485070

URS

September 29, 2000

US EPA Region VIII
Attn. Mr. Paul Peronard, 8EPR-EP
On-Scene Coordinator
999 18th Street, Suite 500
Denver, CO. 80202-2466

501 Mineral Avenue
Libby, MT 59923

RE: US EPA Region VIII Unilateral Administrative Order (UAO) No. CERCLA-8-2000-10, Libby, Mt. Export Plant Weekly Report for September 22-28, 2000.

Dear Mr. Peronard:

Per the above referenced Unilateral Administrative Order, please find attached a weekly report describing the activities that occurred during the week of September 22-28, 2000, at the Libby, Mt. Export Plant.

Please call if you have any questions concerning this submittal.

Sincerely,

Mr. Jim Stout
Site Project Manager

Attachment

cc:	John Constan	Montana DEQ
	Ken Lund	Holme, Roberts & Owen
	Bob Mariam	W.R. Grace
	Karen Brown	W.R. Grace
	Ray Lidstrom	URS

URS COPY
Project No. 805169
File Code No. 6.2.b.1.9
Doc No. 1 of 4

URS

September 29, 2000

US EPA Region VIII
Attn. Mr. Paul Peronard, 8EPR-EP
On-Scene Coordinator
999 18th Street, Suite 500
Denver, CO. 80202-2466

501 Mineral Avenue
Libby, MT 59923

URS
Project No. 805169
File Code No. 6.2.b.1.9
Doc No. 2 of 4

Dear Mr. Peronard:

Progress Report for the Week of September 22 – September 28, 2000

The Weekly Progress Report for the two-week period of September 08 - 21, 2000 was submitted to the EPA and State on September 22, 2000.

At Millwork West

- Millwork West continued planing lumber through September 28, 2000.
- Cleaning inside the warehouse continued. Additional building materials were cleaned and moved into the small shed.
- Four truckloads of miscellaneous materials and debris were removed from the warehouse and hauled to the mine disposal area.

At Millwork West Temporary Relocation Site

- Installation of the metal roof and approximately 90% of the metal siding on the small building was completed on September 28, 2000.
- Installation of the two fire hydrants was completed.
- Construction of the interior shelving in the large pole building was completed and supports for stand-up lumber were near completion on September 28, 2000.
- The flush mounting of two wells was completed on September 28, 2000.
- A temporary lavatory was delivered on September 28, 2000.

At Mine Disposal Site

- Full level C PPE is now required at the mine site per Paul Peronard.
- The drilling of monitoring wells MW-1 and MW-2 has been completed. The installation of casing and well screen in MW-2 has been scheduled for next week.

Problems and Issues

- Addendum No. 7 and Addendum No.8 have not been signed by the EPA.
- Perimeter air sampling is now being required by the EPA when work is being conducted, at the seven previously designated locations at the Export Plant. These samples are being collected in areas where the public has complete access.
- Mel Burnett (Millwork West) continues to use the rooftops and spacer blocks previously purchased by W.R. Grace. This material is considered contaminated.
- All visitors, workers, and contractors conducting activities within the mine site must adhere to level C PPE restrictions per EPA request on August 24, 2000.

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Doc No. 3 of 4

Analytical Data Received

- No new data has been received.

Material Movement and Disposal

- Four truckloads of miscellaneous materials and debris created from cleaning activities at the Export Plant were taken to the mine disposal area.

Health and Safety

- All visitors, workers, and contractors conducting activities within the mine site must adhere to level C PPE restrictions.
- No incidents or accidents.

Anticipated Developments Next Week

- The Millwork West planer run will continue.
- The cleaning of material from the warehouse as well as the removal of materials for disposal at the mine.
- Construction of the new pole buildings will be completed.
- Final grading and installation of temporary fencing at the new building location will be completed.
- Citizen's Communication will install phone service at new location.
- A contractor will complete the construction of supports for stand-up lumber in the large pole building.
- The set-up of the lavatory at new location will be completed.
- The retail office and inventory of Millwork West will be relocated to the new pole buildings.
- A contractor will complete the installation of new monitoring well MW-2 at the mine.
- After Millwork West has been relocated to the new location, work will begin at the Export Plant to establish exclusion and decontamination zones, staging areas, etc. Fencing and runon/runoff controls will also be put in place.
- Soil excavation activities will be initiated.

Planned Resolutions or Anticipated Problems

- A signed copy of Addendum No. 2, updating the implementation schedule for the temporary relocation of Millwork West's business, has not been received.
- Issues concerning use of rooftops and spacer blocks by Millwork West.

Schedule

- Both pole structures at the Millwork West temporary relocation site will be completed by October 1, 2000.
- The final movement of the Millwork West retail business will be completed by October 1, 2000.

Respectfully,

Jim Stout
Project Coordinator
Libby Asbestos Site

Attachments (1)

URS COPY
Project No. 805169
File Code No. 6.2.b.1.9
Doc No. 4 of 4

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 415 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	—	—	—	—	—	—	—	—	—	—	2.0/100	Field Blank
B02	Field Blank	—	—	—	—	—	—	—	—	—	—	1.0/100	Field Blank
P03	EX	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

URS

Project No. 805169
File Code No. 4.5.b.2.79
Doc No.

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, CO 80127
Phone: (303) 932-8484 FAX: (303) 932-8585

URS

Project No. 805169
File Code No. 4.5.b.2.80
Doc No.

CONTRACTOR PERSONNEL AIR SAMPLING SUMMARY

Client: AC & S **Project:** 01001-043	**Project Contact:** Chuck Shaw	**Location:** WR Grace Vermiculite Plant-warehouse Libby, MT	**KEH Rep:** Patrick McGuinn **Analysis By:** Patrick McGuinn

Date: 9/22/00	**Calibration:** ✓ Rotameter ____ ID ____ Other ____ ID	**Microscope Field Area:** ✓ 0.00785 sq mm ____ other ____ sq mm	**PCM Filter:** ✓ 0.8 um25mm Mft.____ ____ 0.8 um37mm Lot#____	**Other Media:** ____ Type Mft.____ ____ Type Mft.____

Name: Victor Rojas **SSN:** 645-65-4365	**Name:** Margarita Rivera **SSN:** 438-20-3756	**Name:** — **SSN:**	**Name:** — **SSN:**

TOTAL				TOTAL				TOTAL				TOTAL			
Sample #	Minutes	Volume	F/cc	Sample #	Minutes	Volume	F/cc	Sample #	Minutes	Volume	F/cc	Sample #	Minutes	Volume	F/cc
P03	36	54.00	<LOQ	P04	355	710.00	0.049								
P05	199	298.50	0.045	P06	130	260.00	0.141								
P07	130	195.00	0.243												

TWA: 0.085 f/cc TWA: 0.074 f/cc TWA: n/a TWA: n/a

Comments: 0.036 + 8.955 + 31.590 / 480 = 40.581 / 480

Comments: 17.395 + 18.33 / 485 = 35.725 / 485

Comments:

Comments

URS

Project No. 805169
File Code No. 4.5.b.2.81
Doc No.

KOCH ENVIRONMENTAL HEALTH, INC.
ASBESTOS FIBER COUNT WORKSHEET

DATE: 9/22/00	KEH PROJECT #: 01001-043	KEH REP: Patrick McGuire
	MICROSCOPE ID #: 1	ANALYST: Patrick McGuire

SAMPLE #	FIBER COUNT	F/N	F/N -B/NB / 100	FIBERS/MM²	SAMPLE VOL. (L)	LOQ (fibers/cc)	FIBERS/CC	COMMENTS
Field Blank B01	2.0	2.0/100	—	—	—	—	—	Field Blank
Field Blank B02	1.0	1.0/100	—	—	—	—	—	Field Blank
P03	4.5	4.5/100	3.0/100	3.82	54.00	0.050	~~0.029~~ <LOQ	—
P04	72.0	72.0/100	70.5/100/.00785	89.81	710.00	0.004	0.049	—
P05	29.0	29.0/100	27.5/100/.00785	35.03	293.50	0.009	0.045	—
P06	76.0	76.0/100	74.5/100/.00785	94.90	260.00	0.010	0.141	—
P07	96.5	96.5/100	96.5/100/.00785	122.93	195.00	0.014	0.243	—
Blind Recount								

SAMPLING INFORMATION:

Effective Collection Area of Filter:	Microscope Field Area:	NIOSH 7400 Method A Rules ✓
✓ 385 mm², 25 mm filter	✓ 0.00785 mm²	
855 mm², 37 mm filter	other (list)	Other Method

ANALYTICAL INFORMATION:

MICROSCOPE ADJUSTMENTS: ✓ phase test ✓ micrometer ✓ adjust field iris ✓ adjust phase rings ✓ focus on samples

ANALYST INFORMATION:

DATE: 9/24/00 ANALYST: Patrick McGuire SIGNATURE: [signature]

KEH97/FORMS/FIBERFRM

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
9/22/00	URS Radian PROJECT #: 21091-001	Tim Gish	WR Grace Vermiculite Plant WORK AREA: Libby, MT	Patrick McGowen ANALYSIS BY: Patrick McGowen

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. 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	—	—	—	—	—	—	—	—	—	—	10/100	Field Blank
PM03/A-09	Perimeter	Location #1 - North of Pole Barn on perimeter	—	1012	1558	346	7.00	6.50	6.75	2335.50	0.001	3.0/100	< LOQ
PM04/A-27		Location #2 - NW of Planer building - on perimeter	—	1026	1602	336	5.50	5.50	5.50	1848.00	0.001	2.5/100	< LOQ
PM05/A-23		Location #3 West of Planer building on perimeter	—	1022	1604	342	5.00	5.00	5.00	1710.00	0.002	4.5/100	< LOQ
PM06/A-25		Location #4 - SW of Planer building - on perimeter	—	1028	1608	340	5.00	5.00	5.50	1870.00	0.001	3.5/100	LOQ
PM07/A-1		Location #5 - South of warehouse building - on perimeter	—	1044	1613	329	5.00	5.00	5.00	1645.00	0.002	8.0/100	0.002
PM08/A-24		Location #6 - NE of lumber storage building on perimeter	—	1053	1615	322	5.00	5.00	5.00	1610.00	0.002	2.0/100	< LOQ
PM09/		Location #7 - NE corner of property - on stop sign - Highway 37	—	1058	1617	319	5.50	5.00	5.25	1674.75	0.002	2.0/100	< LOQ
AB/A-87	OWA	SE of Pole Barn & North of small shed	—	1040	1610	330	5.00	5.00	5.00	1650.00	0.002	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

URS
Project No. 805169
File Code No. 4.5.b.4.8c
Doc No.

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KOCH ENVIRONMENTAL HEALTH, INC.
ASBESTOS FIBER COUNT WORKSHEET

DATE: 9/22/00	KEH PROJECT #: 2100-001 MICROSCOPE ID #:	KEH REP: Patrick McGurren ANALYST: Patrick McGurren

SAMPLE #	FIBER COUNT	F/N	F/N -B/NB / 100	FIBERS/MM²	SAMPLE VOL. (L)	LOQ (fibers/cc)	FIBERS/CC	COMMENTS
Field Blank B01	2.0	2.0/100	—	—	—	—	—	Field Blank
Field Blank B02	1.0	1.0/100	—	—	—	—	—	Field Blank
PM03	3.0	3.0/100	1.5/100/.00785	1.91	2335.50	0.001	<LOQ	—
PM04	2.5	2.5/100	1.0/100/.00785	1.27	1848.00	0.001	<LOQ	—
PM05	4.5	4.5/100	3.0/100/.00785	3.82	1710.00	0.002	<LOQ	—
PM06	3.5	3.5/100	2.0/100/.00785	2.55	1870.00	0.001	LOQ	—
PM07	8.0	8.0/100	6.5/100/.00785	8.28	1645.00	0.002	0.002	—
PM08	2.0	2.0/100	0.5/100/.00785	0.64	1610.00	0.002	<LOQ	—
PM09	2.0	2.0/100	0.5/100/.00785	0.64	1674.75	0.002	<LOQ	—
A10	5.0	5.0/100	3.5/100/.00785	4.46	1650.00	0.002	<LOQ	—
Blind Recount	—	—	—	—	—	—	—	—

SAMPLING INFORMATION:

Effective Collection Area of Filter:	Microscope Field Area:	NIOSH 7400 Method A Rules ✓
✓ 385 mm², 25 mm filter	✓ 0.00785 mm²	
___ 855 mm², 37 mm filter	___ other (list)	Other Method ___

ANALYTICAL INFORMATION:

MICROSCOPE ADJUSTMENTS: ✓ phase test ✓ micrometer ✓ adjust field iris ✓ adjust phase rings ✓ focus on samples

ANALYST INFORMATION:

DATE: 9/24/00 ANALYST: Patrick McGurren SIGNATURE: [signature]

URS

Project No. 805169
File Code No. 4.5.6.4.87
Doc No. ___

KEH97/FORMS/FIBERFRM

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
9/22/00	URS Radian PROJECT #: 21001-001	Jim Stout	WR Grace Vermiculite Mine 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 145 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
B01a	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02a	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
A03a	WORK AREA	West of drilling site	Soil DRILLING	0904	1710	486	1.50	1.50	1.50	729.00	0.004	0/100	< LOQ
A04a	↓	South of drilling site	↓	0907	1713	486	1.50	1.50	1.50	729.00	0.004	1.0/100	< LOQ
P05a	P	North of Giant Hole at drilling site - WORN BY DAVE ELLIOTT	↓	0901	1708	487	2.00	2.00	2.00	974.00	0.003	100/67	0.075
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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File Code No. 4.5.6.4.88
Doc No.

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, CO 80127
Phone: (303) 932-8484 FAX: (303) 932-8585

URS

Project No. 865169
File Code No. 4.5.b.4.89
Doc No.

CONTRACTOR PERSONNEL AIR SAMPLING SUMMARY

Client: URS Radian **Project:** 2100-C.O.	**Project Contact:** Jim Sica	**Location:** WR GRACE Vermiculite Mine - North of Giant Hole Libby, MT	**KEH Rep:** Patrick McGurran **Analysis By:** Patrick McGurran

Date:	Calibration:	Microscope Field Area:	PCM Filter:	Other Media:
9/22/00	✓ Rotameter ____ ID ____ Other ____ ID	✓ 0.00785 sq mm ____ other ____ sq mm	✓ 0.8 um25mm Mft. ____ ____ 0.8 um37mm Lot# ____	____ Type Mft. ____ ____ Type Mft. ____

Name:	Name:	Name:	Name:
Dave Tiff	—	—	—
SSN: 517-86-6436	SSN:	SSN:	SSN:

TOTAL				TOTAL				TOTAL				TOTAL			
Sample #	Minutes	Volume	F/cc	Sample #	Minutes	Volume	F/cc	Sample #	Minutes	Volume	F/cc	Sample #	Minutes	Volume	F/cc
P05a	487	974.00	0.075												

TWA: 0.075 f/cc TWA: n/a TWA: n/a TWA: n/a

Comments: 36.525/487

Comments:

Comments:

Comments

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Project No. 805169
File Code No. 4.5.6.4.90
Doc No.

KOCH ENVIRONMENTAL HEALTH, INC.
ASBESTOS FIBER COUNT WORKSHEET

DATE: 9/22/00

KEH PROJECT #: 21001-001

MICROSCOPE ID #: 1

KEH REP: Patrick McGurren

ANALYST: Patrick McGurren

SAMPLE #	FIBER COUNT	F/N	F/N -B/NB / 100	FIBERS/MM²	SAMPLE VOL. (L)	LOQ (fibers/cc)	FIBERS/CC	COMMENTS
Field Blank B01a	0	0/100	—	—	—	—	—	Field Blank
Field Blank B02a	0	0/100	—	—	—	—	—	Field Blank
A03a	0	0/100	0/100/.00785	0	729.00	0.004	< LOQ	—
A04a	1.0	1.0/100	1.0/100/.00785	1.27	729.00	0.004	< LOQ	—
P05a	100.0	100.0/67	100/67/.00785	190.13	974.00	0.003	0.075	—
Blind Recount								

SAMPLING INFORMATION:

Effective Collection Area of Filter:
✓ 385 mm², 25 mm filter
855 mm², 37 mm filter

Microscope Field Area:
✓ 0.00785 mm²
other (list)

NIOSH 7400 Method A Rules ✓
Other Method

ANALYTICAL INFORMATION:

MICROSCOPE ADJUSTMENTS: ✓ phase test ✓ micrometer ✓ adjust field iris ✓ adjust phase rings ✓ focus on samples

ANALYST INFORMATION:

DATE: 9/24/00 ANALYST: Patrick McGurren SIGNATURE: Patrick McGurren

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
9/25/00	URS Radian PROJECT #: 21001-001	Jim Stout	W.R. Grace Vermiculite Mine 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 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
B01a	Field Blank		—	—	—	—	—	—	—	—	—	2.0/100	Field Blank
B02a	Field Blank		—	—	—	—	—	—	—	—	—	0/100	Field Blank
A03a	Work Area	South of drilling site	Soil DRILLING	1049	1559	310	2.00	2.00	2.00	620.00	0.004	1.5/100	< LOQ
A04a	Work Area	west of drilling site		1052 ~~1603~~	1602	310	2.00	1.90	1.95	604.50	0.004	1.0/100	< LOQ
P05a	Ex	At Drilling site worn by Dave Lieff (driller)		1045	1115	30	1.90	1.90	1.90	57.00	0.047	10.0/100	0.077
P06a	P			1115	1555	280	1.90	1.90	1.90	532.00	0.005	100.0/42	0.217
Blind Recount													

Key:

Sample Type:			Activity:		
	P = Personal	BAK = Background		PREP = Work Area Preparation	BO = Bugout
	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. 4.5.6.4.91
Doc No. _____

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, CO 80127
Phone: (303) 932-8484 FAX: (303) 932-8585

URS
Project No. 805169
File Code No. 4.5.6.4.92
Doc No.

CONTRACTOR PERSONNEL AIR SAMPLING SUMMARY

Client: URS Radian **Project:** 21001-001	**Project Contact:** Jim Stout	**Location:** WR Grace Vermculite Mine	**KEH Rep:** Patrick McGerrea **Analysis By:** Patrick McGerrea

Date: 9/25/00	**Calibration:** ✓ Rotameter ____ ID ____ Other ____ ID	**Microscope Field Area:** ✓ 0.00785 sq mm ____ other ____ sq mm	**PCM Filter:** ✓ 0.8 um25mm Mft. ____ ____ 0.8 um37mm Lot# ____	**Other Media:** ____ Type Mft. ____ ____ Type Mft. ____

Name: Dave Iliff **SSN:** 517-86-8436	**Name:** — **SSN:**	**Name:** — **SSN:**	**Name:** — **SSN:**

TOTAL				TOTAL				TOTAL				TOTAL			
Sample #	Minutes	Volume	F/cc	Sample #	Minutes	Volume	F/cc	Sample #	Minutes	Volume	F/cc	Sample #	Minutes	Volume	F/cc
P05a	30	57.00	0.077												
P06a	280	532.00	0.217												

TWA: 0.131 f/cc | TWA: N/A | TWA: N/A | TWA: N/A

Comments: 2.31 + 60.76 / 480
63.07 / 480

Comments:

Comments:

Comments

URS COPY

Project No. 805169
File Code No. 4.5.6.4.93
Doc No.

KOCH ENVIRONMENTAL HEALTH, INC.
ASBESTOS FIBER COUNT WORKSHEET

DATE: 9/25/00

KEH PROJECT #: 21001-001

MICROSCOPE ID #: 1

KEH REP: Patrick McGurren

ANALYST: Patrick McGurren

SAMPLE #	FIBER COUNT	F/N	F/N -B/NB / 100	FIBERS/MM²	SAMPLE VOL. (L)	LOQ (fibers/cc)	FIBERS/CC	COMMENTS
Field Blank B01a	2.0	2.0/100	–	–	–	–	–	Field Blank
Field Blank B02a	Ø	0/100	–	–	–	–	–	Field Blank
A03a	1.5	1.5/100	0.5/100/.00785	0.64	620.00	0.004	<LOQ	–
A04a	1.0	1.0/100	0/100/.00785	0	604.50	0.004	<LOQ	–
P05a	10.0	10.0/100	9.0/100/.00785	11.46	57.00	0.077	0.077	–
P06a	100.0	100.0/12	99.0/12/.00785	300.27	532.00	0.005	0.217	–
~~Blind Recount~~								

SAMPLING INFORMATION:

Effective Collection Area of Filter:
- ✓ 385 mm², 25 mm filter
- 855 mm², 37 mm filter

Microscope Field Area:
- ✓ 0.00785 mm²
- other (list)

NIOSH 7400 Method A Rules ✓

Other Method

ANALYTICAL INFORMATION:

MICROSCOPE ADJUSTMENTS: ✓ phase test ✓ micrometer ✓ adjust field iris ✓ adjust phase rings ✓ focus on samples

ANALYST INFORMATION:

DATE: 9/26/00 ANALYST: Patrick McGurren SIGNATURE: [signature]

KEH97/FORMS/FIBERFRM

KOCH ENVIRONMENTAL HEALTH, INC.
AIR CONTAMINANT SAMPLING FORM

DATE:	CLIENT:	PROJECT CONTACT:	PROJECT LOCATION:	SAMPLING REP:
9/26/00	URS Radian PROJECT #: 21001-001	Jim Stout	WR Grace Monitoring well #2 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 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
B01a	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
B02a	Field Blank	—	—	—	—	—	—	—	—	—	—	0/100	Field Blank
A03a	work area	Monitoring well #2 west of drilling location	soil drilling	1126	1741	375	2.00	2.00	2.00	750.00 ~~375.00~~	0.004	43.0/100	0.028
P04a	Ex	Monitoring well #2 - worn by Dave Iliff	↓	1309	1339	30	1.80	1.80	1.80	54.00	0.050	37.0/100	0.336
P05a	P	Monitoring well #2 worn by Dave Iliff	↓	1339	~~1539~~ 1739	240	1.80	1.80	1.80	432.00	0.006	97.0/100	0.110
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.b.4.94
Doc No.

KEH\FORMS\AIRFRM97

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, CO 80127
Phone: (303) 932-8484 FAX: (303) 932-8585

URS

Project No. 805169
File Code No. 4.5.6.4.95
Doc No.

CONTRACTOR PERSONNEL AIR SAMPLING SUMMARY

Client: URS Radian **Project:** 21001-001	**Project Contact:** Jim Stat	**Location:** WR GRACE Monitoring Well #2 Libby, MT	**KEH Rep:** Patrick McGowan **Analysis By:** Patrick McGowan
Date: 9/26/00	**Calibration:** ✓ Rotameter ____ ID; ____ Other ____ ID	**Microscope Field Area:** ✓ 0.00785 sq mm; ____ other ____ sq mm	**PCM Filter:** ✓ 0.8 um25mm Mft.____; ____ 0.8 um37mm Lot#____	**Other Media:** ____ Type Mft.____; ____ Type Mft.____
Name: Dave Eliff **SSN:** 517-86-6436	**Name:** — **SSN:**	**Name:** — **SSN:**	**Name:** — **SSN:**

TOTAL				TOTAL				TOTAL				TOTAL			
Sample #	Minutes	Volume	F/cc	Sample #	Minutes	Volume	F/cc	Sample #	Minutes	Volume	F/cc	Sample #	Minutes	Volume	F/cc
P04a	30	54.00	0.336												
P05a	240	432.00	0.110												

TWA: 0.076 f/cc | TWA: N/a | TWA: N/a | TWA: N/a

Comments:
10.08 + 26.40 / 480
36.48 / 480

Comments:

Comments:

Comments

URS

Project No. 805169
File Code No. 4.5.6.4.96
Doc No.

KOCH ENVIRONMENTAL HEALTH, INC.
ASBESTOS FIBER COUNT WORKSHEET

DATE: 9/26/00

KEH PROJECT #: 21001-001

MICROSCOPE ID #:

KEH REP: Patrick McGurren

ANALYST: Patrick McGurren

SAMPLE #	FIBER COUNT	F/N	F/N -B/NB / 100	FIBERS/MM²	SAMPLE VOL. (L)	LOQ (fibers/cc)	FIBERS/CC	COMMENTS
Field Blank B01a	0	0/100	–	–	–	–	–	Field Blank
Field Blank B02a	0	0/100	–	–	–	–	–	Field Blank
A03a	43.00	43.0/100	43/100/.00785	54.78	750.00	0.004	0.028	–
P04a	37.00	37.0/100	37/100/.00785	47.13	54.00	0.050	0.336	–
P05a	97.00	97.0/100	97/100/.00785	123.57	432.00	0.006	0.110	–
Blind Recount								

SAMPLING INFORMATION:

Effective Collection Area of Filter:
- ✓ 385 mm², 25 mm filter
- ___ 855 mm², 37 mm filter

Microscope Field Area:
- ✓ 0.00785 mm²
- ___ other (list)

NIOSH 7400 Method A Rules ✓

Other Method ___

ANALYTICAL INFORMATION:

MICROSCOPE ADJUSTMENTS: ✓ phase test ✓ micrometer ✓ adjust field iris ✓ adjust phase rings ✓ focus on samples

ANALYST INFORMATION:

DATE: 9/27/00 ANALYST: Patrick McGurren SIGNATURE: [signature]