1990)
* Certified General Appraiser in Colorado (#CG01313614)
* Certified General Appraiser in Montana (#606)

EDUCATIONAL AND REAL ESTATE BACKGROUND:

*	January 1988 to present	J. Virginia Messick, MAI
*	August 1983 to October 1986	The Equitable Life Assurance Society of the United States
*	May 1982 to July 1983	Donald V. Urquhart & Associates
*	December 1979 to April 1982	American Real Estate Appraisal Corporation
*	July 1977 to November 1979	Baltimore Federal Savings & Loan Association
*	September 1976 to December 1977	W. Burton Guy (Sales Associate)
*	June 1970	University of Maryland; Bachelor of Arts Degree in Sociology

PROFESSIONAL CONTRIBUTIONS:

*	1985 to 1987	American Institute of Real Estate Appraisers, Board of Directors
*	1983 to 1984	Society of Real Estate Appraisers, Board of Directors
*	1984 to present	Appraisal Faculty: — American Institute of Real Estate Appraisers — American University
*	1989	American Institute of Real Estate Appraisers Rewrite of Case Studies in Real Estate Valuation Course

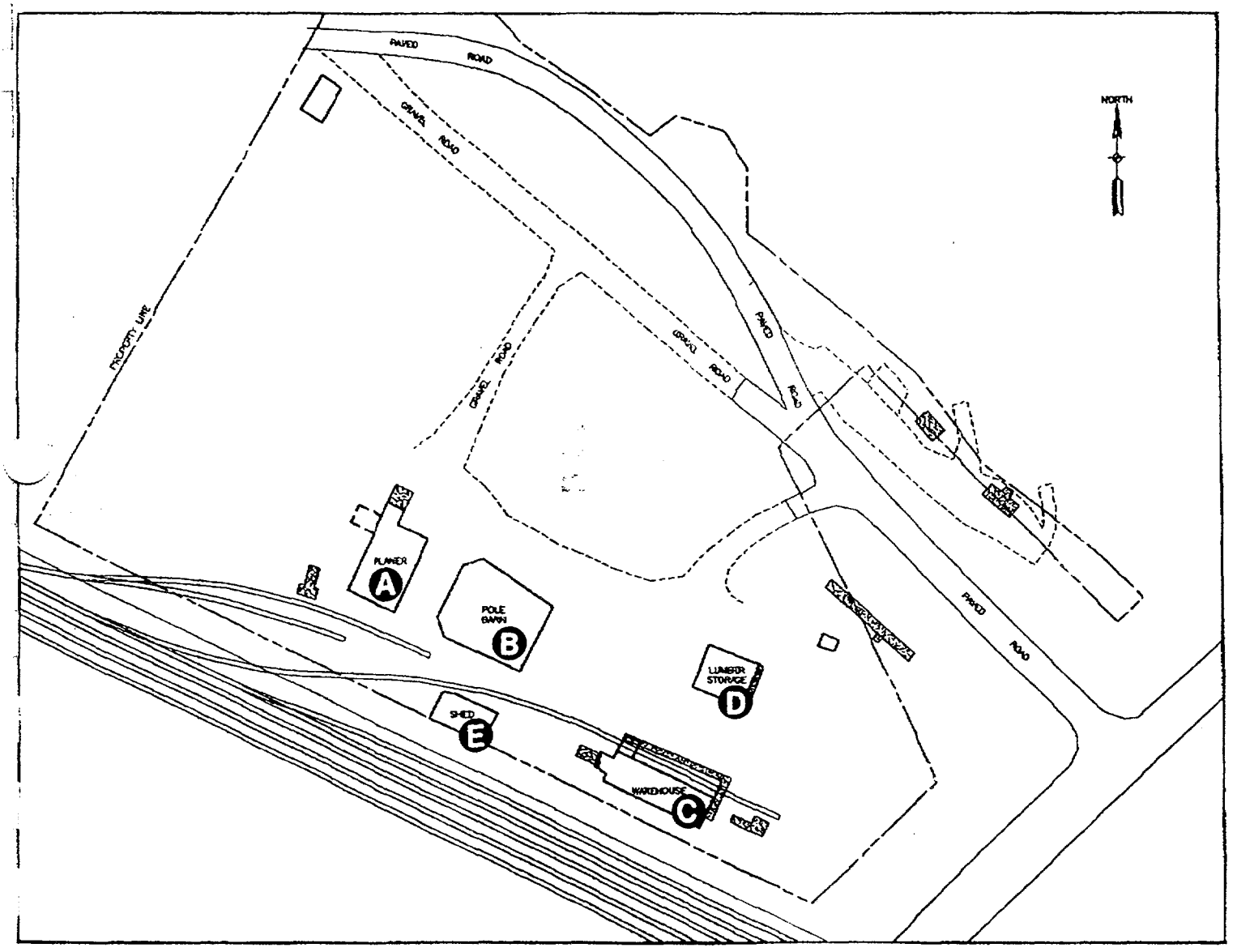
APPRAISAL ASSIGNMENTS INCLUDE:

Apartments, regional shopping centers, hotels, warehouses, service stations, nursery, automobile dealerships, office buildings, medical office buildings, raw, and developed land (commercial, residential and industrial), condominiums (commercial, residential and industrial), retail establishments, market rent studies, market studies, re-use appraisals, special purpose properties, such as: hospitals, gravel pits, funeral homes, courthouse, post office, greenhouse, environmentally-impacted properties, and golf courses.

EXHIBIT A

LEGAL DESCRIPTION
SUBJECT BUILDINGS
SUBJECT PHOTOGRAPHS

SUBJECT BUILDINGS-PHOTOGRAPHS FOLLOWING



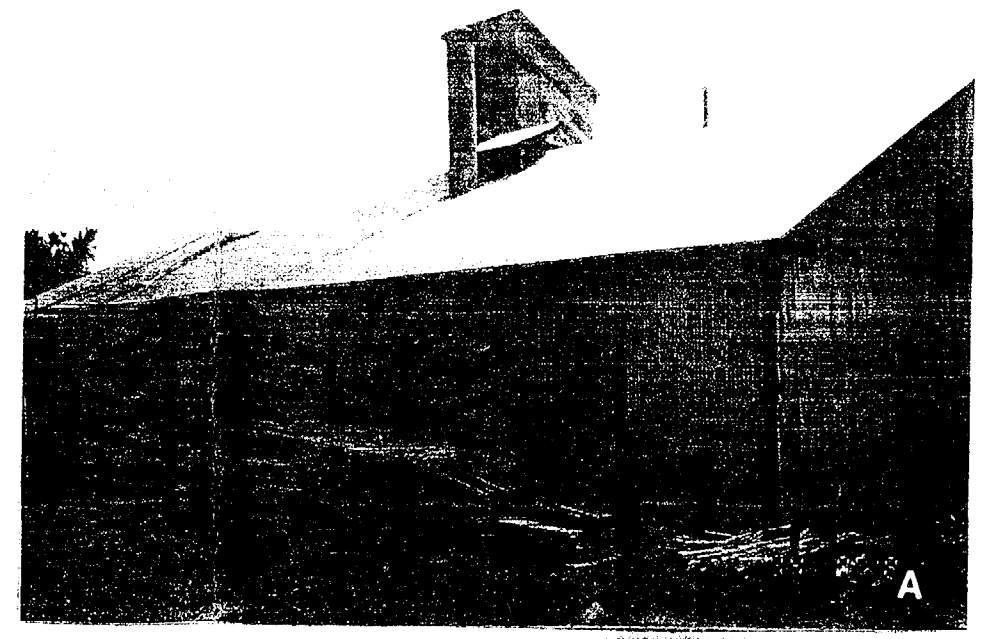
LEGAL DESCRIPTION PARCEL "A"

A tract of land, lying in Libby, Montana, in Lincoln County, and in Gov,t Lot 4 of Section 3, T.30N., R.31W., P.M.,MT., being a portion of that Parcel, as shown on Certificate of Survey No. 2332, Lincoln County records, containing ±10.936 acres, and more particularly described as follows:

Commencing at the northeasterly corner of Plat No. 652, a 5/8 inch rebar marked JRS 9958LS and the True Point of Beginning: thence along the southerly bank of the Kootenai River the following thirteen (13) courses: S59°11'21"E 39.65 feet to a computed point; thence S58°29'55"E 42.39 feet to a computed point; thence S41°46'33"E 110.38 feet to a computed point; thence S56°15'03"E 79.07 feet to a computed point; thence S53°10'09"E 79 04 feet to a computed point; thence N53°09'26"E 32.62 feet to a computed point; thence S73°27'10"E 50.59 feet to a computed point; thence S32°03'36"E 43.75 feet to a computed point; thence S00°09'11"W 64.86 feet to a computed point; thence S49°44'45"E 219.62 feet to a computed point; thence S36°03'47"E 108.75 feet to a computed point; thence S51°31'52"E 151.03 feet to a computed point; thence S43°36'24"E 53.89 feet to a computed point; thence leaving said south bank of Kootenai River S46°04'40"W 34.62 feet to a set 5/8 inch rebar capped Hughes 7322-LS marking the northwesterly right-of-way line of Montana Highway No. 37; thence along said right-of-way line N43°58'50"W 356.84 feet to a set 5/8 inch rebar capped Hughes 7322-LS; thence continuing along said right-of-way line S46°03'10"W 120.00 feet to a set 5/8 inch rebar capped Hughes 7322-LS; thence continuing along said right-of-way line S24°51'25"E 368.41 feet to a set 5/8 inch rebar capped Hughes 7322-LS; thence continuing along said right-of-way S46°03'47"W 173.34 feet to a set 5/8 inch rebar capped Hughes 7322-LS, marking the intersection of said northwesterly right-of-way of Montana Highway 37 and the Northerly right-of-way line of a 200 foot Burlington Northern Rail Road Right-of-Way line which measures 100.00 feet from the centerline thereof; thence along said northern Right-of-Way line of Burlington Northern Rail Road N63°58'00"W 861.63 feet to a found 5/8 inch rebar capped JRS 9958-LS; thence N29°49'53"E 694.65 feet to the True Point of Beginning.

The aforedescribed tract of land is to be known as Parcel "A" and contains ±10.936 acres and is subject to and together will all appurtenant easements of record, actual or implied.

A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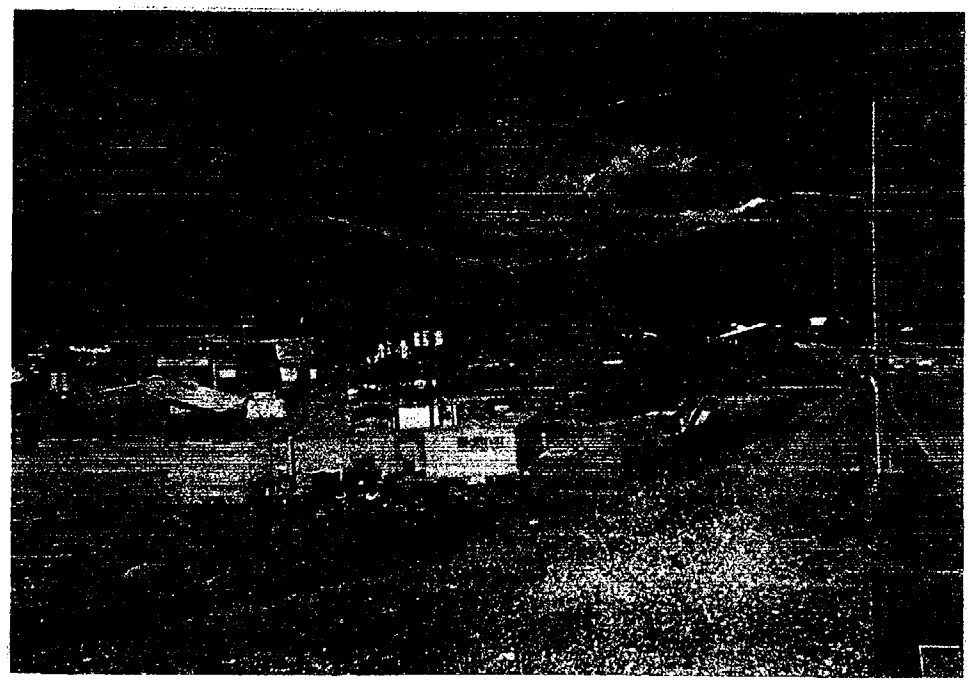

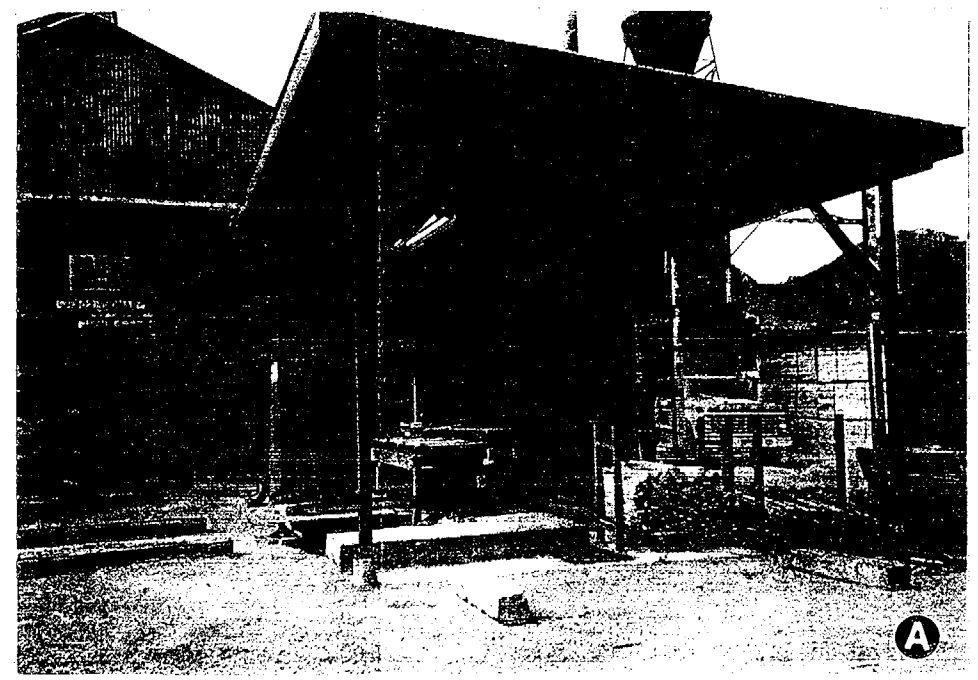
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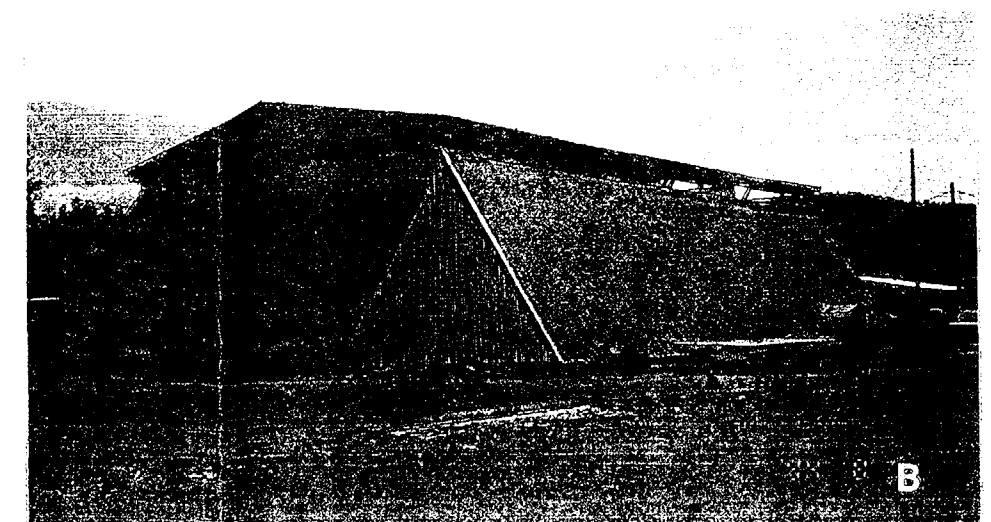
RETAIL LUMBER
B

A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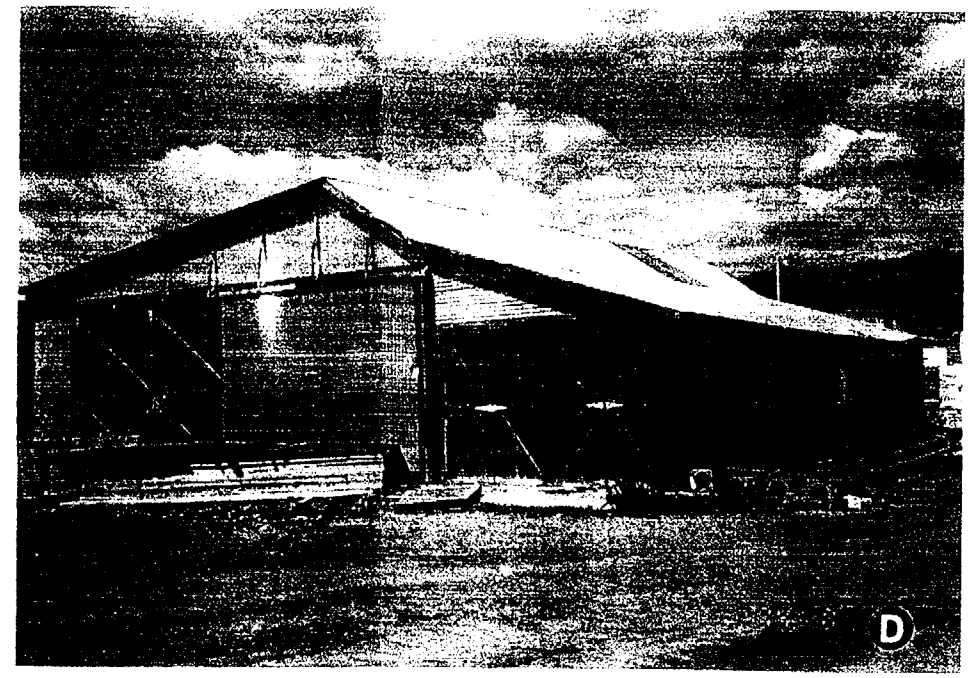
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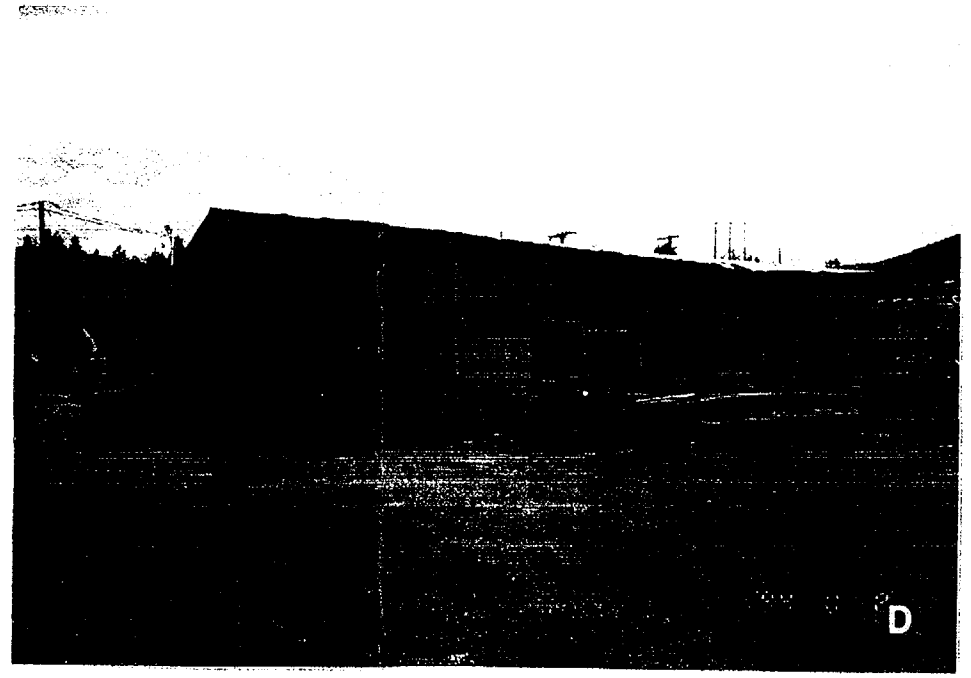
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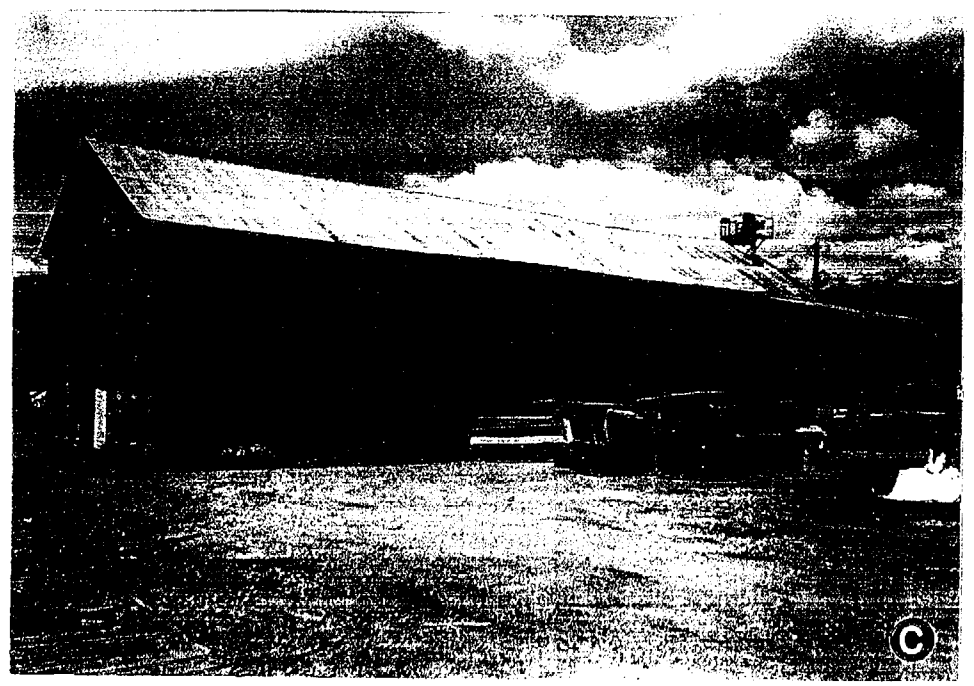
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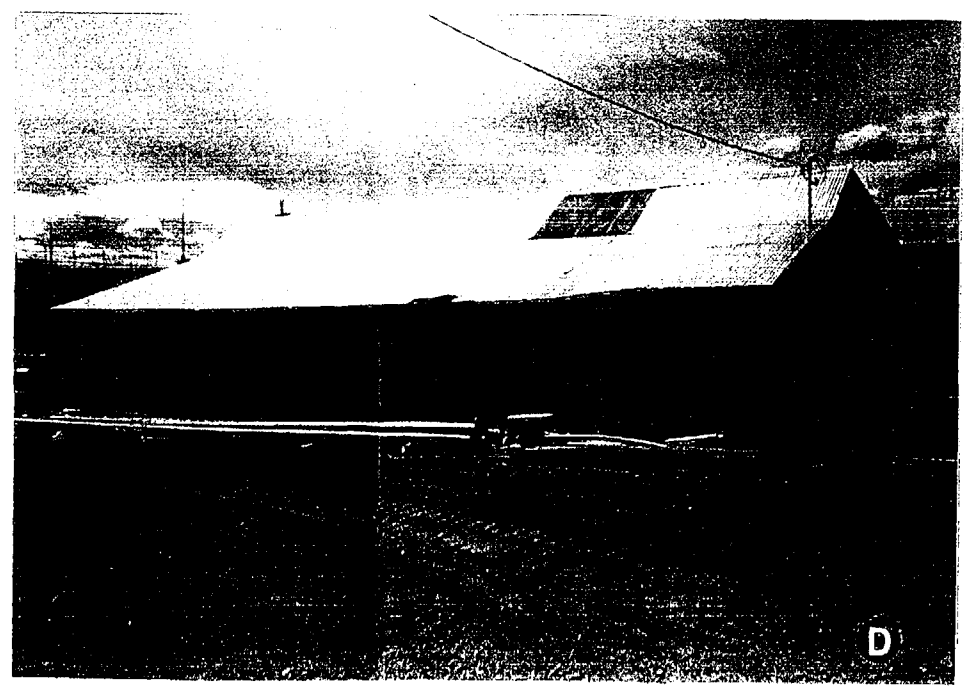
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E

EXHIBIT B

COMPARABLE PHOTOGRAPHS

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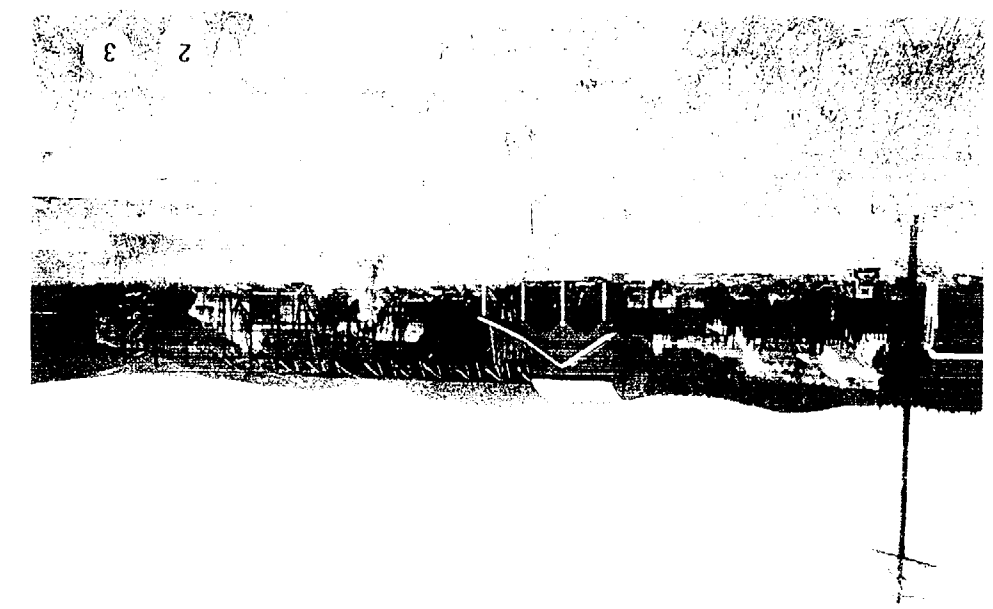

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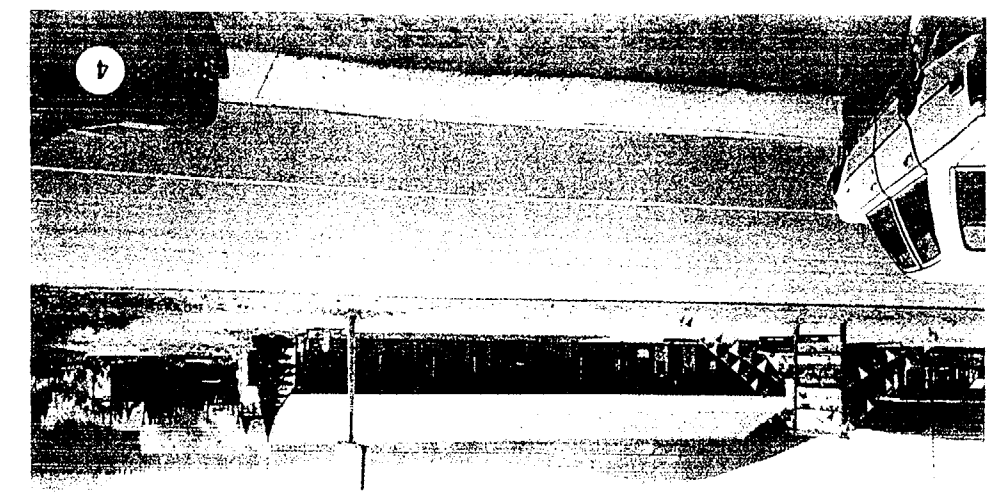

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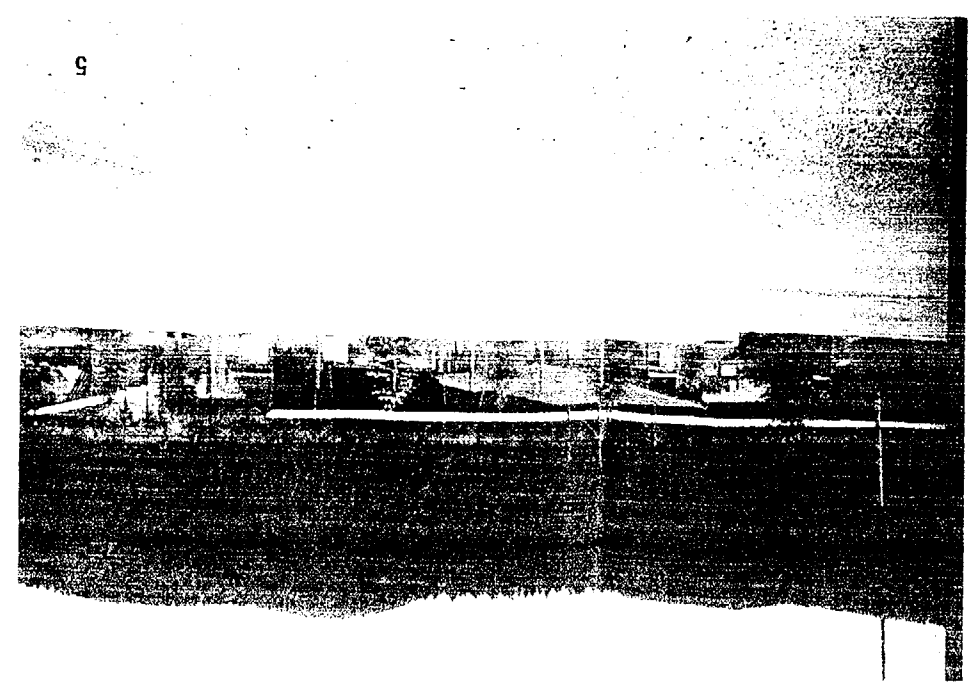

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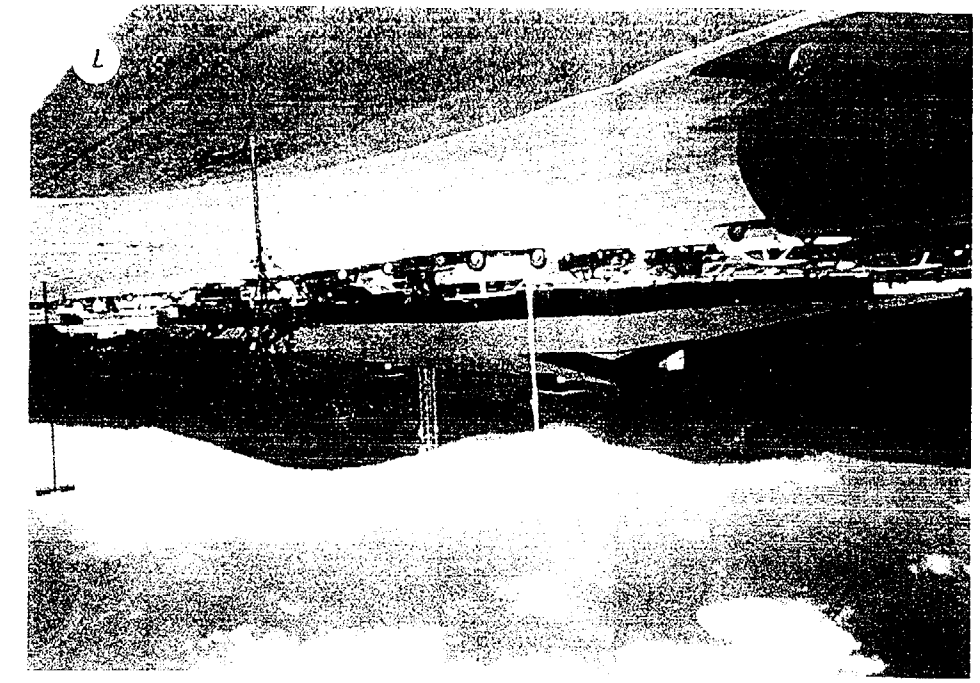

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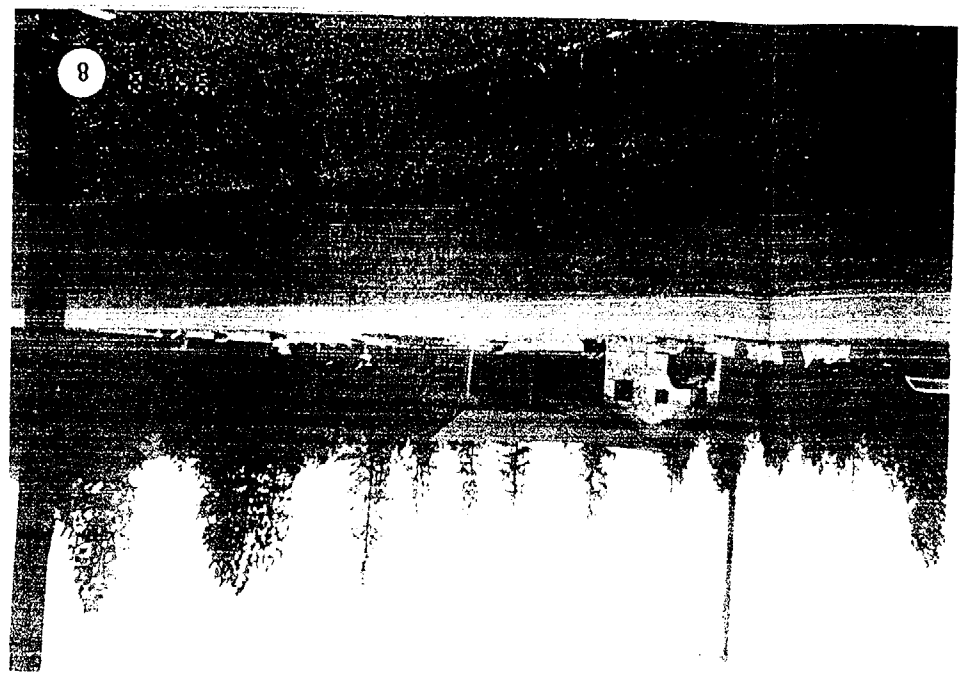

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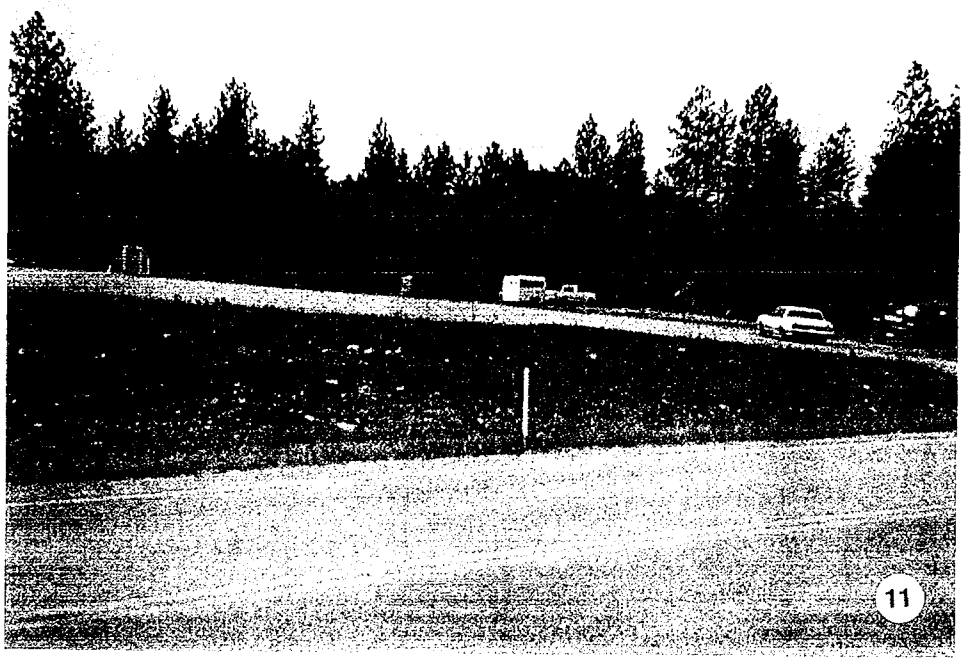
11

12

EXHIBIT C

PRINTOUTS OF OTHER PROPERTY
PHOTOGRAPHS OF OTHER PROPERTY

pine/select

#	depth	width	length	bd ft	$/000 bdft	total $
37	2	4	16	394.6667	2130	840.64
52	2	4	14	485.3333	2130	1033.76
49	2	4	12	392	2130	834.96
73	2	4	10	486.6667	2130	1036.6
286	1	4	10	953.3333	1650	1573
416	1	4	8	1109.333	1650	1830.4
13	1	10	12	130	2075	269.75
10	1	10	14	116.6667	2075	242.0833
7	1	10	18	105	2075	217.875
18	1	10	12	180	2075	373.5
9	1	12	12	108	2535	273.78
5	2	8	16	106.6667	2130	227.2
31	2	6	16	496	2130	1056.48
35	2	6	14	490	2130	1043.7
26	2	6	12	312	2130	664.56
6	2	6	10	60	2130	127.8
36	2	8	12	576	2130	1226.88
216	2	6	12	2592	2130	5520.96
42	2	6	6	252	2130	536.76
3	2	4	6	12	2130	25.56
98	2	6	8	784	2130	1669.92
106	2	4	8	565.3333	2130	1204.16
94	2	6	10	940	2130	2002.2
3	2	6	12	36	2130	76.68
2	2	6	16	32	2130	68.16
4	2	10	10	66.66667	2130	142
5	2	10	8	66.66667	2130	142
9	2	10	12	180	2130	383.4
62	2	6	14	868	2130	1848.84
31	2	6	16	496	2130	1056.48
14	2	8	14	261.3333	2130	556.64
2	2	8	10	26.66667	2130	56.8
5	2	10	12	100	2130	213
5	2	10	14	116.6667	2130	248.5
2	2	10	16	53.33333	2130	113.6
8	2	8	14	149.3333	2130	318.08
3	1	6	16	24	2075	49.8
67	1	8	16	714.6667	2085	1490.08
41	1	8	14	382.6667	2085	797.86
7	1	6	14	49	2025	99.225
36	1	6	12	216	2025	437.4
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41	1	8	10	273.3333	2085	569.9
35	1	4	8	93.33333	1650	154
200	1	4	6	400	1650	660
12	1	6	6	36	2025	72.9
9	1	6	8	36	2025	72.9
18	1	8	6	72	2085	150.12
4	1	8	6	16	2085	33.36

5	1	10	8	33.33333	2075	69.16667	
24	1	8	8	128	2085	266.88	
1	1	10	12	10	2075	20.75	
2	1	8	12	16	2085	33.36	
2	1	12	10	20	2535	50.7	
24	0.5	8	8	64	2085	133.44	
5	0.5	10	8	16.66667	2075	34.58333	
6	0.5	6	8	12	2025	24.3	
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88	1	4	12	352	1650	580.8	
50	1	4	14	233.3333	1650	385	
60	1	4	16	320	1650	528	
9	2	4	6	36	2130	76.68	
5	2	4	8	26.66667	2130	56.8	
15	2	4	10	100	2130	213	
12	2	4	12	96	2130	204.48	
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				0		0	
pine 2+				#VALUE!		#VALUE!	
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336	2	4	12	2688	1080	2903.04	
504	2	4	12	4032	1080	4354.56	
30	2	8	8	320	1186	379.52	
168	2	4	10	1120	1080	1209.6	
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25	1	12	12	300	1360	408	

8	1	10	12	80	1070	85.6
35	1	10	12	350	1070	374.5
50	1	12	8	400	1360	544
167	1	10	8	1113.333	1070	1191.267
21	1	10	6	105	1070	112.35
4	1	12	6	24	1360	32.64
144	1	8	6	576	1186	683.136
125	1	8	8	666.6667	1186	790.6667
60	1	4	8	160	970	155.2
29	1	8	10	193.3333	1186	229.2933
28	1	10	10	233.3333	1070	249.6667
2	2	10	8	26.66667	1320	35.2
4	1	12	6	24	1360	32.64
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35	1	4	6	70	970	67.9
21	1	4	8	56	970	54.32
25	1	12	16	400	1360	544
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26	1	6	8	104	1100	114.4
6	1	6	6	18	1100	19.8
295	1	6	16	2360	1100	2596
126	1	6	14	882	1100	970.2
180	1	6	12	1080	1100	1188
158	1	8	16	1685.333	1095	1845.44
69	1	8	14	644	1095	705.18
5	1	8	12	40	1095	43.8

1	1	6	16	8	1100	8.8
13	1	6	14	91	1100	100.1
4	1	6	12	24	1100	26.4
115	1	6	8	460	1100	506
120	1	6	6	360	1100	396
34	1	8	6	136	1095	148.92
54	1	8	8	288	1095	315.36
6	2	8	8	64	1240	79.36
19	2	6	10	190	1400	266
14	2	6	16	224	1400	313.6
4	2	6	14	56	1400	78.4
15	2	6	10	150	1400	210
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pine/#3+				#VALUE!		#VALUE!
70	2	10	16	1866.667	990	1848
10	2	10	14	233.3333	990	231
8	2	10	14	186.6667	990	184.8
40	2	6	16	640	1010	646.4
169	2	6	10	1690	1010	1706.9
162	2	6	8	1296	1010	1308.96
11	2	12	10	220	1200	264
13	2	6	16	208	1010	210.08
28	2	6	14	392	1010	395.92
99	2	6	10	990	1010	999.9
165	2	6	8	1320	1010	1333.2

26	2	6	7	182	1010	183.82
109	2	4	8	581.3333	810	470.88
189	2	6	8	1512	1010	1527.12
7	2	4	6	28	810	22.68
32	2	4	7	149.3333	810	120.96
37	2	4	8	197.3333	810	159.84
56	2	4	8	298.6667	810	241.92
19	2	4	8	101.3333	810	82.08
164	2	4	8	874.6667	810	708.48
80	2	4	9	480	810	388.8
176	1	3	8	352	500	176
657	1	3	6	985.5	500	492.75
10	1	10	10	83.33333	825	68.75
9	1	10	12	90	825	74.25
2	1	10	14	23.33333	825	19.25
4	1	10	16	53.33333	825	44
4	1	6	16	32	795	25.44
1	1	6	14	7	795	5.565
5	1	8	16	53.33333	830	44.26667
200	1	4	12	800	595	476
20	1	6	10	100	795	79.5
14	1	6	12	84	795	66.78
3	1	8	10	20	830	16.6
19	1	8	12	152	830	126.16
30	1	10	10	250	825	206.25
4	1	10	8	26.66667	825	22
27	1	8	8	144	830	119.52
161	1	6	8	644	795	511.98
10	1	4	8	26.66667	595	15.86667
23	1	4	6	46	595	27.37
10	1	6	6	30	795	23.85
51	1	4	6	102	595	60.69
8	1	8	6	32	830	26.56
3	1	8	14	28	830	23.24
3	1	6	6	9	795	7.155
9	1	8	8	48	830	39.84
2957				17669.5		15835.37

LEGEND;fir and larch
1=select
2=2
3=3
4=pattern

type	#	depth	width	length	bd ft	$/000 bd ft	$
2	49	2	12	8	784	1516	1188.544
2	5	2	10	8	66.66667	1320	88
2	10	2	8	8	106.6667	1186	126.5067
2	73	2	10	8	973.3333	1320	1284.8
2	93	2	8	8	992	1186	1176.512
2	75	2	4	8	400	1080	432
2	50	2	4	8	266.6667	1080	288
2	73	2	8	10	973.3333	1186	1154.373
2	170	2	4	12	1360	1080	1468.8
2	416	1	4	8	1109.333	970	1076.053
2	294	2	4	8	1568	1080	1693.44
2	128	2	6	14	1792	1340	2401.28
2	128	2	6	12	1536	1340	2058.24
2	312	2	4	8	1664	1080	1797.12
2	28	1	8	6	112	1080	120.96
2	164	1	8	8	874.6667	1080	944.64
2	32	1	6	10	160	1050	168
2	94	1	6	12	564	1050	592.2
2	71	1	8	10	473.3333	1080	511.2
2	121	1	8	12	968	1080	1045.44
2	173	1	4	10	576.6667	970	559.3667
2	243	1	4	12	972	970	942.84
2	147	1	6	16	1176	1050	1234.8
2	109	1	6	14	763	1050	801.15
2	137	1	6	14	959	1050	1006.95
2	279	1	6	16	2232	1050	2343.6
2	92	1	6	14	644	1050	676.2
2	164	1	6	16	1312	1050	1377.6
2	134	1	6	16	1072	1050	1125.6
2	58	1	8	14	541.3333	1080	584.64
2	90	2	8	10	1200	1186	1423.2
2	67	2	8	12	1072	1186	1271.392
2	11	1	10	10	91.66667	1070	98.08333
2	18	2	10	12	360	1320	475.2
2	88	2	10	14	2053.333	1320	2710.4
2	3	2	12	20	120	1516	181.92
2	47	2	10	16	1253.333	1320	1654.4
2	19	2	8	14	354.6667	1186	420.6347
2	52	2	8	16	1109.333	1186	1315.669
2	24	2	6	16	384	1346	516.864
2	56	2	6	14	784	1346	1055.264
2	194	2	4	14	1810.667	1080	1955.52
2	2	2	6	14	28	1346	37.688
2	192	2	4	16	2048	1080	2211.84

2	240	2	4	10	1600	1080	1728
2	150	2	4	12	1200	1080	1296
2	83	2	6	10	830	1346	1117.18
2	25	2	6	12	300	1346	403.8
2	25	2	6	12	300	1346	403.8
2	281	2	4	8	1498.667	1080	1618.56
2	4	4	6	8	64	1770	113.28
2	2	4	6	12	48	1770	84.96
2	2	4	6	14	56	1770	99.12
2	2	4	6	16	64	1770	113.28
2	4	4	4	8	42.66667	1770	75.52
2	5	4	4	14	93.33333	1770	165.2
2	77	2	12	14	2156	1516	3268.496
2	30	2	12	16	960	1516	1455.36
2	67	2	12	10	1340	1516	2031.44
2	19	2	12	12	456	1516	691.296
2	32	2	6	8	256	1346	344.576
2	22	2	4	8	117.3333	1080	126.72
2	50	2	6	20	1000	1346	1346
2	72	2	8	2	192	1186	227.712
2	40	2	12	16	1280	1516	1940.48
2	11	1.25	6	16	110	1050	115.5
	6028				53625		64363.21
3	7	2	6	20	140	1346	188.44
3	6	2	6	18	108	1346	145.368
3	6	2	6	12	72	1346	96.912
3	650	1	4	8	1733.333	970	1681.333
3	140	2	6	6	840	1346	1130.64
	809				2893.333		3242.693
4	3	4	8	20	160	1900	304
4	2	4	8	12	64	1900	121.6
4	10	4	8	10	266.6667	1900	506.6667
4	3	4	8	8	64	1900	121.6
4	1	4	8	14	37.33333	1900	70.93333
4	3	2	12	18	108	1516	163.728
4	28	6	6	16	1344	1900	2553.6
4	48	2	8	12	768	1186	910.848
4	26	2	10	16	693.3333	1320	915.2
4	78	2	6	10	780	1346	1049.88
4	43	2	6	12	516	1346	694.536
4	98	2	6	14	1372	1346	1846.712
4	61	2	6	16	976	1346	1313.696
4	101	2	6	10	1010	1346	1359.46
4	109	2	6	12	1308	1346	1760.568
4	151	2	6	14	2114	1346	2845.444
4	70	2	6	16	1120	1346	1507.52
4	35	2	6	16	560	1346	753.76
4	104	2	4	16	1109.333	1080	1198.08
4	82	2	4	16	874.6667	1080	944.64

4	92	2	4	14	858.6667	1080	927.36
4	64	2	6	14	896	1346	1206.016
4	48	2	6	14	672	1346	904.512
4	12	2	8	10	160	1186	189.76
4	57	2	8	12	912	1186	1081.632
4	41	2	8	14	765.3333	1186	907.6853
4	40	2	8	16	853.3333	1186	1012.053
4	8	2	10	16	213.3333	1320	281.6
4	136	2	4	12	1088	1080	1175.04
4	86	2	6	12	1032	1346	1389.072
4	19	2	4	10	126.6667	1180	149.4667
4	104	2	4	10	693.3333	1180	818.1333
4	64	2	6	10	640	1346	861.44
4	52	2	6	10	520	1346	699.92
4	117	2	4	8	624	1180	736.32
4	50	2	6	8	400	1346	538.4
4	64	2	6	8	512	1346	689.152
4	96	4	4	8	1024	1770	1812.48
4	18	4	4	8	192	1770	339.84
4	72	4	4	10	960	1770	1699.2
4	96	4	4	12	1536	1770	2718.72
4	42	4	4	12	672	1770	1189.44
4	18	6	6	10	540	1900	1026
4	13	6	6	12	468	1900	889.2
4	19	6	6	14	798	1900	1516.2
4	1	6	6	8	24	1900	45.6
4	10	2	12	16	320	1516	485.12
4	8	2	6	12	96	1346	129.216
4	8	1	6	6	24	1050	25.2
4	59	1	6	8	236	1050	247.8
4	199	1	6	6	597	1050	626.85
4	187	2	4	6	748	1080	807.84
4	405	2	4	12	3240	1080	3499.2
4	168	2	4	10	1120	1080	1209.6
4	156	2	4	10	1040	1080	1123.2
4	26	0.5	8	16	138.6667	1080	149.76
4	44	0.3125	6.25	12	85.9375	1050	90.23438
4	19	0.3125	8.25	12	48.98438	1080	52.90313
4	49	1	5	16	326.6667	970	316.8667
4	37	1.25	5	16	308.3333	970	299.0833
4	241	2	6	6	1446	1346	1946.316
	4101				42201.59		56755.9
					0		0
					0		0
					0		0
					0		0
					0		0
					0		0
					0		0
					0		0
					0		0

cedar
1=select 5=rough
2=2 0=casing
3=3 6=rad edge
4=treated

class	#	DEPTH	WIDTH	LENGTH	bd ft	$/000 bdft	$
0	50	0.25	4	8	33.33333	6600	220
0	20	0.25	4	6	10	6600	66
1	1	1	10	18	15	1820	27.3
1	1	1	8	8	5.333333	1660	8.853333
1	1	1	6	58	29	1590	46.11
1	1	1	4	100	33.33333	1190	39.66667
1	8	1	4	16	42.66667	1190	50.77333
1	5	1	12	6	30	2000	60
2	24	0.75	6	16	144	1650	237.6
2	3	1	6	16	24	1650	39.6
2	8	1	6	8	32	1650	52.8
2	37	1	6	14	259	1650	427.35
2	6	1	6	12	36	1650	59.4
2	31	1	6	10	155	1650	255.75
2	5	1	6	6	15	1650	24.75
2	14	1	6	8	56	1650	92.4
2	58	2	4	12	464	1300	603.2
2	126	2	4	16	1344	1300	1747.2
2	201	2	4	10	1340	1300	1742
2	96	2	4	8	512	1300	665.6
2	9	2	4	14	84	1300	109.2
2	3	1	6	8	12	1650	19.8
2	3	1	4	6	6	1190	7.14
2	2	1	4	14	9.333333	1190	11.10667
2	52	1	6	10	260	1650	429
2	1	4	4	12	16	2400	38.4
2	1	4	4	8	10.66667	2400	25.6
2	1	4	4	14	18.66667	2400	44.8
2	1	4	4	16	21.33333	2400	51.2
2	5	2	4	8	26.66667	1300	34.66667
2	18	4	4	6	144	2400	345.6
2	116	4	4	8	1237.333	2400	2969.6
2	10	2	4	8	53.33333	1300	69.33333
2	70	2	6	8	560	1800	1008
2	2	1	4	12	8	1190	9.52
2	179	1.25	4	8	596.6667	1190	710.0333
2	50	1	4	10	166.6667	1190	198.3333
3	10	2	6	16	160	1800	288
3	20	2	4	16	213.3333	1300	277.3333
3	320	1	4	8	853.3333	1190	1015.467
3	3	1	4	12	12	1190	14.28
3	1	1	2	200	33.33333	550	18.33333
3	2	0.75	8	12	12	1660	19.92

4	8	2	6	10	80	1800	144
4	1	1	3	2400	600	1000	600
4	26	2	6	8	208	1800	374.4
4	75	2	2	2.67	66.75	1000	66.75
4	24	0.75	8	14	168	1660	278.88
4	16	0.75	8	16	128	1660	212.48
4	3	0.75	8	12	18	1660	29.88
4	2	0.75	8	14	14	1660	23.24
4	56	0.75	8	10	280	1660	464.8
4	30	0.75	8	12	180	1660	298.8
4	12	1	8	18	144	1660	239.04
4	29	1	8	16	309.3333	1660	513.4933
4	10	1	8	8	53.33333	1660	88.53333
4	8	1	8	8	42.66667	1660	70.82667
4	16	1	8	10	106.6667	1660	177.0667
4	30	1	8	12	240	1660	398.4
4	6	1	8	12	48	1660	79.68
4	55	1	6	16	440	1650	726
4	4	1	6	14	28	1650	46.2
4	3	1	6	12	18	1650	29.7
4	5	1	6	10	25	1650	41.25
4	3	1	6	8	12	1650	19.8
4	6	1	6	16	48	1650	79.2
4	27	1	6	12	162	1650	267.3
4	5	1	6	10	25	1650	41.25
4	30	1	6	8	120	1650	198
4	40	1	6	6	120	1650	198
4	1	1	8	300	200	1660	332
4	1	1	8	36	24	1660	39.84
4	16	1	12	16	256	2000	512
4	18	1	12	14	252	2000	504
4	6	1	8	16	64	1660	106.24
4	8	1	4	14	37.33333	1265	47.22667
4	27	1	6	16	216	1650	356.4
4	14	1	10	10	116.6667	1820	212.3333
4	36	1	4	10	120	1265	151.8
4	16	1	10	8	106.6667	1820	194.1333
4	105	1	4	12	420	1265	531.3
4	20	1	4	14	93.33333	1265	118.0667
4	18	1	6	14	126	1650	207.9
4	41	1	4	16	218.6667	1265	276.6133
4	39	1	6	12	234	1650	386.1
4	18	1	6	10	90	1650	148.5
4	1	1	10	8	6.666667	1725	11.5
4	16	1	10	16	213.3333	1725	368
4	34	1	10	14	396.6667	1725	684.25
4	13	1	8	16	138.6667	1725	239.2
4	2	1	10	10	16.66667	1725	28.75
4	12	1	8	14	112	1725	193.2
4	1	1	8	16	10.66667	1725	18.4
4	22	1	10	12	220	1725	379.5

4	20	1	8	12	160	1725	276
4	12	1	8	10	80	1725	138
4	8	1	12	8	64	1780	113.92
4	21	1	8	8	112	1725	193.2
4	12	1	8	6	48	1725	82.8
4	5	1	12	8	40	1780	71.2
4	29	1	4	8	77.33333	1265	97.82667
4	11	1	6	8	44	1650	72.6
4	23	1	6	6	69	1650	113.85
4	15	1	4	6	30	1265	37.95
4	15	1	10	6	75	1725	129.375
4	66	4	4	8	704	1650	1161.6
4	1	4	4	10	13.33333	1650	22
4	2	4	4	12	32	1650	52.8
4	11	4	4	14	205.3333	1650	338.8
4	8	4	4	16	170.6667	1650	281.6
4	1	4	6	8	16	1800	28.8
4	1	4	6	10	20	1800	36
4	2	4	6	12	48	1800	86.4
4	3	4	6	16	96	1800	172.8
4	2	4	6	14	56	1800	100.8
4	8	0.5	8	16	42.66667	1090	46.50667
4	210	0.5	4	6	210	2800	588
4	5	1	6	14	35	1650	57.75
5	9	1	6	16	72	1650	118.8
6	16	1.25	6	8	80	1650	132
6	8	1.25	6	10	50	1650	82.5
6	16	1.25	6	12	120	1650	198
6	26	1.25	6	14	227.5	1650	375.375
	3156				19466.25		31142.5

		#	price	$
plywood/various/avg price		1098	13	14274
50"1x4/in bundles/	1000bf	10.794	350	3777.9
cedar blocks	1000bf	1.88	2000	3760
assorted moulding	1000bf	0.653	990	646.47
vinyl squares		60	0.85	51
blue stain pine	1000bf	1.109	1650	1829.85
closet rods ft		970	0.5	485
quickrete		15	4	60
flashing sf		1300	0.75	975
cement		111	2.5	277.5
mortar mix		85	4	340
fdn vents		13	25	325
pier blocks/stones,misc outdoor		2399	4.5	10795.5
big foots		21	8	168
tubes/ft		138	5	690
windows		3	150	450
brick molds		198	2	396
rails,qtrrnd etc ft		2340	0.35	819
molding, jamb stock,more qtr rnd				0
closet rods ft		17654	0.2	3530.8
roofing	bags	7	50	350
flashing,soffit vents,	pieces	1105	2.5	2762.5
siding, shims,stakes	pieces	4000	0.5	2000
oak,hemlock handrail				0
casing, screen molding,door stops				0
ft		26845	0.2	5369
decking,duradeck	ft	4228	0.35	1479.8
screws ,nails	boxes	88	20	1760
other exterior,roof rolls,				0
scollop blocks,	pieces	859	5	4295
shelves,oak,special wood/				
approximate # pc		50	100	5000
		63601.44		66667.32
	plus 25% for other			
	unitemized product			16666.83
		total		83334.15

faced	r	#	sq ft/bag	sq ft	price	$
*	11	8	135	1080	0.203	219.24
	11	8	155	1240	0.191	236.84
*	11	17	88	1496	0.203	303.688
*	11	22	50	1100	0.203	223.3
	19	11	78	858	0.298	255.684
	19	5	49	245	0.298	73.01
	19	3	75	225	0.298	67.05
*-	19	12	75	900	0.308	277.2
	19	45	87	3915	0.298	1166.67
	19	8	134	1072	0.298	319.456
	19	56	87	4872	0.298	1451.856
	21	14	68	952	0.446	424.592
	30	20	59	1180	0.492	580.56
	30	19	88	1672	0.492	822.624
	38	50	43	2150	0.567	1219.05
	38	11	64	704	0.567	399.168
	38	13	96	1248	0.567	707.616
	38	16	64	1024	0.567	580.608
TOTAL		338				9328.212
				0		
				0		
				0		
				0		
				0		
				0		
				0		
				0		
				0		
				0		
				0		

	$1	$5	$10	$25	$50	$100
fire extinguisher					1	
shovel			1			
H2B staple hammer				1		
screwdrivers	2					
staples			1			
Wards radial arm saw					1	
8' shaft w/bearings				2		
Hydrolic cylinders			4			
flood lamp			1			
space heater				1		
tires				2		
shop lights			1			
car chalks				1		
drill				1		
tool belt			1			
ext cord				1		
shop light	23					
yard light					1	
500' telephone wire					1	
motor oil,brake fluid...		31				
oil filters	7					
gear oil		30				
Mreen Johnson #MJ711						1
3x4 sticker rack				1		
7 1/4 skil saw				1		
3 hp craftsman table saw						1
4x8x6 wood rack				1		
scissor lift etc					3	
sticker rack				1		
8' paper wrap			1			
5 horse gear motor						1
						1
steel plate					1	
tires				2		
blower,motor pipe						1
40 gal tank w/comp						1
fire ex					1	
25 horse 3-phase toshiba						1
						1
						1
loading table					1	
3/4 horse trimmer motor					1	
tool box		1				
crimper			1			
welding hood				1		
hand tools		11				
sander				1		
scissor lift					1	
ladder					1	

Jenkins 191 sb						1
Mereen Johnson 30 horse						1
						1
						1
frame				1		
arc welder					1	
rip saw					1	
chop saw						1
						1
60gal pump						1
ext chord				1		
shovel		1				
sledge		1				
splitter		1				
crowbar		1				
3 horse gear motor					1	
banding tool				1		
clips			1			
banding tools						5
light spare switch,feed roll,tarp			6			
tarp			1			
50' chord			1			
space heater			1			
motor 3/4 horse				1		
table swing saw						1
scale						1
feed roll shaft			1			
fire ex					2	
washer					1	
rooftops						180
sticker rack				1		
the things in the northwest/agreed on at $2000						20
Subtotals	**32**	**77**	**22**	**22**	**19**	**223**
Add to total	32	77	22	22	19	223
	64	**154**	**44**	**44**	**38**	**446**

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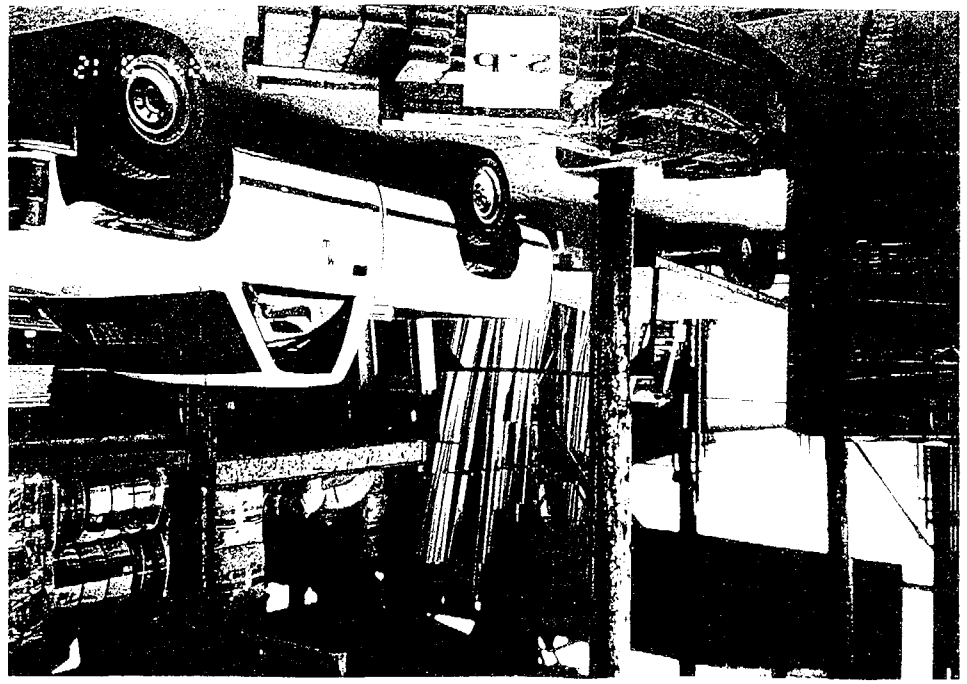
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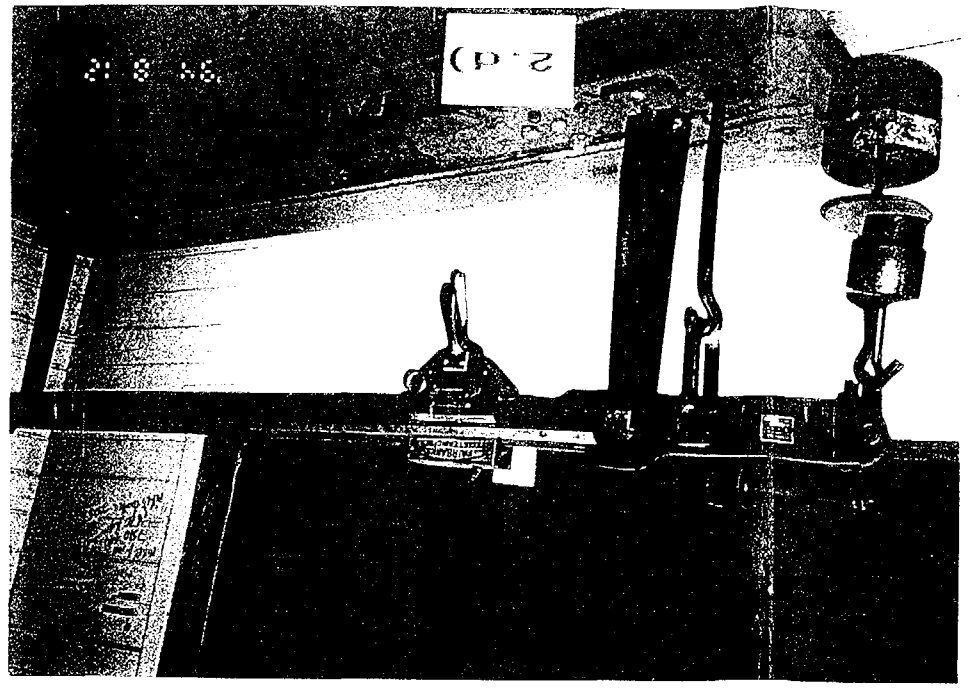
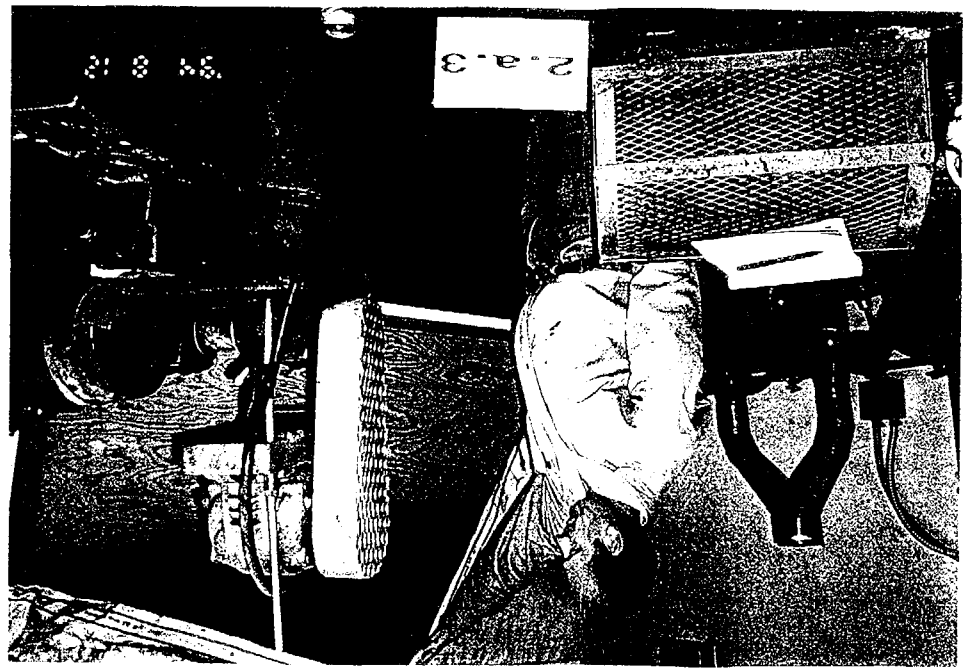

2.a)

1.c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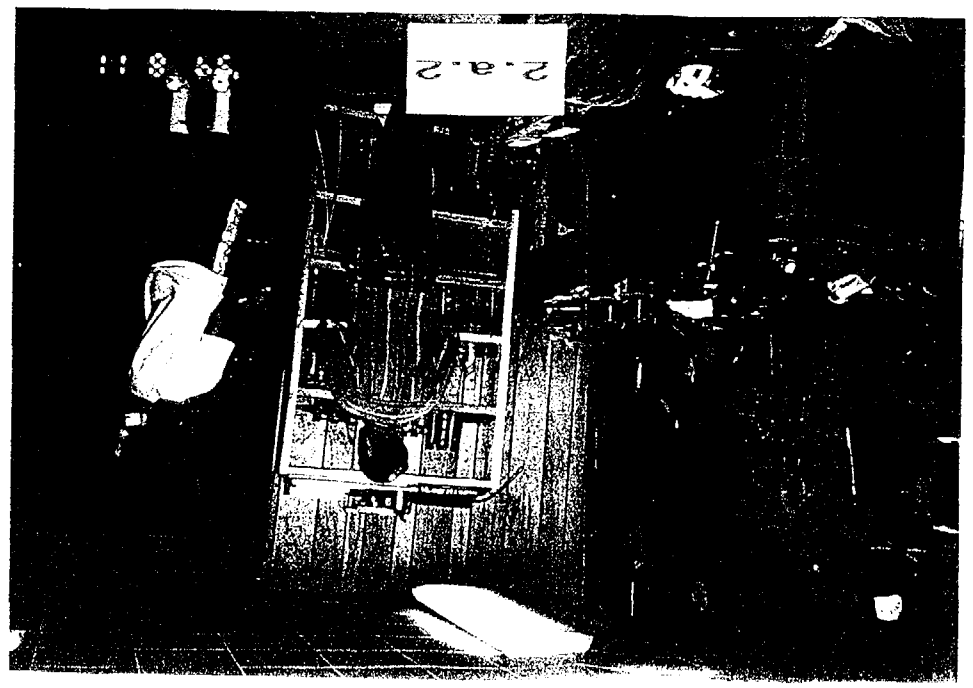
2.c

1.a)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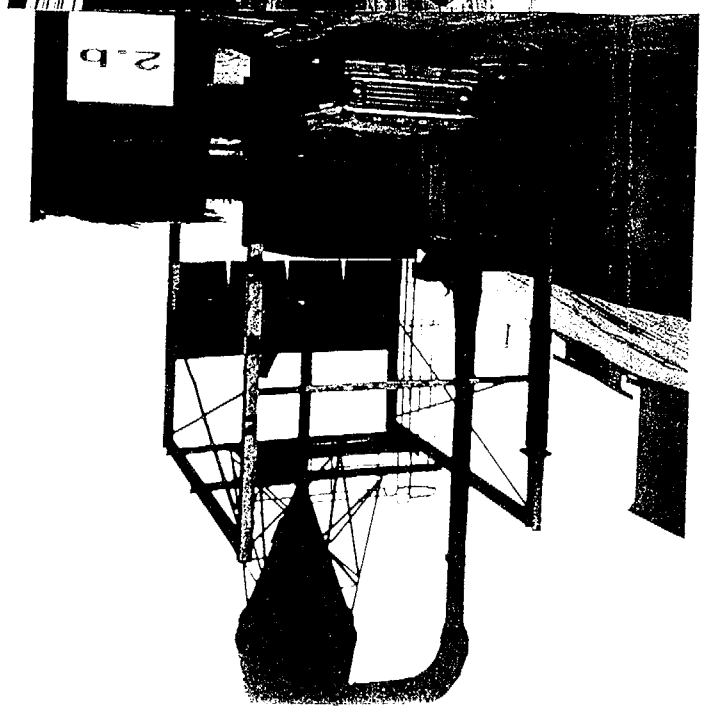
2.b

'94 8 12

'94 8 12

R-21 R-21
'94 8 12

OVL
19/32 CDX 5-PLY 53
OVL
19/32 CDX 5-PLY 53
'94 8 12

'94 8 11

APPENDIX H-2

FORMAL INVENTORY

MillWork West Inventory

Building: Planer Building - Main Room

	Description	Quantity	MillWork West Equipment Value		W.R.Grace Value	Intended Disposition (Clean, Dispose, Compensate)	Photo No.
1	5/8 Banding Clips		$52			CLEAN	
2	Jenkins Trimmer	1	$10,000			CLEAN	
3	Mureen Johnson Rip Saw (30 HP)	1	$24,000			CLEAN	
4	Welder - 180 Amp w/ Leads	1	$350			CLEAN	
5	Breakers for Com., Rip Saw and Trimmer (Elec. Panels West Wall)	1 lot	$5,000			CLEAN	
6							
7	Pneumatic chop saw		$2,500			CLEAN	
8	compressor		$850			CLEAN	
9	50' ext. cord light weight		$30			CLEAN	
10	scoop shovel	1	$30			CLEAN	
11	8"x18' converor belt w/ 3 horse gear motor		$5,000			CLEAN	
12	Splitting maul	1	$18				
13	1-12 lb sledge	1	$21	Removed 9/5/00, DS		CLEAN	
14	3 lb sledge	1	$12	Removed 9/5/00, DS		CLEAN	
15	5' bar	1	$32			CLEAN	

MillWork West Inventory

Building: Planer Building - Main Room

	Description	Quantity	MillWork West Equipment Value		W.R.Grace Value	Intended Disposition (Clean, Dispose, Compensate)	Photo No.
16	Roll banding w\cart	1	$265			CLEAN	
17	Banding tension tool	1	$165			CLEAN	
18	Banding crimper tool	1	$160			CLEAN	
19	feed table motor		$1,800			CLEAN	
20	1\2 in. 5'x9' steel plate	1	$80			CLEAN	
21	cyclone		$3,000			CLEAN	
22	cyclone frame work		$3,000			CLEAN	
23	Blower		$2,000			CLEAN	
24	Blower pipes		$2,000			CLEAN	
25	Fan motor		$1,500			CLEAN	
26	40 gallon compressor	1	$60			CLEAN	
27	1\2 X 21' galv pipe behind rip saw	4@10	$40			CLEAN	
28							
29	Fire ext.		$65			CLEAN	
30	Lumber landing table		$100			CLEAN	

MillWork West Inventory

Building: Planer Building - Main Room

	Description	Quantity	MillWork West Equipment Value		W.R.Grace Value	Intended Disposition (Clean, Dispose, Compensate)	Photo No.
31	25 horse 3 phase motor		$300			CLEAN	
32	planer heads	30@100	$3,000			CLEAN	
33	welding hood	1	$30			CLEAN	
34	3' band saw	1	$2,000			CLEAN	
35	3' X 4' steel rack	1	$200			CLEAN	
36	7 1\4 skill saw	1	$120			CLEAN	
37	Crafstman 3horse table saw	1	$600			CLEAN	
38	window glass rack	1	$1,200			CLEAN	
39	rolls of banding	8@65	$520			CLEAN	
40	110 v. 4 X 6 scissor lift	1	$2,100			CLEAN	
41	4' X 4' sticker racks	2@200	$400			CLEAN	
42	1 1\4 Banding	2@69	$138			CLEAN	
43	8' paper wrap	2@180	$360			CLEAN	
44	shovel (scoop)	1	$30			CLEAN	
45	Handle tools	2@40	$80			CLEAN	

MillWork West Inventory

Building: Planer Building - Main Room

	Description	Quantity	MillWork West Equipment Value		W.R.Grace Value	Intended Disposition (Clean, Dispose, Compensate)	Photo No.
46	H 2 B hammers	2@106	$212			CLEAN	
47	screw drivers	2@5	$10			CLEAN	
48	Boxes H 2 B staples	3@10	$30			CLEAN	
49	12' wood ladder	1	$100			CLEAN	
50	roller stand	1	$15			CLEAN	
51	handsaw	1	$20			CLEAN	
52	4' X 9' lumber rack with stop	1	$300			CLEAN	
53	Yard Dumpster	1	$500			CLEAN	
54	push broom	1	$15			CLEAN	
55	4 X 8 lumber cart w\stop	1	$500			CLEAN	
56	30" bow saw	1	$15			CLEAN	
57	7 lbs fire ext.	1	$45	2 of 2 removed 9/5/00, DS		CLEAN	
58	100'garden hose	1	$34			CLEAN	
59	scoop shovels	2@30	$60			CLEAN	
60	garden rake	1	$15			CLEAN	

MillWork West Inventory

Building: Planer Building - Main Room

	Description	Quantity	MillWork West Equipment Value		W.R.Grace Value	Intended Disposition (Clean, Dispose, Compensate)	Photo No.
61	pick	1	$27			CLEAN	
62	axe	1	$12			CLEAN	
63	garbage cans	2@14	$28			CLEAN	
64	lift truck chains	1 pair	$150	delivered to Mel on 11/29/00, snowing		CLEAN	
65	propane tank	2@120	$240			CLEAN	
66	pallet jack	1	$3,000			CLEAN	
67							
68							
69							
70							

MillWork West Inventory

Building: Planer Bldg - Planer Room

	Description	Quantity	MillWork West Equipment Value		W.R.Grace Value	Intended Disposition (Clean, Dispose, Compensate)	Photo No.
1	Planer moulder		$150,000			CLEAN	
2	Electrical panels in room		$15,000			CLEAN	
3	ac to dc inductor		$15,000			CLEAN	
4	jointing tools	3	$2,000			CLEAN	
5	planer heads	91@1000	$91,000			CLEAN	
6	sledge hammer	1	$12			CLEAN	
7	planer wrenches	15@20	$300			CLEAN	
8	scissor lift pump	1	$1,000			CLEAN	
9	air hose	35'	$60			CLEAN	
10	grease guns	2@17	$34			CLEAN	
11	Variable speed box drive		$6,000			CLEAN	
12	calipers	1	$175			CLEAN	
13	ceiling lights	3@75	$225			CLEAN	
14	spare drive gears	10@20	$200			CLEAN	
15	drive pulleys	6@20	$120			CLEAN	

MillWork West Inventory

Building: Planer Bldg - Planer Room

	Description	Quantity	MillWork West Equipment Value		W.R.Grace Value	Intended Disposition (Clean, Dispose, Compensate)	Photo No.
16	sprockets	2@25	$50			CLEAN	
17	Fire ext.	1	$65			CLEAN	
18	scissor lift	1	$3,500			CLEAN	
19	Feed table	1	$5,000			CLEAN	
20	over head lights	1	$95			CLEAN	
21	8' sraight edge	1	$40			CLEAN	
22							
23							
24							

MillWork West Inventory

Building: Planer Bldg - 2nd Level

	Description	Quantity	MillWork West Equipment Value		W.R.Grace Value	Intended Disposition (Clean, Dispose, Compensate)	Photo No.
1	Car Ramps	2@20	$40			CLEAN	
2	Truck Tire	1pr	$50			CLEAN	
3	Quartz light w\stand	1	$50			CLEAN	
4	24" X 6' roller conv.	1	$350			CLEAN	
5	24 " curved conv.	1	$270			CLEAN	
6	used 4' sq elect. Panel	1	$100			CLEAN	
7	10-4 cord	50'	$43			CLEAN	
8	10'x50' tarps	8@30	$240			CLEAN	
9	220 3phase space heater	1	$600			CLEAN	
10	5 horse gear motor	1	$150			CLEAN	
11	2 horse gear motor	1	$150			CLEAN	
12	3\4 horse 90 degree gear motor	1	$350			CLEAN	
13	10" swing saw	1	$200			CLEAN	
14	spare gears	1 LOT	$200			CLEAN	
15	250 lb platform scale	1	$600			CLEAN	

MillWork West Inventory

Building: Planer Bldg - 2nd Level

	Description	Quantity	MillWork West Equipment Value		W.R.Grace Value	Intended Disposition (Clean, Dispose, Compensate)	Photo No.
16	feed rolls shaft	1	$60			CLEAN	
17	3\4 horse trimmer motor	1	$150			CLEAN	
18	tool box and torch tips	1	$40			CLEAN	
19	Branding tension crimper	1	$80			CLEAN	
20	30" wrecking bar	2@6	$12			CLEAN	
21	Key hole saws	2@5	$10			CLEAN	
22	Hand planes	2@50	$100			CLEAN	
23	Hand saws	3@20	$60			CLEAN	
24	Hack saw	1	$10			CLEAN	
25	24" level	1	$40			CLEAN	
26	B & D sander & box	1	$80			CLEAN	
27	3' X 10' scissor lift	1	$3,000			CLEAN	
28	Misc. large elec. Panels	3@1000	$3,000			CLEAN	
29	sprockets 60-120	7@20	$140			CLEAN	
30	Breaker panels	12	$1,000			CLEAN	

MillWork West Inventory

Building: Planer Bldg - 2nd Level

	Description	Quantity	MillWork West Equipment Value		W.R.Grace Value	Intended Disposition (Clean, Dispose, Compensate)	Photo No.
31	2 horse motors	7@300	$2,100			CLEAN	
32	radial arm saw	1	$400			CLEAN	
33	1 1\2 X 8' shaft bearings &	2@150	$300			CLEAN	
34	6 " hyd. Cylinders	4@200	$800			CLEAN	
35	220 3phase heater	1	$400			CLEAN	
36	pallet of chains and sproc	1	$600			CLEAN	
37	4' shop lights	2@50	$100			CLEAN	
38							
39							
40							

MillWork West Inventory

Building: Planer Building - Filing Room

	Description	Quantity	MillWork West Equipment Value		W.R.Grace Value	Intended Disposition (Clean, Dispose, Compensate)	Photo No.
1	knife grinder # 228		$4,000			CLEAN	
2	setup stand		$2,000			CLEAN	
3	4 head grinder		$4,000			CLEAN	
4	File cab.		$120			CLEAN	
5	dressing tools	2@15	$30			CLEAN	
6	Planer Cutting Heads	2@1000	$2,000			CLEAN	
7	Panel Displays	4@30	$120			CLEAN	
8	stool		$60			CLEAN	
9	misc. paint closet		$40			COMPENSATE AND DISPOSE	
10	#2 lift truck		$8,000			CLEAN	
11	#3 lift truck		$20,000			CLEAN	
12	shavings truck		$4,000			CLEAN	
13	lumber trailer		$3,500			CLEAN	
14	pick up truck		$8,000			CLEAN	
15							

MillWork West Inventory

Building: Planer Bldg - Train Room

	Description	Quantity	MillWork West Equipment Value		W.R.Grace Value	Intended Disposition (Clean, Dispose, Compensate)	Photo No.
1	splitter rip yolk	3@1200	$3,600			CLEAN	
2	shelf rack & parts	1	$120			CLEAN	
3	cuppling (rip saw)	1	$30			CLEAN	
4	kick back fingers	1 set	$70			CLEAN	
5	Rip saw Bearing	1	$40			CLEAN	
6	rip saw spacers	15@2	$30			CLEAN	
7	3 1\8 X 10" saw blades	16@780	$1,280			CLEAN	
8	shop lights 4'	19@10	$190			CLEAN	
9	2' shop lights	4@8	$32			CLEAN	
10	75 watt yard light	2@110	$220			CLEAN	
11	Box of bolts		$35			CLEAN	
12	Hose clamps	100@1	$100			CLEAN	
13	rolls stretch film	4@21	$84			CLEAN	
14	Fire Exts.	1	$150			CLEAN	
15	Fire Exts.	1	$65			CLEAN	

MillWork West Inventory

Building: Planer Bldg - Break Room

	Description	Quantity	MillWork West Equipment Value		W.R.Grace Value	Intended Disposition (Clean, Dispose, Compensate)	Photo No.
	Cabinet						
1	Motor oil	5 gallons	$30			CLEAN	
2	Power steering fluid	10 pts@2	$20			CLEAN	
3	Brake fluid	4qts@6	$24			CLEAN	
4	cans spry paint	5@3	$15			CLEAN	
5	diesel fuel filters	3@12	$36			CLEAN	
6	oil filters	6@7	$42			CLEAN	
7	80w gear oil	30qts	$111			CLEAN	
8	anti freeze	2gal	$15			CLEAN	
9	10w comp. Oil	1gal	$9			CLEAN	
10	truck air filters	3@12	$36			CLEAN	
11	cleaning concentrate	3qts@3	$9			CLEAN	
12	20 -1" wood drill bits	20	$175			CLEAN	
13	smallscrew drivers	10@2	$20			CLEAN	
14	1' X 18" Auger bit	1	$30			CLEAN	
15	Pneumatic valves (chop saw)	6@10	$60			CLEAN	

MillWork West Inventory

Building: Planer Bldg - Break Room

	Description	Quantity	MillWork West Equipment Value		W.R.Grace Value	Intended Disposition (Clean, Dispose, Compensate)	Photo No.
16	Bearings Chop saw	4@10	$40			CLEAN	
17	grease guns hose	6@1.5	$9			CLEAN	
18	set cut torch gauges	1	$200			CLEAN	
19	4ft bar	1	$20			CLEAN	
	Main Room						
20	saw blades	28@100	$2,800			CLEAN	
21	metal blades	3@20	$60			CLEAN	
22	mechanical switch	1	$30			CLEAN	
23	planer heads	25@1000	$25,000			CLEAN	
24	craftsman tools	1	$300			CLEAN	
25	16" saw blade	16@90	$1,440			CLEAN	
26	12" fan	1	$25			CLEAN	
27	grease guns	5@17	$85			CLEAN	
28	planer head spacers	30@5	$150			CLEAN	
29	Torch w\cart & cylinders	1	$700			CLEAN	
30	20' ext. cord	3@15	$45			CLEAN	

MillWork West Inventory

Building: Planer Bldg - Break Room

	Description	Quantity	MillWork West Equipment Value		W.R.Grace Value	Intended Disposition (Clean, Dispose, Compensate)	Photo No.
31	25' ext. cord	1	$15			CLEAN	
32	set weld leads	1	$100			CLEAN	
33	auto creeper	1	$15			CLEAN	
34	makita angle grinder	1	$169			CLEAN	
35	welding rod	40@.5	$20			CLEAN	
36	Elec. Switch for planer	1	$50			CLEAN	
37	anti freeze	1 gal.	$6			CLEAN	
38	1 1\4 Band clips	1 box	$48			CLEAN	
39	Planer fuse links		$150			CLEAN	
40	Boxes fuses	5@30	$150			CLEAN	
41	# 14 stranded wire	1300'	$65			CLEAN	
42	heavy duty Banding cutters	1	$70			CLEAN	
43	1 1\4 Band crimpers	2@160	$320			CLEAN	
44	1 1\4 tension tools	2@180	$360			CLEAN	
45	3\4 Band crimper	3@160	$480			CLEAN	

MillWork West Inventory

Building: Planer Bldg - Break Room

	Description	Quantity	MillWork West Equipment Value		W.R.Grace Value	Intended Disposition (Clean, Dispose, Compensate)	Photo No.
46	1\2 Band crimper	1	$50			CLEAN	
47	1\2 - 3\4 Band tension tools	6@165	$990			CLEAN	
48	Drop cord	1	$15			CLEAN	
49	2" load straps	6@25	$150			CLEAN	
50	spare planer switch	1	$500			CLEAN	
51	feed rolls	2@90	$180			CLEAN	
52	spare gear drive	1	$350			CLEAN	
53	pressure bar arm	1	$190			CLEAN	
54	drive chains-misc.		$85			CLEAN	
55	chip breaker parts--		$145			CLEAN	
56	100 w\light bulb	14@.45	$6			CLEAN	
57	8 X 10 tarp	1	$15			COMPENSATE AND DISPOSE	
58	pressure bar bolts breaker bar bolts	1	$65			CLEAN	
59							
60	wrecking bar	2@8	$16			CLEAN	

MillWork West Inventory

Building: Planer Bldg - Break Room

	Description	Quantity	MillWork West Equipment Value		W.R.Grace Value	Intended Disposition (Clean, Dispose, Compensate)	Photo No.
61	3' level	1	$30			CLEAN	
62	Basin wrench	1	$22			CLEAN	
63	lockers	6@76	$456			CLEAN	
64	small platform scale	1	$75			CLEAN	
65	3\4" Banding clips	3500	$38			CLEAN	
66	Heavy duty ext. cord	1	$50			CLEAN	
67	moisture meter	1	$270			CLEAN	
68	3' X 4' White desk	1	$60			CLEAN	
69	H 2 B staple hammer	4@106	$424			CLEAN	
70	micrometer	1	$134			CLEAN	
71	portable telephone	1	$49			CLEAN	
72	short air hose	1	$10			CLEAN	
73	fire ext. (2large,1 small)	3	$365			CLEAN	
74	small micro wave oven	1	$100			CLEAN	
75	boxes ear plugs	3@35	$105			CLEAN	

MillWork West Inventory

Building: Planer Bldg - Break Room

	Description	Quantity	MillWork West Equipment Value		W.R.Grace Value	Intended Disposition (Clean, Dispose, Compensate)	Photo No.
76	coffee maker	1	$40			CLEAN	
77	2' X 3' table	1	$40			CLEAN	
78	3' X 10' table	1	$50			CLEAN	
79	1st aid kit		$60			COMPENSATE AND DISPOSE	
80	chairs	7@12	$84			CLEAN	
81	planer heads	4@1000	$4,000			CLEAN	
82	boxes nails	5@52	$260			CLEAN	
83	sets 4" knives	24@14.5	$348			CLEAN	
84	planer heads	107@1000	$107,000			CLEAN	
85	planer heads	40@1005	$40,200			CLEAN	
86	Jointers	2	$140			CLEAN	
87	2' X 8' X 8' Cabinet	1	$280			CLEAN	
88	pressure bar dividers	2	$40			CLEAN	
89	Garden hose	100'	$34			CLEAN	
90	head w\knives	46@1000	$46,000			CLEAN	

MillWork West Inventory

Building: Planer Bldg - Break Room

	Description	Quantity	MillWork West Equipment Value		W.R.Grace Value	Intended Disposition (Clean, Dispose, Compensate)	Photo No.
91	arbor slip joint---------	20@25	$500			CLEAN	
92	6" gibbs	32@18	$576			CLEAN	
93	sets knives (box)	40@180	$7,200			CLEAN	
94	4" Gibbs	40@14	$560			CLEAN	
95	2 ton floor jack	1	$110			CLEAN	
96	4' shop light	1	$22			CLEAN	
97	9" planer saw blade	12@60	$720			CLEAN	
98	out feed bed	1	$600			CLEAN	
99							
100	Pidgeon hole cabinet & contents excluding fuses	1	$1,300			CLEAN	
	Oil Closet						
101	sets 8" planer knives	22@28.81	$634			CLEAN	
102	sets 6" planer knines	26@21.61	$562			CLEAN	
103	sets 4" planer knives	12@14.41	$173			CLEAN	
104	sets 10" planer knives	1	$36			CLEAN	
105	Drill bit 1\4 to 1in.	30@5	$150			CLEAN	

MillWork West Inventory

Building: Planer Bldg - Break Room

	Description	Quantity	MillWork West Equipment Value		W.R.Grace Value	Intended Disposition (Clean, Dispose, Compensate)	Photo No.
106	asst. allen wrenches	50	$45			CLEAN	
107	set full round knives	1	$75			CLEAN	
108	1\2' B & D industrial Drill	1	$200			CLEAN	
109	B & D saber saw	1	$75			CLEAN	
110	hand soldering gun	1	$35			CLEAN	
111	1\2 X 16" drill bits	2@20	$40			CLEAN	
112	11\16 X 2' drill bits	1	$30			CLEAN	
113	complete set planer tools	1	$300			CLEAN	
114	Brass hammer	1	$15			CLEAN	
115	rubber mallet	1	$15			CLEAN	
116	Files	40@3	$120			CLEAN	
117	Gib bolts	30@4	$120			CLEAN	
118	1\4 X3\4 X 3 Jointer stones	28@4.5	$126			CLEAN	
119							
120	pattern stones	50@6	$300			CLEAN	
	Bench						

MillWork West Inventory

Building: Planer Bldg - Break Room

	Description	Quantity	MillWork West Equipment Value		W.R.Grace Value	Intended Disposition (Clean, Dispose, Compensate)	Photo No.
121	Jointer stones						
122	elec testers	2@35	$70			CLEAN	
123	misc chisels		$20			CLEAN	
124	misc spade bits		$15			CLEAN	
125	air hose fittings		$15			CLEAN	
126	head set up stand	1	$100			CLEAN	
127	vise	1	$100			CLEAN	
128	Bench	1	$100			CLEAN	
129	Cable comalong	2@40	$80			CLEAN	
130	Chain comalong	1	$200			CLEAN	
131	Chain binder	2@30	$60			CLEAN	
132	Closet		$400			CLEAN	

MillWork West Inventory

Building: Outside

	Description	Quantity	MillWork West Equipment Value		W.R.Grace Value	Intended Disposition (Clean, Dispose, Compensate)	Photo No.
1	16' lumber rack w/ wheels		$1,800			CLEAN	
2	sticker racks	3@200	$600			CLEAN	
3	Roof tops	236@75	$17,700			COMPENSATE AND DISPOSE	
4	spacer blocks	2000@3	$6,000			COMPENSATE AND DISPOSE	
5	Kiln sticks	53000	$6,000			COMPENSATE AND DISPOSE	
6	8' pallets 12' pallets	5@85 6@85	$300			CLEAN	
7							
8							
9							

MillWork West Inventory

Building: Boneyard and adjacent area

	Description	Quantity	MillWork West Equipment Value		W.R.Grace Value	Intended Disposition (Clean, Dispose, Compensate)	Photo No.
1	lumber rack		$250			COMPENSATE AND DISPOSE	
2	big dumpster		$850			COMPENSATE AND DISPOSE	
3	steel rack		$150			COMPENSATE AND DISPOSE	
4							
5	*Bone Yard		$2,000			COMPENSATE AND DISPOSE	
6	*Note: Bone Yard includes all misc. steel structures in the west yard						
7							
8							

MillWork West Inventory

Building: Wood Building

	Description	Quantity	MillWork West Equipment Value		W.R.Grace Value	Intended Disposition (Clean, Dispose, Compensate)	Photo No.
1	air hose fittings and valves		$250			CLEAN	
2	fire wood bundling racks	2@100	$200			CLEAN	
3	12' trimmer motors	1 2@50	$400			CLEAN	
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							

MillWork West Inventory

Building: Garage Bldg

	Description	Quantity	MillWork West Equipment Value		W.R.Grace Value	Intended Disposition (Clean, Dispose, Compensate)	Photo No.
1	Bolt cutters	1	$45			CLEAN	
2	Truck ext. Rack	1	$150			CLEAN	
3	Husk chain saw	1	$350			CLEAN	
4	Truck load lock	1	$50			CLEAN	
5	pallets	54@15	$810			CLEAN	
6	STRECTCH FILM - 5"	30@12.98	$389			CLEAN	
7	STRECTCH FILM - 3"	38@11.5	$437			CLEAN	
8	STRECTCH FILM - 15"	4@21.49	$86			CLEAN	
9	Rolls 6' lumber wrap	5@180	$900			CLEAN	
10	Rolls 8' lumber wrap	3@256	$768			CLEAN	
11	pallets	15@6	$90			CLEAN	
12	Simpson Rack	1	$20			CLEAN	
13	Splitting Maul	1	$18			CLEAN	
14							

MillWork West Inventory

Building: Pole Barn

	Description	Quantity	MillWork West Equipment Value		W.R.Grace Value	Intended Disposition (Clean, Dispose, Compensate)	Photo No.
1	push brooms	2@15	$30			CLEAN	
2	scoop shovel	1	$30			CLEAN	
3	18" pipe wrench	1	$38			CLEAN	
4	roll of flags	1	$50			CLEAN	
5	H 2 B hammer stapler	1	$106			CLEAN	
6	box of H 2 B staples	1	$10			CLEAN	
7	Roll twine	1	$8			CLEAN	
8	Shrink wrap 24"	1	$22			CLEAN	
9	Nail bin 48 bins	1	$1,000			CLEAN	
10	Nail scales	1	$220			CLEAN	
11	fire ext.	2@65	$130			CLEAN	
12	fire ext.	1	$65			CLEAN	
13	DeWalt 7 1\4 skill saw	1	$120			CLEAN	
14	100' ext. cord	1	$50			CLEAN	
15	small fridge	1	$120			CLEAN	

MillWork West Inventory

Building: Pole Barn

	Description	Quantity	MillWork West Equipment Value		W.R.Grace Value	Intended Disposition (Clean, Dispose, Compensate)	Photo No.
16	saw horses	2@20	$40			CLEAN	
17	Truck tire and wheel	1	$40			CLEAN	
18	paper bags		$50			COMPENSATE AND DISPOSE	
19	Pallets	9@15	$135			CLEAN	
20	Pallets	10@6	$60			CLEAN	
21							
22							
23							
24							
25							
26							

MillWork West Inventory

Building: Office Bldg

	Description	Quantity	MillWork West Equipment Value		W.R.Grace Value	Intended Disposition (Clean, Dispose, Compensate)	Photo No.
1	sweeping compound		$30			CLEAN	
2	office equipment						
3	2' simpson rack		$15			CLEAN	
4	4 drawer file cabinet		$120			CLEAN	
5	5' desk		$150			CLEAN	
6	fax phone		$150			CLEAN	
7	phones	3@90	$270			CLEAN	
8	portable phone		$90			CLEAN	
9	sales boxes	4@10	$40			CLEAN	
10	Air cond.		$500			CLEAN	
11	carpenter pencils	1000@0.35	$350			CLEAN	
12	Sales counter		$600			CLEAN	
13	cash drawer		$150			CLEAN	
14	calculators	2@10	$20			CLEAN	
15	staplers	2@12	$24			CLEAN	

MillWork West Inventory

Building: Office Bldg

	Description	Quantity	MillWork West Equipment Value		W.R.Grace Value	Intended Disposition (Clean, Dispose, Compensate)	Photo No.
16	2 way radio w\charger	3@100	$300			CLEAN	
17	office chair	2@60	$120			CLEAN	
18	shelving		$80			CLEAN	
19	shelving		$60			CLEAN	
20	open sign		$150			CLEAN	
21	Molding displays						
22	Small		$30			CLEAN	
23	Large		$75			CLEAN	
24							
25	MISC. OFFICE SUPPLIES		$1,000			CLEAN	
26							
27							
28							
29							
30							

APPENDIX I

MONITORING WELL ANALYTICAL DATA
and
BORING AND WELL DEVELOPMENT LOGS

APPENDIX I-1

MONITORING WELL ANALYTICAL DATA

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EPA METHOD 8270C

Client:	Kootenai Development Corp.	Date Reported:	10/17/00
Sample ID:	MW-1	Date Sampled:	10/5/00 17:20
Project Info:	PROJ. NO. 805169.30, KDC/WR GRACE- MINE WELLS	Date Received:	10/10/00
Lab ID:	001-00-58747	Date Analyzed:	10/12/00 1:17
Matrix:	WATER	Date Extracted:	10/11/00

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	LIMIT OF QUANTITATION(µg/L)
83-32-9	Acenaphthene	ND	10
208-96-8	Acenaphthylene	ND	10
120-12-7	Anthracene	ND	10
103-33-3	Azobenzene	ND	10
92-87-5	Benzidine	ND	20
56-55-3	Benzo(a)Anthracene	ND	10
205-99-2	Benzo(b)fluoranthene	ND	10
207-08-9	Benzo(k)fluoranthene	ND	10
191-24-2	Benzo(g,h,i)perylene	ND	10
50-32-8	Benzo(a)pyrene	ND	10
101-55-3	4-Bromophenyl-phenylether	ND	10
85-68-7	Butylbenzylphthalate	ND	10
59-50-7	4-Chloro-3-Methylphenol	ND	10
111-91-1	bis(-2-Chloroethoxy)Methane	ND	10
111-44-4	bis(-2-Chloroethyl)Ether	ND	10
108-60-1	bis(2-Chloroisopropyl)ether	ND	10
91-58-7	2-Chloronaphthalene	ND	10
95-57-8	2-Chlorophenol	ND	10
106-48-9	4-Chlorophenol	ND	10
7005-72-3	4-Chlorophenyl-phenylether	ND	10
218-01-9	Chrysene	ND	10
53-70-3	Dibenzo(a,h)anthracene	ND	10
95-50-1	1,2-Dichlorobenzene	ND	10
541-73-1	1,3-Dichlorobenzene	ND	10
106-46-7	1,4-Dichlorobenzene	ND	10
91-94-1	3,3'-Dichlorobenzidine	ND	20
120-83-2	2,4-Dichlorophenol	ND	10
84-66-2	Diethylphthalate	ND	10
131-11-3	Dimethyl Phthalate	ND	10
105-67-9	2,4-Dimethylphenol	ND	10
84-74-2	Di-n-Butylphthalate	ND	10
534-52-1	4,6-Dinitro-2-methylphenol	ND	50
51-28-5	2,4-Dinitrophenol	ND	50
121-14-2	2,4-Dinitrotoluene	ND	10
606-20-2	2,6-Dinitrotoluene	ND	10
117-84-0	Di-n-octyl Phthalate	ND	10
117-81-7	bis(2-ethylhexyl)Phthalate	ND	10
206-44-0	Fluoranthene	ND	10
86-73-7	Fluorene	ND	10
118-74-1	Hexachlorobenzene	ND	10
87-68-3	Hexachlorobutadiene	ND	10
77-47-4	Hexachlorocyclopentadiene	ND	20
67-72-1	Hexachloroethane	ND	10
193-39-5	Indeno(1,2,3-c,d)pyrene	ND	10
78-59-1	Isophorone	ND	10
90-12-0	1-Methylnaphthalene	ND	10
91-57-6	2-Methylnaphthalene	ND	10
95-48-7	2-Methylphenol	ND	10
106445/108394	4Methylphenol/3Methylphenol	ND	10
91-20-3	Naphthalene	ND	10

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EPA METHOD 8270C(Continued)

Client: **Kootenai Development Corp.** Date Reported: 10/17/00
Sample ID: MW-1 Lab ID: 001-00-58747

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	LIMIT OF QUANTITATION(µg/L)
98-95-3	Nitrobenzene	ND	10
88-75-5	2-Nitrophenol	ND	10
100-02-7	4-Nitrophenol	ND	50
62-75-9	N-Nitrosodimethylamine	ND	10
621-64-7	N-nitroso-Di-n-propylamine	ND	10
86-30-6	N-nitrosodiphenylamine	ND	10
87-86-5	Pentachlorophenol	ND	50
85-01-8	Phenanthrene	ND	10
108-95-2	Phenol	ND	10
129-00-0	Pyrene	ND	10
110-86-1	Pyridine	ND	20
120-82-1	1,2,4-Trichlorobenzene	ND	10
95-95-4	2,4,5-Trichlorophenol	ND	10
88-06-2	2,4,6-Trichlorophenol	ND	10

ND= Indicates compound was analyzed for but not detected.

Runtime Quality Assurance Report

SYSTEM MONITORING COMPOUNDS	CONCENTRATION(µg/L) ADDED	MEASURED	PERCENT RECOVERY	ACCEPTANCE RANGE
2-Fluorophenol	200	77.7	39	21--100
Phenol-d5	200	80.4	40	10-- 94
Nitrobenzene-d5	100	57.8	58	35--114
2-Fluorobiphenyl	100	62.7	63	43--116
2,4,6-Tribromophenol	200	174	87	10--123
Terphenyl-d14	100	82.2	82	33--141

REPORT COMMENTS: None

Analyst: Reviewing Supervisor: /chem/SV5973.i/sc101100.b/11OCT15.D

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EPA METHOD 8270C

Client:	**Kootenai Development Corp.**	Date Reported:	10/17/00
Sample ID:	MW-2	Date Sampled:	10/5/00 11:15
Project Info:	PROJ. NO. 805169.30, KDC/WR GRACE- MINE WELLS	Date Received:	10/10/00
Lab ID:	002-00-58747	Date Analyzed:	10/16/00 19:39
Matrix:	WATER	Date Extracted:	10/12/00

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	LIMIT OF QUANTITATION(µg/L)
83-32-9	Acenaphthene	ND	10
208-96-8	Acenaphthylene	ND	10
120-12-7	Anthracene	ND	10
103-33-3	Azobenzene	ND	10
92-87-5	Benzidine	ND	20
56-55-3	Benzo(a)Anthracene	ND	10
205-99-2	Benzo(b)fluoranthene	ND	10
207-08-9	Benzo(k)fluoranthene	ND	10
191-24-2	Benzo(g,h,i)perylene	ND	10
50-32-8	Benzo(a)pyrene	ND	10
101-55-3	4-Bromophenyl-phenylether	ND	10
85-68-7	Butylbenzylphthalate	ND	10
59-50-7	4-Chloro-3-Methylphenol	ND	10
111-91-1	bis(-2-Chloroethoxy)Methane	ND	10
111-44-4	bis(-2-Chloroethyl)Ether	ND	10
108-60-1	bis(2-Chloroisopropyl)ether	ND	10
91-58-7	2-Chloronaphthalene	ND	10
95-57-8	2-Chlorophenol	ND	10
106-48-9	4-Chlorophenol	ND	10
7005-72-3	4-Chlorophenyl-phenylether	ND	10
218-01-9	Chrysene	ND	10
53-70-3	Dibenzo(a,h)anthracene	ND	10
95-50-1	1,2-Dichlorobenzene	ND	10
541-73-1	1,3-Dichlorobenzene	ND	10
106-46-7	1,4-Dichlorobenzene	ND	10
91-94-1	3,3'-Dichlorobenzidine	ND	20
120-83-2	2,4-Dichlorophenol	ND	10
84-66-2	Diethylphthalate	ND	10
131-11-3	Dimethyl Phthalate	ND	10
105-67-9	2,4-Dimethylphenol	ND	10
84-74-2	Di-n-Butylphthalate	ND	10
534-52-1	4,6-Dinitro-2-methylphenol	ND	50
51-28-5	2,4-Dinitrophenol	ND	50
121-14-2	2,4-Dinitrotoluene	ND	10
606-20-2	2,6-Dinitrotoluene	ND	10
117-84-0	Di-n-octyl Phthalate	ND	10
117-81-7	**bis(2-ethylhexyl)Phthalate**	(1.9)(J)	10
206-44-0	Fluoranthene	ND	10
86-73-7	Fluorene	ND	10
118-74-1	Hexachlorobenzene	ND	10
87-68-3	Hexachlorobutadiene	ND	10
77-47-4	Hexachlorocyclopentadiene	ND	20
67-72-1	Hexachloroethane	ND	10
193-39-5	Indeno(1,2,3-c,d)pyrene	ND	10
78-59-1	Isophorone	ND	10
90-12-0	1-Methylnaphthalene	ND	10
91-57-6	2-Methylnaphthalene	ND	10
95-48-7	2-Methylphenol	ND	10
106445/108394	4Methylphenol/3Methylphenol	ND	10
91-20-3	Naphthalene	ND	10

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EPA METHOD 8270C(Continued)

Client: **Kootenai Development Corp.** Date Reported: 10/17/00
Sample ID: MW-2 Lab ID: 002-00-58747

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	LIMIT OF QUANTITATION(µg/L)
98-95-3	Nitrobenzene	ND	10
88-75-5	2-Nitrophenol	ND	10
100-02-7	4-Nitrophenol	ND	50
62-75-9	N-Nitrosodimethylamine	ND	10
621-64-7	N-nitroso-Di-n-propylamine	ND	10
86-30-6	N-nitrosodiphenylamine	ND	10
87-86-5	Pentachlorophenol	ND	50
85-01-8	Phenanthrene	ND	10
108-95-2	Phenol	ND	10
129-00-0	Pyrene	ND	10
110-86-1	Pyridine	ND	20
120-82-1	1,2,4-Trichlorobenzene	ND	10
95-95-4	2,4,5-Trichlorophenol	ND	10
88-06-2	2,4,6-Trichlorophenol	ND	10

ND= Indicates compound was analyzed for but not detected.

J= Estimated value. Present, but less than the limit of quantitation.

Runtime Quality Assurance Report

SYSTEM MONITORING COMPOUNDS	CONCENTRATION(µg/L) ADDED	MEASURED	PERCENT RECOVERY	ACCEPTANCE RANGE
2-Fluorophenol	400	134	34	21--100
Phenol-d5	400	144	36	10-- 94
Nitrobenzene-d5	200	96.2	48	35--114
2-Fluorobiphenyl	200	89.7	45	43--116
2,4,6-Tribromophenol	400	255	64	10--123
Terphenyl-d14	200	94.4	47	33--141

REPORT COMMENTS: None

Analyst: _____ Reviewing Supervisor: _____ /chem/SV5973.i/sc101600.b/16OCT06.D

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QUALITY ASSURANCE REPORT FOR EPA METHOD 8270C: SAMPLE MATRIX SPIKES

Laboratory ID: 002-00-36414MS Matrix Spike
Matrix: WATER
Extract Method: EPA 3510

Date Reported: 10/17/00
Date Analyzed: 10/4/00 20:27
Date Extracted: 10/04/00

SPIKE COMPOUNDS	CONCENTRATION(µg/L) ADDED	SAMPLE	SPIKE	PERCENT RECOVERY	ACCEPTANCE RANGE
Acenaphthene	50	<10.0	34.8	70	46--118
4-Chloro-3-Methylphenol	75	<10.0	51	68	23-- 97
2-Chlorophenol	75	<10.0	46.1	61	27--123
1,4-Dichlorobenzene	50	<10.0	27.9	56	36-- 97
2,4-Dinitrotoluene	50	<10.0	36.5	73	24-- 96
4-Nitrophenol	75	<50.0	37.1	49	10-- 80
N-nitroso-Di-n-propylamine	50	<10.0	37.3	75	41--116
Pentachlorophenol	75	<50.0	62.6	83	9--103
Phenol	75	<10.0	40.8	54	12--110
Pyrene	50	<10.0	44	88	26--127
1,2,4-Trichlorobenzene	50	<10.0	29.6	59	39-- 98

Runtime Quality Assurance Report

SYSTEM MONITORING COMPOUNDS	CONCENTRATION(µg/L) ADDED	MEASURED	PERCENT RECOVERY	ACCEPTANCE RANGE
2-Fluorophenol	100	48.3	48	21--100
Phenol-d5	100	60.6	61	10-- 94
Nitrobenzene-d5	50	28.8	58	35--114
2-Fluorobiphenyl	50	28.6	57	43--116
2,4,6-Tribromophenol	100	72.7	73	10--123
Terphenyl-d14	50	45.3	91	33--141

Laboratory ID: 003-00-36414MSD Matrix Spike Duplicate
Matrix: WATER
Extract Method: EPA 3510

Date Reported: 10/17/00
Date Analyzed: 10/4/00 21:51
Date Extracted: 10/04/00

SPIKE COMPOUNDS	CONCENTRATION(µg/L) ADDED	MEASURED	PERCENT RECOVERY	ACCEPTANCE RANGE	RPD	RPD LIMIT
Acenaphthene	50	32.8	66	46--118	6	31
4-Chloro-3-Methylphenol	75	51.1	68	23-- 97	0	42
2-Chlorophenol	75	43.7	58	27--123	5	40
1,4-Dichlorobenzene	50	27.2	54	36-- 97	3	28
2,4-Dinitrotoluene	50	35	70	24-- 96	4	38
4-Nitrophenol	75	24.2	32	10-- 80	42	50
N-nitroso-Di-n-propylamine	50	37.8	76	41--116	1	38
Pentachlorophenol	75	50.4	67	9--103	22	50
Phenol	75	36.6	49	12--110	11	42
Pyrene	50	35.5	71	26--127	21	31
1,2,4-Trichlorobenzene	50	29.2	58	39-- 98	1	28

Runtime Quality Assurance Report

SYSTEM MONITORING COMPOUNDS	CONCENTRATION(µg/L) ADDED	MEASURED	PERCENT RECOVERY	ACCEPTANCE RANGE
2-Fluorophenol	100	39.9	40	21--100
Phenol-d5	100	49	49	10-- 94
Nitrobenzene-d5	50	29	58	35--114
2-Fluorobiphenyl	50	28	56	43--116
2,4,6-Tribromophenol	100	65	65	10--123
Terphenyl-d14	50	35.6	71	33--141

REPORT COMMENTS: None

Analyst _____ Reviewing Supervisor _____ /chem/Sv55/2.sl 100400.b/040C109.D

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QUALITY ASSURANCE REPORT FOR EPA METHOD 8270C: SAMPLE MATRIX SPIKES

Laboratory ID: 006-00-58774MS Matrix Spike
Matrix: WATER
Extract Method: EPA 3510

Date Reported: 10/17/00
Date Analyzed: 10/13/00 18:09
Date Extracted: 10/12/00

SPIKE COMPOUNDS	CONCENTRATION(µg/L) ADDED	SAMPLE	SPIKE	PERCENT RECOVERY	ACCEPTANCE RANGE
Acenaphthene	100	<10.0	62.2	62	46--118
4-Chloro-3-Methylphenol	150	<10.0	97.1	65	23-- 97
2-Chlorophenol	150	<10.0	79.2	53	27--123
1,4-Dichlorobenzene	100	<10.0	50.5	50	36-- 97
2,4-Dinitrotoluene	100	<10.0	67.9	68	24-- 96
4-Nitrophenol	150	<50.0	96.7	64	10-- 80
N-nitroso-Di-n-propylamine	100	<10.0	62.3	62	41--116
Pentachlorophenol	150	<50.0	106	71	9--103
Phenol	150	<10.0	146	97	12--110
Pyrene	100	<10.0	68.4	68	26--127
1,2,4-Trichlorobenzene	100	<10.0	56.3	56	39-- 98

Runtime Quality Assurance Report

SYSTEM MONITORING COMPOUNDS	CONCENTRATION(µg/L) ADDED	MEASURED	PERCENT RECOVERY	ACCEPTANCE RANGE
2-Fluorophenol	200	86.8	43	21--100
Phenol-d5	200	100	50	10-- 94
Nitrobenzene-d5	100	53	53	35--114
2-Fluorobiphenyl	100	57.6	58	43--116
2,4,6-Tribromophenol	200	175	88	10--123
Terphenyl-d14	100	78	78	33--141

Laboratory ID: 006-00-58774MSD Matrix Spike Duplicate
Matrix: WATER
Extract Method: EPA 3510

Date Reported: 10/17/00
Date Analyzed: 10/13/00 18:52
Date Extracted: 10/12/00

SPIKE COMPOUNDS	CONCENTRATION(µg/L) ADDED	MEASURED	PERCENT RECOVERY	ACCEPTANCE RANGE	RPD	RPD LIMIT
Acenaphthene	100	61	61	46--118	2	31
4-Chloro-3-Methylphenol	150	99.9	67	23-- 97	3	42
2-Chlorophenol	150	78.5	52	27--123	1	40
1,4-Dichlorobenzene	100	48.5	48	36-- 97	4	28
2,4-Dinitrotoluene	100	66.9	67	24-- 96	1	38
4-Nitrophenol	150	96.2	64	10-- 80	0	50
N-nitroso-Di-n-propylamine	100	61.7	62	41--116	1	38
Pentachlorophenol	150	111	74	9--103	5	50
Phenol	150	139	93	12--110	5	42
Pyrene	100	64.6	65	26--127	6	31
1,2,4-Trichlorobenzene	100	54.5	55	39-- 98	3	28

Runtime Quality Assurance Report

SYSTEM MONITORING COMPOUNDS	CONCENTRATION(µg/L) ADDED	MEASURED	PERCENT RECOVERY	ACCEPTANCE RANGE
2-Fluorophenol	200	85.3	43	21--100
Phenol-d5	200	101	50	10-- 94
Nitrobenzene-d5	100	53.7	54	35--114
2-Fluorobiphenyl	100	56	56	43--116
2,4,6-Tribromophenol	200	173	86	10--123
Terphenyl-d14	100	71.6	72	33--141

REPORT COMMENTS None

Analyst _____ Reviewing Supervisor _____ /chem/SV5973.i/sc101300.b/13OCT15b.D

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QUALITY ASSURANCE REPORT FOR EPA METHOD 8270C: REFERENCE STANDARD BLANK MATRIX SPIKE

Sample ID: Quality Assurance Blank Matrix Spike
Matrix: WATER
Extract Method: EPA 3510

Date Reported: 10/17/00
Date Analyzed: 10/6/00 19:27
Date Extracted: 10/04/00

SPIKE COMPOUNDS	CONCENTRATION(µg/L) ADDED	MEASURED	PERCENT RECOVERY	ACCEPTANCE RANGE
Acenaphthene	100	78.7	79	53--101
Acenaphthylene	96	72.7	76	50-- 94
Anthracene	100	81.4	81	52--109
Benzo(a)Anthracene	100	85.7	86	57--115
Benzo(b)fluoranthene	100	84.9	85	54--120
Benzo(k)fluoranthene	100	92.3	92	48--118
Benzo(g,h,i)perylene	100	85.9	86	43--121
Benzo(a)pyrene	100	82.8	83	44--122
4-Bromophenyl-phenylether	100	78.4	78	51--105
Butylbenzylphthalate	100	87.9	88	45--130
4-Chloro-3-Methylphenol	100	63.4	63	50-- 94
bis(-2-Chloroethoxy)Methane	101	67.5	67	45--102
bis(-2-Chloroethyl)Ether	100	67.1	67	13--122
bis(2-Chloroisopropyl)ether	100	68.4	68	40-- 91
2-Chloronaphthalene	100	73.1	73	52-- 89
2-Chlorophenol	100	58.8	59	39-- 78
4-Chlorophenyl-phenylether	101	75.7	75	54-- 98
Chrysene	100	87.2	87	54--122
Dibenzo(a,h)anthracene	100	83.4	83	39--120
1,2-Dichlorobenzene	100	63.6	64	37-- 77
1,3-Dichlorobenzene	100	59.7	60	28-- 77
1,4-Dichlorobenzene	100	61.2	61	38-- 74
2,4-Dichlorophenol	101	59	58	40-- 90
Diethylphthalate	101	79.4	79	51--108
Dimethyl Phthalate	100	77.1	77	53--106
2,4-Dimethylphenol	100	47.5	48	28-- 86
Di-n-Butylphthalate	101	85	84	51--114
4,6-Dinitro-2-methylphenol	99	91.1	92	24--123
2,4-Dinitrophenol	100	53.6	54	10--132
2,4-Dinitrotoluene	102	82.2	81	60--102
2,6-Dinitrotoluene	101	78.2	77	59--100
Di-n-octyl Phthalate	100	90.4	90	45--134
bis(2-ethylhexyl)Phthalate	100	86.3	86	47--128
Fluoranthene	100	84.4	84	50--121
Fluorene	100	78.1	78	54--101
Hexachlorobenzene	100	75.7	76	49--101
Hexachlorobutadiene	99	57.7	58	38-- 94
Hexachlorocyclopentadiene	100	29.9	30	17-- 93
Hexachloroethane	100	60.7	61	43-- 76
Indeno(1,2,3-c,d)pyrene	100	91.4	91	43--125
Isophorone	101	74.5	74	51--100
Naphthalene	100	65.8	66	43-- 93
Nitrobenzene	101	65.5	65	47-- 87
2-Nitrophenol	100	60.7	61	44-- 87
4-Nitrophenol	100	30.3	30	10-- 95
N-Nitrosodimethylamine	100	35.1	35	12-- 78
N-nitroso-Di-n-propylamine	100	79	79	30--116
N-nitrosodiphenylamine	100	77.2	77	47--109
Pentachlorophenol	101	79.1	78	16--117
Phenanthrene	100	81	81	52--108
Phenol	100	43.2	43	10-- 78
Pyrene	99	86.5	87	56--116
1,2,4-Trichlorobenzene	100	59.3	59	43-- 82
2,4,6-Trichlorophenol	101	71.3	[illegible]	47-- 96

Runtime Quality Assurance Report

SYSTEM MONITORING COMPOUNDS	CONCENTRATION(µg/L) ADDED	MEASURED	PERCENT RECOVERY	ACCEPTANCE RANGE
2-Fluorobiphenyl	200	174.1	87	[illegible]
Phenol-d6	200	70.8	35	[illegible]
Nitrobenzene-d5	100	58.5	59	[illegible]
2-Fluorophenol	100	64.8	65	[illegible]
2,4,6-Tribromophenol	200	126	63	[illegible]
Terphenyl-d14	100	82.6	83	[illegible]

REPORT COMMENTS: None

Analyst: [illegible] Reviewed By: [illegible]

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QUALITY ASSURANCE REPORT FOR EPA METHOD 8270C: REFERENCE STANDARD BLANK MATRIX SPIKE

Sample ID: Quality Assurance Blank Matrix Spike
Matrix: WATER
Extract Method: EPA 3510

Date Reported: 10/17/00
Date Analyzed: 10/6/00 18:46
Date Extracted: 10/05/00

SPIKE COMPOUNDS	CONCENTRATION(µg/L) ADDED	MEASURED	PERCENT RECOVERY	ACCEPTANCE RANGE
Acenaphthene	100	83.5	84	53--101
Acenaphthylene	96	77	80	50-- 94
Anthracene	100	86.6	87	52--109
Benzo(a)Anthracene	100	86.6	87	57--115
Benzo(b)fluoranthene	100	86.2	86	54--120
Benzo(k)fluoranthene	100	90.1	90	48--118
Benzo(g,h,i)perylene	100	86.2	86	43--121
Benzo(a)pyrene	100	85.1	85	44--122
4-Bromophenyl-phenylether	100	82.2	82	51--105
Butylbenzylphthalate	100	89.3	89	45--130
4-Chloro-3-Methylphenol	100	66	66	50-- 94
bis(-2-Chloroethoxy)Methane	101	69.5	69	45--102
bis(-2-Chloroethyl)Ether	100	62	62	13--122
bis(2-Chloroisopropyl)ether	100	64.5	64	40-- 91
2-Chloronaphthalene	100	75.5	76	52-- 89
2-Chlorophenol	100	54.4	54	39-- 78
4-Chlorophenyl-phenylether	101	79.3	79	54-- 98
Chrysene	100	89.3	89	54--122
Dibenzo(a,h)anthracene	100	83.1	83	39--120
1,2-Dichlorobenzene	100	58.7	59	37-- 77
1,3-Dichlorobenzene	100	53.2	53	28-- 77
1,4-Dichlorobenzene	100	56.1	56	38-- 74
2,4-Dichlorophenol	101	60.9	60	40-- 90
Diethylphthalate	101	83	82	51--108
Dimethyl Phthalate	100	78.8	79	53--106
2,4-Dimethylphenol	100	52.2	52	28-- 86
Di-n-Butylphthalate	101	87.7	87	51--114
4,6-Dinitro-2-methylphenol	99	89.4	90	24--123
2,4-Dinitrophenol	100	51.9	52	10--132
2,4-Dinitrotoluene	102	82.9	81	60--102
2,6-Dinitrotoluene	101	80.2	79	59--100
Di-n-octyl Phthalate	100	93.7	94	45--134
bis(2-ethylhexyl)Phthalate	100	88.3	88	47--128
Fluoranthene	100	87.3	87	50--121
Fluorene	100	81.8	82	54--101
Hexachlorobenzene	100	77.6	78	49--101
Hexachlorobutadiene	99	60.2	61	38-- 94
Hexachlorocyclopentadiene	100	40.7	41	17-- 93
Hexachloroethane	100	56.8	57	43-- 76
Indeno(1,2,3-c,d)pyrene	100	89	89	43--125
Isophorone	101	80.2	79	51--100
Naphthalene	100	69.4	69	43-- 93
Nitrobenzene	101	67.3	67	47-- 87
2-Nitrophenol	100	63	63	44-- 87
4-Nitrophenol	100	33.1	33	10-- 95
N-Nitrosodimethylamine	100	34.8	35	12-- 78
N-nitroso-Di-n-propylamine	100	71.1	71	30--116
N-nitrosodiphenylamine	100	83.7	84	47--109
Pentachlorophenol	101	79	78	16--117
Phenanthrene	100	84.9	85	52--108
Phenol	100	40.9	41	10-- 78
Pyrene	99	90.2	91	56--116
1,2,4-Trichlorobenzene	100	62.6	63	43-- 82
2,4,6-Trichlorophenol	[illegible]	[illegible]	71	47-- 96

Runtime Quality Assurance Report

SYSTEM MONITORING COMPOUNDS	CONCENTRATION(µg/L) ADDED	MEASURED	PERCENT RECOVERY	ACCEPTANCE RANGE
2-Fluorophenol	[illegible]	[illegible]	[illegible]	[illegible]
Phenol-d5	[illegible]	[illegible]	[illegible]	[illegible]
Nitrobenzene-d5	[illegible]	[illegible]	[illegible]	[illegible]
2-Fluorobiphenyl	[illegible]	[illegible]	[illegible]	[illegible]
2,4,6-Tribromophenol	[illegible]	[illegible]	[illegible]	[illegible]
Terphenyl-d14	[illegible]	[illegible]	[illegible]	[illegible]

REPORT COMMENTS: None

Approved by: [illegible] Reviewed by: [illegible] Date: [illegible]

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QUALITY ASSURANCE REPORT FOR EPA METHOD 8270C: METHOD BLANK

Sample ID: Quality Assurance Method Blank
Matrix: WATER
Extract Method: EPA 3510

Date Reported: 10/17/00
Date Analyzed: 10/4/00 18:45
Date Extracted: 10/04/00

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	LIMIT OF QUANTITATION(µg/L)
83-32-9	Acenaphthene	ND	10
208-96-8	Acenaphthylene	ND	10
120-12-7	Anthracene	ND	10
103-33-3	Azobenzene	ND	10
92-87-5	Benzidine	ND	20
56-55-3	Benzo(a)Anthracene	ND	10
205-99-2	Benzo(b)fluoranthene	ND	10
207-08-9	Benzo(k)fluoranthene	ND	10
191-24-2	Benzo(g,h,i)perylene	ND	10
50-32-8	Benzo(a)pyrene	ND	10
101-55-3	4-Bromophenyl-phenylether	ND	10
85-68-7	Butylbenzylphthalate	ND	10
59-50-7	4-Chloro-3-Methylphenol	ND	10
111-91-1	bis(-2-Chloroethoxy)Methane	ND	10
111-44-4	bis(-2-Chloroethyl)Ether	ND	10
108-60-1	bis(2-Chloroisopropyl)ether	ND	10
91-58-7	2-Chloronaphthalene	ND	10
95-57-8	2-Chlorophenol	ND	10
106-48-9	4-Chlorophenol	ND	10
7005-72-3	4-Chlorophenyl-phenylether	ND	10
218-01-9	Chrysene	ND	10
53-70-3	Dibenzo(a,h)anthracene	ND	10
95-50-1	1,2-Dichlorobenzene	ND	10
541-73-1	1,3-Dichlorobenzene	ND	10
106-46-7	1,4-Dichlorobenzene	ND	10
91-94-1	3,3'-Dichlorobenzidine	ND	20
120-83-2	2,4-Dichlorophenol	ND	10
84-66-2	Diethylphthalate	ND	10
131-11-3	Dimethyl Phthalate	ND	10
105-67-9	2,4-Dimethylphenol	ND	10
84-74-2	Di-n-Butylphthalate	ND	10
534-52-1	4,6-Dinitro-2-methylphenol	ND	50
51-28-5	2,4-Dinitrophenol	ND	50
121-14-2	2,4-Dinitrotoluene	ND	10
606-20-2	2,6-Dinitrotoluene	ND	10
117-84-0	Di-n-octyl Phthalate	ND	10
117-81-7	bis(2-ethylhexyl)Phthalate	ND	10
206-44-0	Fluoranthene	ND	10
86-73-7	Fluorene	ND	10
118-74-1	Hexachlorobenzene	ND	10
87-68-3	Hexachlorobutadiene	ND	10
77-47-4	Hexachlorocyclopentadiene	ND	10
67-72-1	Hexachloroethane	ND	10
193-39-5	Indeno(1,2,3-c,d)pyrene	ND	10
78-59-1	Isophorone	ND	10
90-12-0	1-Methylnaphthalene	ND	10
91-57-6	2-Methylnaphthalene	ND	10
95-48-7	2-Methylphenol	ND	10
106445/108394	4Methylphenol/3Methylphenol	ND	10
91-20-3	Naphthalene	ND	10

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QUALITY ASSURANCE REPORT FOR EPA METHOD 8270C: METHOD BLANK (Continued)

Sample ID: Quality Assurance Method Blank
Matrix: WATER
Extract Method: EPA 3510

Date Reported: 10/17/00
Date Analyzed: 10/4/00 18:45
Date Extracted: 10/04/00

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	LIMIT OF QUANTITATION(µg/L)
98-95-3	Nitrobenzene	ND	10
88-75-5	2-Nitrophenol	ND	10
100-02-7	4-Nitrophenol	ND	50
62-75-9	N-Nitrosodimethylamine	ND	10
621-64-7	N-nitroso-Di-n-propylamine	ND	10
86-30-6	N-nitrosodiphenylamine	ND	10
87-86-5	Pentachlorophenol	ND	50
85-01-8	Phenanthrene	ND	10
108-95-2	Phenol	ND	10
129-00-0	Pyrene	ND	10
110-86-1	Pyridine	ND	20
120-82-1	1,2,4-Trichlorobenzene	ND	10
95-95-4	2,4,5-Trichlorophenol	ND	10
88-06-2	2,4,6-Trichlorophenol	ND	10

ND= Indicates compound was analyzed for but not detected.

Runtime Quality Assurance Report

SYSTEM MONITORING COMPOUNDS	CONCENTRATION(µg/L) ADDED	MEASURED	PERCENT RECOVERY	ACCEPTANCE RANGE
2-Fluorophenol	200	85.2	43	21--100
Phenol-d5	200	76.6	38	10-- 94
Nitrobenzene-d5	100	62.9	63	35--114
2-Fluorobiphenyl	100	65.5	66	43--116
2,4,6-Tribromophenol	200	130	65	10--123
Terphenyl-d14	100	86	86	33--141

REPORT COMMENTS: None

Analyst: _____ Reviewing Supervisor: _____ /chem/SV5972 i/sb100400.b/04oct0501005.d

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QUALITY ASSURANCE REPORT FOR EPA METHOD 8270C: METHOD BLANK

Sample ID: Quality Assurance Method Blank
Matrix: WATER
Extract Method: EPA 3510

Date Reported: 10/17/00
Date Analyzed: 10/6/00 18:04
Date Extracted: 10/05/00

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	LIMIT OF QUANTITATION(µg/L)
83-32-9	Acenaphthene	ND	10
208-96-8	Acenaphthylene	ND	10
120-12-7	Anthracene	ND	10
103-33-3	Azobenzene	ND	10
92-87-5	Benzidine	ND	20
56-55-3	Benzo(a)Anthracene	ND	10
205-99-2	Benzo(b)fluoranthene	ND	10
207-08-9	Benzo(k)fluoranthene	ND	10
191-24-2	Benzo(g,h,i)perylene	ND	10
50-32-8	Benzo(a)pyrene	ND	10
101-55-3	4-Bromophenyl-phenylether	ND	10
85-68-7	Butylbenzylphthalate	ND	10
59-50-7	4-Chloro-3-Methylphenol	ND	10
111-91-1	bis(-2-Chloroethoxy)Methane	ND	10
111-44-4	bis(-2-Chloroethyl)Ether	ND	10
108-60-1	bis(2-Chloroisopropyl)ether	ND	10
91-58-7	2-Chloronaphthalene	ND	10
95-57-8	2-Chlorophenol	ND	10
106-48-9	4-Chlorophenol	ND	10
7005-72-3	4-Chlorophenyl-phenylether	ND	10
218-01-9	Chrysene	ND	10
53-70-3	Dibenzo(a,h)anthracene	ND	10
95-50-1	1,2-Dichlorobenzene	ND	10
541-73-1	1,3-Dichlorobenzene	ND	10
106-46-7	1,4-Dichlorobenzene	ND	10
91-94-1	3,3'-Dichlorobenzidine	ND	20
120-83-2	2,4-Dichlorophenol	ND	10
84-66-2	Diethylphthalate	ND	10
131-11-3	Dimethyl Phthalate	ND	10
105-67-9	2,4-Dimethylphenol	ND	10
84-74-2	Di-n-Butylphthalate	ND	10
534-52-1	4,6-Dinitro-2-methylphenol	ND	50
51-28-5	2,4-Dinitrophenol	ND	50
121-14-2	2,4-Dinitrotoluene	ND	10
606-20-2	2,6-Dinitrotoluene	ND	10
117-84-0	Di-n-octyl Phthalate	ND	10
117-81-7	bis(2-ethylhexyl)Phthalate	ND	10
206-44-0	Fluoranthene	ND	10
86-73-7	Fluorene	ND	10
118-74-1	Hexachlorobenzene	ND	10
87-68-3	Hexachlorobutadiene	ND	10
77-47-4	Hexachlorocyclopentadiene	ND	10
67-72-1	Hexachloroethane	ND	10
193-39-5	Indeno(1,2,3-c,d)pyrene	ND	10
78-59-1	Isophorone	ND	10
90-12-0	1-Methylnaphthalene	ND	10
91-57-6	2-Methylnaphthalene	ND	10
95-48-7	2-Methylphenol	ND	10
106445/108394	4Methylphenol/3Methylphenol	ND	10
91-20-3	Naphthalene	ND	10

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QUALITY ASSURANCE REPORT FOR EPA METHOD 8270C: METHOD BLANK (Continued)

Sample ID: Quality Assurance Method Blank
Matrix: WATER
Extract Method: EPA 3510

Date Reported: 10/17/00
Date Analyzed: 10/6/00 18:04
Date Extracted: 10/05/00

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	LIMIT OF QUANTITATION(µg/L)
98-95-3	Nitrobenzene	ND	10
88-75-5	2-Nitrophenol	ND	10
100-02-7	4-Nitrophenol	ND	50
62-75-9	N-Nitrosodimethylamine	ND	10
621-64-7	N-nitroso-Di-n-propylamine	ND	10
86-30-6	N-nitrosodiphenylamine	ND	10
87-86-5	Pentachlorophenol	ND	50
85-01-8	Phenanthrene	ND	10
108-95-2	Phenol	ND	10
129-00-0	Pyrene	ND	10
110-86-1	Pyridine	ND	20
120-82-1	1,2,4-Trichlorobenzene	ND	10
95-95-4	2,4,5-Trichlorophenol	ND	10
88-06-2	2,4,6-Trichlorophenol	ND	10

ND= Indicates compound was analyzed for but not detected.

Runtime Quality Assurance Report

SYSTEM MONITORING COMPOUNDS	CONCENTRATION(µg/L) ADDED	MEASURED	PERCENT RECOVERY	ACCEPTANCE RANGE
2-Fluorophenol	200	69.9	35	21--100
Phenol-d5	200	64.3	32	10-- 94
Nitrobenzene-d5	100	56	56	35--114
2-Fluorobiphenyl	100	60.4	60	43--116
2,4,6-Tribromophenol	200	121	60	10--123
Terphenyl-d14	100	83.9	84	33--141

REPORT COMMENTS: None

Analyst: _____ Reviewing Supervisor: _____ /chem/SV5972.i/sb100600.b/06oct0501005.d

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Lab Nos. 00-58747-1-2

QUALITY ASSURANCE DATA PACKAGE

This report is a summary of the results of the quality assurance tests performed with the sample analyses. They are performed to determine if the methodology is in control and to monitor the laboratory's ability to produce accurate and precise results. The date the quality assurance sample was analyzed is consistent with Energy Laboratories' Quality Assurance Plan.

Constituents	Duplicate Analysis - - - mg/l (ppm) - - - Original	Duplicate	Spiked Analysis % Recovery	Blank Analysis mg/l (ppm)	Calibration Sample Analysis mg/l (ppm)	True Value, Acceptable +/- 10% mg/l (ppm)
Arsenic, Total	<0.005	<0.005	90	<0.005	0.049	0.05
Barium, Total	0.2	0.2	93	<0.1	1.0	1
Cadmium, Total	<0.001	<0.001	101	<0.001	0.050	0.05
Chromium, Total	<0.01	<0.01	95	<0.01	0.047	0.05
Lead, Total	<0.01	<0.01	100	<0.01	0.049	0.05
Mercury, Total	0.002	0.002	98	<0.001	0.002	0.002
Selenium, Total	<0.005	<0.005	91	<0.005	0.049	0.05
Silver, Total	<0.005	<0.005	86	<0.005	0.018	0.02

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Lab Nos.: 001-00-58747 - 003-00-587[illegible]

Date: 10-OCT-00

Received by: Krystal Simcox

Logged In by: Krystal Simcox

SAMPLE CONDITION QA/QC REPORT

This report provides information about the condition of the sample(s) and associated sample custody information on receipt at the laboratory.

Chain of Custody Form Completed & Signed	Yes	Comments:
Chain of Custody Seal	No	Comments:
Intact	N/A	Comments:
Signature Match Chain of Custody vs. Seal	N/A	Comments:
Temperature Received	7 C.	Comments:
Samples Received Within Holding Time	Yes	Comments:
Samples Received in Proper Containers	Yes	Comments:
Samples Received Properly Preserved(1)	Yes	Comments:

(1)Acid preservation of samples for volatile organics is not evaluated on this form.
Any preservation problems encountered for these samples are noted on the analytical parameter report pages.

Record of client contact:

Who: _____ By: _____ Date/Time: _____

Method of Shipping: UPS ARS Ground

Additional comments: _____

M.E. LAB

CHAIN OF CUSTODY RECORD

[illegible]

PROJ. NO.: 805169.30
PROJECT NAME: KDC/ W.R. Grace - Mine Wells
SAMPLERS (Signature): Jeffrey W. Baum

STAT. NO.	DATE	TIME	COMP	GRAB	STATION LOCATION (Kootenai Dev. Corp.)	NO. OF CONTAINERS	EPA 8260	EPA 8270	EPA 8081 - Pest. [illegible]	RCRA METALS			REMARKS (Kootenai Development Corp)
	10/5/00	0830		✓	Trip Blank	1	✓						003
	10/5/00	1720		✓	MW-1	6	✓	✓	✓	✓			001-00-58747
	10/6/00	1115		✓	MW-2	6	✓	✓	✓	✓			002 2

NO MORE SAMPLES

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Jeffrey W. Baum	10.6.00 16:08	Daniel [illegible]			
Trudy Clinton	10/9/00 11:15 AM				

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time
		Krystal Swing	10/16/00 1445

Remarks: Need standard QA/QC package
Duplicate + MS/MSD + Trip Blank
Bill/Report to: KDC
317 Mineral Ave.
Libby, MT 59923
Attn: Alan Stringer

Split Samples:
☐ Accepted ☐ Declined

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QUALITY ASSURANCE REPORT FOR EPA METHOD 8082: SAMPLE MATRIX SPIKES

Laboratory ID: 001-00-22361MS Matrix Spike
Matrix: WATER
Extract Method: EPA 3510

Date Reported: 10/31/00
Date Analyzed: 10/7/00 1:12
Date Extracted: 09/28/00

SPIKE COMPOUNDS	CONCENTRATION(µg/L) ADDED	SAMPLE	SPIKE	PERCENT RECOVERY	ACCEPTANCE RANGE
Aroclor-1016	10	<1.00	7.65	76	50--150
Aroclor-1260	10	<1.00	9.04	90	50--150

Runtime Quality Assurance Report

SYSTEM MONITORING COMPOUNDS	CONCENTRATION(µg/L) ADDED	MEASURED	PERCENT RECOVERY		ACCEPTANCE RANGE
Tetrachloro-m-xylene	2.00	1.39	70		60--150
Decachlorobiphenyl	2.00	1.11	56	*	60--150

*Value Outside QC Advisory Limits

Laboratory ID: 001-00-22361MSD Matrix Spike Duplicate
Matrix: WATER
Extract Method: EPA 3510

Date Reported: 10/31/00
Date Analyzed: 10/7/00 1:45
Date Extracted: 09/28/00

SPIKE COMPOUNDS	CONCENTRATION(µg/L) ADDED	MEASURED	PERCENT RECOVERY	ACCEPTANCE RANGE	RPD	RPD LIMIT
Aroclor-1016	10	7.46	75	50--150	3	40
Aroclor-1260	10	8.88	89	50--150	2	40

Runtime Quality Assurance Report

SYSTEM MONITORING COMPOUNDS	CONCENTRATION(µg/L) ADDED	MEASURED	PERCENT RECOVERY	ACCEPTANCE RANGE
Tetrachloro-m-xylene	2.00	1.40	70	60--150
Decachlorobiphenyl	2.00	1.32	66	60--150

REPORT COMMENTS: None

Analyst: Reviewing Supervisor: /chem/BECD.i/B100300.b/b1003061.d

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QUALITY ASSURANCE REPORT FOR EPA METHOD 8082: REFERENCE STANDARD BLANK MATRIX SPIKE

Sample ID: Quality Assurance Blank Matrix Spike
Matrix: WATER
Extract Method: EPA 3510

Date Reported: 10/31/00
Date Analyzed: 10/7/00 0:06
Date Extracted: 09/28/00

SPIKE COMPOUNDS	CONCENTRATION(µg/L) ADDED	MEASURED	PERCENT RECOVERY	ACCEPTANCE RANGE
Aroclor-1016	10	9.31	93	60--140
Aroclor-1260	10	9.73	97	60--140

Runtime Quality Assurance Report

SYSTEM MONITORING COMPOUNDS	CONCENTRATION(µg/L) ADDED	MEASURED	PERCENT RECOVERY	ACCEPTANCE RANGE
Tetrachloro-m-xylene	2.00	1.41	70	60--150
Decachlorobiphenyl	2.00	2.16	108	60--150

REPORT COMMENTS: None

Analyst: GW Reviewing Supervisor: WM /chem/BECD.i/B100300.b/b1003058.d

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QUALITY ASSURANCE REPORT FOR EPA METHOD 8082: METHOD BLANK

Sample ID: Quality Assurance Method Blank
Matrix: WATER
Extract Method: EPA 3510

Date Reported: 10/31/00
Date Analyzed: 10/6/00 23:01
Date Extracted: 09/28/00

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	LIMIT OF QUANTITATION(µg/L)
12674-11-2	Aroclor-1016	ND	1.0
11104-28-2	Aroclor-1221	ND	2.0
1114-16-5	Aroclor-1232	ND	1.0
53469-21-9	Aroclor-1242	ND	1.0
12672-29-6	Aroclor-1248	ND	1.0
11097-69-1	Aroclor-1254	ND	1.0
11096-82-5	Aroclor-1260	ND	1.0
37324-23-5	Aroclor-1262	ND	1.0
11100-14-4	Aroclor-1268	ND	1.0

ND= Indicates compound was analyzed for but not detected.

Runtime Quality Assurance Report

SYSTEM MONITORING COMPOUNDS	CONCENTRATION(µg/L) ADDED	MEASURED	PERCENT RECOVERY	ACCEPTANCE RANGE
Tetrachloro-m-xylene	2.00	1.46	73	60--150
Decachlorobiphenyl	2.00	2.09	104	60--150

REPORT COMMENTS: None

Analyst: EW Reviewing Supervisor: [illegible] /chem/BECD.i/B100300.b/b1003056.d

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EPA METHOD 8260B

Client:	**Kootenai Development Corp.**	Date Reported:	10/19/00
Sample ID:	MW-1	Date Sampled:	10/5/00 17:20
Project Info:	PROJ. NO. 805169.30, KDC/WR GRACE- MINE WELLS	Date Received:	10/10/00
Lab ID:	001-00-58747	Date Analyzed:	10/17/00 18:00
Matrix:	WATER		

C.A.S. #	*TARGET COMPOUNDS*	*CONCENTRATION (µg/L)*	*LIMIT OF QUANTITATION(µg/L)*
71-43-2	Benzene	ND	1.0
108-86-1	Bromobenzene	ND	1.0
74-97-5	Bromochloromethane	ND	1.0
75-27-4	Bromodichloromethane	ND	1.0
75-25-2	Bromoform	ND	1.0
74-83-9	Bromomethane	ND	1.0
56-23-5	Carbon tetrachloride	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
124-48-1	Chlorodibromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
110-75-8	2-Chloroethylvinyl ether	ND	1.0
67-66-3	Chloroform	ND	1.0
74-87-3	Chloromethane	ND	1.0
95-49-8	2-Chlorotoluene	ND	1.0
106-43-4	4-Chlorotoluene	ND	1.0
106-93-4	1,2-Dibromoethane	ND	1.0
74-95-3	Dibromomethane	ND	1.0
95-50-1	1,2-Dichlorobenzene	ND	1.0
541-73-1	1,3-Dichlorobenzene	ND	1.0
106-46-7	1,4-Dichlorobenzene	ND	1.0
75-71-8	Dichlorodifluoromethane	ND	1.0
75-34-3	1,1-Dichloroethane	ND	1.0
107-06-2	1,2-Dichloroethane	ND	1.0
75-35-4	1,1-Dichloroethene	ND	1.0
156-59-2	cis-1,2-Dichloroethene	ND	1.0
156-60-5	trans-1,2-Dichloroethene	ND	1.0
78-87-5	1,2-Dichloropropane	ND	1.0
142-28-9	1,3-Dichloropropane	ND	1.0
594-20-7	2,2-Dichloropropane	ND	1.0
563-58-6	1,1-Dichloropropene	ND	1.0
10061-01-5	cis-1,3-Dichloropropene	ND	1.0
10061-02-6	trans-1,3-Dichloropropene	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
1634-04-4	Methyl-t-butyl ether	ND	1.0
78-93-3	Methyl ethyl ketone	ND	20
75-09-2	Methylene chloride	ND	1.0
100-42-5	Styrene	ND	1.0
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0
127-18-4	Tetrachloroethene	ND	1.0
108-88-3	Toluene	ND	1.0
71-55-6	1,1,1-Trichloroethane	ND	1.0
79-00-5	1,1,2-Trichloroethane	ND	1.0
79-01-6	Trichloroethene	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
96-18-4	1,2,3-Trichloropropane	ND	1.0
75-01-4	Vinyl chloride	ND	1.0
108383/106423	m+p-Xylenes	ND	1.0
95-47-6	o-Xylene	ND	1.0

ND= Indicates compound was analyzed for but not detected

Runtime Quality Assurance Report

SYSTEM MONITORING COMPOUNDS	CONCENTRATION(µg/L) ADDED	MEASURED	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	10	[illegible]	97	74--120
1,2-Dichloroethane d4	10	10.4	104	74--120
Toluene d8	10	11.2	112	80--120
p-Bromofluorobenzene	10	10.3	103	80--120

REPORT COMMENTS: None

Analyst: JRR Reviewing Supervisor: [illegible]

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EPA METHOD 8260B

Client:	Kootenai Development Corp.	Date Reported:	10/19/00
Sample ID:	MW-2	Date Sampled:	10/5/00 11:15
Project Info:	PROJ. NO. 805169.30, KDC/WR GRACE- MINE WELLS	Date Received:	10/10/00
Lab ID:	002-00-58747	Date Analyzed:	10/17/00 18:38
Matrix:	WATER		

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	LIMIT OF QUANTITATION(µg/L)
71-43-2	Benzene	ND	1.0
108-86-1	Bromobenzene	ND	1.0
74-97-5	Bromochloromethane	ND	1.0
75-27-4	Bromodichloromethane	ND	1.0
75-25-2	Bromoform	ND	1.0
74-83-9	Bromomethane	ND	1.0
56-23-5	Carbon tetrachloride	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
124-48-1	Chlorodibromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
110-75-8	2-Chloroethylvinyl ether	ND	1.0
67-66-3	Chloroform	ND	1.0
74-87-3	Chloromethane	ND	1.0
95-49-8	2-Chlorotoluene	ND	1.0
106-43-4	4-Chlorotoluene	ND	1.0
106-93-4	1,2-Dibromoethane	ND	1.0
74-95-3	Dibromomethane	ND	1.0
95-50-1	1,2-Dichlorobenzene	ND	1.0
541-73-1	1,3-Dichlorobenzene	ND	1.0
106-46-7	1,4-Dichlorobenzene	ND	1.0
75-71-8	Dichlorodifluoromethane	ND	1.0
75-34-3	1,1-Dichloroethane	ND	1.0
107-06-2	1,2-Dichloroethane	ND	1.0
75-35-4	1,1-Dichloroethene	ND	1.0
156-59-2	cis-1,2-Dichloroethene	ND	1.0
156-60-5	trans-1,2-Dichloroethene	ND	1.0
78-87-5	1,2-Dichloropropane	ND	1.0
142-28-9	1,3-Dichloropropane	ND	1.0
594-20-7	2,2-Dichloropropane	ND	1.0
563-58-6	1,1-Dichloropropene	ND	1.0
10061-01-5	cis-1,3-Dichloropropene	ND	1.0
10061-02-6	trans-1,3-Dichloropropene	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
1634-04-4	Methyl-t-butyl ether	ND	1.0
78-93-3	Methyl ethyl ketone	ND	20
75-09-2	Methylene chloride	ND	1.0
100-42-5	Styrene	ND	1.0
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0
127-18-4	Tetrachloroethene	ND	1.0
108-88-3	Toluene	ND	1.0
71-55-6	1,1,1-Trichloroethane	ND	1.0
79-00-5	1,1,2-Trichloroethane	ND	1.0
79-01-6	Trichloroethene	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
96-18-4	1,2,3-Trichloropropane	ND	1.0
75-01-4	Vinyl chloride	ND	1.0
108383/106423	m+p-Xylenes	ND	1.0
95-47-6	o-Xylene	ND	1.0

ND= Indicates compound was analyzed for but not detected.

Runtime Quality Assurance Report

SYSTEM MONITORING COMPOUNDS	CONCENTRATION(µg/L) ADDED	MEASURED	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	10	9.82	98	74--120
1,2-Dichloroethane d4	10	10.5	105	74--120
Toluene d8	10	11	110	80--120
p-Bromofluorobenzene	10	9.48	95	80--120

REPORT COMMENTS: None

Analyst: [illegible] Reviewing Supervisor: [illegible]

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EPA METHOD 8260B

Client:	**Kootenai Development Corp.**	Date Reported:	10/19/00
Sample ID:	TRIP BLANK	Date Sampled:	
Project Info:	PROJ. NO. 805169.30, KDC/WR GRACE- MINE WELLS	Date Received:	10/10/00
Lab ID:	003-00-58747	Date Analyzed:	10/17/00 17:22
Matrix:	WATER		

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	LIMIT OF QUANTITATION(µg/L)
71-43-2	Benzene	ND	1.0
108-86-1	Bromobenzene	ND	1.0
74-97-5	Bromochloromethane	ND	1.0
75-27-4	Bromodichloromethane	ND	1.0
75-25-2	Bromoform	ND	1.0
74-83-9	Bromomethane	ND	1.0
56-23-5	Carbon tetrachloride	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
124-48-1	Chlorodibromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
110-75-8	2-Chloroethylvinyl ether	ND	1.0
67-66-3	Chloroform	ND	1.0
74-87-3	Chloromethane	ND	1.0
95-49-8	2-Chlorotoluene	ND	1.0
106-43-4	4-Chlorotoluene	ND	1.0
106-93-4	1,2-Dibromoethane	ND	1.0
74-95-3	Dibromomethane	ND	1.0
95-50-1	1,2-Dichlorobenzene	ND	1.0
541-73-1	1,3-Dichlorobenzene	ND	1.0
106-46-7	1,4-Dichlorobenzene	ND	1.0
75-71-8	Dichlorodifluoromethane	ND	1.0
75-34-3	1,1-Dichloroethane	ND	1.0
107-06-2	1,2-Dichloroethane	ND	1.0
75-35-4	1,1-Dichloroethene	ND	1.0
156-59-2	cis-1,2-Dichloroethene	ND	1.0
156-60-5	trans-1,2-Dichloroethene	ND	1.0
78-87-5	1,2-Dichloropropane	ND	1.0
142-28-9	1,3-Dichloropropane	ND	1.0
594-20-7	2,2-Dichloropropane	ND	1.0
563-58-6	1,1-Dichloropropene	ND	1.0
10061-01-5	cis-1,3-Dichloropropene	ND	1.0
10061-02-6	trans-1,3-Dichloropropene	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
1634-04-4	Methyl-t-butyl ether	ND	1.0
78-93-3	Methyl ethyl ketone	ND	20
75-09-2	Methylene chloride	ND	1.0
100-42-5	Styrene	ND	1.0
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0
127-18-4	Tetrachloroethene	ND	1.0
108-88-3	Toluene	ND	1.0
71-55-6	1,1,1-Trichloroethane	ND	1.0
79-00-5	1,1,2-Trichloroethane	ND	1.0
79-01-6	Trichloroethene	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
96-18-4	1,2,3-Trichloropropane	ND	1.0
75-01-4	Vinyl chloride	ND	1.0
108383/106423	m+p-Xylenes	ND	1.0
95-47-6	o-Xylene	ND	1.0

ND= Indicates compound was analyzed for but not detected

Runtime Quality Assurance Report

SYSTEM MONITORING COMPOUNDS	CONCENTRATION(µg/L) ADDED	MEASURED	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	10	10	100	74 -120
1,2-Dichloroethane d4	10	10.8	108	74 -120
Toluene d8	10	11.4	114	80 -120
4-Bromofluorobenzene	10	10.8	108	80- 120

REPORT COMMENTS: None

Analyst: JAR Reviewing Supervisor: [illegible]

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QUALITY ASSURANCE REPORT FOR EPA METHOD 8260B: METHOD BLANK

Sample ID: Quality Assurance Method Blank
Matrix: WATER
Extract Method: EPA 5030

Date Reported: 10/19/00
Date Analyzed: 10/17/00 16:44

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (µg/L)	LIMIT OF QUANTITATION(µg/L)
71-43-2	Benzene	ND	1.0
108-86-1	Bromobenzene	ND	1.0
74-97-5	Bromochloromethane	ND	1.0
75-27-4	Bromodichloromethane	ND	1.0
75-25-2	Bromoform	ND	1.0
74-83-9	Bromomethane	ND	1.0
56-23-5	Carbon tetrachloride	ND	1.0
108-90-7	Chlorobenzene	ND	1.0
124-48-1	Chlorodibromomethane	ND	1.0
75-00-3	Chloroethane	ND	1.0
110-75-8	2-Chloroethylvinyl ether	ND	1.0
67-66-3	Chloroform	ND	1.0
74-87-3	Chloromethane	ND	1.0
95-49-8	2-Chlorotoluene	ND	1.0
106-43-4	4-Chlorotoluene	ND	1.0
106-93-4	1,2-Dibromoethane	ND	1.0
74-95-3	Dibromomethane	ND	1.0
95-50-1	1,2-Dichlorobenzene	ND	1.0
541-73-1	1,3-Dichlorobenzene	ND	1.0
106-46-7	1,4-Dichlorobenzene	ND	1.0
75-71-8	Dichlorodifluoromethane	ND	1.0
75-34-3	1,1-Dichloroethane	ND	1.0
107-06-2	1,2-Dichloroethane	ND	1.0
75-35-4	1,1-Dichloroethene	ND	1.0
156-59-2	cis-1,2-Dichloroethene	ND	1.0
156-60-5	trans-1,2-Dichloroethene	ND	1.0
78-87-5	1,2-Dichloropropane	ND	1.0
142-28-9	1,3-Dichloropropane	ND	1.0
594-20-7	2,2-Dichloropropane	ND	1.0
563-58-6	1,1-Dichloropropene	ND	1.0
10061-01-5	cis-1,3-Dichloropropene	ND	1.0
10061-02-6	trans-1,3-Dichloropropene	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
1634-04-4	Methyl-t-butyl ether	ND	1.0
78-93-3	Methyl ethyl ketone	ND	20
75-09-2	Methylene chloride	ND	1.0
100-42-5	Styrene	ND	1.0
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0
127-18-4	Tetrachloroethene	ND	1.0
108-88-3	Toluene	ND	1.0
71-55-6	1,1,1-Trichloroethane	ND	1.0
79-00-5	1,1,2-Trichloroethane	ND	1.0
79-01-6	Trichloroethene	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
96-18-4	1,2,3-Trichloropropane	ND	1.0
75-01-4	Vinyl chloride	ND	1.0
108383/106423	m+p-Xylenes	ND	1.0
95-47-6	o-Xylene	ND	1.0

ND= Indicates compound was analyzed for but not detected.

Runtime Quality Assurance Report

SYSTEM MONITORING COMPOUNDS	CONCENTRATION(µg/L) ADDED	MEASURED	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	10	9.66	97	74--120
1,2-Dichloroethane d4	10	10	100	74--120
Toluene d8	10	11.2	112	80--120
p-Bromofluorobenzene	10	11.1	111	80--120

REPORT COMMENTS None

Analyst JRR Reviewing Supervisor [illegible]

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QUALITY ASSURANCE REPORT FOR EPA METHOD 8260B: SAMPLE MATRIX SPIKES

Laboratory ID: 001-00-58747MS Matrix Spike
Matrix: WATER
Extract Method: EPA 5030

Date Reported: 10/19/00
Date Analyzed: 10/18/00 18:51

SPIKE COMPOUNDS	CONCENTRATION(µg/L) ADDED	SAMPLE	SPIKE	PERCENT RECOVERY	ACCEPTANCE RANGE
Benzene	5.00	<1.00	4.68	94	60--140
Bromobenzene	5.00	<1.00	5.26	105	60--140
Bromochloromethane	5.00	<1.00	5.11	102	60--140
Bromodichloromethane	5.00	<1.00	4.85	97	60--140
Bromoform	5.00	<1.00	4.78	96	60--140
Bromomethane	5.00	<1.00	4.29	86	60--140
Carbon tetrachloride	5.00	<1.00	4.46	89	60--140
Chlorobenzene	5.00	<1.00	4.97	99	60--140
Chloroethane	5.00	<1.00	4.94	99	60--140
Chloroform	5.00	<1.00	4.89	98	60--140
Chloromethane	5.00	<1.00	3.06	61	60--140
2-Chlorotoluene	5.00	<1.00	5.61	112	60--140
4-Chlorotoluene	5.00	<1.00	5.76	115	60--140
Chlorodibromomethane	5.00	<1.00	4.79	96	60--140
1,2-Dibromoethane	5.00	<1.00	5.31	106	60--140
Dibromomethane	5.00	<1.00	5.31	106	60--140
1,2-Dichlorobenzene	5.00	<1.00	5.49	110	60--140
1,3-Dichlorobenzene	5.00	<1.00	5.62	112	60--140
1,4-Dichlorobenzene	5.00	<1.00	5.50	110	60--140
Dichlorodifluoromethane	5.00	<1.00	4.66	93	60--140
1,1-Dichloroethane	5.00	<1.00	4.95	99	60--140
1,2-Dichloroethane	5.00	<1.00	5.40	108	60--140
1,1-Dichloroethene	5.00	<1.00	4.93	99	60--140
cis-1,2-Dichloroethene	5.00	<1.00	4.88	98	60--140
trans-1,2-Dichloroethene	5.00	<1.00	5.00	100	60--140
1,2-Dichloropropane	5.00	<1.00	4.88	98	60--140
1,3-Dichloropropane	5.00	<1.00	5.06	101	60--140
2,2-Dichloropropane	5.00	<1.00	4.43	89	60--140
1,1-Dichloropropene	5.00	<1.00	5.02	100	60--140
cis-1,3-Dichloropropene	5.00	<1.00	5.40	108	60--140
trans-1,3-Dichloropropene	5.00	<1.00	5.26	105	60--140
Ethylbenzene	5.00	<1.00	4.39	88	60--140
Methyl-t-butyl ether	5.00	<1.00	6.69	134	60--140
Methylene chloride	5.00	<1.00	4.94	99	60--140
Methyl ethyl ketone	50	<20.0	52.4	105	60--140
Styrene	5.00	<1.00	4.73	95	60--140
1,1,1,2-Tetrachloroethane	5.00	<1.00	5.51	110	60--140
1,1,2,2-Tetrachloroethane	5.00	<1.00	5.52	110	60--140
Tetrachloroethene	5.00	<1.00	5.16	103	60--140
Toluene	5.00	<1.00	4.95	99	60--140
1,1,1-Trichloroethane	5.00	<1.00	4.92	98	60--140
1,1,2-Trichloroethane	5.00	<1.00	5.31	106	60--140
Trichloroethene	5.00	<1.00	5.52	110	60--140
Trichlorofluoromethane	5.00	<1.00	4.50	90	60--140
1,2,3-Trichloropropane	5.00	<1.00	5.39	108	60--140
Vinyl chloride	5.00	<1.00	3.42	68	60--140
m+p-Xylenes	10	<1.00	9.23	92	60--140
o-Xylene	5.00	<1.00	5.07	101	60--140

Runtime Quality Assurance Report

SYSTEM MONITORING COMPOUNDS	CONCENTRATION(µg/L) ADDED	MEASURED	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	10	9.47	95	75--120
1,2-Dichloroethane d4	10	10.4	104	75--120
Toluene d8	10	10.5	105	80--120
p-Bromofluorobenzene	10	11.4	114	80--120

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Laboratory ID: 001-00-58747MSD Matrix Spike Duplicate
Matrix: WATER

Date Reported: 10/19/00
Date Analyzed: 10/18/00 19:28

SPIKE COMPOUNDS	CONCENTRATION(µg/L) ADDED	MEASURED	PERCENT RECOVERY	ACCEPTANCE RANGE	RPD	RPD LIMIT
Benzene	5.00	5.01	100	60--140	7	20
Bromobenzene	5.00	5.57	111	60--140	6	20
Bromochloromethane	5.00	5.67	113	60--140	10	20
Bromodichloromethane	5.00	5.38	108	60--140	10	20
Bromoform	5.00	5.37	107	60--140	12	20
Bromomethane	5.00	4.63	93	60--140	8	20
Carbon tetrachloride	5.00	5.02	100	60--140	12	20
Chlorobenzene	5.00	5.26	105	60--140	6	20
Chloroethane	5.00	4.83	97	60--140	2	20
Chloroform	5.00	5.37	107	60--140	9	20
Chloromethane	5.00	3.83	77	60--140	22*	20
2-Chlorotoluene	5.00	5.77	115	60--140	3	20
4-Chlorotoluene	5.00	6.48	130	60--140	12	20
Chlorodibromomethane	5.00	5.06	101	60--140	5	20
1,2-Dibromoethane	5.00	5.62	112	60--140	6	20
Dibromomethane	5.00	5.62	112	60--140	6	20
1,2-Dichlorobenzene	5.00	5.71	114	60--140	4	20
1,3-Dichlorobenzene	5.00	5.95	119	60--140	6	20
1,4-Dichlorobenzene	5.00	5.71	114	60--140	4	20
Dichlorodifluoromethane	5.00	4.56	91	60--140	2	20
1,1-Dichloroethane	5.00	5.56	111	60--140	12	20
1,2-Dichloroethane	5.00	5.88	118	60--140	9	20
1,1-Dichloroethene	5.00	5.45	109	60--140	10	20
cis-1,2-Dichloroethene	5.00	5.43	109	60--140	11	20
trans-1,2-Dichloroethene	5.00	5.79	116	60--140	15	20
1,2-Dichloropropane	5.00	5.26	105	60--140	7	20
1,3-Dichloropropane	5.00	5.39	108	60--140	6	20
2,2-Dichloropropane	5.00	5.11	102	60--140	14	20
1,1-Dichloropropene	5.00	5.46	109	60--140	8	20
cis-1,3-Dichloropropene	5.00	5.53	111	60--140	2	20
trans-1,3-Dichloropropene	5.00	5.77	115	60--140	9	20
Ethylbenzene	5.00	4.66	93	60--140	6	20
Methyl-t-butyl ether	5.00	6.59	132	60--140	2	20
Methylene chloride	5.00	5.52	110	60--140	11	20
Methyl ethyl ketone	50	55.7	111	60--140	6	20
Styrene	5.00	5.31	106	60--140	12	20
1,1,1,2-Tetrachloroethane	5.00	5.48	110	60--140	1	20
1,1,2,2-Tetrachloroethane	5.00	6.20	124	60--140	12	20
Tetrachloroethene	5.00	5.37	107	60--140	4	20
Toluene	5.00	5.22	104	60--140	5	20
1,1,1-Trichloroethane	5.00	5.41	108	60--140	9	20
1,1,2-Trichloroethane	5.00	5.46	109	60--140	3	20
Trichloroethene	5.00	5.47	109	60--140	1	20
Trichlorofluoromethane	5.00	4.61	92	60--140	2	20
1,2,3-Trichloropropane	5.00	4.76	95	60--140	12	20
Vinyl chloride	5.00	3.52	70	60--140	3	20
m+p-Xylenes	10	10.8	108	60--140	16	20
o-Xylene	5.00	4.91	98	60--140	3	20

*= Value outside QC advisory limits

Runtime Quality Assurance Report

SYSTEM MONITORING COMPOUNDS	CONCENTRATION(µg/L) ADDED	MEASURED	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	10	9.43	94	75--120
1,2-Dichloroethane d4	10	10.5	105	75--120
Toluene d8	10	10.6	106	80--120
p-Bromofluorobenzene	10	11.6	116	80--120

*= Value outside QC advisory limits

REPORT COMMENTS None

Analyst: [illegible] Reviewing Supervisor: [illegible]

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QUALITY ASSURANCE REPORT FOR EPA METHOD 8260B: REFERENCE STANDARD BLANK MATRIX SPIKE

Sample ID: Quality Assurance Blank Matrix Spike
Matrix: WATER
Extract Method EPA 5030

Date Reported: 10/19/00
Date Analyzed: 10/17/00 20:32

SPIKE COMPOUNDS	CONCENTRATION(µg/L) ADDED	MEASURED	PERCENT RECOVERY	ACCEPTANCE RANGE
Benzene	5.00	5.49	110	60--140
Bromobenzene	5.00	5.58	112	60--140
Bromochloromethane	5.00	5.81	116	60--140
Bromodichloromethane	5.00	5.58	112	60--140
Bromoform	5.00	5.72	114	60--140
Bromomethane	5.00	5.77	115	60--140
Carbon tetrachloride	5.00	5.91	118	60--140
Chlorobenzene	5.00	5.58	112	60--140
Chlorodibromomethane	5.00	5.55	111	60--140
Chloroethane	5.00	6.96	139	60--140
2-Chloroethylvinyl ether	5.00	4.17	83	60--140
Chloroform	5.00	5.73	115	60--140
Chloromethane	5.00	5.94	119	60--140
2-Chlorotoluene	5.00	5.68	114	60--140
4-Chlorotoluene	5.00	5.76	115	60--140
1,2-Dibromoethane	5.00	5.59	112	60--140
Dibromomethane	5.00	5.51	110	60--140
1,2-Dichlorobenzene	5.00	5.72	114	60--140
1,3-Dichlorobenzene	5.00	5.84	117	60--140
1,4-Dichlorobenzene	5.00	5.90	118	60--140
Dichlorodifluoromethane	5.00	5.81	116	60--140
1,1-Dichloroethane	5.00	5.96	119	60--140
1,2-Dichloroethane	5.00	5.72	114	60--140
1,1-Dichloroethene	5.00	5.98	120	60--140
cis-1,2-Dichloroethene	5.00	5.29	106	60--140
trans-1,2-Dichloroethene	5.00	5.84	117	60--140
1,2-Dichloropropane	5.00	5.02	100	60--140
1,3-Dichloropropane	5.00	5.39	108	60--140
2,2-Dichloropropane	5.00	5.90	118	60--140
1,1-Dichloropropene	5.00	5.03	101	60--140
cis-1,3-Dichloropropene	5.00	5.20	104	60--140
trans-1,3-Dichloropropene	5.00	5.06	101	60--140
Ethylbenzene	5.00	5.68	114	60--140
Methyl-t-butyl ether	5.00	4.82	96	60--140
Methyl ethyl ketone	50	56.3	113	60--140
Methylene chloride	5.00	5.68	114	60--140
Styrene	5.00	5.46	109	60--140
1,1,1,2-Tetrachloroethane	5.00	5.82	116	60--140
1,1,2,2-Tetrachloroethane	5.00	5.12	102	60--140
Tetrachloroethene	5.00	5.76	115	60--140
Toluene	5.00	5.60	112	60--140
1,1,1-Trichloroethane	5.00	5.72	114	60--140
1,1,2-Trichloroethane	5.00	5.38	108	60--140
Trichloroethene	5.00	5.53	111	60--140
Trichlorofluoromethane	5.00	5.18	104	60--140
1,2,3-Trichloropropane	5.00	5.47	109	60--140
Vinyl chloride	5.00	5.55	111	60--140
m+p-Xylenes	10	11.3	113	60--140
o-Xylene	5.00	5.75	115	60--140

Runtime Quality Assurance Report

SYSTEM MONITORING COMPOUNDS	CONCENTRATION(µg/L) ADDED	MEASURED	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	10	9.96	100	74--120
1,2-Dichloroethane d4	10	10.1	101	74--120
Toluene d8	10	10.6	106	80--120
p-Bromofluorobenzene	10	10.2	102	80--120

REPORT COMMENTS None

Analyst: [illegible] Reviewing Supervisor: [illegible]

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QUALITY ASSURANCE REPORT FOR EPA METHOD 8260B: REFERENCE STANDARD BLANK MATRIX SPIKE

Sample ID: Quality Assurance Blank Matrix Spike
Matrix: WATER
Extract Method EPA 5030

Date Reported: 10/19/00
Date Analyzed: 10/18/00 15:47

SPIKE COMPOUNDS	CONCENTRATION(µg/L) ADDED	MEASURED	PERCENT RECOVERY	ACCEPTANCE RANGE
Benzene	5.00	4.69	94	60--140
Bromobenzene	5.00	5.32	106	60--140
Bromochloromethane	5.00	4.86	97	60--140
Bromodichloromethane	5.00	4.67	93	60--140
Bromoform	5.00	4.54	91	60--140
Bromomethane	5.00	5.03	101	60--140
Carbon tetrachloride	5.00	4.60	92	60--140
Chlorobenzene	5.00	5.08	102	60--140
Chloroethane	5.00	5.31	106	60--140
2-Chloroethylvinyl ether	5.00	5.45	109	60--140
Chloroform	5.00	5.07	101	60--140
Chloromethane	5.00	4.25	85	60--140
2-Chlorotoluene	5.00	5.61	112	60--140
4-Chlorotoluene	5.00	5.30	106	60--140
Chlorodibromomethane	5.00	4.53	91	60--140
1,2-Dibromoethane	5.00	5.35	107	60--140
Dibromomethane	5.00	4.89	98	60--140
1,2-Dichlorobenzene	5.00	5.08	102	60--140
1,3-Dichlorobenzene	5.00	5.32	106	60--140
1,4-Dichlorobenzene	5.00	5.22	104	60--140
Dichlorodifluoromethane	5.00	5.16	103	60--140
1,1-Dichloroethane	5.00	5.01	100	60--140
1,2-Dichloroethane	5.00	5.15	103	60--140
1,1-Dichloroethene	5.00	4.91	98	60--140
cis-1,2-Dichloroethene	5.00	5.00	100	60--140
trans-1,2-Dichloroethene	5.00	5.18	104	60--140
1,2-Dichloropropane	5.00	5.07	101	60--140
1,3-Dichloropropane	5.00	5.05	101	60--140
2,2-Dichloropropane	5.00	4.89	98	60--140
1,1-Dichloropropene	5.00	5.06	101	60--140
cis-1,3-Dichloropropene	5.00	5.44	109	60--140
trans-1,3-Dichloropropene	5.00	5.42	108	60--140
Ethylbenzene	5.00	4.69	94	60--140
Methyl-t-butyl ether	5.00	6.78	136	60--140
Methylene chloride	5.00	5.16	103	60--140
Methyl ethyl ketone	50	50.1	100	60--140
Styrene	5.00	4.89	98	60--140
1,1,1,2-Tetrachloroethane	5.00	5.12	102	60--140
1,1,2,2-Tetrachloroethane	5.00	5.22	104	60--140
Tetrachloroethene	5.00	5.55	111	60--140
Toluene	5.00	5.01	100	60--140
1,1,1-Trichloroethane	5.00	4.82	96	60--140
1,1,2-Trichloroethane	5.00	4.97	99	60--140
Trichloroethene	5.00	5.68	114	60--140
Trichlorofluoromethane	5.00	4.95	99	60--140
1,2,3-Trichloropropane	5.00	4.10	82	60--140
Vinyl chloride	5.00	4.09	82	60--140
m+p-Xylenes	10	10.6	106	60--140
o-Xylene	5.00	4.74	95	60--140

Runtime Quality Assurance Report

SYSTEM MONITORING COMPOUNDS	CONCENTRATION(µg/L) ADDED	MEASURED	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	10	9.54	95	75--120
1,2-Dichloroethane d4	10	10	100	75--120
Toluene d8	10	10.5	105	80--120
p-Bromofluorobenzene	10	10.3	103	80--120

REPORT COMMENTS None

Analyst JER Reviewing Supervisor MJ

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EPA METHOD 8082

Client:	**Kootenai Development Corp.**	Date Reported:	10/31/00
Sample ID:	MW-1	Date Sampled:	10/5/00 17:20
Project Info:	PROJ. NO. 805169.30, KDC/WR GRACE- MINE WELLS	Date Received:	10/10/00
Lab ID:	001-00-58747	Date Analyzed:	10/26/00 13:38
Matrix:	WATER	Date Extracted:	10/11/00

C.A.S. #	*TARGET COMPOUNDS*	*CONCENTRATION (µg/L)*	*LIMIT OF QUANTITATION(µg/L)*
12674-11-2	Aroclor-1016	ND	1.0
11104-28-2	Aroclor-1221	ND	2.0
1114-16-5	Aroclor-1232	ND	1.0
53469-21-9	Aroclor-1242	ND	1.0
12672-29-6	Aroclor-1248	ND	1.0
11097-69-1	Aroclor-1254	ND	1.0
11096-82-5	Aroclor-1260	ND	1.0
37324-23-5	Aroclor-1262	ND	1.0
11100-14-4	Aroclor-1268	ND	1.0

ND= Indicates compound was analyzed for but not detected.

Runtime Quality Assurance Report

	CONCENTRATION(µg/L)		PERCENT	ACCEPTANCE
SYSTEM MONITORING COMPOUNDS	**ADDED**	**MEASURED**	**RECOVERY**	**RANGE**
Tetrachloro-m-xylene	2.00	1.77	88	60--150
Decachlorobiphenyl	2.00	1.63	82	60--150

REPORT COMMENTS: None

Analyst: ____ Reviewing Supervisor: ____ /chem/BECD i/B102500.b/b1025043.d

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EPA METHOD 8082

Client:	**Kootenai Development Corp.**	Date Reported:	10/31/00
Sample ID:	MW-2	Date Sampled:	10/5/00 11:15
Project Info:	PROJ. NO. 805169.30, KDC/WR GRACE- MINE WELLS	Date Received:	10/10/00
Lab ID:	002-00-58747	Date Analyzed:	10/26/00 14:11
Matrix:	WATER	Date Extracted:	10/11/00

C.A.S. #	*TARGET COMPOUNDS*	*CONCENTRATION (µg/L)*	*LIMIT OF QUANTITATION(µg/L)*
12674-11-2	Aroclor-1016	ND	1.0
11104-28-2	Aroclor-1221	ND	2.0
1114-16-5	Aroclor-1232	ND	1.0
53469-21-9	Aroclor-1242	ND	1.0
12672-29-6	Aroclor-1248	ND	1.0
11097-69-1	Aroclor-1254	ND	1.0
11096-82-5	Aroclor-1260	ND	1.0
37324-23-5	Aroclor-1262	ND	1.0
11100-14-4	Aroclor-1268	ND	1.0

ND= Indicates compound was analyzed for but not detected.

Runtime Quality Assurance Report

SYSTEM MONITORING COMPOUNDS	CONCENTRATION(µg/L) ADDED	MEASURED	PERCENT RECOVERY		ACCEPTANCE RANGE
Tetrachloro-m-xylene	2.00	1.70	85		60--150
Decachlorobiphenyl	2.00	0.595	30	*	60--150

**Value Outside QC Advisory Limits*

REPORT COMMENTS: None

Analyst: GCW Reviewing Supervisor: WM /chem/BECD.i/B102500.b/b1025044.d

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LABORATORY ANALYSIS REPORT

Kootenai Development Corp.	Project ID:	PROJ. NO. 805169.30, KDC/WR GRACE- MINE WELLS
Alan Stringer	Sample ID:	MW-1
317 Mineral Ave.	Laboratory ID:	00-58747-1
Libby, MT 59923	Sample Matrix:	Water
	Sample Date:	05-Oct-00 1720
	Received at lab:	10-Oct-00 Reported: 23-Oct-00

	Results	Units	Reporting Limit	Method	Analyzed	
Arsenic, Total	<0.005	mg/l	0.005	EPA 200.8	12-Oct-00 1857	LB/CR
Barium, Total	0.2	mg/l	0.1	EPA 200.7	12-Oct-00 1509	MKE
Cadmium, Total	<0.001	mg/l	0.001	EPA 200.8	12-Oct-00 1857	LB/CR
Chromium, Total	<0.01	mg/l	0.01	EPA 200.8	12-Oct-00 1857	LB/CR
Lead, Total	<0.01	mg/l	0.01	EPA 200.8	12-Oct-00 1857	LB/CR
Mercury, Total	<0.001	mg/l	0.001	EPA 245.1mod	20-Oct-00 1437	FMB
Selenium, Total	<0.005	mg/l	0.005	EPA 200.8	12-Oct-00 1857	LB/CR
Silver, Total	<0.005	mg/l	0.005	EPA 200.8	12-Oct-00 1857	LB/CR

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LABORATORY ANALYSIS REPORT

Kootenai Development Corp.	Project ID:	PROJ. NO. 805169.30, KDC/WR GRACE- MINE WELLS
Alan Stringer	Sample ID:	MW-2
317 Mineral Ave.	Laboratory ID:	00-58747-2
Libby, MT 59923	Sample Matrix:	Water
	Sample Date:	05-Oct-00 1115
	Received at lab:	10-Oct-00 Reported: 23-Oct-00

	Results	Units	Reporting Limit	Method	Analyzed	
Arsenic, Total	0.023	mg/l	0.005	EPA 200.8	12-Oct-00 1908	LB/CR
Barium, Total	0.3	mg/l	0.1	EPA 200.7	12-Oct-00 1513	MKE
Cadmium, Total	<0.001	mg/l	0.001	EPA 200.8	12-Oct-00 1908	LB/CR
Chromium, Total	<0.01	mg/l	0.01	EPA 200.8	17-Oct-00 1503	LB/CR
Lead, Total	0.02	mg/l	0.01	EPA 200.8	12-Oct-00 1908	LB/CR
Mercury, Total	<0.001	mg/l	0.001	EPA 245.1mod	20-Oct-00 1441	FMB
Selenium, Total	0.006	mg/l	0.005	EPA 200.8	12-Oct-00 1908	LB/CR
Silver, Total	<0.005	mg/l	0.005	EPA 200.8	12-Oct-00 1908	LB/CR

APPENDIX I-2

BORING AND WELL DEVELOPMENT LOGS

URS

DENVER FILE

Well #: MW-1

LOG OF DRILLING OPERATIONS

PROJECT	WR Grace, Libby, MT	LOCATION	Vermiculite Mine
TOTAL DEPTH	251.7 ft. bgs	START DATE	9/21/00 1024
FINISH DATE	9/22/00 1755		
GEOLOGIST	Jeff Bader	APPROVED BY	JWB
R.G.#	556		
DRILLING COMPANY	B&B Drilling	DRILLER	David Iliff
DRILLING METHOD	Air Rotary/Compression	EQUIPMENT	Becyrus Erie
DRILL BIT TYPE AND SIZE	6 in.		
BORING LOCATION (ST. ADDRESS OR DESCRIPTION)	Vermiculite Mine		

Depth Below Surface (ft)	Lithologic Description (Color, Texture, Moisture, etc.)	Graphic Log	Well Construction Details and Comments
0	**Fill** Mafic igneous rock. Medium grained, gray, feldspar and mafic minerals (pyroxene).		Spud 10:24.
5	**Vermiculite** Greenish brown, flakes of biotite, very loose, dry.		Cuttings at 4 ft.; difficulty drilling.
10			
15			
20	**Pyroxinite with varying amounts of pyroxene and feldspar** Very dry, greenish gray, coarse grained, hard.		Cuttings at 20 ft.; very dry.
25			Second pipe on at 11:12, drilling slow.
30			
35	**Felsic vein or sill**		Cuttings at 34-35 ft.
	Pyroxinite with varying amounts of pyroxene and feldspar Very dry, greenish gray, coarse grained, hard.		
40			Cuttings at 40 ft.; third pipe on at 11:40; slow drilling.
45			
50			Centralizer placed at 50 ft. during well construction.
55	**Felsic vein or sill**		Cuttings at 55 ft.; slow drilling.
	Pyroxinite with varying amounts of feldspar and pyroxene Medium grained, dark gray, coarse grained, hard.		
60			Cuttings at 60 ft.; fourth pipe on at 1220; slow drilling.
65			
70			Cuttings at 70 ft.; very slow drilling.
75			
80			
85	**Biotite pyroxinite** Varying amounts of biotite, pyroxene, and feldspar. Biotite 10-60%, coarse grained, hard.		Fifth pipe on at 14:21; drilling faster at 82 ft. Cuttings at 88 ft.
90			Cuttings at 91 ft.
95			Cuttings at 95 ft.
100			

Well Construction: 50.0 – 100.0

NOTES

MW= Monitoring Well

ft= Feet

bgs= below ground surface

First ▽ 240.00

Final ▼ 192.50

URS

LOG OF DRILLING OPERATIONS

Well #: MW-1

PROJECT WR Grace, Libby, MT LOCATION Vermiculite Mine

Depth Below Surface (ft)	Lithologic Description (Color, Texture, Moisture, etc.)	Well Construction Details and Comments
100		Cuttings at 100 ft.; sixth pipe on at 1510. Centralizer placed at 100 ft. during well construction.
105		
110	**Trace tremolite**	Cuttings at 109 ft.
115	**Trace diposide, sphene, and tremolite**	Cuttings at 113 ft. Clean pipes at 1555.
120		Driller out of water at 1610. Resume drilling at 0939 on 09/22/00; clean out hole; seventh pipe on at 0957. Cuttings at 125 ft.
125		
130	**Trace tremolite**	Cuttings at 130 ft.; drilling faster.
135	**Trace tremolite and diopside**	Cuttings at 136 ft.; eighth pipe on at 1104.
140		
145	**Trace diopside**	Cuttings at 145 ft.; drilling faster.
150		Cuttings at 150 ft.; centralizer placed at 150 ft. during well construction. 150.0
155		Cuttings at 155 ft.; ninth pipe on at 1147.
160		Cuttings at 160 ft.
165	**Trace tremolite**	Cuttings at 162 ft.
170		Cuttings at 166 ft. Cuttings at 168 ft. Cuttings at 170 ft.; drilling slower.
175		Cuttings at 175 ft. Cuttings at 176 ft.
180		Cuttings at 180 ft.; clean-up hole; tenth pipe on at 1440.
185		Cuttings from 186 ft.
190		
195		Slow drilling; dry; water pump off; bit grinding the pyroxenite to powder and "gritty" gravel.
200		200.0 Centralizer placed at 200 ft. during well construction.
205		Cuttings at 202 ft.; eleventh pipe on at 1554. Very dry cuttings.
210		Cuttings at 210 ft.; very dry.
215		
220		219.0 Cuttings at 218 ft.; very dry. Twelveth pipe on at 1642.
225		Cuttings at 222 ft.. cuttings dry. Very dry.

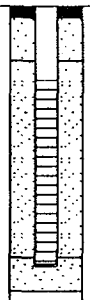
URS

LOG OF DRILLING OPERATIONS

Well #: MW-1

PROJECT WR Grace, Libby, MT LOCATION Vermiculite Mine

Depth Below Surface (ft)		Lithologic Description Color, Texture, Moisture, etc.	Graphic Log		Well Construction Details and Comments
230					Thirteenth pipe on at 1705.
235		**Biotite 5%**			Centralizer placed near top of screen (approximately 233 ft.) during well construction.
240		**Trace tremolite, biotite 5%**			Very dry. ∇ Cuttings at 240 ft., oxidized, fractures; discharge approximately 1-2 gpm.
245					Drilling hanging up/gummed up; fourteenth pipe on at 1730.
250					Cuttings at 245 ft; very dry. Cuttings at 248 ft; very dry.
255					Centralizer placed near bottom of screen (approximately 249 ft.) during well construction.
260					Boring terminated at 1755; reached groundwater.
265					
270					
275					
280					
285					
290					
295					
300					
305					
310					
315					
320					
325					
330					
335					
340					
345					
350					
355					



URS

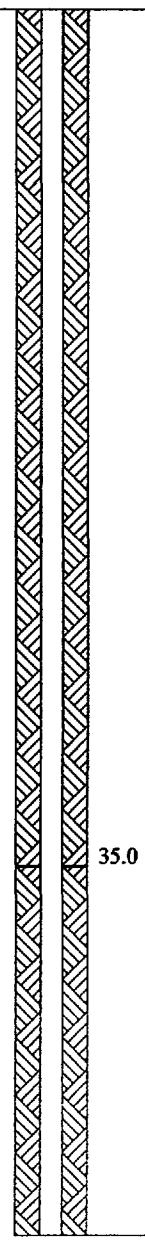
DENVER FILE

Well #: MW-2

LOG OF DRILLING OPERATIONS

PROJECT	WR Grace, Libby, MT	LOCATION	Vermiculite Mine
TOTAL DEPTH	90 ft. bgs	START DATE	9/26/00 1313
FINISH DATE	10/4/00 1540	GEOLOGIST	Jeff Bader
APPROVED BY	JWB	R.G.#	556
DRILLING COMPANY	B&B Drilling	DRILLER	David Iliff
DRILLING METHOD	Air Rotary/Compression	EQUIPMENT	Becyrus Erie
DRILL BIT TYPE AND SIZE	6 in.		
BORING LOCATION (ST. ADDRESS OR DESCRIPTION)	West flank of vermiculite mine		

Depth Below Surface (ft)	Lithologic Description Color, Texture, Moisture, etc.	Graphic Log	Well Construction Details and Comments
0	**Vermiculitic soil** at surface, light brown.		Spud 1313.
5	**Gravelly sand** Sand very fine to coarse, well graded, sub-angular, loose, trace biotite, greenish brown, dry.		Cuttings at 5 ft.
10	**Gravelly sand** Sand fine grained, mafic minerals, brownish green, dry.		Cuttings at 10 ft.
15	**Fine to very fine sand** Damp, loose, gray green, mafic minerals.		Cuttings at 15 ft.
	Gravelly sand Fine to very fine sand, light brown, loose, felsic minerals, dry.		Cuttings at 17 ft.
20	**Fine to very fine sand** Damp, loose, gray green, mafic minerals. **Very fine sand** Loose, biotite, pyroxene/mafic minerals, diopside and vermiculite, damp.		Rig adjustments.
25			Cuttings at 25 ft.; second pipe on at 1400.
30			
35	**Becomes highly vermiculitic**		Cuttings at 35 ft.; centralizer placed at 35 ft. during well construction.
40			Third pipe on at 1418.
45			
50	**Becomes reddish brown**		



NOTES

MW= Monitoring Well

ft= Feet

bgs= below ground surface

First ▽ 56.50

Final ▼ 55.84

URS

LOG OF DRILLING OPERATIONS

Well #: MW-2

PROJECT WR Grace, Libby, MT LOCATION Vermiculite Mine

Depth Below Surface (ft)	Lithologic Description Color, Texture, Moisture, etc.	Graphic Log	Well Construction Details and Comments
50	**Becomes greenish gray**		
55	**Less vermiculitic, more biotite**		Cuttings at 55 ft.
60			Fourth pipe on at 1440.
65	**Sand** Fine to very fine grained, moist, loose, mafic minerals (biotite, pyroxene), some felsic minerals (feldspar and quartz), gray green. **Trace gravel (Tremolite) and lighter** **Sand** Fine to very fine grained, moist, loose, mafic minerals (vermiculite, biotite, pyroxene), trace felsic minerals, grayish green.		Cuttings at 65 ft.; centralizer placed at 65 ft. during well construction.
70			
75			
80			Fifth pipe in at 1500.
85			
90			Cuttings at 90 ft. Out of pipe at 1540. Resume at 1651. Water in hole. Evaluate discharge at 65 ft. Producing approximately 1.25 quarts/minute. Boring terminated at 1800; reached groundwater.
95			
100			
105			
110			

WELL CONSTRUCTION DETAILS AND ABANDONMENT FORM

FIELD REPRESENTATIVE: Jeffrey W Bader

DRILLING CONTRACTOR: B+B Drilling

DRILLING TECHNIQUE: Air rotary/compression

AUGER SIZE AND TYPE: NA

BOREHOLE IDENTIFICATION: MW-1

BOREHOLE DIAMETER: 6"

WELL IDENTIFICATION: MW-2

WELL CONSTRUCTION START DATE: 9/26/00

WELL CONSTRUCTION COMPLETE DATE: 10/4/00

SCREEN MATERIAL: PVC-Sch. 80 cont wrap

SCREEN DIAMETER: 2" / 0.02

STRATUM-SCREENED INTERVAL (FT): 59.8-69.8

CASING MATERIAL: PVC-Sch 80

CASING DIAMETER: 2"

TYPE OF FILTER PACK: Colorado Silica Sand 10/20 pack

GRADIATION: 10/20

AMOUNT OF FILTER PACK USED: 11 (50 lb bags)

TYPE OF BENTONITE: Chips Western Bentonite

AMOUNT BENTONITE USED: 1 - Seal 50 lb bags

TYPE OF CEMENT: Portland

AMOUNT CEMENT USED: NA

GROUT MATERIALS USED: 4% bentonite powder Tremied in

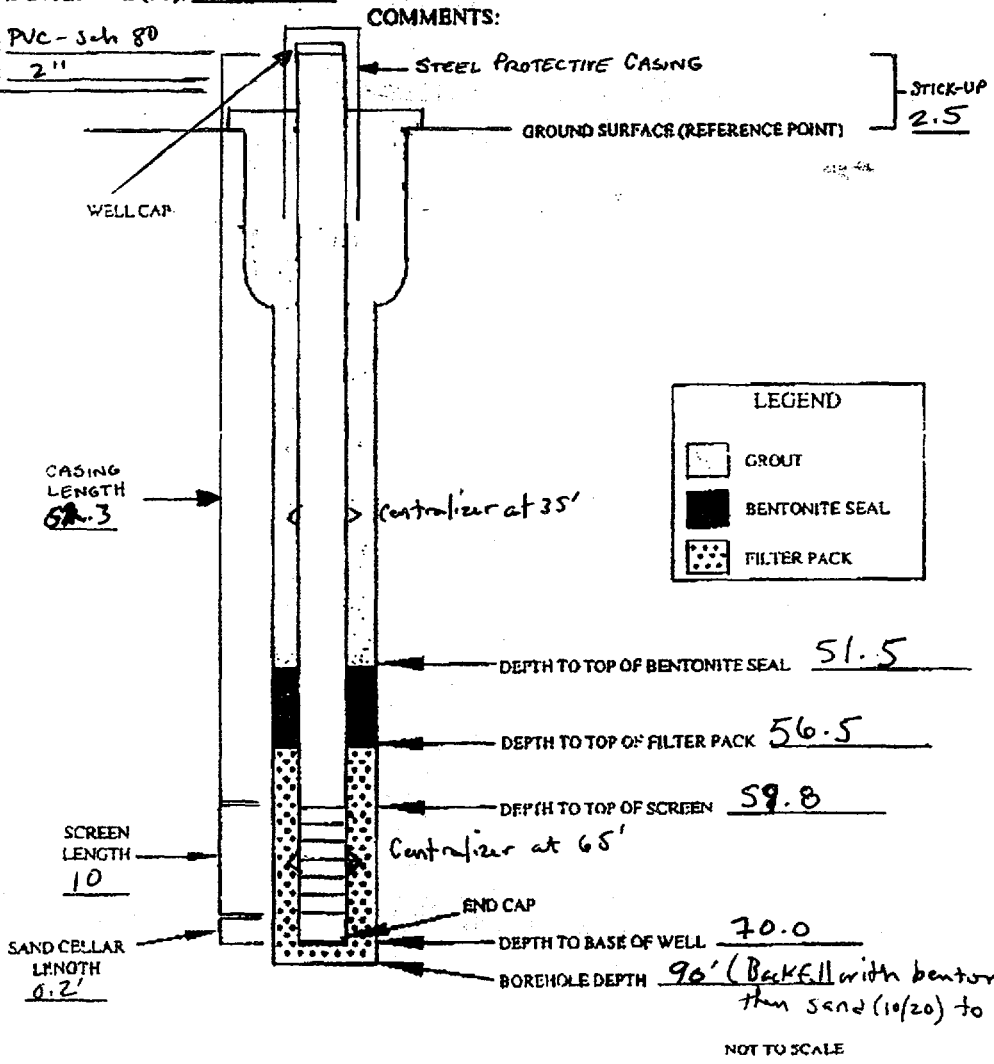
DIMENSIONS OF SECURITY BOX: 6' diameter

TYPE OF WELL CAP: Threaded

TYPE OF END CAP: Threaded

COMMENTS:

SPECIAL CONDITIONS (describe and draw)



4.9
7.8
7.8
7.9
7.8
7.9
9.9
4.9
5.0
0.2
74.0
stick-up 1.75
72.25

INSTALLED BY: Dave Iliff

INSTALLATION OBSERVED BY: Jeff Bader

DISCREPANCIES:

DENVER FILE

URS

Project No. 805169

File Code No. 12.2

Doc No. 2

WELL CONSTRUCTION DETAILS AND ABANDONMENT FORM

FIELD REPRESENTATIVE: Jeffrey W Bader

DRILLING CONTRACTOR: B+B Drilling

DRILLING TECHNIQUE: Air rotary/compression

AUGER SIZE AND TYPE: NA

BOREHOLE IDENTIFICATION: ~~MW-1~~ MW-1

BOREHOLE DIAMETER: 6"

WELL IDENTIFICATION: ~~MW-1~~ MW-1

WELL CONSTRUCTION START DATE: 9/21/00

WELL CONSTRUCTION COMPLETE DATE: 10/4/00

SCREEN MATERIAL: PVC Sch. 80 - Cont. wrap

SCREEN DIAMETER: 2" /0.02

STRATUM-SCREENED INTERVAL (FT): 234.7 - 249.7

CASING MATERIAL: PVC Sch. 80

CASING DIAMETER: 2"

TYPE OF FILTER PACK: Colorado Silica Sand

GRADIATION: 10/20

AMOUNT OF FILTER PACK USED: 8 bags (50 lb bags)

TYPE OF BENTONITE: Chips western Bentonite

AMOUNT BENTONITE USED: 2 bags (50 lb bags)

TYPE OF CEMENT: Holnam - 94 lb bags (Portland)

AMOUNT CEMENT USED:

GROUT MATERIALS USED: 4% bentonite powder (3.5 bags) Tremied in

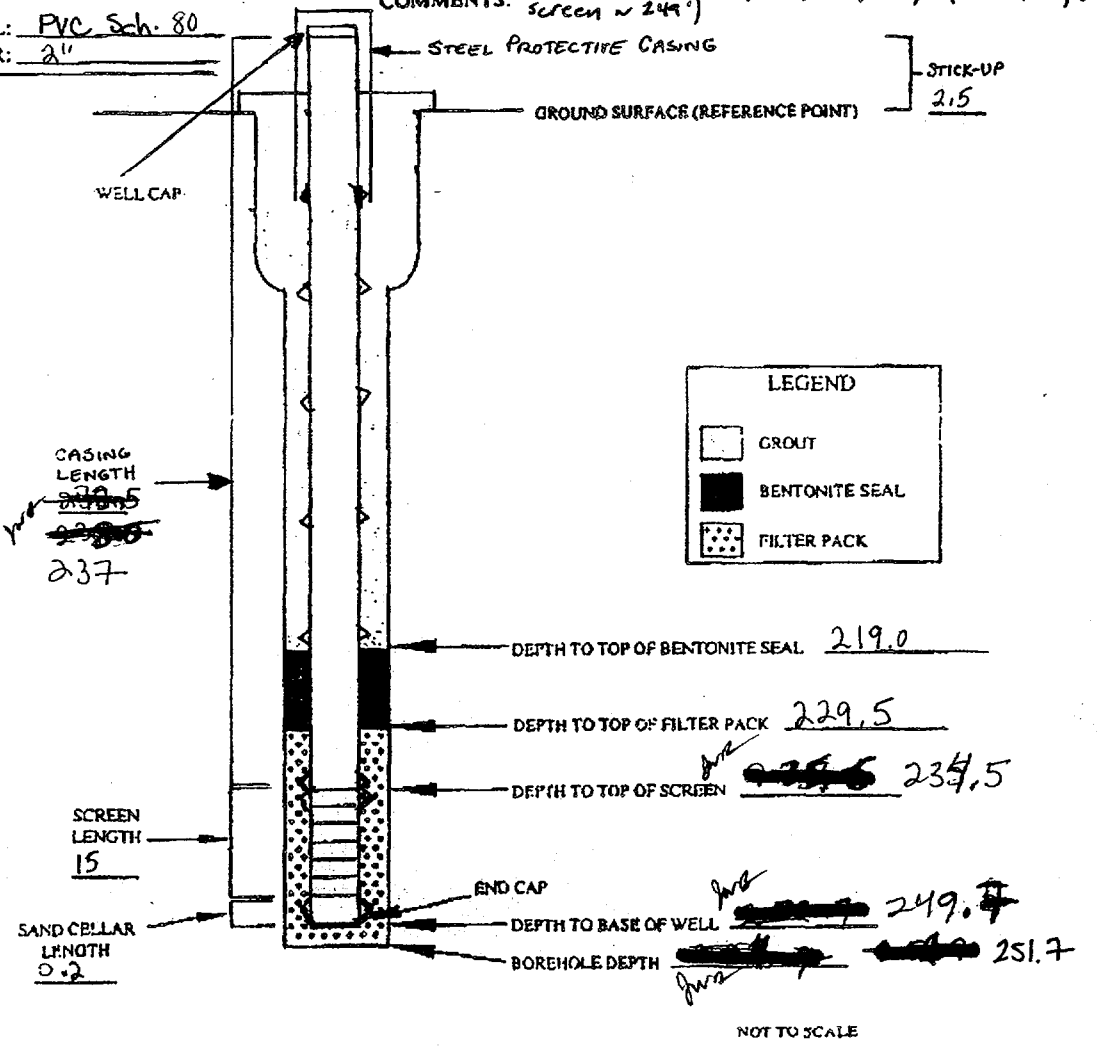
DIMENSIONS OF SECURITY BOX: 6" diameter

TYPE OF WELL CAP: Stop Threaded

TYPE OF END CAP: Threaded

COMMENTS: Centralizers at 50', 100', 150', 200', top of screen (234.7), bottom of screen ~ 249')

SPECIAL CONDITIONS (describe and draw)



237 - 252

2.45

245
15
0.2
260.2
255.2

257.7
252.7

INSTALLED BY: David Iliff

INSTALLATION OBSERVED BY: Jeffrey W Bader

DISCREPANCIES

URS

Project No. 805169
File Code No. 1.2.2
Doc No. 1

DENVER FILE

WELL DEVELOPMENT RECORD

Field Copy 10/10/00 [illegible]

WELL/PIEZOMETER ID MW-2
SHEET 1 of 1

PROJECT NAME: WRGrace PROJECT NO.: 805169.30 DATE: 10/5/00 & 10/6/00

LOCATION: MINE DATE INSTALLED: 10/4/00

TOTAL DEPTH (FTOC) 72.5 CASING DIAMETER 2"

METHODS OF DEVELOPMENT

☐ Swabbing ☒ Bailing ☐ Pumping ☒ Describe Bailing and Surging

Equipment decontaminated prior to development NA ☐ Yes ☐ NO

Describe Using dedicated or disposable bailers

EQUIPMENT NUMBERS:

pH Meter NA EC Meter NA Turbidity Meter NA Thermometer NA

CASING VOLUME INFORMATION: Calibrate with DI water, pH = 7.4 in DI at cal. 7
0.00 mS for cond. on 10/5. pH 7.1 in DI at cal 7.0
0.00 mS for cond. on 10/6

Casing ID (inch)	1.0	1.5	2.0	2.2	3.0	4.0	4.3	5.0	6.0	7.0	8.0
Unit Casing Volume (A) (gal/ft)	0.04	0.09	0.16	0.2	0.37	0.65	0.75	1.0	1.5	2.0	2.6

PURGING INFORMATION:

Measured Well Depth (B) 72.5 ft.

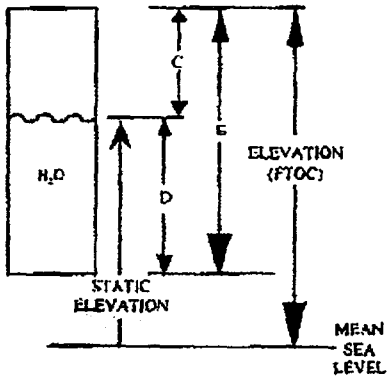
Measured Water Level Depth (C) 58.34 ft.

Length of Static Water Column (D) 72.5 (B) - 58.34 (C) = 14.16 ft.

Casing Water Volume (E) = 0.16 (A) x 14.16 (D) = 2.2 gal

x 3 = 6.6 gallons

Total Purge Volume = _____ (gal)



Date	Time	Water Level (FTOC)	Volume Removed (gal)	pH	mS EC	Temperature F or C	Turbidity/ Sand (ppm)	Comments
	1912	58.34	6	6.8	1.20	7	NA	water cloudy w/ bottom of bucket 1/8" sed.
	0913	–	7	7.0	1.20	6	NA	water cloudy Trace sed. in bucket
	0949	–	8	7.1	1.20	6	NA	water clearing - murky Trace sed. in bucket
	1005	–	9	7.1	1.20	6	NA	Parameters stable water murky
	1024	–	12	7.1	1.20	6	NA	well not clearing; allow to stabilize and sample
	1115	–	12	–	–	–	NA	Sample well
								EPA 8260
								EPA 8270
								EPA 8081
								RCRA metals

URS
Project No. 805169
File Code No. 12.3
Doc No.

DENVER FILE

DENVER FILE

WELL DEVELOPMENT RECORD

Field Copy
10/10/00 [illegible]

WELL/PIEZOMETER ID MW-1
SHEET 1 of 1

PROJECT NAME: WR Grace PROJECT NO.: 805169.30 DATE: 10/5/00

LOCATION: Minnie DATE INSTALLED: 10/4/00

TOTAL DEPTH (FTOC) 252.2 CASING DIAMETER 2"

METHODS OF DEVELOPMENT

☐ Swabbing ☒ Bailing ☐ Pumping ☒ Describe Bailing and surging

Equipment decontaminated prior to development NA ☐ Yes ☐ NO

Describe Using dedicated or disposable bailers

EQUIPMENT NUMBERS:

pH Meter NA EC Meter NA Turbidity Meter NA Thermometer NA

meters calibrated with DI water = pH = 7.3 Cond. 0.80 mS

CASING VOLUME INFORMATION:

Casing ID (inch)	1.0	1.5	2.0	2.2	3.0	4.0	4.3	5.0	6.0	7.0	8.0
Unit Casing Volume (A) (gal/ft)	0.04	0.09	0.16	0.2	0.37	0.65	0.75	1.0	1.5	2.0	2.6

PURGING INFORMATION:

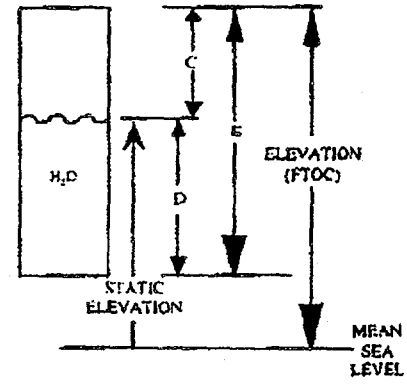
Measured Well Depth (B) 252.2 ft.

Measured Water Level Depth (C) 195.38 ft.

Length of Static Water Column (D) 252.2 (B) - 195.38 (C) = 56.82 ft.

Casing Water Volume (E) = 0.16 (A) x 56.82 (D) = 9.09 gal

Total Purge Volume = 27.27 (gal)



Date	Time	Water Level (FTOC)	Volume Removed (gal)	pH	mS EC	Temperature F or C	Turbidity/ Sand (ppm)	Comments
10/5/00	1031	195.38	0.5	7.2	1.0	9.5	NA	Begin purging water clear no sediment in bailer
	1143	–	2.5	8.1	0.9	9	NA	water clear no sediment
	1334	–	4	8	0.8	10	NA	Surge well with bailer near base: no sediment. Bailer catching 2hr delay
	1358	–	6	8.1	0.8	10	NA	water clear parameters stable
	1720	–	8	8.1	0.8	10	NA	" " "
	1608	–	22	8.1	0.8	10	NA	" " "
	1651	–	24	8.0	0.8	10	NA	" " "
	1715	–	27	8.0	0.8	10	NA	" " " "
	1720	–			?			Sample well
					High			ERA 8260 " 8270 " 8081 RCRA metals

DI read 8.1 after sampling prior to next well.

URS

Project No. 805169
File Code No. 12.3
Doc No.

APPENDIX J

SOIL SAMPLE LOGS AND ANALYTICAL DATA

APPENDIX J-1

SOIL SAMPLE LOGS

ORIGINAL

URS Consultants, Inc.

Surface and Shallow Soil Sampling Log

Records Management Data

Project Number	Project Name	Page
805169	Export Plant Removal Action	1 of 1

General Info

Location: Export Plant, Libby, MT		
Surface Elevation: 2066 ft. msl	Date Started: 10-25-00	Date Completed: 10-25-00
Field Investigator: TIM GISH		C of C#:
Sampling Excavation Method: N/A	Sampling Method: TROWEL (STAINLESS STEEL)	
Depth of Excavation: ≈1.5 ft.	Depth Water First Encountered: N/A ft.	Backfill Material: N/A

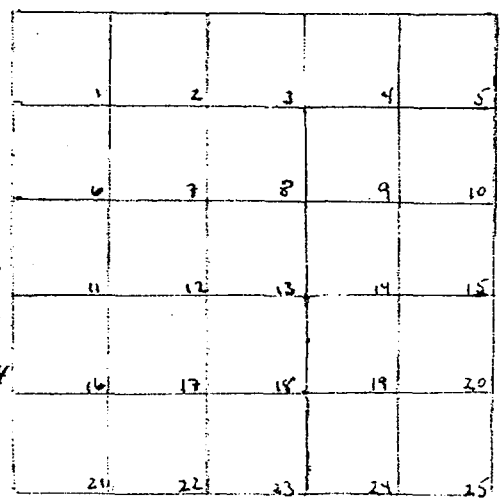
Sample Info

Sample Number	Depth (ft)	Lithologic Description[1]	Sample Container	Analyses Requested
A-1,5	0-2"	SILTY SAND WITH SIME GRAVEL	PLASTIC BAG	PLM
A-6,10	0-2"	"	"	"
A-11,15	0-2"	"	"	"
A-16,20	0-2"	"	"	"
A-21,25	0-2"	"	"	"

Plan View

GRID "A"

NOTE: SOIL SAMPLES TAKEN AT APPROXIMATE CENTER OF EACH SUB-GRID.



Legend

Soil Sampling Location

N

Scale in Feet: 0 20 40

Recorded By	Date	Checked By	Date
DAVID SINKBEIL	10-25-00		

[1] Include such data as OVM, pH, blow-counts, or other physical readings as applicable.

805169

4.8.5.1

ORIGINAL

URS Consultants, Inc.	Surface and Shallow Soil Sampling Log	Records Management Data

Project Number	Project Name	Page
805169	Export Plant Removal Action	1 of 1

General Info

Location: Export Plant, Libby, MT		
Surface Elevation: 2066 ft. msl	Date Started: 10-28-00	Date Completed: 10-28-00
Field Investigator: TIM GISH		C of C#:
Sampling Excavation Method: N/A	Sampling Method: TROWEL (STAINLESS STEEL)	
Depth of Excavation: ≈ 1.5 ft.	Depth Water First Encountered: N/A ft.	Backfill Material: N/A

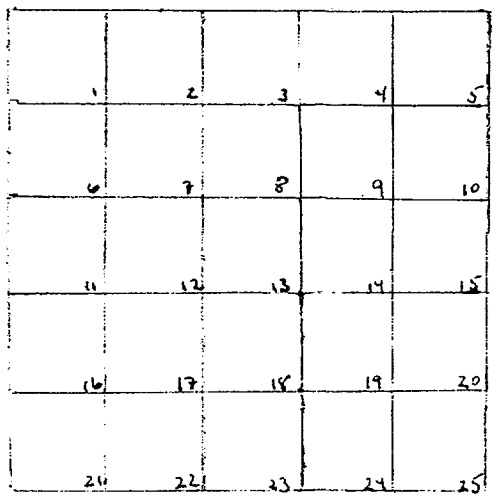
Sample Info

Sample Number	Depth (ft)	Lithologic Description[1]	Sample Container	Analyses Requested
J-1,5	0-2"	SILTY SAND WITH SOME GRAVEL	PLASTIC BAG	PLM
J-6,10	0-2"	"	"	"
J-11,15	0-2"	"	"	"
J-16,20	0-2"	"	"	"
J-21,25	0-2"	"	"	"

Plan View

GRID "J"

NOTE: SOIL SAMPLES TAKEN AT APPROXIMATE CENTER OF EACH SUB-GRID.



Legend

Soil Sampling Location

N

Scale in Feet: 0 20 40

Recorded By	Date	Checked By	Date
DAVID SINKBEIL	10-28-00		

[1] Include such data as OVM, pH, blow-counts, or other physical readings as applicable.

805169
8.8.6.2

ORIGINAL

URS Consultants, Inc.

Surface and Shallow Soil Sampling Log

Records Management Data

Project Number	Project Name	Page
805169	Export Plant Removal Action	1 of 1

General Info

Location: Export Plant, Libby, MT		
Surface Elevation: 2067 ft. msl	Date Started: 10-28-00	Date Completed: 10-28-00
Field Investigator: TIM GISH		C of C#:
Sampling Excavation Method: N/A	Sampling Method: TROWEL (STAINLESS STEEL)	
Depth of Excavation: ≈1.5 ft.	Depth Water First Encountered: N/A ft.	Backfill Material: N/A

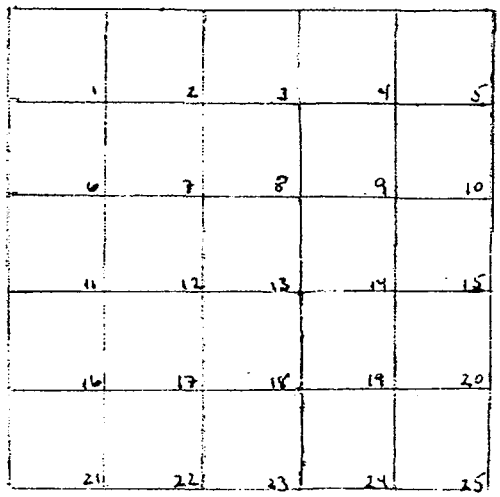
Sample Info

Sample Number	Depth (ft)	Lithologic Description[1]	Sample Container	Analyses Requested
S-1,5	0-2"	SILTY SAND WITH SOME GRAVEL	PLASTIC BAG	PLM
S-6,10	0-2"	"	"	"
S-11,15	0-2"	"	"	"
S-16,20	0-2"	"	"	"
S-21,25	0-2"	"	"	"

Plan View

GRID "S"

NOTE: SOIL SAMPLES TAKEN AT APPROXIMATE CENTER OF EACH SUB-GRID.



Legend

Soil Sampling Location

N

Scale in Feet

0 20 40

Recorded By	Date	Checked By	Date
DAVID SINKBEIL	10-28-00		

[1] Include such data as OVM, pH, blow-counts, or other physical readings as applicable.

805169

8.8.b.3

ORIGINAL

URS Consultants, Inc.

Surface and Shallow Soil Sampling Log

Records Management Data

Project Number	Project Name	Page
805169	Export Plant Removal Action	1 of 1

General Info

Location: Export Plant, Libby, MT		
Surface Elevation: 2066 ft. msl	Date Started: —	Date Completed: 10-31-00
Field Investigator: TIM GISH		C of C#:
Sampling Excavation Method: N/A	Sampling Method: TROWEL (STAINLESS STEEL)	
Depth of Excavation: ≈1.5 ft.	Depth Water First Encountered: N/A ft.	Backfill Material: N/A

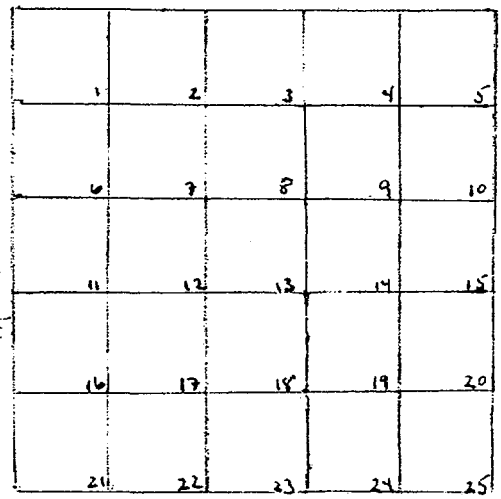
Sample Info

Sample Number	Depth (ft)	Lithologic Description[1]	Sample Container	Analyses Requested
B-1.5	0-2"	SILTY, SAND WITH SOME GRAVEL	PLASTIC BAG	PLM
B-6.10	"	"	"	"
B-11.15	"	"	"	"
B-16.20	"	"	"	"
B-21.25	"	"	"	"

Plan View

GRID "B"

NOTE: SOIL SAMPLES TAKEN AT APPROXIMATE CENTER OF EACH SUB-GRID.



Legend

Soil Sampling Location

N

Scale in Feet

0 20 40

Recorded By	Date	Checked By	Date
DAVID SINKBEIL	10-31-00		

[1] Include such data as OVM, pH, blow-counts, or other physical readings as applicable.

805169
8.8.6.4

ORIGINAL

URS Consultants, Inc.

Surface and Shallow Soil Sampling Log

Records Management Data

Project Number	Project Name	Page
805169	Export Plant Removal Action	1 of 1

General Info

Location: Export Plant, Libby, MT		
Surface Elevation: 2067 ft. msl	Date Started: 11-1-00	Date Completed: 11-1-00
Field Investigator: TIM GISH		C of C#:
Sampling Excavation Method: N/A	Sampling Method: TROWEL (STAINLESS STEEL)	
Depth of Excavation: ≈1.5 ft.	Depth Water First Encountered: N/A ft.	Backfill Material: N/A

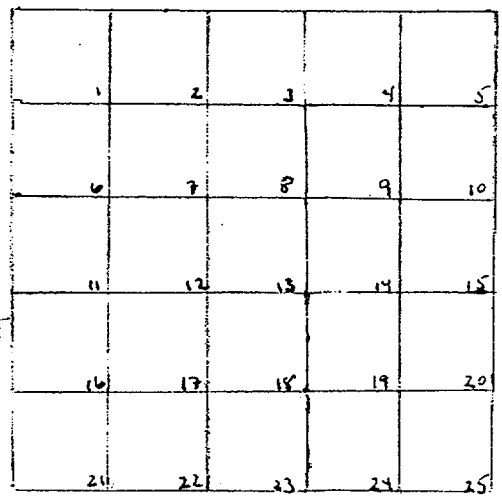
Sample Info

Sample Number	Depth (ft)	Lithologic Description[1]	Sample Container	Analyses Requested
K-1.5	0-2"	SILTY, SAND WITH SOME GRAVEL	PLASTIC BAG	PLM
K-6.10	"	"	"	"
K-11.15	"	"	"	"
K-16.20	"	"	"	"
K-21.25	"	"	"	"

Plan View

GRID "K"

NOTE: SOIL SAMPLES TAKEN AT APPROXIMATE CENTER OF EACH SUB-GRID.



Legend

Soil Sampling Location

N

Scale in Feet: 0 20 40

Recorded By	Date	Checked By	Date
DAVID SINKBEIL	11-1-00		

[1] Include such data as OVM, pH, blow-counts, or other physical readings as applicable.

805169
8.8.6.5

ORIGINAL

URS Consultants, Inc.	Surface and Shallow Soil Sampling Log	Records Management Data

Project Number	Project Name	Page
805169	Export Plant Removal Action	1 of ___

General Info

Location: Export Plant, Libby, MT		
Surface Elevation: 2068 ft. msl	Date Started: 11-2-00	Date Completed: 11-2-00
Field Investigator: DAVID SINKBEIL		C of C#:
Sampling Excavation Method: N/A	Sampling Method: STAINLESS STEEL TROWEL	
Depth of Excavation: ≈1.5 ft.	Depth Water First Encountered: N/A ft.	Backfill Material: N/A

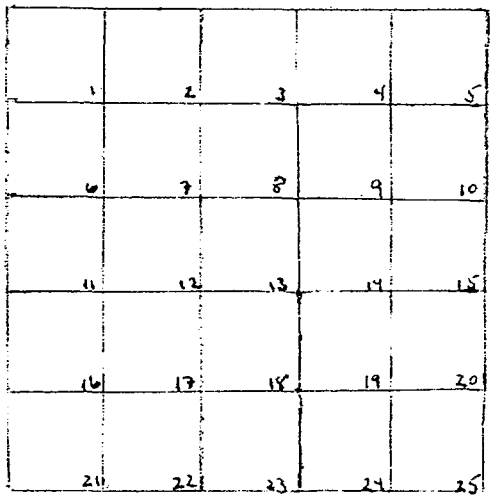
Sample Info

Sample Number	Depth (ft)	Lithologic Description[1]	Sample Container	Analyses Requested
T-1,5	0-2"	SILTY SAND WITH SOME GRAVEL	PLASTIC BAG	PLM
T-6,10	"	"	"	"
T-11,15	"	"	"	"

Plan View

GRID "T"

NOTE: SOIL SAMPLES TAKEN AT APPROXIMATE CENTER OF EACH SUB-GRID.



Legend

Soil Sampling Location

N

Scale in Feet: 0 20 40

Recorded By	Date	Checked By	Date
DAVID SINKBEIL	11-2-00		

[1] Include such data as OVM, pH, blow-counts, or other physical readings as applicable.

805169
8.8.6.6

ORIGINAL

URS Consultants, Inc.

Surface and Shallow Soil Sampling Log

Records Management Data

Project Number	Project Name	Page
805169	Export Plant Removal Action	1 of 1

General Info

Location: Export Plant, Libby, MT		
Surface Elevation: 2067 ft. msl	Date Started: 11-3-00	Date Completed: 11-3-00
Field Investigator: DAVID SINKBEIL		C of C#:
Sampling Excavation Method: N/A	Sampling Method: STAINLESS STEEL TROWEL	
Depth of Excavation: ≈1.5 ft.	Depth Water First Encountered: N/A ft.	Backfill Material: N/A

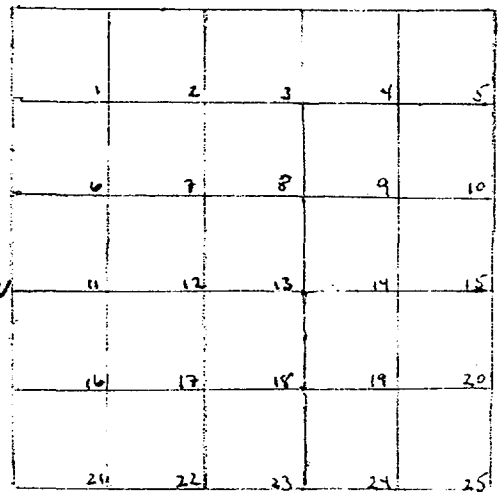
Sample Info

Sample Number	Depth (ft)	Lithologic Description[1]	Sample Container	Analyses Requested
C-1.5	0-2"	SILTY, SAND WITH SOME GRAVEL	PLASTIC BAG	PLM
C-6,10	"	"	"	"
C-11,15	"	"	"	"
C-16,20	"	"	"	"
C-21,25	"	"	"	"

Plan View

GRID "C"

NOTE: SOIL SAMPLES TAKEN AT APPROXIMATE CENTER OF EACH SUB-GRID



Legend

Soil Sampling Location

N

Scale in Feet

0 20 40

Recorded By	Date	Checked By	Date
DAVID SINKBEIL	11-3-00		

[1] Include such data as OVM, pH, blow-counts, or other physical readings as applicable.

805169

8.8.b.7

ORIGINAL

URS Consultants, Inc.	Surface and Shallow Soil Sampling Log	Records Management Data

Project Number	Project Name	Page
805169	Export Plant Removal Action	1 of 1

General Info

Location: Export Plant, Libby, MT		
Surface Elevation: 2067 ft. msl	Date Started: 11-6-00	Date Completed: 11-6-00
Field Investigator: TIM GISH		C of C#:
Sampling Excavation Method: N/A	Sampling Method: TROWEL (STAINLESS STEEL)	
Depth of Excavation: ≈1.5 ft.	Depth Water First Encountered: N/A ft.	Backfill Material: N/A

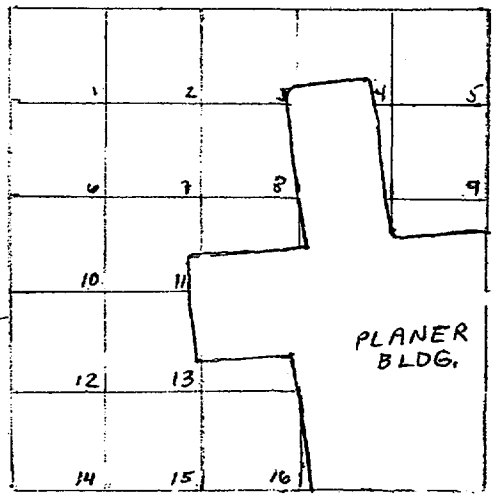
Sample Info

Sample Number	Depth (ft)	Lithologic Description[1]	Sample Container	Analyses Requested
L-1,5	0-2"	SILTY, SAND WITH SOME GRAVEL	PLASTIC BAG	PLM
L-6,10	"	"	"	"
L-11,15	"	"	"	"
L-16,20	"	"	"	"
L-21,25	"	"	"	"

Plan View

GRID "L"

NOTE: SOIL SAMPLES TAKEN AT APPROXIMATE CENTER OF EACH SUB-GRID.



Legend

Soil Sampling Location

N

Scale In Feet: 0 20 40

Recorded By	Date	Checked By	Date
DAVID SINKBEIL	11-6-00		

[1] Include such data as OVM, pH, blow-counts, or other physical readings as applicable.

805169
8.8.6.8

ORIGINAL

Records Management Data

URS Consultants, Inc.

Surface and Shallow Soil Sampling Log

Project Number	Project Name	Page
805169	Export Plant Removal Action	1 of 1

General Info

Location: Export Plant, Libby, MT		
Surface Elevation: 2067 ft. msl	Date Started: 11-6-00	Date Completed: 11-6-00
Field Investigator: TIM GISH		C of C#:
Sampling Excavation Method: N/A	Sampling Method: TROWEL (STAINLESS STEEL)	
Depth of Excavation: ≈1.5 ft.	Depth Water First Encountered: N/A ft.	Backfill Material: N/A

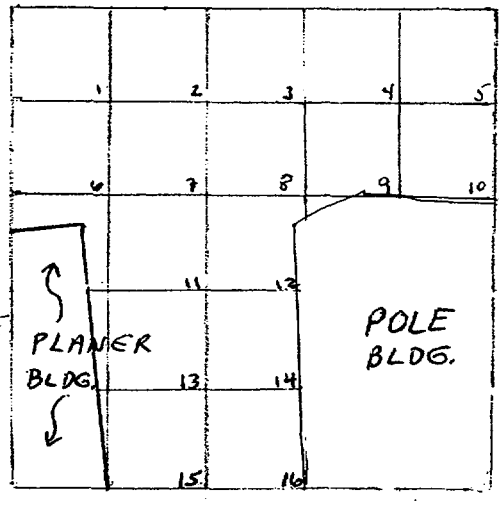
Sample Info

Sample Number	Depth (ft)	Lithologic Description[1]	Sample Container	Analyses Requested
M-1.5	0-2"	SILTY, SAND WITH SOME GRAVEL	PLASTIC BAG	PLM
M-6.10	"	"	"	"
M-11.15	"	"	"	"

Plan View

GRID M

NOTE: SOIL SAMPLES TAKEN AT APPROXIMATE CENTER OF EACH SUB-GRID.



Legend

Soil Sampling Location

N

Scale in Feet

0 20 40

Recorded By	Date	Checked By	Date
DAVID SINKBEIL	11-6-00		

[1] Include such data as OVM, pH, blow-counts, or other physical readings as applicable.

805169

8.8.5.9

ORIGINAL

URS Consultants, Inc.	Surface and Shallow Soil Sampling Log	Records Management Data

Project Number	Project Name	Page
805169	Export Plant Removal Action	1 of 1

General Info

Location: Export Plant, Libby, MT		
Surface Elevation: 2067 ft. msl	Date Started: 11-6-00	Date Completed: 11-6-00
Field Investigator: TIM GISH		C of C#:
Sampling Excavation Method: N/A	Sampling Method: TROWEL (STAINLESS STEEL)	
Depth of Excavation: ≈1.5 ft.	Depth Water First Encountered: N/A ft.	Backfill Material: N/A

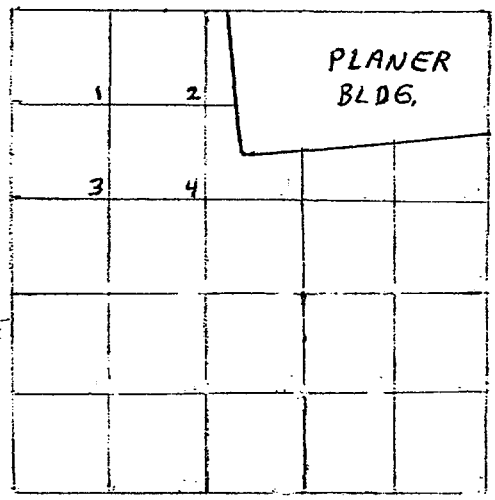
Sample Info

Sample Number	Depth (ft)	Lithologic Description[1]	Sample Container	Analyses Requested
U-1.4	0-2"	SILTY, SAND WITH SOME GRAVEL	PLASTIC BAG	PLM

Plan View

GRID "U"

NOTE: SOIL SAMPLES TAKEN AT APPROXIMATE CENTER OF EACH SUB-GRID.



Legend

Soil Sampling Location

N

Scale in Feet: 0 20 40

Recorded By	Date	Checked By	Date
DAVID SINKBEIL	11-6-00		

[1] Include such data as OVM, pH, blow-counts, or other physical readings as applicable.

805169
8.8.5.10

ORIGINAL

URS Consultants, Inc.

Surface and Shallow Soil Sampling Log

Records Management Data

Project Number	Project Name	Page
805169	Export Plant Removal Action	1 of ___

General Info

Location: Export Plant, Libby, MT		
Surface Elevation: 2068 ft. msl	Date Started: 11-7-00	Date Completed: 11-7-00
Field Investigator: TIM GISH		C of C#:
Sampling Excavation Method: N/A	Sampling Method: TROWEL (STAINLESS STEEL)	
Depth of Excavation: ≈1.5 ft.	Depth Water First Encountered: N/A ft.	Backfill Material: N/A

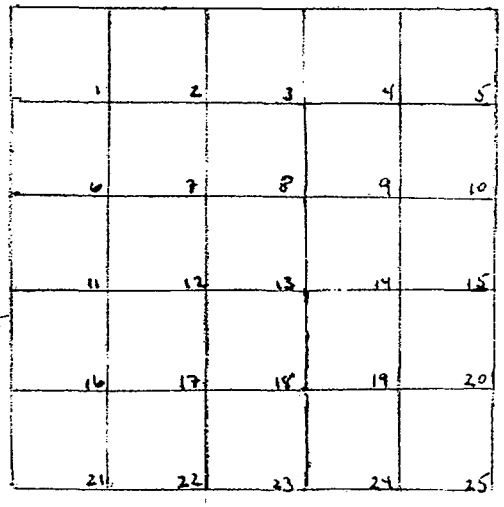
Sample Info

Sample Number	Depth (ft)	Lithologic Description[1]	Sample Container	Analyses Requested
D-1.5	0-2"	SILTY, SAND WITH SOME GRAVEL	PLASTIC BAG	PLM
D-6.10	"	"	"	"
D-11.15	"	"	"	"
D-16.20	"	"	"	"
D-21.25	"	"	"	"

Plan View

GRID "D"

NOTE: SOIL SAMPLES TAKEN AT APPROXIMATE CENTER OF EACH SUB-GRID.



Legend

Soil Sampling Location

N

Scale in Feet: 0 20 40

Recorded By	Date	Checked By	Date
DAVID SINKBEIL	11-7-00		

[1] Include such data as OVM, pH, blow-counts, or other physical readings as applicable.

805169
8.8.6.11

ORIGINAL

URS Consultants, Inc.

Surface and Shallow Soil Sampling Log

Records Management Data

Project Number	Project Name	Page
805169	Export Plant Removal Action	1 of 1

General Info

Location: Export Plant, Libby, MT		
Surface Elevation: 2069 ft. msl	Date Started: 11-20-00	Date Completed: 11-20-00
Field Investigator: TIM GISH		C of C#:
Sampling Excavation Method: N/A	Sampling Method: TROWEL (STAINLESS STEEL)	
Depth of Excavation: ≈1.5 ft.	Depth Water First Encountered: N/A ft.	Backfill Material: N/A

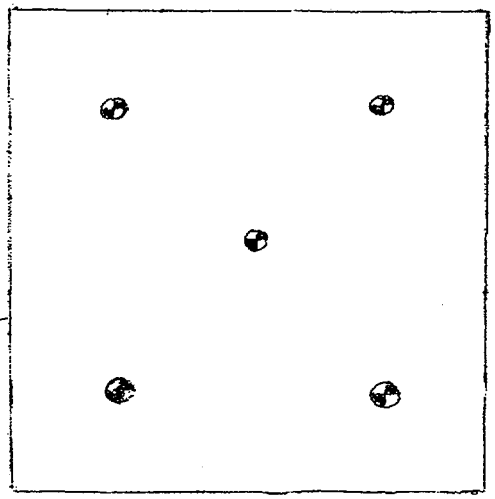
Sample Info

Sample Number	Depth (ft)	Lithologic Description[1]	Sample Container	Analyses Requested
H	0-2"	SILTY, SAND WITH SOME GRAVEL	PLASTIC BAG	PLM

Plan View

GRID "H"

NOTE: SOIL SAMPLES TAKEN AT APPROXIMATE LOCATIONS SHOWN.



Legend

Soil Sampling Location

N

Scale in Feet: 0 20 40

Recorded By	Date	Checked By	Date
DAVID SINKBEIL	11-20-00		

[1] Include such data as OVM, pH, blow-counts, or other physical readings as applicable.

805169
8.8.b.12

ORIGINAL

URS Consultants, Inc.

Surface and Shallow Soil Sampling Log

Records Management Data

Project Number	Project Name	Page
805169	Export Plant Removal Action	1 of 1

General Info

Location: Export Plant, Libby, MT		
Surface Elevation: 2069 ft. msl	Date Started: 11-20-00	Date Completed: 11-20-00
Field Investigator: TIM GISH		C of C#:
Sampling Excavation Method: N/A	Sampling Method: TROWEL (STAINLESS STEEL)	
Depth of Excavation: ≈1.5 ft.	Depth Water First Encountered: N/A ft.	Backfill Material: N/A

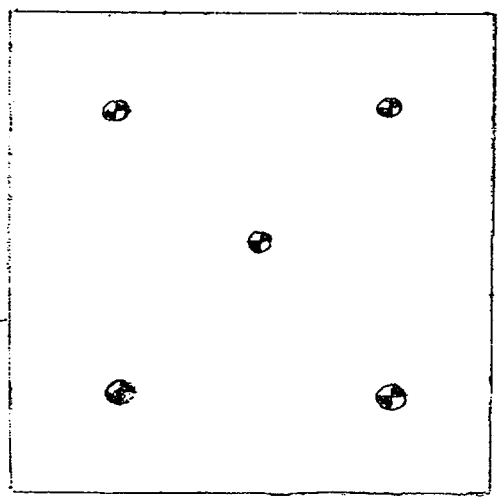
Sample Info

Sample Number	Depth (ft)	Lithologic Description[1]	Sample Container	Analyses Requested
I	0-2"	SILTY, SAND WITH SOME GRAVEL	PLASTIC BAG	PLM

Plan View

GRID "I"

NOTE: SOIL SAMPLES TAKEN AT APPROXIMATE LOCATIONS SHOWN.



Legend

Soil Sampling Location

N

Scale in Feet: 0 20 40

Recorded By	Date	Checked By	Date
DAVID SINKBEIL	11-20-00		

[1] Include such data as OVM, pH, blow-counts, or other physical readings as applicable.

805169
8.8.6.13

ORIGINAL

URS Consultants, Inc.

Surface and Shallow Soil Sampling Log

Records Management Data

Project Number	Project Name	Page
805169	Export Plant Removal Action	1 of 1

General Info

Location: Export Plant, Libby, MT		
Surface Elevation: 2069 ft. msl	Date Started: 11-20-00	Date Completed: 11-20-00
Field Investigator: TIM GISH		C of C#:
Sampling Excavation Method: N/A	Sampling Method: TROWEL (STAINLESS STEEL)	
Depth of Excavation: ≈1.5 ft.	Depth Water First Encountered: N/A ft.	Backfill Material: N/A

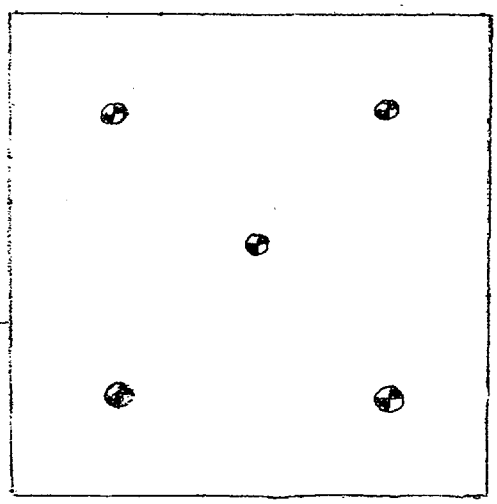
Sample Info

Sample Number	Depth (ft)	Lithologic Description[1]	Sample Container	Analyses Requested
Q	0-2"	SILTY, SAND WITH SOME GRAVEL	PLASTIC BAG	PLM

Plan View

GRID "Q"

NOTE: SOIL SAMPLES TAKEN AT APPROXIMATE LOCATIONS SHOWN.



Legend

Soil Sampling Location

N

Scale in Feet: 0 20 40

Recorded By	Date	Checked By	Date
DAVID SINKBEIL	11-20-00		

[1] Include such data as OVM, pH, blow-counts, or other physical readings as applicable.

805169
8.8.5.14

ORIGINAL

URS Consultants, Inc.

Surface and Shallow Soil Sampling Log

Records Management Data

Project Number	Project Name	Page
805169	Export Plant Removal Action	1 of 1

General Info

Location: Export Plant, Libby, MT		
Surface Elevation: 2069 ft. msl	Date Started: 11-20-00	Date Completed: 11-20-00
Field Investigator: TIM GISH		C of C#:
Sampling Excavation Method: N/A	Sampling Method: TROWEL (STAINLESS STEEL)	
Depth of Excavation: ≈1.5 ft.	Depth Water First Encountered: N/A ft.	Backfill Material: N/A

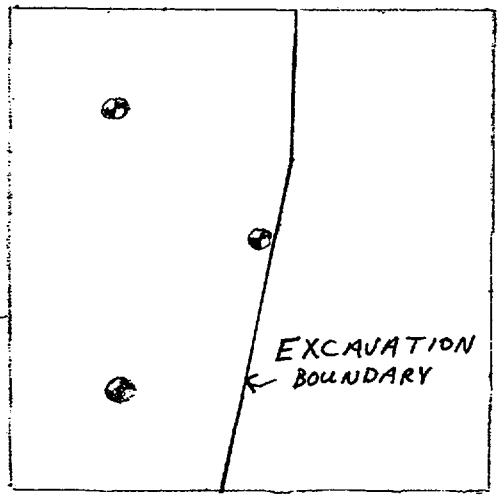
Sample Info

Sample Number	Depth (ft)	Lithologic Description[1]	Sample Container	Analyses Requested
R	0-2"	SILTY, SAND WITH SOME GRAVEL	PLASTIC BAG	PLM

Plan View

GRID "R"

NOTE: SOIL SAMPLES TAKEN AT APPROXIMATE LOCATIONS SHOWN.



Legend

Soil Sampling Location

N

Scale in Feet

0 20 40

Recorded By	Date	Checked By	Date
DAVID SINKBEIL	11-20-00		

[1] Include such data as OVM, pH, blow-counts, or other physical readings as applicable.

805169
8.8.6.15

ORIGINAL

URS Consultants, Inc.

Surface and Shallow Soil Sampling Log

Records Management Data

Project Number	Project Name	Page
805169	Export Plant Removal Action	1 of 1

General Info

Location: Export Plant, Libby, MT		
Surface Elevation: 2069 ft. msl	Date Started: 11-20-00	Date Completed: 11-20-00
Field Investigator: TIM GISH		C of C#:
Sampling Excavation Method: N/A	Sampling Method: TROWEL (STAINLESS STEEL)	
Depth of Excavation: ≈1.5 ft.	Depth Water First Encountered: N/A ft.	Backfill Material: N/A

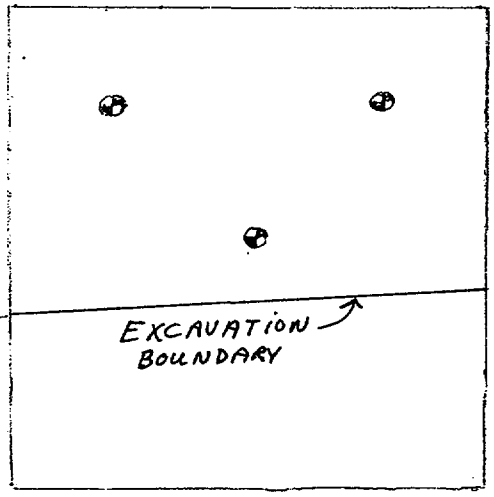
Sample Info

Sample Number	Depth (ft)	Lithologic Description[1]	Sample Container	Analyses Requested
Z	0-2"	SILTY, SAND WITH SOME GRAVEL	PLASTIC BAG	PLM

Plan View

GRID "Z"

NOTE: SOIL SAMPLES TAKEN AT APPROXIMATE LOCATIONS SHOWN.



Legend

Soil Sampling Location

N

Scale in Feet: 0 20 40

Recorded By	Date	Checked By	Date
DAVID SINKBEIL	11-20-00		

[1] Include such data as OVM, pH, blow-counts, or other physical readings as applicable.

805169
8.8.5.16

ORIGINAL

URS Consultants, Inc.

Surface and Shallow Soil Sampling Log

Records Management Data

Project Number	Project Name	Page
805169	Export Plant Removal Action	1 of 1

General Info

Location: Export Plant, Libby, MT		
Surface Elevation: 2068 ft. msl	Date Started: 11-20-00	Date Completed: 11-20-00
Field Investigator: TIM GISH		C of C#:
Sampling Excavation Method: N/A	Sampling Method: TROWEL (STAINLESS STEEL)	
Depth of Excavation: ≈1.5 ft.	Depth Water First Encountered: N/A ft.	Backfill Material: N/A

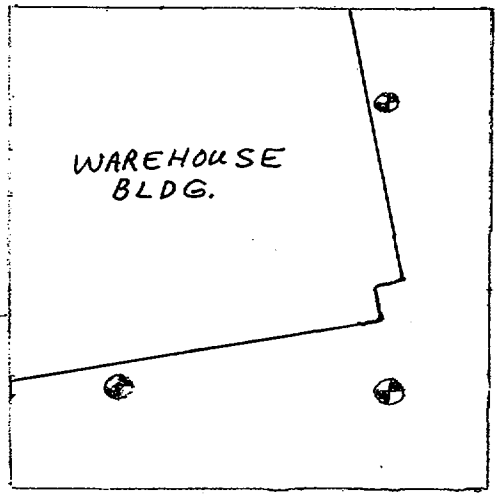
Sample Info

Sample Number	Depth (ft)	Lithologic Description[1]	Sample Container	Analyses Requested
Y	0-2"	SILTY, SAND WITH SOME GRAVEL	PLASTIC BAG	PLM

Plan View

GRID "Y"

NOTE: SOIL SAMPLES TAKEN AT APPROXIMATE LOCATIONS SHOWN.



Legend

Soil Sampling Location

N

Scale in Feet

0 20 40

Recorded By	Date	Checked By	Date
DAVID SINKBEIL	11-20-00		

[1] Include such data as OVM, pH, blow-counts, or other physical readings as applicable.

805169
8.8.6.17

ORIGINAL

URS Consultants, Inc.	Surface and Shallow Soil Sampling Log	Records Management Data

Project Number	Project Name	Page
805169	Export Plant Removal Action	1 of 1

General Info

Location: Export Plant, Libby, MT		
Surface Elevation: 2069 ft. msl	Date Started: 11-21-00	Date Completed: 11-21-00
Field Investigator: TIM GISH		C of C#:
Sampling Excavation Method: N/A	Sampling Method: TROWEL (STAINLESS STEEL)	
Depth of Excavation: ≈1.5 ft.	Depth Water First Encountered: N/A ft.	Backfill Material: N/A

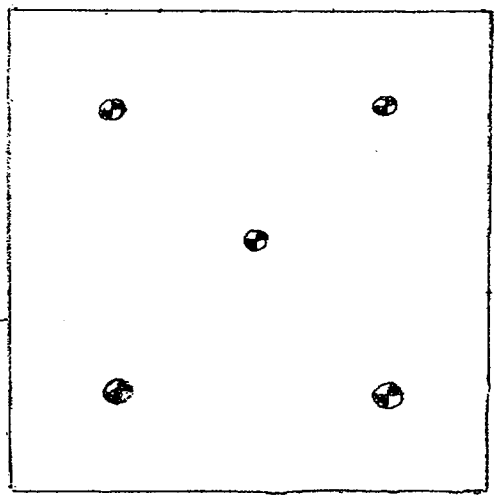
Sample Info

Sample Number	Depth (ft)	Lithologic Description[1]	Sample Container	Analyses Requested
G	0-2"	SILTY, SAND WITH SOME GRAVEL	PLASTIC BAG	PLM

Plan View

GRID "G"

NOTE: SOIL SAMPLES TAKEN AT APPROXIMATE LOCATIONS SHOWN.



Legend

Soil Sampling Location

N

Scale in Feet: 0 10 20

Recorded By	Date	Checked By	Date
DAVID SINKBEIL	11-21-00		

[1] Include such data as OVM, pH, blow-counts, or other physical readings as applicable.

805169
8.8.6.18

ORIGINAL

URS Consultants, Inc.

Surface and Shallow Soil Sampling Log

Records Management Data

Project Number	Project Name	Page
805169	Export Plant Removal Action	1 of 1

General Info

Location: Export Plant, Libby, MT		
Surface Elevation: 2066 ft. msl	Date Started: 11-21-00	Date Completed: 11-21-00
Field Investigator: TIM GISH		C of C#:
Sampling Excavation Method: N/A	Sampling Method: TROWEL (STAINLESS STEEL)	
Depth of Excavation: ≈1.5 ft.	Depth Water First Encountered: N/A ft.	Backfill Material: N/A

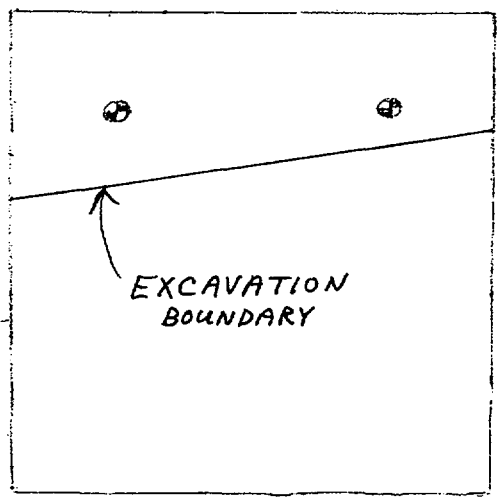
Sample Info

Sample Number	Depth (ft)	Lithologic Description[1]	Sample Container	Analyses Requested
AA	0-2"	SILTY, SAND WITH SOME GRAVEL	PLASTIC BAG	PLM

Plan View

GRID "AA"

NOTE: SOIL SAMPLES TAKEN AT APPROXIMATE LOCATIONS SHOWN.



Legend

Soil Sampling Location

N

Scale in Feet: 0 20 40

Recorded By	Date	Checked By	Date
DAVID SINKBEIL	11-21-00		

[1] Include such data as OVM, pH, blow-counts, or other physical readings as applicable.

605169
8.8.5.19

ORIGINAL

URS Consultants, Inc.	Surface and Shallow Soil Sampling Log	Records Management Data

Project Number	Project Name	Page
805169	Export Plant Removal Action	1 of 1

General Info

Location: Export Plant, Libby, MT		
Surface Elevation: 2066 ft. msl	Date Started: 11-21-00	Date Completed: 11-21-00
Field Investigator: TIM GISH		C of C#:
Sampling Excavation Method: N/A	Sampling Method: TROWEL (STAINLESS STEEL)	
Depth of Excavation: ≈1.5 ft.	Depth Water First Encountered: N/A ft.	Backfill Material: N/A

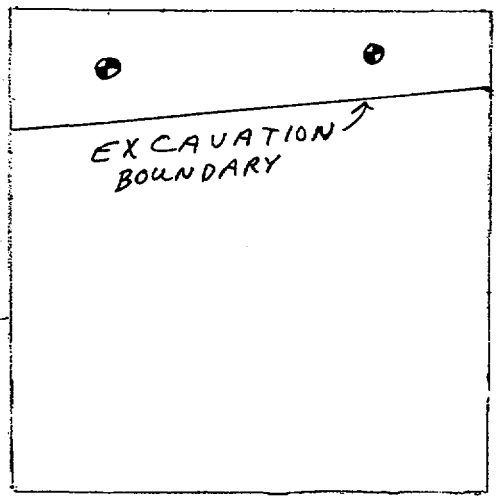
Sample Info

Sample Number	Depth (ft)	Lithologic Description[1]	Sample Container	Analyses Requested
AB	0-2"	SILTY, SAND WITH SOME GRAVEL	PLASTIC BAG	PLM

Plan View

GRID "AB"

NOTE: SOIL SAMPLES TAKEN AT APPROXIMATE LOCATIONS SHOWN.



Legend

Soil Sampling Location

N

Scale in Feet: 0 20 40

Recorded By	Date	Checked By	Date
DAVID SINKBEIL	11-21-00		

[1] Include such data as OVM, pH, blow-counts, or other physical readings as applicable.

805169
8.8.6.20

ORIGINAL

URS Consultants, Inc.	Surface and Shallow Soil Sampling Log	Records Management Data

Project Number	Project Name	Page
805169	Export Plant Removal Action	1 of 1

General Info

Location: Export Plant, Libby, MT		
Surface Elevation: 2069 ft. msl	Date Started: 12-1-00	Date Completed: 12-1-00
Field Investigator: TIM GISH		C of C#:
Sampling Excavation Method: N/A	Sampling Method: TROWEL (STAINLESS STEEL)	
Depth of Excavation: ≈1.5 ft.	Depth Water First Encountered: N/A ft.	Backfill Material: N/A

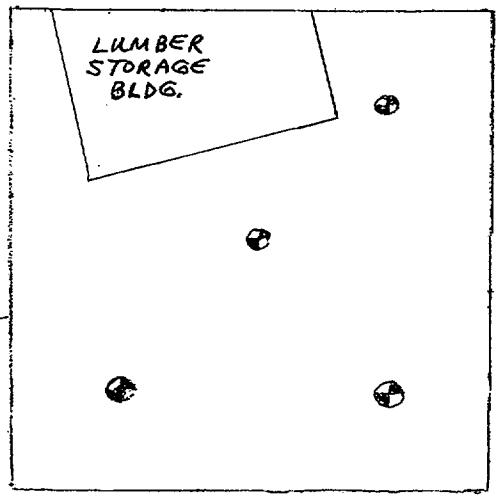
Sample Info

Sample Number	Depth (ft)	Lithologic Description[1]	Sample Container	Analyses Requested
P	0-2"	SILTY, SAND WITH SOME GRAVEL	PLASTIC BAG	PLM

Plan View

GRID "P"

NOTE: SOIL SAMPLES TAKEN AT APPROXIMATE LOCATIONS SHOWN.



Legend

Soil Sampling Location

N

Scale in Feet: 0 20 40

Recorded By	Date	Checked By	Date
DAVID SINKBEIL	12-1-00		

[1] Include such data as OVM, pH, blow-counts, or other physical readings as applicable.

805169
8.8.6.21

ORIGINAL

URS Consultants, Inc.

Surface and Shallow Soil Sampling Log

Records Management Data

Project Number	Project Name	Page
805169	Export Plant Removal Action	1 of 1

General Info

Location: Export Plant, Libby, MT		
Surface Elevation: 2068 ft. msl	Date Started: 12-1-00	Date Completed: 12-1-00
Field Investigator: TIM GISH		C of C#:
Sampling Excavation Method: N/A	Sampling Method: TROWEL (STAINLESS STEEL)	
Depth of Excavation: ≈1.5 ft.	Depth Water First Encountered: N/A ft.	Backfill Material: N/A

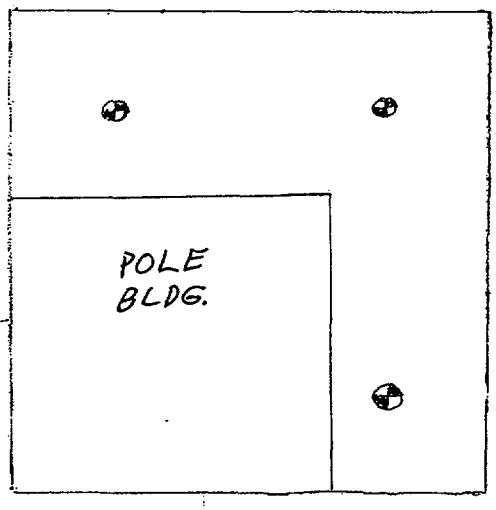
Sample Info

Sample Number	Depth (ft)	Lithologic Description[1]	Sample Container	Analyses Requested
N	0-2"	SILTY, SAND WITH SOME GRAVEL	PLASTIC BAG	PLM

Plan View

GRID "N"

NOTE: SOIL SAMPLES TAKEN AT APPROXIMATE LOCATIONS SHOWN.



Legend

Soil Sampling Location

N

Scale in Feet: 0 20 40

Recorded By	Date	Checked By	Date
DAVID SINKBEIL	12-1-00		

[1] Include such data as OVM, pH, blow-counts, or other physical readings as applicable.

405169
8.8.6.22

ORIGINAL

URS Consultants, Inc.	Surface and Shallow Soil Sampling Log	Records Management Data

Project Number	Project Name	Page
805169	Export Plant Removal Action	1 of 1

General Info

Location: Export Plant, Libby, MT		
Surface Elevation: 2067 ft. msl	Date Started: 12-1-00	Date Completed: 12-1-00
Field Investigator: TIM GISH		C of C#:
Sampling Excavation Method: N/A	Sampling Method: TROWEL (STAINLESS STEEL)	
Depth of Excavation: ≈1.5 ft.	Depth Water First Encountered: N/A ft.	Backfill Material: N/A

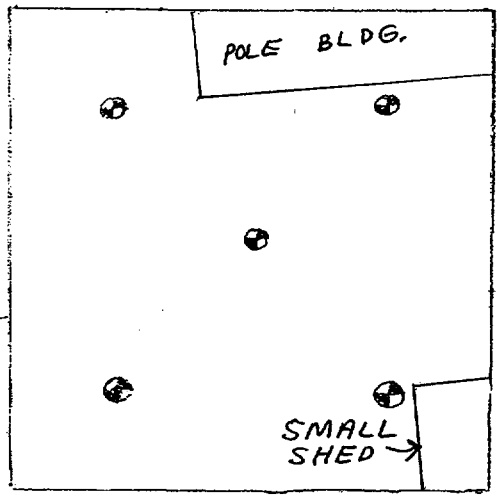
Sample Info

Sample Number	Depth (ft)	Lithologic Description[1]	Sample Container	Analyses Requested
V	0-2"	SILTY, SAND WITH SOME GRAVEL	PLASTIC BAG	PLM

Plan View

GRID "V"

NOTE: SOIL SAMPLES TAKEN AT APPROXIMATE LOCATIONS SHOWN.



Legend

Soil Sampling Location

N

Scale in Feet: 0 20 40

Recorded By	Date	Checked By	Date
DAVID SINKBEIL	12-1-00		

[1] Include such data as OVM, pH, blow-counts, or other physical readings as applicable.

805169
8.8.6.23

ORIGINAL

URS Consultants, Inc.

Surface and Shallow Soil Sampling Log

Records Management Data

Project Number	Project Name	Page
805169	Export Plant Removal Action	1 of 1

General Info

Location: Export Plant, Libby, MT		
Surface Elevation: 2068 ft. msl	Date Started: 12-1-00	Date Completed: 12-1-00
Field Investigator: TIM GISH		C of C#:
Sampling Excavation Method: N/A	Sampling Method: TROWEL (STAINLESS STEEL)	
Depth of Excavation: ≈1.5 ft.	Depth Water First Encountered: N/A ft.	Backfill Material: N/A

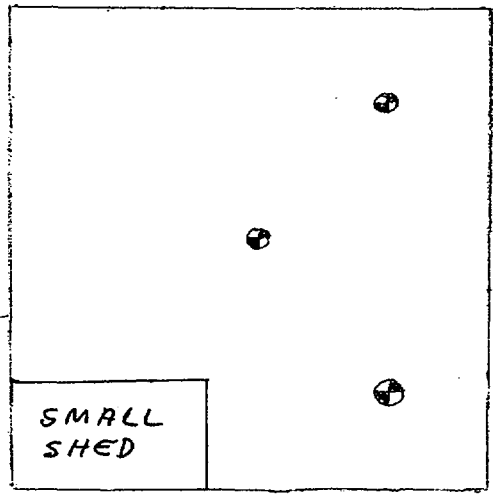
Sample Info

Sample Number	Depth (ft)	Lithologic Description[1]	Sample Container	Analyses Requested
W	0-2"	SILTY, SAND WITH SOME GRAVEL	PLASTIC BAG	PLM

Plan View

GRID "W"

NOTE: SOIL SAMPLES TAKEN AT APPROXIMATE LOCATIONS SHOWN.



Legend

Soil Sampling Location

N

Scale in Feet: 0 10 40

Recorded By	Date	Checked By	Date
DAVID SINKBEIL			

[1] Include such data as OVM, pH, blow-counts, or other physical readings as applicable.

805169
8.8.6.24

ORIGINAL

URS Consultants, Inc.

Surface and Shallow Soil Sampling Log

Records Management Data

Project Number	Project Name	Page
805169	Export Plant Removal Action	1 of 1

General Info

Location: Export Plant, Libby, MT		
Surface Elevation: 2069 ft. msl	Date Started: 12-1-00	Date Completed: 12-1-00
Field Investigator: TIM GISH		C of C#:
Sampling Excavation Method: N/A	Sampling Method: TROWEL (STAINLESS STEEL)	
Depth of Excavation: ≈1.5 ft.	Depth Water First Encountered: N/A ft.	Backfill Material: N/A

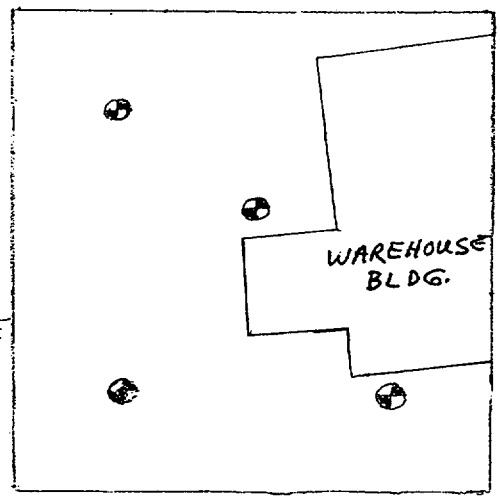
Sample Info

Sample Number	Depth (ft)	Lithologic Description[1]	Sample Container	Analyses Requested
X	0-2"	SILTY, SAND WITH SOME GRAVEL	PLASTIC BAG	PLM

Plan View

GRID "X"

NOTE: SOIL SAMPLES TAKEN AT APPROXIMATE LOCATIONS SHOWN.



Legend

Soil Sampling Location

N

Scale in Feet

0 20 40

Recorded By	Date	Checked By	Date
DAVID SINKBEIL	12-1-00		

[1] Include such data as OVM, pH, blow-counts, or other physical readings as applicable.

805169
8.8.6.25

ORIGINAL

URS Consultants, Inc.

Surface and Shallow Soil Sampling Log

Records Management Data

Project Number	Project Name	Page
805169	Export Plant Removal Action	1 of 1

General Info

Location: Export Plant, Libby, MT		
Surface Elevation: 2068 ft. msl	Date Started: 12-4-00	Date Completed: 12-4-00
Field Investigator: TIM GISH		C of C#:
Sampling Excavation Method: N/A	Sampling Method: TROWEL (STAINLESS STEEL)	
Depth of Excavation: ≈1.5 ft.	Depth Water First Encountered: N/A ft.	Backfill Material: N/A

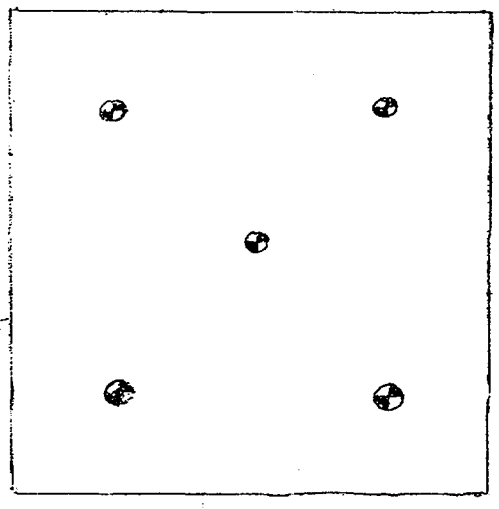
Sample Info

Sample Number	Depth (ft)	Lithologic Description[1]	Sample Container	Analyses Requested
E	0-2"	SILTY, SAND WITH SOME GRAVEL	PLASTIC BAG	PLM

Plan View

GRID "E"

NOTE: SOIL SAMPLES TAKEN AT APPROXIMATE LOCATIONS SHOWN.



Legend

Soil Sampling Location

N

Scale in Feet: 0 20 40

Recorded By	Date	Checked By	Date
DAVID SINKBEIL	12-4-00		

[1] Include such data as OVM, pH, blow-counts, or other physical readings as applicable.

805169
8.8.6.26

ORIGINAL

URS Consultants, Inc.

Surface and Shallow Soil Sampling Log

Records Management Data

Project Number	Project Name	Page
805169	Export Plant Removal Action	1 of 1

General Info

Location: Export Plant, Libby, MT		
Surface Elevation: 2068 ft. msl	Date Started: 12-4-00	Date Completed: 12-4-00
Field Investigator: TIM GISH		C of C#:
Sampling Excavation Method: N/A	Sampling Method: TROWEL (STAINLESS STEEL)	
Depth of Excavation: ≈1.5 ft.	Depth Water First Encountered: N/A ft.	Backfill Material: N/A

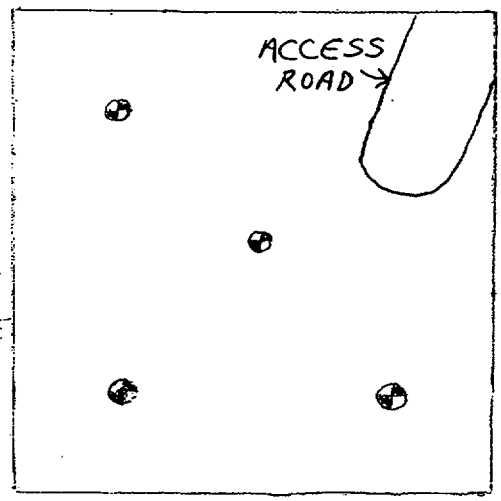
Sample Info

Sample Number	Depth (ft)	Lithologic Description[1]	Sample Container	Analyses Requested
F	0-2"	SILTY, SAND WITH SOME GRAVEL	PLASTIC BAG	PLM

Plan View

GRID "F"

NOTE: SOIL SAMPLES TAKEN AT APPROXIMATE LOCATIONS SHOWN.



Legend

Soil Sampling Location

N

Scale in Feet: 0 20 40

Recorded By	Date	Checked By	Date
DAVID SINKBEIL	12-4-00		

[1] Include such data as OVM, pH, blow-counts, or other physical readings as applicable.

805169
8.8.5.27

ORIGINAL

URS Consultants, Inc.	Surface and Shallow Soil Sampling Log	Records Management Data

Project Number	Project Name	Page
805169	Export Plant Removal Action	1 of 1

General Info

Location: Export Plant, Libby, MT		
Surface Elevation: 2067 ft. msl	Date Started: 12-4-00	Date Completed: 12-4-00
Field Investigator: TIM GISH		C of C#:
Sampling Excavation Method: N/A	Sampling Method: TROWEL (STAINLESS STEEL)	
Depth of Excavation: ≈1.5 ft.	Depth Water First Encountered: N/A ft.	Backfill Material: N/A

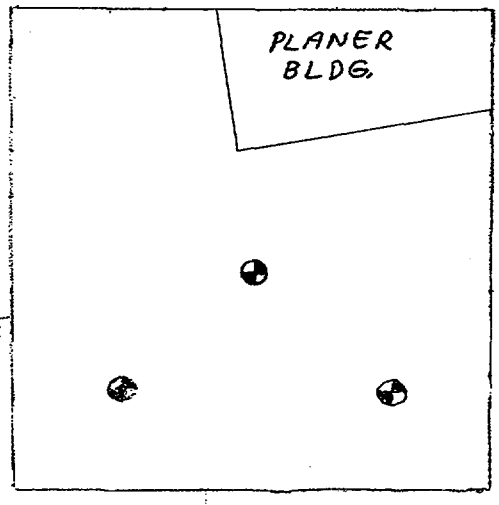
Sample Info

Sample Number	Depth (ft)	Lithologic Description[1]	Sample Container	Analyses Requested
U	0-2"	SILTY, SAND WITH SOME GRAVEL	PLASTIC BAG	PLM

Plan View

GRID "U"

NOTE: SOIL SAMPLES TAKEN AT APPROXIMATE LOCATIONS SHOWN.



Legend

Soil Sampling Location

N

Scale in Feet: 0 10 40

Recorded By	Date	Checked By	Date
DAVID SINKBEIL	12-4-00		

[1] Include such data as OVM, pH, blow-counts, or other physical readings as applicable.

805169
8.8.5.28

ORIGINAL

URS Consultants, Inc.

Surface and Shallow Soil Sampling Log

Records Management Data

Project Number	Project Name	Page
805169	Export Plant Removal Action	1 of 1

General Info

Location: Export Plant, Libby, MT		
Surface Elevation: 2069 ft. msl	Date Started: 12-4-00	Date Completed: 12-4-00
Field Investigator: TIM GISH		C of C#:
Sampling Excavation Method: N/A	Sampling Method: TROWEL (STAINLESS STEEL)	
Depth of Excavation: ≈1.5 ft.	Depth Water First Encountered: N/A ft.	Backfill Material: N/A

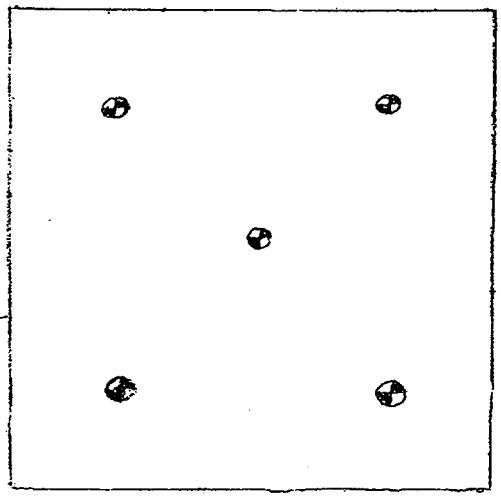
Sample Info

Sample Number	Depth (ft)	Lithologic Description[1]	Sample Container	Analyses Requested
0	0-2"	SILTY, SAND WITH SOME GRAVEL	PLASTIC BAG	PLM

Plan View

GRID "0"

NOTE: SOIL SAMPLES TAKEN AT APPROXIMATE LOCATIONS SHOWN.



Legend

Soil Sampling Location

N

Scale in Feet: 0 20 40

Recorded By	Date	Checked By	Date
DAVID SINKBEIL	12-4-00		

[1] Include such data as OVM, pH, blow-counts, or other physical readings as applicable.

805169
8.8.5.29

ORIGINAL

URS Consultants, Inc.	Surface and Shallow Soil Sampling Log	Records Management Data

Project Number	Project Name	Page
805169	Export Plant Removal Action	1 of 1

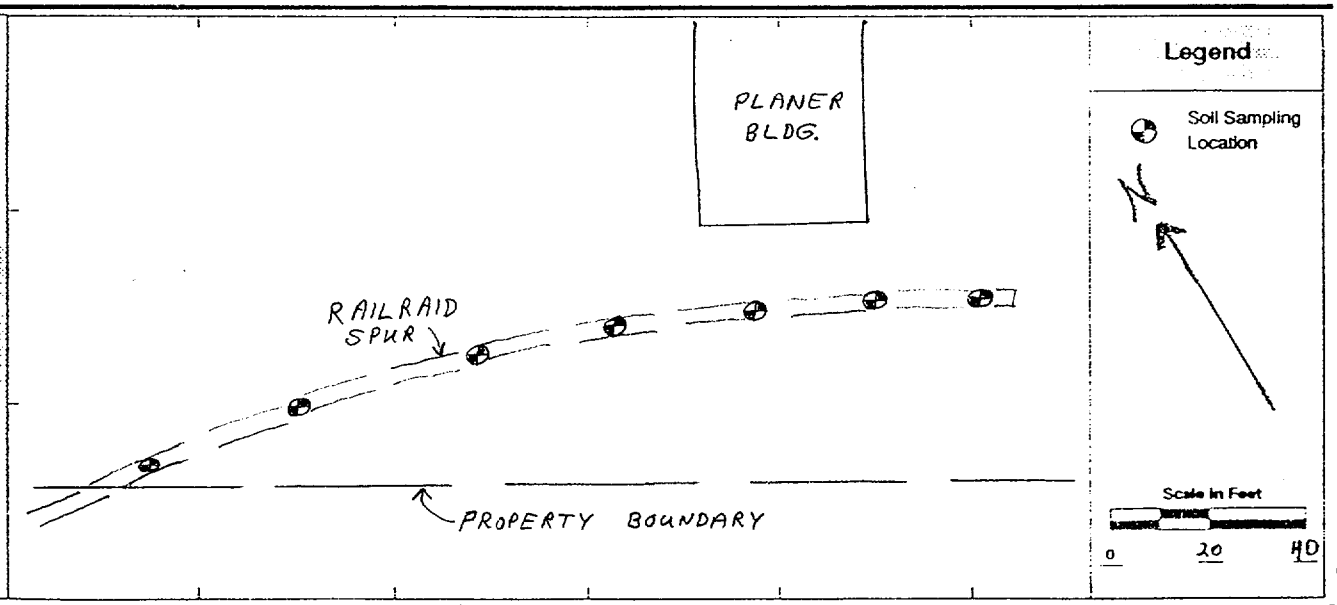
General Info

Location: Export Plant, Libby, MT		
Surface Elevation: 2069 ft. msl	Date Started: 12-4-00	Date Completed: 12-4-00
Field Investigator: TIM GISH		C of C#:
Sampling Excavation Method: N/A	Sampling Method: STAINLESS STEEL TROWEL	
Depth of Excavation: N/A ft.	Depth Water First Encountered: N/A ft.	Backfill Material: N/A

Sample Info

Sample Number	Depth (ft)	Lithologic Description[1]	Sample Container	Analyses Requested
TRACKS	0-2"	SANDY GRAVEL	PLASTIC BAG	PLM

Plan View



Recorded By	Date	Checked By	Date
DAVID SINKBEIL	12-4-00		

[1] Include such data as OVM, pH, blow-counts, or other physical readings as applicable.

805169
8.8.b.30

APPENDIX J-2

COMPLETE RESULTS OF CONFIRMATION SAMPLES WERE UNOBTAINABLE FROM USEPA

APPENDIX J-3

ANALYTICAL RESULTS FOR HYDROCARBON CONTAMINATED SOIL

ENERGY LABORATORIES, INC.
2704 BILLINGS AVE. - HELENA, MT 59601 • P.O. BOX 5688 - HELENA, MT 59604
VOICE/FAX 406-442-0711 • E-MAIL debg@energylab.com

Client: URS Corp

Login No.: 00-90875
Date: 22-Nov-00

EXTRACTABLE PETROLEUM HYDROCARBONS SCREENING ANALYSIS REPORT

EXPORT PLANT-317 MINERAL AVE. LIBBY, MT 59923

Received:19-Oct-00

Lab No./Sample Information		Total Extractable Hydrocarbons	Units	Q	Date/Time Analyzed	Date Extracted	Surrogate %Rec.
001-00-90875	Revised: 11/22/00	2470	µg/g(ppm)		24-Oct-00 15:31	20-Oct-00	103
LOAD 1							
18-Oct-00 15:50					Batch I.D.:EPH-GRPS001019		Analyst:skw
002-00-90875		< 10	µg/g(ppm)		24-Oct-00 12:11	20-Oct-00	73
EAST WALL							
18-Oct-00 18:00					Batch I.D.:EPH-GRPS001019		Analyst:skw
003-00-90875		< 10	µg/g(ppm)		24-Oct-00 12:50	20-Oct-00	65
WEST WALL							
18-Oct-00 18:00					Batch I.D.:EPH-GRPS001019		Analyst:skw
004-00-90875		< 10	µg/g(ppm)		24-Oct-00 13:29	20-Oct-00	68
SOUTH WALL							
18-Oct-00 18:00					Batch I.D.:EPH-GRPS001019		Analyst:skw
005-00-90875		16	µg/g(ppm)		24-Oct-00 14:08	20-Oct-00	65
BOTTOM							
18-Oct-00 18:00					Batch I.D.:EPH-GRPS001019		Analyst:skw
006-00-90875		222	µg/g(ppm)		24-Oct-00 14:50	20-Oct-00	58
INTERMEDIATE							
18-Oct-00 18:00					Batch I.D.:EPH-GRPS001019		Analyst:skw

Qualifiers(Q) and Notes

NOTE1: Total Extractable Hydrocarbons are defined as the total hydrocarbon responses regardless of elution time. This value is equivalent to EPA 8015M as Diesel.

Revised: Reported under dilution factor of 1, s/b dilution factor 1

ENERGY LABORATORIES

Batch: EPH-GRPS001019E
Date: 21-Nov-00

EPH SCREEN BATCH QUALITY ASSURANCE REPORT

QC Sample I.D.	Diesel Range Organics	Diesel Range Organics as Diesel	Total Extractable Hydrocarbons	Units	Q	Date/Time Analyzed	Date Extracted	Surrogate %Rec.
Method Blank1	< 10	< 10	< 10	µg/g(ppm)		23-Oct-00 01:55	20-Oct-00	85

LABORATORY CONTROL SAMPLE REPORT

Date Analyzed: 23-Oct-00 01:08:00
Date Extracted: 20-Oct-00

CONSTITUENT	SPIKE ADDED µg/g(ppm)	MS CONC. µg/g(ppm)	MS % Rec.	QC Limits % Rec.	Surrogate %Rec.
EPH Spiking Mix	156	158	101	60 to 140	89

MATRIX SPIKE/MATRIX SPIKE DUPLICATE REPORT

MATRIX SPIKE

Laboratory Number: 002-00-59122
Date Analyzed: 23-Oct-00 15:22:00
Date Extracted: 20-Oct-00

CONSTITUENT	Spike Added µg/g(ppm)	Sample Conc. µg/g(ppm)	MS Conc. µg/g(ppm)	MS % Rec.	QC Limits %Rec.	Surroga %Rec.
EPH Spiking Mix	156	44	206	104	60 to 140	76

MATRIX SPIKE DUPLICATE

Laboratory Number: 002-00-59122
Date Analyzed: 23-Oct-00 00:21:00
Date Extracted: 20-Oct-00

CONSTITUENT	Spike Added µg/g(ppm)	MSD Conc. µg/g(ppm)	MSD %Rec.	RPD	QC Limit RPD	QC Limit %Rec.	Surrogate %Rec.
EPH Spiking Mix	156	214	109	5	20	60 to 140	76

Analyst: pf

ENERGY LABORATORIES

EPH ALIPHATICS CONTINUING CALIBRATION REPORT

This continuing calibration report applies to the following analysis runs:
001-00-90875,002-00-90875,003-00-90875,004-00-90875,005-00-90875,006-00-90875

Sample Name: cc1 EPH Aliphatics Continuing Cal :1024DROH.cc1
Area File: G:\ORG\HP1\1024DROH.01A
Date & Time Collected: Oct 24, 2000 11:32:43
Method File: G:\ORG\HP1\SH1010A.MET
Calibration File: G:\ORG\HP1\ALI0620K.CAL

COMPOUND	ACTUAL	MEASURED	%RECOVERY	%RECOVERY LIMITS
n-Nonane	200	189	94	75-125
n-Decane	200	193	96	75-125
n-Dodecane	200	191	95	75-125
n-Tetradecane	200	192	96	75-125
n-Hexadecane	200	192	96	75-125
n-Octadecane	200	192	96	75-125
n-Nonadecane	200	192	96	75-125
n-Eicosane	200	198	99	75-125
n-Docosane	200	196	98	75-125
n-Tetracosane	200	194	97	75-125
n-Hexacosane	200	194	97	75-125
n-Octacosane	200	196	98	75-125
n-Triacontane	200	170	85	75-125
n-Hexatriacontane	200	188	94	75-125
TOTAL EPH	2800	2676	96	75-125
*1-Chloro-octadecane	200	171	86	75-125

ENERGY LABORATORIES

Client: URS Corp

Login No.: 001-00-90875
Date: 21-Nov-00

EXTRACTABLE PETROLEUM HYDROCARBONS (EPH) LABORATORY ANALYSIS REPORT

Project ID: EXPORT PLANT-317 MINERAL AVE. LIBBY, MT 59923
Client ID: LOAD 1
Sampled:18-Oct-00 15:50
Received:19-Oct-00
Extracted: 20-Oct-00; Batch: EPHS001019E

Range/Target Analyte

CONSTITUENT	Result	Units	Qualifier	Reporting Limit	QC/Regulatory Limit[e]	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	< 40	ug/g(ppm)		40	1000	05-Nov-00 18:58	pf
C19-C36 Aliphatics	85	ug/g(ppm)		40	2500	05-Nov-00 18:58	pf
C11-C22 Aromatics	**1210**	**ug/g(ppm)**		**40**	**120**	**05-Nov-00 19:47**	**pf**
Total Extractable Hydrocarbons	1520	ug/g(ppm)		40		05-Nov-00 18:58	pf
Naphthalene	**3.0**	**ug/g(ppm)**		**0.67**	**3**	**05-Nov-00 19:47**	**pf**
2-Methylnaphthalene	6.2	ug/g(ppm)		0.67		05-Nov-00 19:47	pf
Acenaphthylene	1.8	ug/g(ppm)		0.67		05-Nov-00 19:47	pf
Acenaphthene	<0.67	ug/g(ppm)		0.67	160	05-Nov-00 19:47	pf
Fluorene	3.8	ug/g(ppm)		0.67	160	05-Nov-00 19:47	pf
Phenanthrene	2.3	ug/g(ppm)		0.67		05-Nov-00 19:47	pf
Anthracene	0.69	ug/g(ppm)		0.67	2900	05-Nov-00 19:47	pf
Fluoranthene	2.1	ug/g(ppm)		0.67	390	05-Nov-00 19:47	pf
Pyrene	<0.67	ug/g(ppm)		0.67	290	05-Nov-00 19:47	pf
Benzo(a)Anthracene	<0.67	ug/g(ppm)		0.67	0.8	05-Nov-00 19:47	pf
Chrysene	<0.67	ug/g(ppm)		0.67	80	05-Nov-00 19:47	pf
Benzo(b&k)Fluoranthene**	<1.3	ug/g(ppm)		1.3	0.8	05-Nov-00 19:47	pf
Benzo(a)Pyrene	<0.67	ug/g(ppm)		0.67	0.08	05-Nov-00 19:47	pf
Indeno-Dibenzo***	<1.3	ug/g(ppm)		1.3	0.08	05-Nov-00 19:47	pf
Benzo(g,h,i)Perylene	<0.67	ug/g(ppm)		0.67		05-Nov-00 19:47	pf
Moisture	18	%by Weight					

Surrogate Recoveries

2-Fluorobiphenyl	85	% Rec.	40 to 140%	05-Nov-00 19:47	pf
2-Bromonaphthalene	92	% Rec.	40 to 140%	05-Nov-00 19:47	pf
o-Terphenyl	124	% Rec.	40 to 140%	05-Nov-00 19:47	pf
1-Chloro-octadecane	98	%Rec.	40 to 140%	05-Nov-00 18:58	pf

Qualifiers and Notes

Note: Quantitation by GC/FID analyses may be subject to a positive bias due to co-elution of similar hydrocarbons.

Note: If present, target PAH compounds are subtracted from the C11-C22 Aromatics range total.

Note: The Total Extractable Hydrocarbons (TEH) value is equivalent to the DRO Method TEH value.

**Co-eluting target analytes consisting of Benzo(b)Fluoranthene and Benzo(k)Fluoranthene.

***Co-eluting target analytes consisting of Indeno(1,2,3-cd)Pyrene and Dibenzo(a,h)Anthracene.

[e]The regulatory limits listed for target analyte and hydrocarbon range values are Montana DEQ default RBSLs which apply to residential surface soil less than 10 feet to groundwater. These limits may not apply to your sample.

ENERGY LABORATORIES

Client: URS Corp

Login No.: 006-00-90875
Date: 21-Nov-00

EXTRACTABLE PETROLEUM HYDROCARBONS (EPH) LABORATORY ANALYSIS REPORT

Project ID: EXPORT PLANT-317 MINERAL AVE. LIBBY, MT 59923
Client ID: INTERMEDIATE
Sampled:18-Oct-00 18:00
Received:19-Oct-00
Extracted: 20-Oct-00; Batch: EPHS001019E

Range/Target Analyte

CONSTITUENT	Result	Units	Qualifier	Reporting Limit	QC/Regulatory Limit[e]	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	< 20	ug/g(ppm)		20	1000	16-Nov-00 01:42	pf
C19-C36 Aliphatics	47	ug/g(ppm)		20	2500	16-Nov-00 01:42	pf
C11-C22 Aromatics	88	ug/g(ppm)		20	120	16-Nov-00 02:33	pf
Total Extractable Hydrocarbons	160	ug/g(ppm)		20		16-Nov-00 01:42	pf
Naphthalene	<0.33	ug/g(ppm)		0.33	3	16-Nov-00 02:33	pf
2-Methylnaphthalene	0.33	ug/g(ppm)		0.33		16-Nov-00 02:33	pf
Acenaphthylene	<0.33	ug/g(ppm)		0.33		16-Nov-00 02:33	pf
Acenaphthene	<0.33	ug/g(ppm)		0.33	160	16-Nov-00 02:33	pf
Fluorene	<0.33	ug/g(ppm)		0.33	160	16-Nov-00 02:33	pf
Phenanthrene	<0.33	ug/g(ppm)		0.33		16-Nov-00 02:33	pf
Anthracene	<0.33	ug/g(ppm)		0.33	2900	16-Nov-00 02:33	pf
Fluoranthene	<0.33	ug/g(ppm)		0.33	390	16-Nov-00 02:33	pf
Pyrene	0.42	ug/g(ppm)		0.33	290	16-Nov-00 02:33	pf
Benzo(a)Anthracene	<0.33	ug/g(ppm)		0.33	0.8	16-Nov-00 02:33	pf
Chrysene	<0.33	ug/g(ppm)		0.33	80	16-Nov-00 02:33	pf
Benzo(b&k)Fluoranthene**	<0.67	ug/g(ppm)		0.67	0.8	16-Nov-00 02:33	pf
Benzo(a)Pyrene	<0.33	ug/g(ppm)		0.33	0.08	16-Nov-00 02:33	pf
Indeno-Dibenzo***	<0.67	ug/g(ppm)		0.67	0.08	16-Nov-00 02:33	pf
Benzo(g,h,i)Perylene	<0.33	ug/g(ppm)		0.33		16-Nov-00 02:33	pf
Moisture	14	%by Weight					

Surrogate Recoveries

2-Fluorobiphenyl	70	% Rec.	40 to 140%	16-Nov-00 02:33	pf
2-Bromonaphthalene	79	% Rec.	40 to 140%	16-Nov-00 02:33	pf
o-Terphenyl	71	% Rec.	40 to 140%	16-Nov-00 02:33	pf
1-Chloro-octadecane	64	%Rec.	40 to 140%	16-Nov-00 01:42	pf

Qualifiers and Notes

Note: Quantitation by GC/FID analyses may be subject to a positive bias due to co-elution of similar hydrocarbons.

Note: If present, target PAH compounds are subtracted from the C11-C22 Aromatics range total.

Note: The Total Extractable Hydrocarbons (TEH) value is equivalent to the DRO Method TEH value.

**Co-eluting target analytes consisting of Benzo(b)Fluoranthene and Benzo(k)Fluoranthene.

***Co-eluting target analytes consisting of Indeno(1,2,3-cd)Pyrene and Dibenzo(a,h)Anthracene.

[e]The regulatory limits listed for target analyte and hydrocarbon range values are Montana DEQ default RBSLs which apply to residential surface soil less than 10 feet to groundwater. These limits may not apply to your sample.

ENERGY LABORATORIES

Date: 21-Nov-00

EXTRACTABLE PETROLEUM HYDROCARBONS (EPH) QUALITY ASSURANCE REPORT
METHOD BLANK ANALYSIS

Extracted: 19-Oct-00; Batch: EPHS001019E

Range/Target Analyte

CONSTITUENT	Result	Units	Qualifier	Reporting Limit	QC/Regulatory Limit	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	< 20	ug/g(ppm)		20		02-Nov-00 23:17	pf
C19-C36 Aliphatics	< 20	ug/g(ppm)		20		02-Nov-00 23:17	pf
C11-C22 Aromatics	< 20	ug/g(ppm)		20		03-Nov-00 00:07	pf
Total Extractable Hydrocarbons	< 20	ug/g(ppm)		20		02-Nov-00 23:17	pf
Naphthalene	<0.33	ug/g(ppm)		0.33		03-Nov-00 00:07	pf
2-Methylnaphthalene	<0.33	ug/g(ppm)		0.33		03-Nov-00 00:07	pf
Acenaphthylene	<0.33	ug/g(ppm)		0.33		03-Nov-00 00:07	pf
Acenaphthene	<0.33	ug/g(ppm)		0.33		03-Nov-00 00:07	pf
Fluorene	<0.33	ug/g(ppm)		0.33		03-Nov-00 00:07	pf
Phenanthrene	<0.33	ug/g(ppm)		0.33		03-Nov-00 00:07	pf
Anthracene	<0.33	ug/g(ppm)		0.33		03-Nov-00 00:07	pf
Fluoranthene	<0.33	ug/g(ppm)		0.33		03-Nov-00 00:07	pf
Pyrene	<0.33	ug/g(ppm)		0.33		03-Nov-00 00:07	pf
Benzo(a)Anthracene	<0.33	ug/g(ppm)		0.33		03-Nov-00 00:07	pf
Chrysene	<0.33	ug/g(ppm)		0.33		03-Nov-00 00:07	pf
Benzo(b&k)Fluoranthene**	<0.67	ug/g(ppm)		0.67		03-Nov-00 00:07	pf
Benzo(a)Pyrene	<0.33	ug/g(ppm)		0.33		03-Nov-00 00:07	pf
Indeno-Dibenzo***	<0.67	ug/g(ppm)		0.67		03-Nov-00 00:07	pf
Benzo(g,h,i)Perylene	<0.33	ug/g(ppm)		0.33		03-Nov-00 00:07	pf

Surrogate Recoveries

2-Fluorobiphenyl	84	% Rec.	40 to 140%	03-Nov-00 00:07	pf
2-Bromonaphthalene	69	% Rec.	40 to 140%	03-Nov-00 00:07	pf
o-Terphenyl	65	% Rec.	40 to 140%	03-Nov-00 00:07	pf
1-Chloro-octadecane	59	%Rec.	40 to 140%	02-Nov-00 23:17	pf

Qualifiers and Notes

Note: Quantitation by GC/FID analyses may be subject to a positive bias due to co-elution of similar hydrocarbons.

Note: If present, target PAH compounds are subtracted from the C11-C22 Aromatics range total.

Note: The Total Extractable Hydrocarbons (TEH) value is equivalent to the DRO Method TEH value.

**Co-eluting target analytes consisting of Benzo(b)Fluoranthene and Benzo(k)Fluoranthene.

***Co-eluting target analytes consisting of Indeno(1,2,3 cd)Pyrene and Dibenzo(a,h)Anthracene.

ENERGY LABORATORIES

Date: 21-Nov-00

EXTRACTABLE PETROLEUM HYDROCARBONS (EPH) QUALITY ASSURANCE REPORT
LABORATORY FORTIFIED BLANK

Extracted: 19-Oct-00; Batch: EPHS001019E

Target Analyte

CONSTITUENT	Spike Amt.	Measured	Units	% Rec.	QC Limit	Date/Time Analyzed	Analyst
n-Decane	6.66	2.3	ug/g(ppm)	35	40-140	03-Nov-00 04:07	pf
n-Dodecane	6.66	3.2	ug/g(ppm)	48	40-140	03-Nov-00 04:07	pf
n-Tetradecane	6.66	4.0	ug/g(ppm)	60	40-140	03-Nov-00 04:07	pf
n-Hexadecane	6.66	5.2	ug/g(ppm)	78	40-140	03-Nov-00 04:07	pf
n-Octadecane	6.66	6.0	ug/g(ppm)	90	40-140	03-Nov-00 04:07	pf
n-Eicosane	6.66	6.5	ug/g(ppm)	98	40-140	03-Nov-00 04:07	pf
n-Docosane	6.66	6.7	ug/g(ppm)	101	40-140	03-Nov-00 04:07	pf
n-Tetracosane	6.66	6.9	ug/g(ppm)	104	40-140	03-Nov-00 04:07	pf
n-Hexacosane	6.66	6.8	ug/g(ppm)	102	40-140	03-Nov-00 04:07	pf
n-Octacosane	6.66	6.9	ug/g(ppm)	104	40-140	03-Nov-00 04:07	pf

Surrogate Recoveries

1-Chloro-octadecane	50	% Rec.			40-140	03-Nov-00 04:07	pf

ENERGY LABORATORIES

Date: 21-Nov-00

EXTRACTABLE PETROLEUM HYDROCARBONS (EPH) QUALITY ASSURANCE REPORT
LABORATORY FORTIFIED BLANK

Extracted: 19-Oct-00; Batch: EPHS001019E

Target Analyte

CONSTITUENT	Spike Amt.	Measured	Units	% Rec.	QC Limit	Date/Time Analyzed	Analyst
Naphthalene	6.66	2.8	ug/g(ppm)	42	40-140	03-Nov-00 04:55	pf
Acenaphthylene	6.66	4.7	ug/g(ppm)	71	40-140	03-Nov-00 04:55	pf
Acenaphthene	6.66	4.0	ug/g(ppm)	60	40-140	03-Nov-00 04:55	pf
Fluorene	6.66	5.8	ug/g(ppm)	87	40-140	03-Nov-00 04:55	pf
Phenanthrene	6.66	5.7	ug/g(ppm)	86	40-140	03-Nov-00 04:55	pf
Anthracene	6.66	4.7	ug/g(ppm)	71	40-140	03-Nov-00 04:55	pf
Fluoranthene	6.66	6.8	ug/g(ppm)	102	40-140	03-Nov-00 04:55	pf
Pyrene	6.66	6.7	ug/g(ppm)	101	40-140	03-Nov-00 04:55	pf
Benzo(a)Anthracene	6.66	6.0	ug/g(ppm)	90	40-140	03-Nov-00 04:55	pf
Chrysene	6.66	5.3	ug/g(ppm)	80	40-140	03-Nov-00 04:55	pf
Benzo(b&k)Fluoranthe	13.32	14	ug/g(ppm)	105	40-140	03-Nov-00 04:55	pf
Benzo(a)Pyrene	6.66	6.8	ug/g(ppm)	102	40-140	03-Nov-00 04:55	pf
Indeno-Dibenzo	13.32	12	ug/g(ppm)	90	40-140	03-Nov-00 04:55	pf
Benzo(g,h,i)Perylene	6.66	7.8	ug/g(ppm)	117	40-140	03-Nov-00 04:55	pf

Surrogate Recoveries

2-Fluorobiphenyl	77	% Rec.	40-140	03-Nov-00 04:55	pf
2-Bromonaphthalene	73	% Rec.	40-140	03-Nov-00 04:55	pf
o-Terphenyl	74	% Rec.	40-140	03-Nov-00 04:55	pf

ENERGY LABORATORIES

Date: 21-Nov-00

QUALITY ASSURANCE MATRIX SPIKE REPORTS

MATRIX SPIKE REPORT
EPH Target Aliphatics

Extracted: 20-Oct-00; Batch: EPHS001019E

Sample Number: 002-00-59122

Constituent	MS Conc.	Sample Conc.	Spike Added	Units	MS %Rec.	QC Limit %Rec.	RPD
n-Decane	2.8	0	6.66	ug/g(ppm)	42	40-140	
n-Dodecane	4.5	0	6.66	ug/g(ppm)	68	40-140	
n-Tetradecane	5.1	0	6.66	ug/g(ppm)	77	40-140	
n-Hexadecane	6.2	0	6.66	ug/g(ppm)	93	40-140	
n-Octadecane	7.0	0	6.66	ug/g(ppm)	105	40-140	
n-Eicosane	7.0	0	6.66	ug/g(ppm)	105	40-140	
n-Docosane	6.8	0	6.66	ug/g(ppm)	102	40-140	
n-Tetracosane	6.9	0	6.66	ug/g(ppm)	104	40-140	
n-Hexacosane	6.9	0	6.66	ug/g(ppm)	104	40-140	
n-Octacosane	6.9	0	6.66	ug/g(ppm)	104	40-140	
Surrogate Recoveries							
1-Chloro-octadecane					65	40-140	
			MATRIX SPIKE DUPLICATE				
n-Decane	2.5	0	6.66	ug/g(ppm)	38	40-140	11
n-Dodecane	4.0	0	6.66	ug/g(ppm)	60	40-140	12
n-Tetradecane	4.3	0	6.66	ug/g(ppm)	65	40-140	17
n-Hexadecane	5.3	0	6.66	ug/g(ppm)	80	40-140	16
n-Octadecane	5.7	0	6.66	ug/g(ppm)	86	40-140	20
n-Eicosane	6.4	0	6.66	ug/g(ppm)	96	40-140	9
n-Docosane	6.3	0	6.66	ug/g(ppm)	95	40-140	8
n-Tetracosane	6.5	0	6.66	ug/g(ppm)	98	40-140	6
n-Hexacosane	6.5	0	6.66	ug/g(ppm)	98	40-140	6
n-Octacosane	6.4	0	6.66	ug/g(ppm)	96	40-140	8
Surrogate Recoveries							
1-Chloro-octadecane					54	40-140	

ENERGY LABORATORIES

Date: 21-Nov-00

QUALITY ASSURANCE MATRIX SPIKE REPORTS

MATRIX SPIKE REPORT
EPH Target Aromatics

Extracted: 20-Oct-00; Batch: EPHS001019E

Sample Number: 002-00-59122

Constituent	MS Conc.	Sample Conc.	Spike Added	Units	MS %Rec.	QC Limit %Rec.	RPD
Naphthalene	3.8	0.66	6.66	ug/g(ppm)	47	40-140	
Acenaphthylene	5.2	0	6.66	ug/g(ppm)	78	40-140	
Acenaphthene	4.3	0	6.66	ug/g(ppm)	65	40-140	
Fluorene	6.5	0	6.66	ug/g(ppm)	98	40-140	
Phenanthrene	6.1	0	6.66	ug/g(ppm)	92	40-140	
Anthracene	4.9	0	6.66	ug/g(ppm)	74	40-140	
Fluoranthene	6.8	0	6.66	ug/g(ppm)	102	40-140	
Pyrene	6.8	0	6.66	ug/g(ppm)	102	40-140	
Benzo(a)Anthracene	5.9	0	6.66	ug/g(ppm)	89	40-140	
Chrysene	5.1	0	6.66	ug/g(ppm)	77	40-140	
Benzo(b&k)Fluoranthe	14	0	13.32	ug/g(ppm)	105	40-140	
Benzo(a)Pyrene	6.9	0	6.66	ug/g(ppm)	104	40-140	
Indeno-Dibenzo	12	0	13.32	ug/g(ppm)	90	40-140	
Benzo(g,h,i)Perylene	7.8	0	6.66	ug/g(ppm)	117	40-140	
Surrogate Recoveries							
2-Fluorobiphenyl					85	40-140	
2-Bromonaphthalene					80	40-140	
o-Terphenyl					76	40-140	
MATRIX SPIKE DUPLICATE							
Naphthalene	4.0	0.66	6.66	ug/g(ppm)	50	40-140	6
Acenaphthylene	4.4	0	6.66	ug/g(ppm)	66	40-140	17
Acenaphthene	3.9	0	6.66	ug/g(ppm)	59	40-140	10
Fluorene	5.6	0	6.66	ug/g(ppm)	84	40-140	15
Phenanthrene	5.3	0	6.66	ug/g(ppm)	80	40-140	14
Anthracene	4.4	0	6.66	ug/g(ppm)	66	40-140	11
Fluoranthene	6.0	0	6.66	ug/g(ppm)	90	40-140	13
Pyrene	5.9	0	6.66	ug/g(ppm)	89	40-140	14
Benzo(a)Anthracene	6.4	0	6.66	ug/g(ppm)	96	40-140	8
Chrysene	6.2	0	6.66	ug/g(ppm)	93	40-140	19
Benzo(b&k)Fluoranthe	13	0	13.32	ug/g(ppm)	98	40-140	7
Benzo(a)Pyrene	6.3	0	6.66	ug/g(ppm)	95	40-140	9
Indeno-Dibenzo	13	0	13.32	ug/g(ppm)	98	40-140	8
Benzo(g,h,i)Perylene	7.0	0	6.66	ug/g(ppm)	105	40-140	11
Surrogate Recoveries							
2-Fluorobiphenyl					81	40-140	
2-Bromonaphthalene					79	40-140	
o-Terphenyl					64	40-140	

ENERGY LABORATORIES

EPH ALIPHATICS CONTINUING CALIBRATION REPORT

This continuing calibration report applies to the following analysis runs:
006-00-90875

Sample Name: cc1 EPH Aliphatics Continuing Cal FID22704 :1115DROF.cc1
Area File: G:\ORG\FIS\1115DROF.01A
Date & Time Collected: Nov 15, 2000 17:49:49
Method File: G:\ORG\FIS\ALIRFB.MET
Calibration File: G:\ORG\FIS\AL0525B.CAL

COMPOUND	ACTUAL	MEASURED	%RECOVERY	%RECOVERY LIMITS
n-Nonane	200	227	114	75-125
n-Decane	200	237	119	75-125
n-Dodecane	200	207	103	75-125
n-Tetradecane	200	191	96	75-125
n-Hexadecane	200	205	102	75-125
n-Octadecane	200	207	104	75-125
n-Nonadecane	200	209	104	75-125
n-Eicosane	200	207	104	75-125
n-Docosane	200	209	105	75-125
n-Tetracosane	200	209	104	75-125
n-Hexacosane	200	211	105	75-125
n-Octacosane	200	212	106	75-125
n-Triacontane	200	215	108	75-125
n-Hexatriacontane	200	218	109	75-125
TOTAL EPH	2800	2957	106	75-125
*1-Chloro-octadecane	200	213	106	75-125

ENERGY LABORATORIES

EPH AROMATICS CONTINUING CALIBRATION REPORT

This continuing calibration report applies to the following analysis runs:
006-00-90875

Sample Name: cc1 EPH Aromatics Continuing Cal Fid22703 :1115DROF.cc1
Area File: G:\ORG\FIS\1115DROF.02A
Date & Time Collected: Nov 15, 2000 18:42:46
Method File: G:\ORG\FIS\ARORFB.MET
Calibration File: G:\ORG\FIS\AR0525B.CAL

COMPOUND	ACTUAL	MEASURED	%RECOVERY	%RECOVERY LIMITS
Naphthalene	200	203	102	75-125
2-Methylnaphthalene	200	204	102	75-125
Acenaphthylene	200	201	101	75-125
Acenaphthene	200	186	93	75-125
Fluorene	200	211	105	75-125
Phenanthrene	200	215	107	75-125
Anthracene	200	201	100	75-125
Fluoranthene	200	204	102	75-125
Pyrene	200	203	102	75-125
Benzo(a)Anthracene	200	218	109	75-125
Chrysene	200	205	102	75-125
Benzo(b&k)Fluoranthe	400	419	105	75-125
Benzo(a)Pyrene	200	223	112	75-125
Indeno-Dibenzo	400	437	109	75-125
Benzo(g,h,i)Perylene	200	234	117	75-125
TOTAL EPH	3400	3551	104	75-125
*2-Fluorobiphenyl	200	213	106	75-125
*2-Bromonaphthalene	200	215	108	75-125
*o-Terphenyl	200	210	105	75-125

ENERGY LABORATORIES

EPH ALIPHATICS CONTINUING CALIBRATION REPORT

This continuing calibration report applies to the following analysis runs:
001-00-90875

Sample Name: cc5 EPH Aliphatics Continuing Cal FID22704 :1103DROF.cc5
Area File: G:\ORG\FIS\1103DROF.59A
Date & Time Collected: Nov 5, 2000 14:56:48
Method File: G:\ORG\FIS\ALIRFA.MET
Calibration File: G:\ORG\FIS\AL0525A.CAL

COMPOUND	ACTUAL	MEASURED	%RECOVERY	%RECOVERY LIMITS
n-Nonane	200	208	104	75-125
n-Decane	200	210	105	75-125
n-Dodecane	200	193	96	75-125
n-Tetradecane	200	184	92	75-125
n-Hexadecane	200	194	97	75-125
n-Octadecane	200	194	97	75-125
n-Nonadecane	200	195	98	75-125
n-Eicosane	200	194	97	75-125
n-Docosane	200	194	97	75-125
n-Tetracosane	200	194	97	75-125
n-Hexacosane	200	194	97	75-125
n-Octacosane	200	194	97	75-125
n-Triacontane	200	194	97	75-125
n-Hexatriacontane	200	195	98	75-125
TOTAL EPH	2800	2733	98	75-125
*1-Chloro-octadecane	200	199	100	75-125

ENERGY LABORATORIES

EPH AROMATICS CONTINUING CALIBRATION REPORT

This continuing calibration report applies to the following analysis runs:
001-00-90875

Sample Name: cc5 EPH Aromatics Continuing Cal FID22703 :1103DROF.cc5
Area File: G:\ORG\FIS\1103DROF.60A
Date & Time Collected: Nov 5, 2000 15:45:25
Method File: G:\ORG\FIS\ARORFA.MET
Calibration File: G:\ORG\FIS\AR0525A.CAL

COMPOUND	ACTUAL	MEASURED	%RECOVERY	%RECOVERY LIMITS
Naphthalene	200	200	100	75-125
2-Methylnaphthalene	200	199	100	75-125
Acenaphthylene	200	197	98	75-125
Acenaphthene	200	186	93	75-125
Fluorene	200	203	102	75-125
Phenanthrene	200	206	103	75-125
Anthracene	200	196	98	75-125
Fluoranthene	200	197	99	75-125
Pyrene	200	198	99	75-125
Benzo(a)Anthracene	200	205	102	75-125
Chrysene	200	198	99	75-125
Benzo(b&k)Fluoranthe	400	403	101	75-125
Benzo(a)Pyrene	200	214	107	75-125
Indeno-Dibenzo	400	421	105	75-125
Benzo(g,h,i)Perylene	200	228	114	75-125
TOTAL EPH	3400	3441	101	75-125
*2-Fluorobiphenyl	200	211	105	75-125
*2-Bromonaphthalene	200	206	103	75-125
*o-Terphenyl	200	204	102	75-125

ENERGY LABORATORIES

Client: URS Corp

Login No.: 00-90875
Date: 21-Nov-00

VOLATILE ORGANIC CHEMICALS LABORATORY ANALYSIS REPORT

EXPORT PLANT-317 MINERAL AVE. LIBBY, MT 59923

Received:19-Oct-00

Lab No./ Sample Info.	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	Units	Q	Date Analyzed	Surrogate %Rec.
001-00-90875	< 0.50	< 0.25	0.80	0.61	6.4	38	µg/g(ppm)	1,2	17-Nov-00	77*
LOAD 1										
18-Oct-00 15:50						Seq. I.D.:B11150P4				Analyst:bw
006-00-90875	< 0.10	< 0.05	< 0.05	< 0.05	< 0.10J	0.36	µg/g(ppm)		16-Nov-00	93
INTERMEDIATE										
18-Oct-00 18:00						Seq. I.D.:B11150P6				Analyst:bw

Qualifiers(Q) and Notes

(1)The reporting limits for MTBE and Benzene were increased due to sample matrix interference.

(2)Naphthalene was confirmed by EPA Method 8260 GC/MS analysis.

(J)Present but less than the practical quantitation limit.

(*)Surrogate recovery outside QC advisory limits. The QC advisory limit is 80 to 120%

ENERGY LABORATORIES

Date: 21-Nov-00

VOLATILE ORGANIC CHEMICALS ANALYSIS QUALITY ASSURANCE REPORT

QC Sample I.D.	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	Units	Q	Date Analyzed	Surrogate %Rec
Method Blank	< 0.10	< 0.05	< 0.05	< 0.05	< 0.10	< 0.10	µg/g(ppm)		16-Nov-00	118
Sequence I.D.: B11150P4										
Method Blank	< 0.10	< 0.05	< 0.05	< 0.05	< 0.10	< 0.10	µg/g(ppm)		17-Nov-00	111
Sequence I.D.: B11150P6										

LABORATORY CONTROL SAMPLE ANALYSIS RESULTS

Date Analyzed: 16-Nov-00 17:09:00

Sequence I.D.: B11150P4

Constituent	SPIKE ADDED µg/g(ppm)	MS CONC. µg/g(ppm)	MS %Rec.	QC Limit %Rec.	Surrogate %Rec.
MTBE	2.0	2.1	105	60-140	107
Benzene	2.0	2.1	105	60-140	
Toluene	2.0	2.0	100	60-140	
Ethylbenzene	2.0	2.2	110	60-140	
Xylenes	6.0	6.0	100	60-140	
Naphthalene	2.0	2.2	110	60-140	

LABORATORY CONTROL SAMPLE ANALYSIS RESULTS

Date Analyzed: 17-Nov-00 10:36:00

Sequence I.D.: B11150P4

Constituent	SPIKE ADDED µg/g(ppm)	MS CONC. µg/g(ppm)	MS %Rec.	QC Limit %Rec.	Surrogate %Rec.
MTBE	2.0	2.0	100	60-140	107
Benzene	2.0	2.1	105	60-140	
Toluene	2.0	1.9	95	60-140	
Ethylbenzene	2.0	2.1	105	60-140	
Xylenes	6.0	5.9	98	60-140	
Naphthalene	2.0	1.9	90	60-140	

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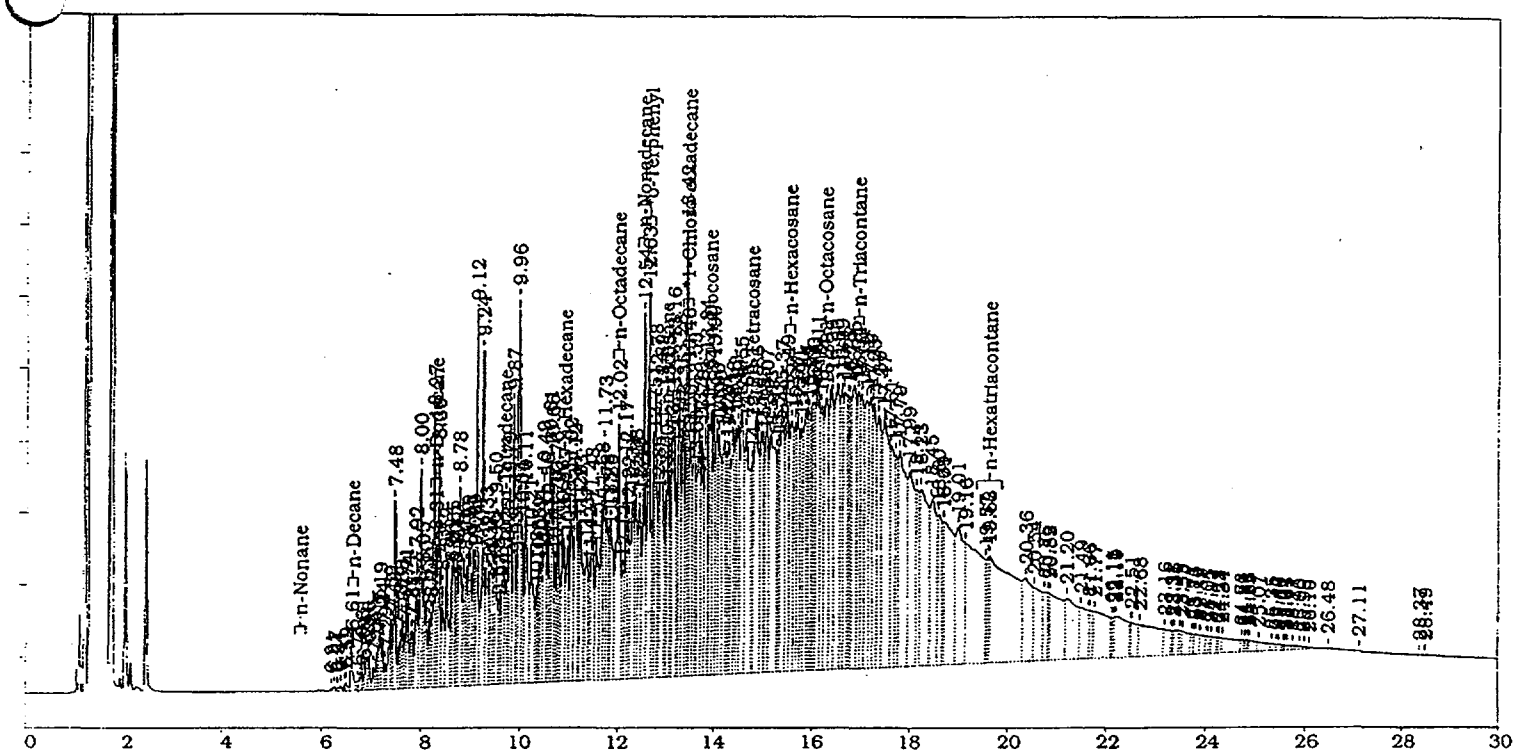
File=G:\ORG\HP1\1024DROH.07R Date printed=11-17-2000 Time= 14:34:31
Sample Name=001-00-90875 ;00-90875 Soil :1024DROH.ccl
to 30.0 min. Low Y=-5.0 High Y=100.0 mv Span=105.0



ENERGY LABORATORIES, INC. MDEP EPH SCREENING (FID) ANALYSIS REPORT
Sample Name: 001-00-90875 ;00-90875 Soil :1024DROH.ccl
Area File: G:\ORG\HP1\1024DROH.07A
Date & Time Collected: Oct 24, 2000 15:31:04
Method File: G:\ORG\HP1\SH102407.MET
Calibration File: G:\ORG\HP1\ALI0620K.CAL
Sample Weight: 30 Dilution: 2 S.A.: 1

Mean RF for C9 to C18 Hydrocarbons: 558.535
Mean RF for C19 to C36 Hydrocarbons: 569.7176
Mean RF for Total Extractable Hydrocarbons: 564.1262
Rt range for Diesel Range Organics: 6.53 to 17.04
Rt range for C9 to C18 Hydrocarbons: 5.47 to 12.41
Rt range for C19 to C36 Hydrocarbons: 12.46 to 19.88

Peaks subtracted from Total:

Compound Name	RT	Area	Amount	%Recovery
*o-Terphenyl	12.6	240,025	22.603	339
*1-Chloro-octade	13.5	95,318	11.274	169

DRO Area:	14,873,108	DRO AMOUNT	1,757.66
TEH Area:	20,897,256	TEH AMOUNT	2,469.57
C9-C18 Area:	5,516,445	Quant:	658.44
C19-C36 Area	13,699,999	Quant:	1,603.13

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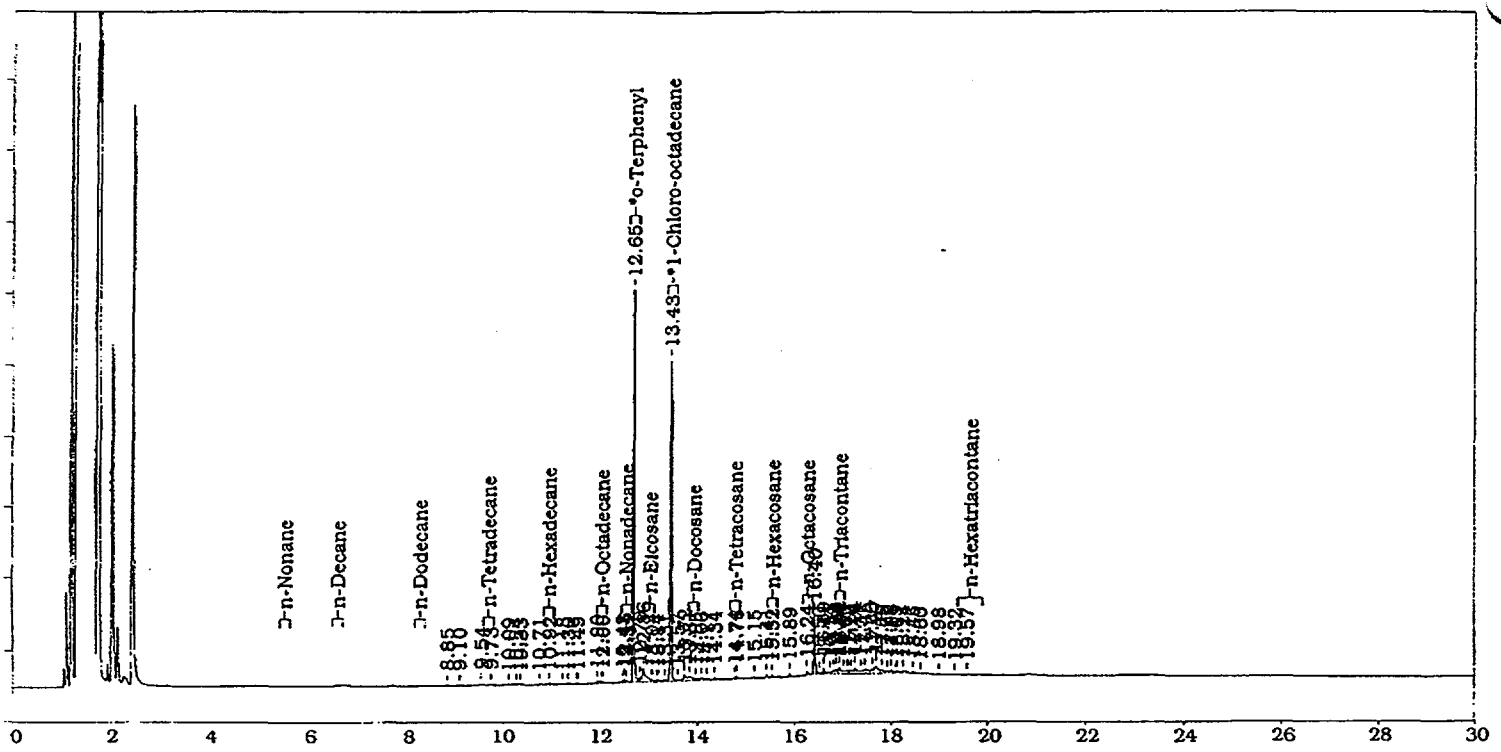
File=G:\ORG\HP1\1024DROH.02R Date printed=10-25-2000 Time= 10:30:05
Sample Name=002-00-90875 ;00-90875 Soil :1024DROH.ccl
0.0 to 30.0 min. Low Y=-5.0 High Y=100.0 mv Span=105.0



ENERGY LABORATORIES, INC. MDEP EPH SCREENING (FID) ANALYSIS REPORT
Sample Name: 002-00-90875 ;00-90875 Soil :1024DROH.ccl
Area File: G:\ORG\HP1\1024DROH.02A
Date & Time Collected: Oct 24, 2000 12:11:30
Method File: G:\ORG\HP1\SH102403.MET
Calibration File: G:\ORG\HP1\ALI0620K.CAL
Sample Weight: 30 Dilution: 1 S.A.: 1

Mean RF for C9 to C18 Hydrocarbons: 558.535
Mean RF for C19 to C36 Hydrocarbons: 569.7176
Mean RF for Total Extractable Hydrocarbons: 564.1262
Rt range for Diesel Range Organics: 6.53 to 17.04
Rt range for C9 to C18 Hydrocarbons: 5.47 to 12.41
Rt range for C19 to C36 Hydrocarbons: 12.46 to 19.88

Peaks subtracted from Total:

Compound Name	RT	Area	Amount	%Recovery
*o-Terphenyl	12.6	102,778	4.839	73
*1-Chloro-octade	13.4	87,179	5.156	77

DRO Area:	101,543	DRO AMOUNT	6.00
TEH Area:	144,062	TEH AMOUNT	8.51
C9-C18 Area:	19,153	Quant:	1.14
C19-C36 Area	119,130	Quant:	6.97

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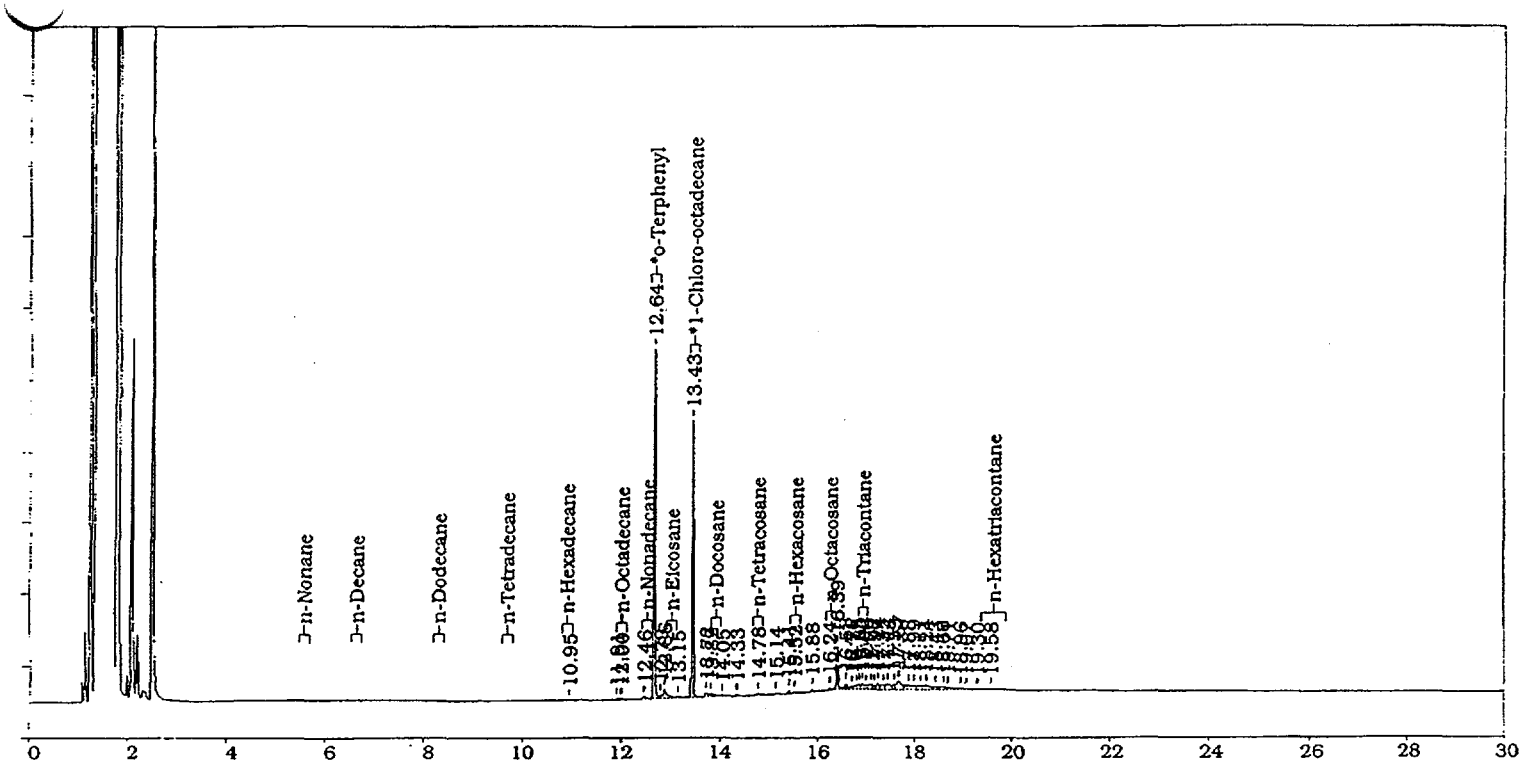
File=G:\ORG\HP1\1024DROH.03R Date printed=10-25-2000 Time= 10:30:20
Sample Name=003-00-90875 ;00-90875 Soil :1024DROH.cc1
to 30.0 min. Low Y=-5.0 High Y=100.0 mv Span=105.0



ERGY LABORATORIES, INC. MDEP EPH SCREENING (FID) ANALYSIS REPORT
mple Name: 003-00-90875 ;00-90875 Soil :1024DROH.cc1
Area File: G:\ORG\HP1\1024DROH.03A
Date & Time Collected: Oct 24, 2000 12:50:39
Method File: G:\ORG\HP1\SH102403.MET
Calibration File: G:\ORG\HP1\ALI0620K.CAL
Sample Weight: 30 Dilution: 1 S.A.: 1

Mean RF for C9 to C18 Hydrocarbons: 558.535
Mean RF for C19 to C36 Hydrocarbons: 569.7176
Mean RF for Total Extractable Hydrocarbons: 564.1262
Rt range for Diesel Range Organics: 6.53 to 17.04
Rt range for C9 to C18 Hydrocarbons: 5.47 to 12.41
Rt range for C19 to C36 Hydrocarbons: 12.46 to 19.88

Peaks subtracted from Total:

Compound Name	RT	Area	Amount	%Recovery
*o-Terphenyl	12.6	91,705	4.318	65
*1-Chloro-octade	13.4	75,860	4.486	67

DRO Area:	60,347	DRO AMOUNT	3.57
TEH Area:	123,706	TEH AMOUNT	7.31
C9-C18 Area:	6,018	Quant:	0.36
9-C36 Area	112,755	Quant:	6.60

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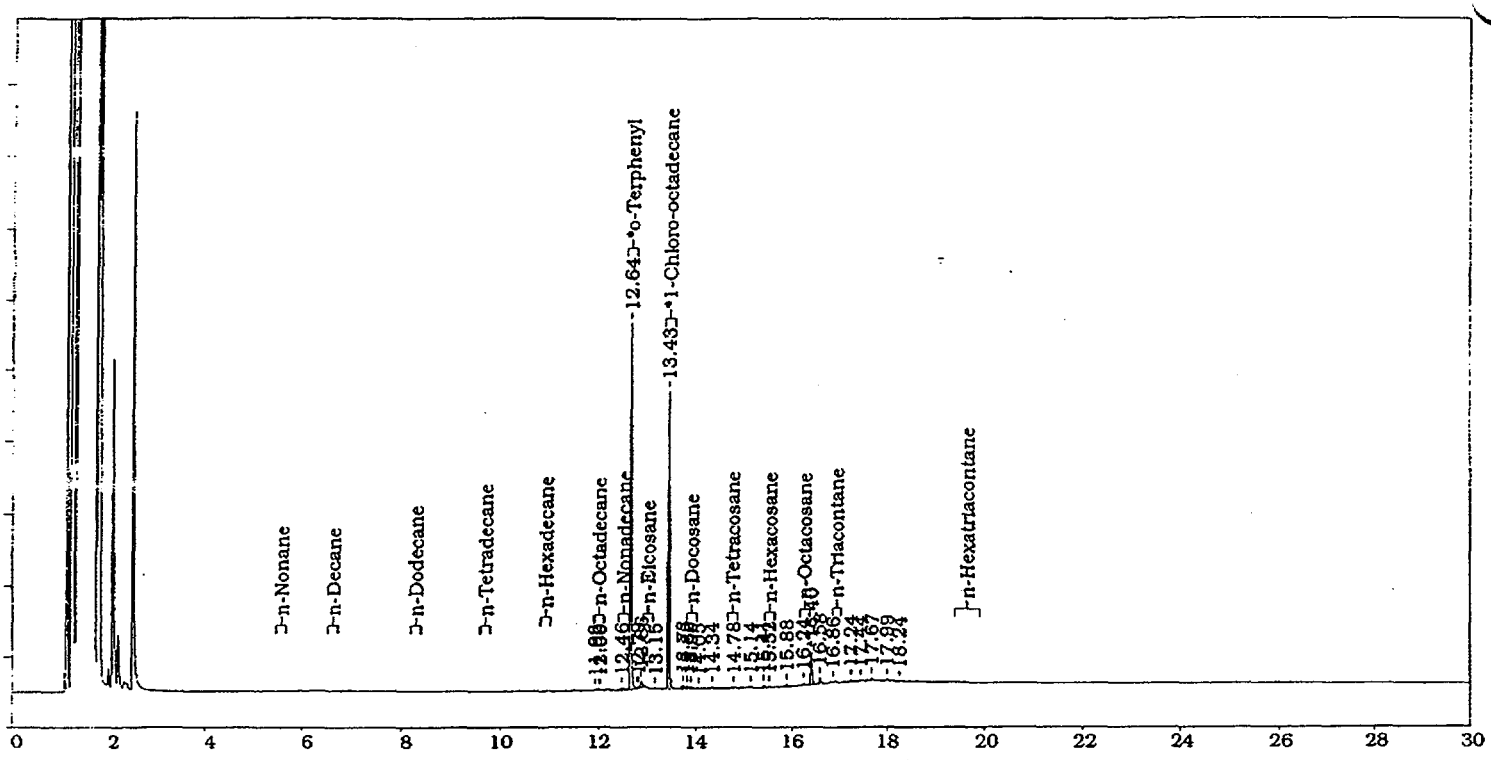
File=G:\ORG\HP1\1024DROH.04R Date printed=10-25-2000 Time= 10:30:36
Sample Name=004-00-90875 ;00-90875 Soil :1024DROH.ccl
0.0 to 30.0 min. Low Y=-5.0 High Y=100.0 mv Span=105.0



ENERGY LABORATORIES, INC. MDEP EPH SCREENING (FID) ANALYSIS REPORT
Sample Name: 004-00-90875 ;00-90875 Soil :1024DROH.ccl
Area File: G:\ORG\HP1\1024DROH.04A
Date & Time Collected: Oct 24, 2000 13:29:31
Method File: G:\ORG\HP1\SH1010A.MET
Calibration File: G:\ORG\HP1\ALI0620K.CAL
Sample Weight: 30 Dilution: 1 S.A.: 1

Mean RF for C9 to C18 Hydrocarbons: 558.535
Mean RF for C19 to C36 Hydrocarbons: 569.7176
Mean RF for Total Extractable Hydrocarbons: 564.1262
Rt range for Diesel Range Organics: 6.53 to 17.04
Rt range for C9 to C18 Hydrocarbons: 5.47 to 12.41
Rt range for C19 to C36 Hydrocarbons: 12.46 to 19.88

Peaks subtracted from Total:

Compound Name	RT	Area	Amount	%Recovery
*o-Terphenyl	12.6	96,194	4.529	68
*1-Chloro-octade	13.4	80,186	4.742	71

DRO Area:	40,871	DRO AMOUNT	2.42
TEH Area:	58,127	TEH AMOUNT	3.43
C9-C18 Area:	7,580	Quant:	0.45
C19-C36 Area	43,023	Quant:	2.52

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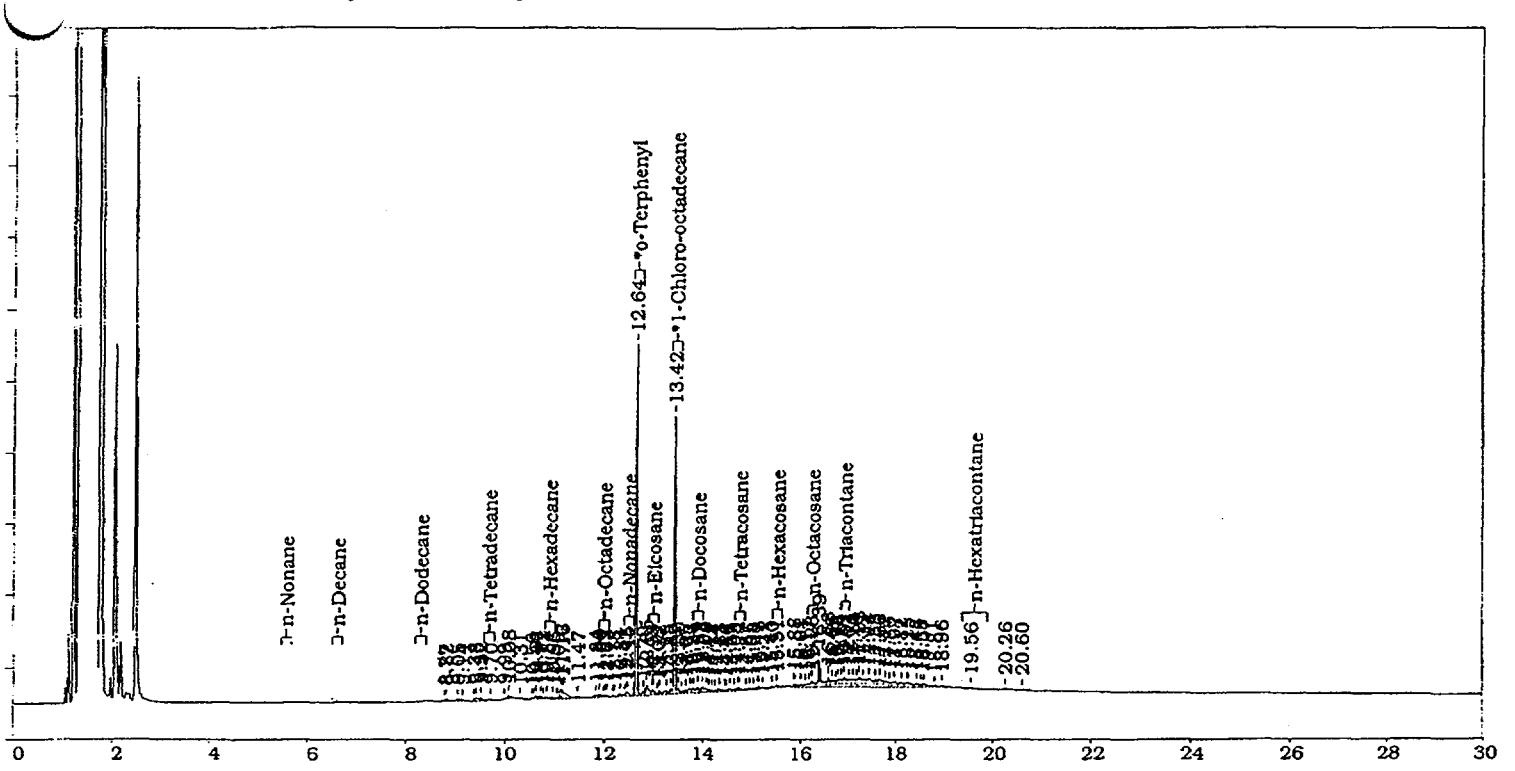
File=G:\ORG\HP1\1024DROH.05R Date printed=10-25-2000 Time= 10:30:52
Sample Name=005-00-90875 ;00-90875 Soil :1024DROH.cc1
to 30.0 min. Low Y=-5.0 High Y=100.0 mv Span=105.0



ENERGY LABORATORIES, INC. MDEP EPH SCREENING (FID) ANALYSIS REPORT
Sample Name: 005-00-90875 ;00-90875 Soil :1024DROH.cc1
Area File: G:\ORG\HP1\1024DROH.05A
Date & Time Collected: Oct 24, 2000 14:08:40
Method File: G:\ORG\HP1\SH102405.MET
Calibration File: G:\ORG\HP1\ALI0620K.CAL
Sample Weight: 30 Dilution: 1 S.A.: 1

Mean RF for C9 to C18 Hydrocarbons: 558.535
Mean RF for C19 to C36 Hydrocarbons: 569.7176
Mean RF for Total Extractable Hydrocarbons: 564.1262
Rt range for Diesel Range Organics: 6.53 to 17.04
Rt range for C9 to C18 Hydrocarbons: 5.47 to 12.41
Rt range for C19 to C36 Hydrocarbons: 12.46 to 19.88

Peaks subtracted from Total:

Compound Name	RT	Area	Amount	%Recovery
*o-Terphenyl	12.6	91,472	4.307	65
*1-Chloro-octade	13.4	74,527	4.407	66

DRO Area:	174,548	DRO AMOUNT	10.31
TEH Area:	269,566	TEH AMOUNT	15.93
C9-C18 Area:	50,013	Quant:	2.98
C19-C36 Area	199,803	Quant:	11.69

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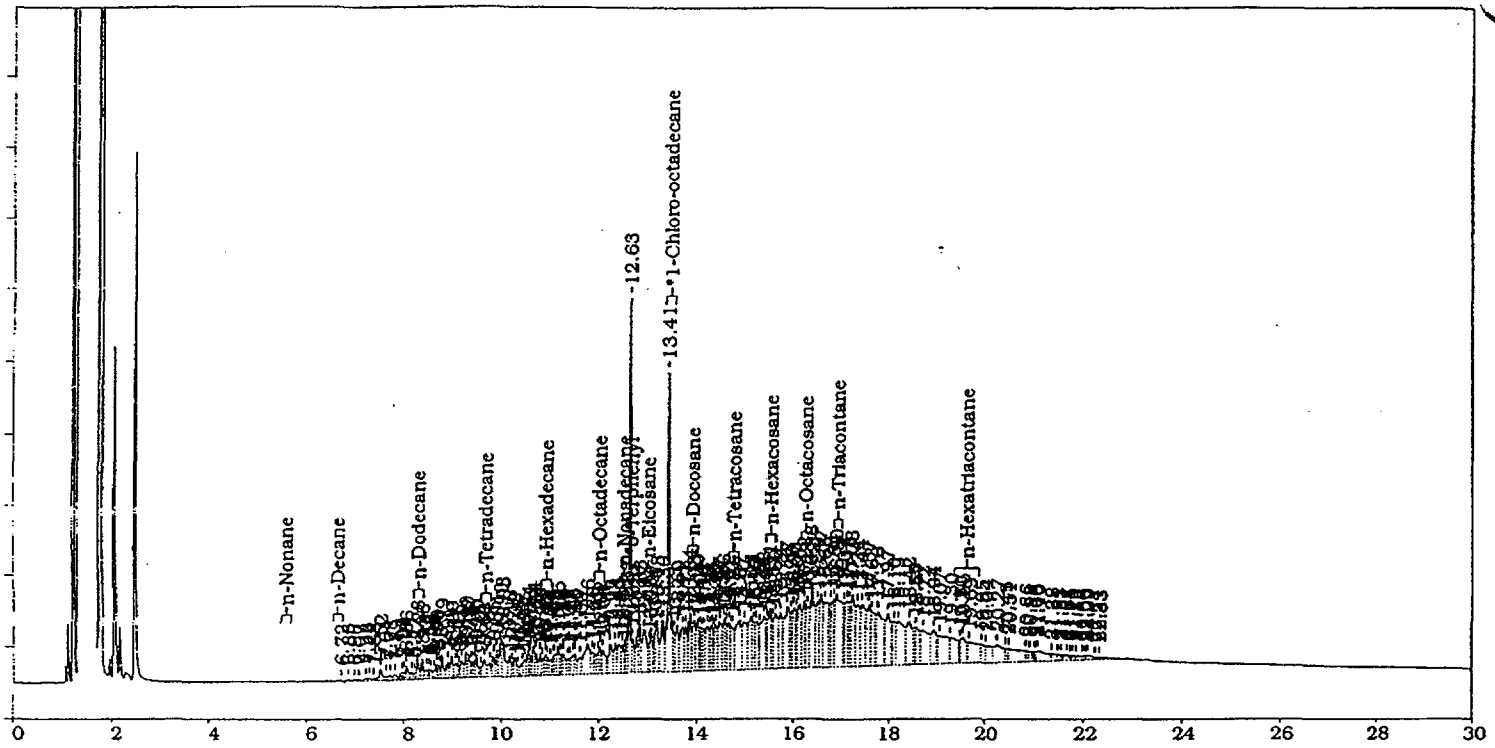
File=G:\ORG\HP1\1024DROH.06R Date printed=10-25-2000 Time= 10:31:06
Sample Name=006-00-90875 ;00-90875 Soil :1024DROH.cc1
0.0 to 30.0 min. Low Y=-5.0 High Y=100.0 mv Span=105.0



ENERGY LABORATORIES, INC. MDEP EPH SCREENING (FID) ANALYSIS REPORT
Sample Name: 006-00-90875 ;00-90875 Soil :1024DROH.cc1
Area File: G:\ORG\HP1\1024DROH.06A
Date & Time Collected: Oct 24, 2000 14:50:03
Method File: G:\ORG\HP1\SH102406.MET
Calibration File: G:\ORG\HP1\ALI0620K.CAL
Sample Weight: 30 Dilution: 1 S.A.: 1

Mean RF for C9 to C18 Hydrocarbons: 558.535
Mean RF for C19 to C36 Hydrocarbons: 569.7176
Mean RF for Total Extractable Hydrocarbons: 564.1262
Rt range for Diesel Range Organics: 6.53 to 17.04
Rt range for C9 to C18 Hydrocarbons: 5.47 to 12.41
Rt range for C19 to C36 Hydrocarbons: 12.46 to 19.88

Peaks subtracted from Total:

Compound Name	RT	Area	Amount	%Recovery
*o-Terphenyl	12.7	17,472	0.823	12
*1-Chloro-octade	13.4	131,521	7.778	117

DRO Area:	2,591,672	DRO AMOUNT	153.14
TEH Area:	3,761,239	TEH AMOUNT	222.25
C9-C18 Area:	668,459	Quant:	39.89
C19-C36 Area	2,898,246	Quant:	169.57

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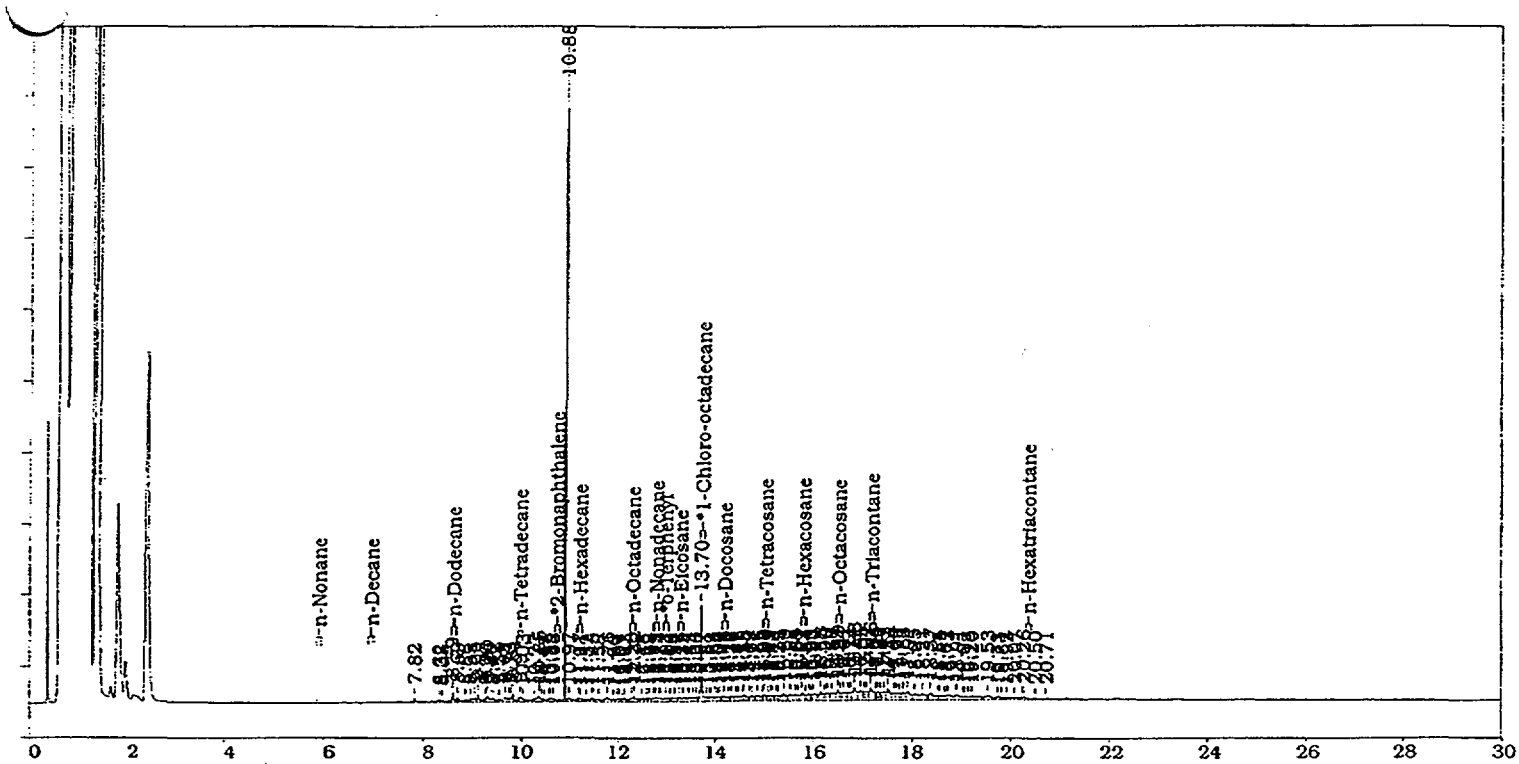
File=G:\ORG\FIS\1103DROF.64R Date printed=11-13-2000 Time= 12:16:37
Sample Name=001-00-90875 ;00-90875 Soil Aliphatic:1103DROF.cc5
to 30.0 min. Low Y=-5.0 High Y=100.0 mv Span=105.0



ERGY LABORATORIES, INC. MDEP EPH ALIPHATICS (FID) ANALYSIS REPORT
mple Name: 001-00-90875 ;00-90875 Soil Aliphatic:1103DROF.cc5
Area File: G:\ORG\FIS\1103DROF.64A
Date & Time Collected: Nov 5, 2000 18:58:58
Method File: G:\ORG\FIS\ALR64A.MET
Calibration File: G:\ORG\FIS\AL0525A.CAL
Sample Weight: 30 Dilution: 4 S.A.: 1

Mean RF for C9 to C18 Aliphatic Hydrocarbons: 539.412
Mean RF for C19 to C36 Aliphatic Hydrocarbons: 511.826
Mean RF for Total Extractable Hydrocarbons: 523.6486
Rt range for Diesel Range Organics: 6.91 to 16.56
Rt range for C9 to C18 Aliphatic Hydrocarbons: 5.86 to 12.74
Rt range for C19 to C36 Aliphatic Hydrocarbons: 12.765 to 20.4

Peaks subtracted from Total:

Compound Name	RT	Area	Amount	%Recovery
*o-Terphenyl	13.0	2,487	0.548	8
*1-Chloro-octade	13.7	26,038	7.552	113

DRO Area:	285,033	DRO AMOUNT	72.58
TEH Area:	464,143	TEH AMOUNT	118.18

Aliphatic Hydrocarbon Areas and Quantitatations:

-C18 Area:	132,198	Quant:	32.68
9-C36 Area	325,526	Quant:	84.80

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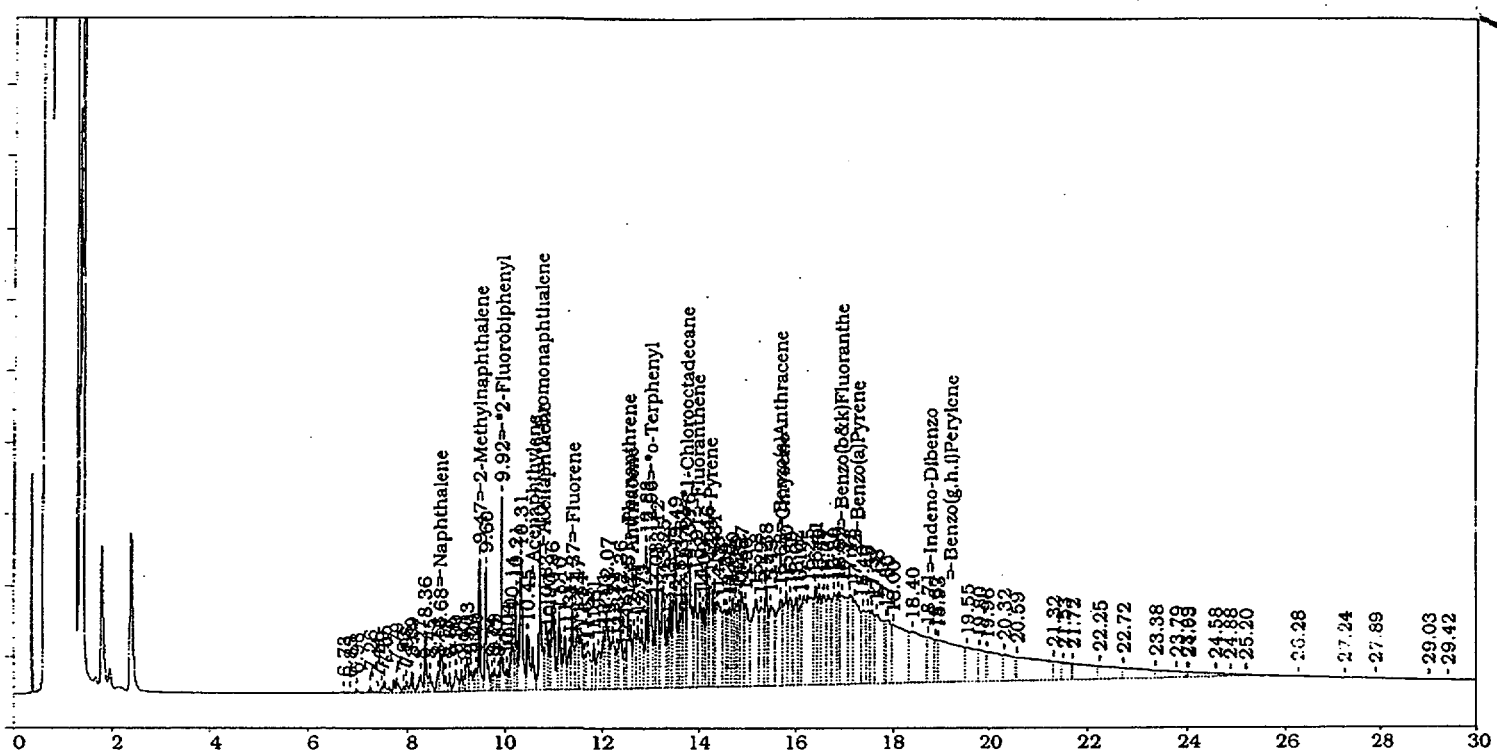
File=G:\ORG\FIS\1103DROF.65R Date printed=11-13-2000 Time= 12:18:54
Sample Name=001-00-90875 ;00-90875 Soil Aromatic:1103DROF.cc5
0.0 to 30.0 min. Low Y=-5.0 High Y=100.0 mv Span=105.0



ENERGY LABORATORIES, INC. MDEP EPH AROMATICS (FID) ANALYSIS REPORT
Sample Name: 001-00-90875 ;00-90875 Soil Aromatic:1103DROF.cc5
Area File: G:\ORG\FIS\1103DROF.65A
Date & Time Collected: Nov 5, 2000 19:47:43
Method File: G:\ORG\FIS\ARR65A.MET
Calibration File: G:\ORG\FIS\AR0525A.CAL
Sample Weight: 30 Dilution: 4 S.A.: 1

Mean RF EPH Aromatics: 583.4833
Rt range for EPH C11 to C22 Aromatics: 8.62 to 19.24

Peaks subtracted from Total:

Compound Name	RT	Area	Amount	%Recovery
*2-Fluorobipheny	9.9	60,231	453	227
*2-Bromonaphthal	10.7	74,249	806	403
*o-Terphenyl	13.0	77,432	507	254
*1-Chlorooctadec	13.7	59,742	520	260

C11-C22 Aromatics Area:	5,360,736	Quant:	1,225.00
EPH Aromatics total Area:	6,152,864	Quant:	1,406.01

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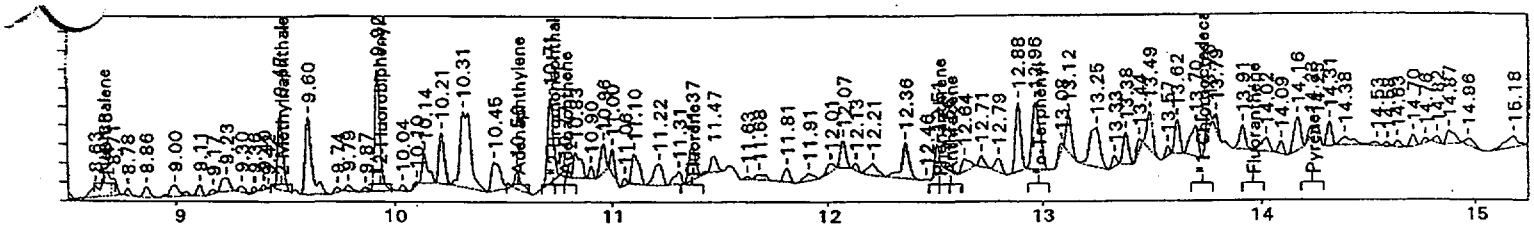
File=G:\ORG\FIS\1103DROF.65R Date printed=11-21-2000 Time= 07:42:03
Sample Name=001-00-90875 ;00-90875 Soil Aromatic:1103DROF.cc5
to 15.25 min. Low Y=0.22 High Y=41.083 mv Span=40.863



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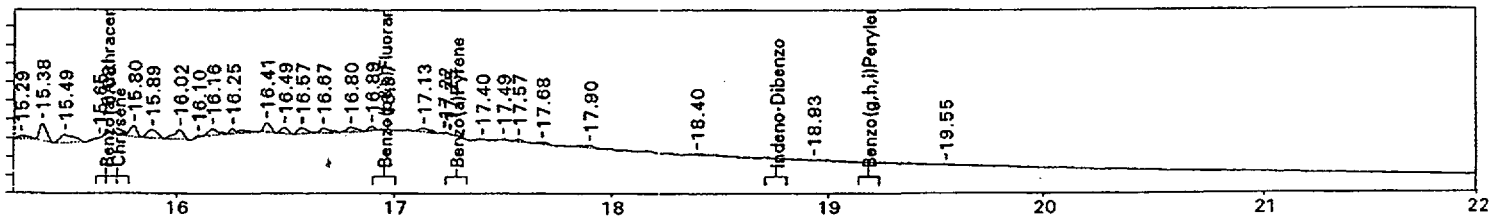
Sample Name=001-00-90875 ;00-90875 Soil Aromatic:1103DROF.cc5
15.25 to 22.0 min. Low Y=0.22 High Y=41.083 mv Span=40.863



ENERGY LABORATORIES, INC.----AROMATICS TARGET EPH CHROMATOGRAM
Sample Name: 001-00-90875 ;00-90875 Soil Aromatic:1103DROF.cc5
Area File: G:\ORG\FIS\1103DROF.65A
Date & Time Collected: Nov 5, 2000 19:47:43
Method File: G:\ORG\FIS\ART65A.MET
Calibration File: G:\ORG\FIS\AR0525A.CAL
Sample Weight: 30 Dilution: 4 S.A.: 1

Target Analytes:

COMPOUND	RT	Cal RRT	RRT	Area	Amount	Flag
Naphthalene	8.68	-8.67	-8.68	14257	3.029	
2-Methylnaphthalene	9.47	-9.48	-9.47	27692	6.219	
Acenaphthylene	10.56	-10.56	-10.56	8441	1.837	
Acenaphthene	10.77	10.77	10.77	1711	< 0.667	U
Fluorene	11.37	-11.37	-11.37	17034	3.837	
Phenanthrene	12.51	-12.52	-12.51	9746	2.302	
Anthracene	12.56	-12.57	-12.56	3230	0.688	
Fluoranthene	13.91	-13.96	-13.91	9468	2.116	
Pyrene	14.23	-14.23	-14.23	2903	0.645	J
Benzo(a)Anthracene	15.68	15.68	15.68	1181	< 0.667	U
Chrysene	0.00	0.00	0.00	0	< 0.667	U
Benzo(b&k)Fluoranthe	16.97	16.97	16.97	971	< 1.333	U
Benzo(a)Pyrene	17.25	17.25	17.25	810	< 0.667	U
Indeno-Dibenzo	0.00	0.00	0.00	0	< 1.333	U
Benzo(g,h,i)Perylene	0.00	0.00	0.00	0	< 0.667	U

SURROGATE CMPND	RT	ACTUAL	MEASURED	%RECOVERY	QC LIMITS
*2-Fluorobiphenyl	9.92	6.667	11.340	170/2	40-140
*2-Bromonaphthalene	10.71	6.667	12.296	184/2	40-140
*o-Terphenyl	12.96	6.667	8.273	124	40-140
Chlorooctadecane	13.70	6.667	4.822	72	40-140

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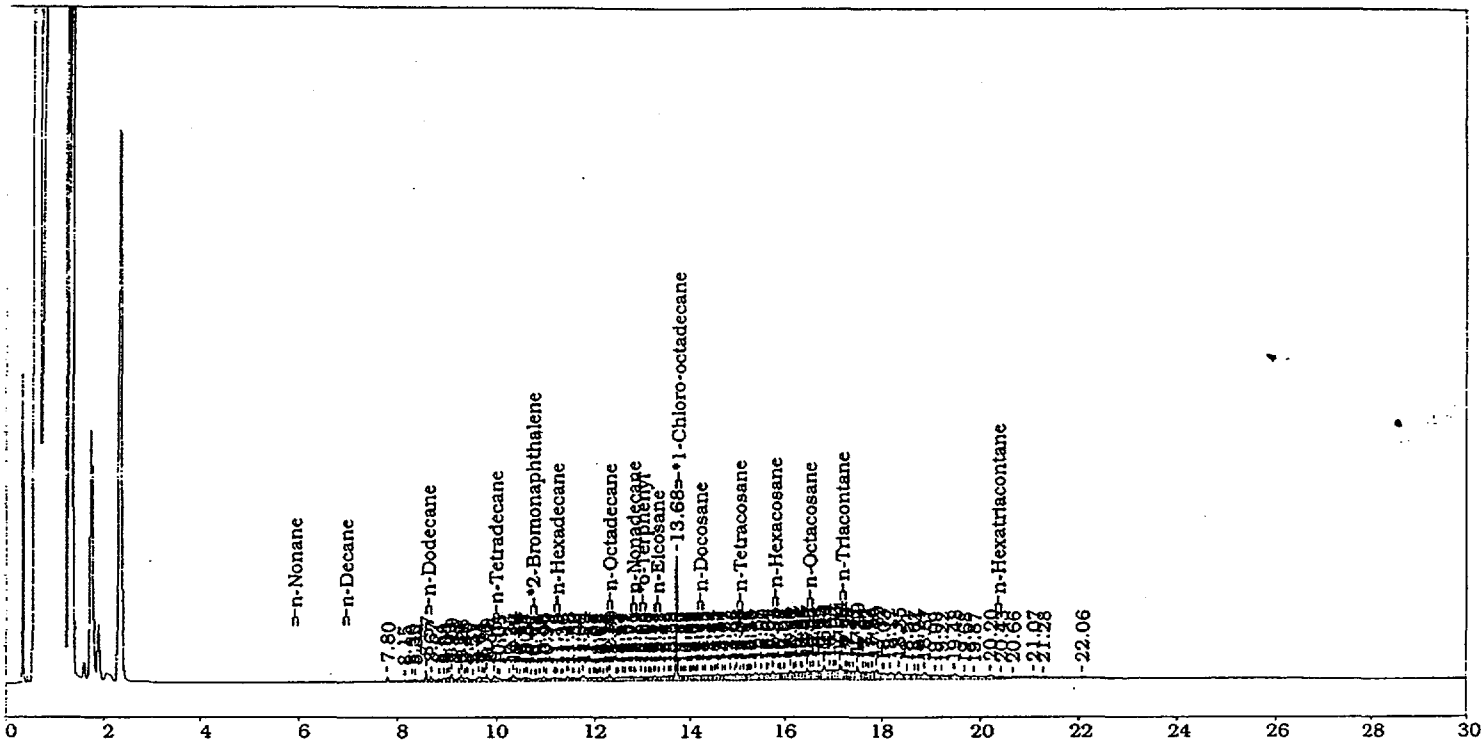
ile=G:\ORG\FIS\1115DROF.10R Date printed=11-16-2000 Time= 01:43:02
ample Name=006-00-90875 ;00-90875 Soil Aliphatic:1115DROF.ccl
.0 to 30.0 min. Low Y=-5.0 High Y=100.0 mv Span=105.0



ENERGY LABORATORIES, INC. MDEP EPH ALIPHATICS (FID) ANALYSIS REPORT
Sample Name: 006-00-90875 ;00-90875 Soil Aliphatic:1115DROF.ccl
Area File: G:\ORG\FIS\1115DROF.10A
Date & Time Collected: Nov 16, 2000 01:42:50
Method File: G:\ORG\FIS\ALIRFA.MET
Calibration File: G:\ORG\FIS\AL0525A.CAL
Sample Weight: 30 Dilution: 2 S.A.: 1

Mean RF for C9 to C18 Aliphatic Hydrocarbons: 539.412
Mean RF for C19 to C36 Aliphatic Hydrocarbons: 511.826
Mean RF for Total Extractable Hydrocarbons: 523.6486
Rt range for Diesel Range Organics: 6.91 to 16.56
Rt range for C9 to C18 Aliphatic Hydrocarbons: 5.86 to 12.74
Rt range for C19 to C36 Aliphatic Hydrocarbons: 12.765 to 20.4

Peaks subtracted from Total:

Compound Name	RT	Area	Amount	%Recovery
*2-Bromonaphthal	10.7	1,219	0.212	3
*o-Terphenyl	13.0	2,788	0.307	5
*1-Chloro-octade	13.7	34,758	5.040	76

DRO Area:	305,091	DRO AMOUNT	38.84
TEH Area:	523,380	TEH AMOUNT	66.63

Aliphatic Hydrocarbon Areas and Quantitatations:

C9-C18 Area:	131,680	Quant:	16.27
C19-C36 Area	364,551	Quant:	47.48

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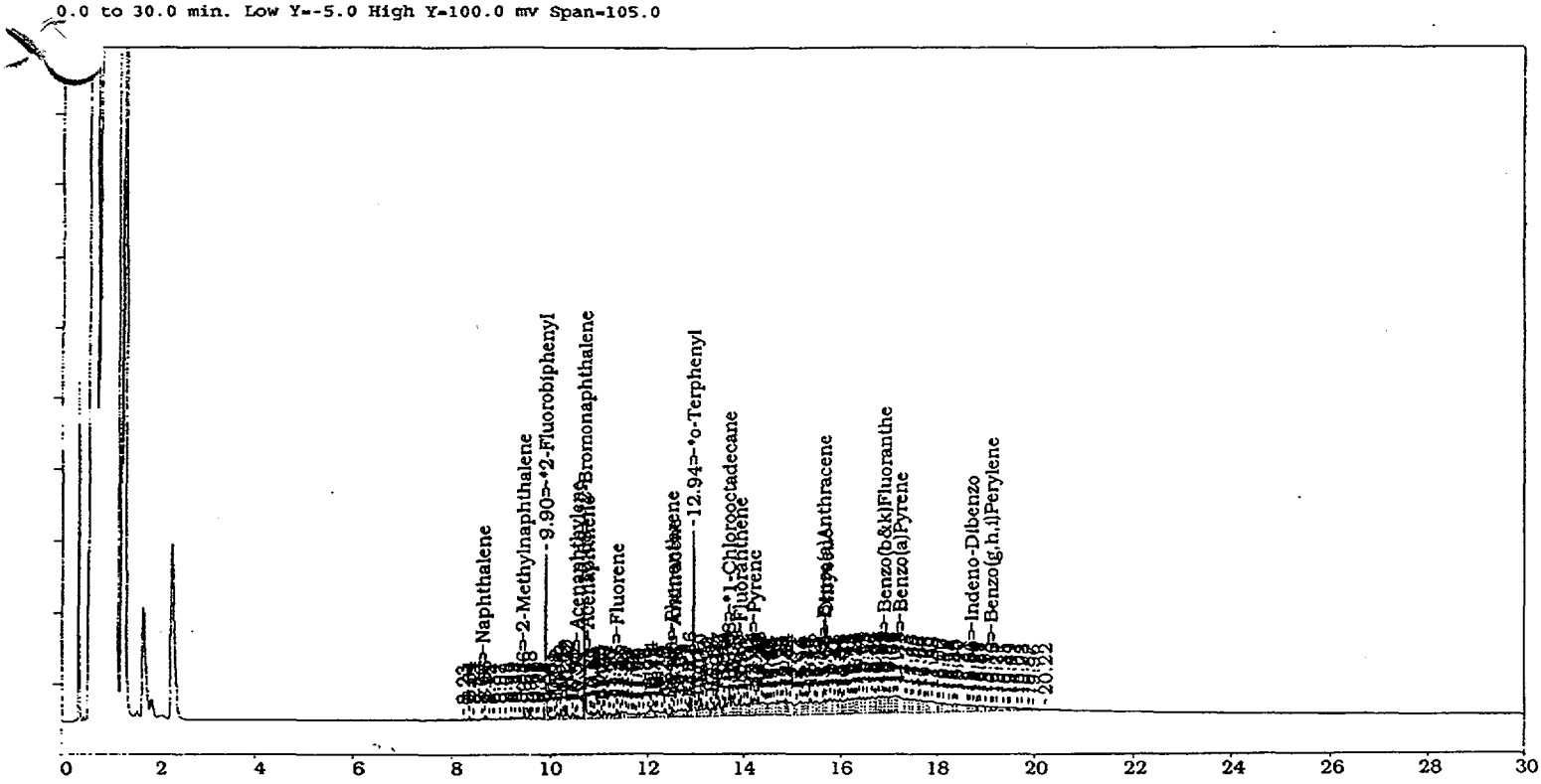
F[illegible]115DROF.11R Date printed=11-16-2000 Time= 15:35:24

Sample Name=006-00-90875 ;00-90875 Soil Aromatic:1115DROF.ccl

0.0 to 30.0 min. Low Y=-5.0 High Y=100.0 mv Span=105.0



ENERGY LABORATORIES, INC. MDEP EPH AROMATICS (FID) ANALYSIS REPORT
[illegible]mple Name: 006-00-90875 ;00-90875 Soil Aromatic:1115DROF.ccl
[illegible]ea File: G:\ORG\FIS\1115DROF.11A
Date & Time Collected: Nov 16, 2000 02:33:48
Method File: G:\ORG\FIS\ARORFB.MET
Calibration File: G:\ORG\FIS\AR0525B.CAL
Sample Weight: 30 Dilution: 2 S.A.: 1

Mean RF EPH Aromatics: 583.4833
Rt range for EPH C11 to C22 Aromatics: 8.58 to 19.15

Peaks subtracted from Total:

Compound Name	RT	Area	Amount	%Recovery
*2-Fluorobipheny	9.9	37,505	141	71
*2-Bromonaphthal	10.7	31,542	171	86
*o-Terphenyl	12.9	48,453	159	79
*1-Chlorooctadec	13.7	12,596	55	27

C11-C22 Aromatics Area:	776,889	Quant:	88.76
EPH Aromatics total Area:	813,941	Quant:	93.00

ENERGY LABORATORIES, INC. • P.O. Box 30916 • 1120 South 27th Street • Billings, MT 59107-0916
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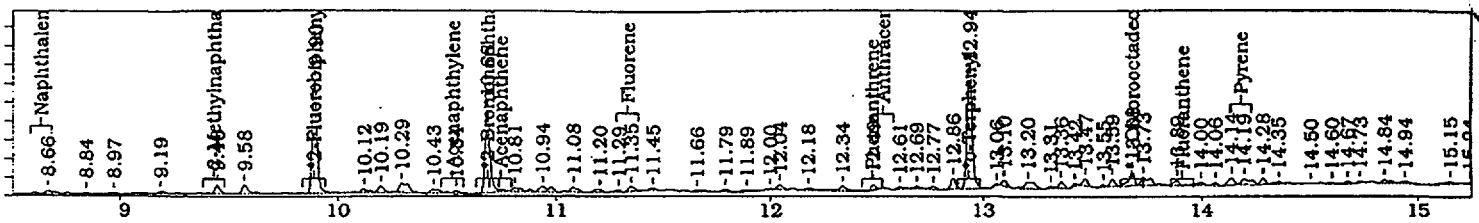
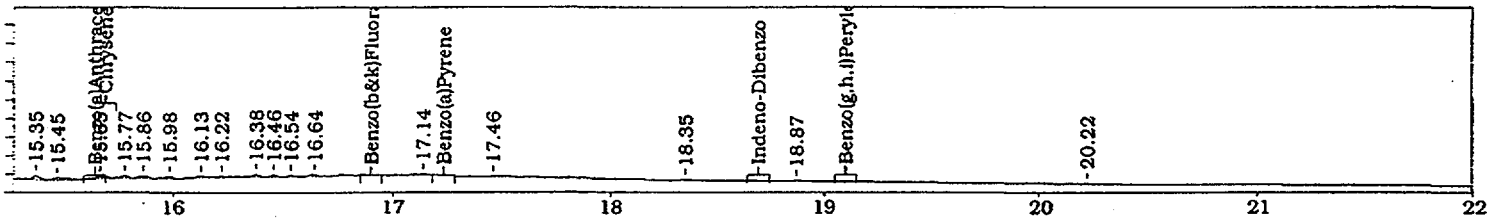
File=G:\ORG\FIS\1115DROF.11R Date printed=11-16-2000 Time= 15:33:57
Sample Name=006-00-90875 ;00-90875 Soil Aromatic:1115DROF.cc1
8.5 to 15.25 min. Low Y=-0.171 High Y=39.732 mv Span=39.904



File=G:\ORG\FIS\1115DROF.11R Date printed=11-16-2000 Time= 15:33:58
Sample Name=006-00-90875 ;00-90875 Soil Aromatic:1115DROF.cc1
15.25 to 22.0 min. Low Y=-0.171 High Y=39.732 mv Span=39.904



ENERGY LABORATORIES, INC.----AROMATICS TARGET EPH CHROMATOGRAM
Sample Name: 006-00-90875 ;00-90875 Soil Aromatic:1115DROF.cc1
Area File: G:\ORG\FIS\1115DROF.11A
Date & Time Collected: Nov 16, 2000 02:33:48
Method File: G:\ORG\FIS\ART07B.MET
Calibration File: G:\ORG\FIS\AR0525B.CAL
Sample Weight: 30 Dilution: 2 S.A.: 1

Target Analytes:

COMPOUND	RT	Cal RRT	RRT	Area	Amount	Flag
Naphthalene	8.66	8.66	8.66	1545	< 0.333	U
2-Methylnaphthalene	9.46	-9.44	-9.46	2982	0.335	
Acenaphthylene	10.54	10.54	10.54	1145	< 0.333	U
Acenaphthene	0.00	0.00	0.00	0	< 0.333	U
Fluorene	11.35	11.35	11.35	2098	< 0.333	U
Phenanthrene	12.49	12.49	12.49	1586	< 0.333	U
Anthracene	0.00	0.00	0.00	0	< 0.333	U
Fluoranthene	13.89	13.89	13.89	1870	< 0.333	U
Pyrene	14.19	-14.18	-14.19	3745	0.416	
Benzo(a)Anthracene	15.65	15.65	15.65	1773	< 0.333	U
Chrysene	0.00	0.00	0.00	0	< 0.333	U
Benzo(b&k)Fluoranthe	0.00	0.00	0.00	0	< 0.667	U
Benzo(a)Pyrene	0.00	0.00	0.00	0	< 0.333	U
Indeno-Dibenzo	0.00	0.00	0.00	0	< 0.667	U
Benzo(g,h,i)Perylene	0.00	0.00	0.00	0	< 0.333	U

SURROGATE CMPND	RT	ACTUAL	MEASURED	%RECOVERY	QC LIMITS
*2-Fluorobiphenyl	9.90	6.667	4.644	70	40-140
*2-Bromonaphthalene	10.68	6.667	5.255	79	40-140
*o-Terphenyl	12.94	6.667	4.757	71	40-140
*1-Chlorooctadecane	13.68	6.667	0.811	12	40-140