cc Brian Hohn
Cathy Laughner

Montana Department of
ENVIRONMENTAL QUALITY

Judy Martz, Governor

P.O. Box 200901 • Helena, MT 59620-0901 • (406) 444-2544 • www.deq.state.mt.us

November 7, 2001

Steve Wright
Columbia Falls Aluminum Company
2000 Aluminum Drive
Columbia Falls, MT 59912

Enclosed is a report from the 09/23/01 sampling event at the Columbia Falls Aluminum Company (CFAC). When the department's laboratory analysis report is received, it will be transferred to you. It is the department's understanding that, when available, the CFAC laboratory report will be sent to this office. CFAC is to be commended for its efforts to fulfill the requirements for hazardous waste determination found in 40 CFR 262.11 and adopted by reference in ARM 17.53.601.

If you have any comments on the enclosed report, please call me at (406) 444-5286 or e-mail me at bpotts@state.mt.us. You may also contact Iver Johnson at (406) 444-5852 or ijohnson@state.mt.us.

Sincerely

Wm Potts

William Potts
SHW Specialist
Air and Waste Management Bureau

Cc: Mark Steger Smith, DEQ Legal

MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY
Permitting and Compliance Division
Air & Waste Management Bureau

FIELD INVESTIGATION REPORT

SITE: Columbia Falls Aluminum Company, LLC

EPA ID #: MTD057561763

LOCATION: 2000 Aluminum Drive - Columbia Falls

DATE & TIME: September 25, 2001 8:30 a.m.

INSPECTION LENGTH: 6 Hours 30 Minutes

CONTACT: Steve Wright and Brian Hohn

INSPECTION TEAM: William Potts and Iver Johnson

PURPOSE: Sampling Inspection

REPORT PREPARED BY: Iver Johnson

BACKGROUND: Columbia Falls Aluminum Company (CFAC) suspended production operations on January 19, 2001. In response to inquiries by the Department of Environmental Quality (Department) as to the determination if waste in accumulation is a hazardous waste, CFAC and the Department developed individual waste sampling plans. Therefore, the purpose of the inspection was to generally follow CFAC's sampling plan outlined in attachment A with the following exceptions as noted in the Department's sampling plan outlined in attachment B. CFAC was last inspected for compliance with Montana's hazardous waste regulations on June 26, 2001.

RESULTS OF INSPECTION: Prior to this inspection, Mr. Potts telephoned Mr. Steve Wright and arranged the date and time for the inspection. We introduced ourselves to Mr. Wright and Mr. Brian Hohn, Environmental Hygiene Supervisor, at the security desk in CFAC's main office building. We explained that we were there to conduct a sampling inspection in accordance with attachments A and B. Mr. Wright accompanied us on the inspection in the Department's vehicle. Mr. Hohn lead the way using one of CFAC's small utility (golf cart type) vehicle. Both Mr. Wright and Mr. Hohn provided the following details and driving directions of CFAC's operations facility, which aided us immensely in accomplishing the purpose of the inspection:

- We drove to the Anode Dust Control System Baghouse where sample CFAC-001 was taken. Mr. Potts and Mr. Hohn collected a baghouse bag, with assistance from CFAC work force, in a 5-gallon plastic bucket. Mr. Potts placed a grab sample of the bag (two

inches of fabric cut approximately three inches from the bottom of the bag) into a 32-oz. jar. The sample was split with CFAC. We were told that the bag had been used for approximately two years. The jar was properly labeled and placed back into the original box. Used Personal Protective Equipment (PPE), other than Mr. Potts coveralls, was disposed in a black plastic sack. Mr. Johnson was the sampling witness for all the sampling events.

- We drove to the Paste Plant Dry Coke Scrubber where split sample CFAC-002 was taken. Several flights of stairs were taken to reach this baghouse. The same procedure was used to collect this baghouse bag sample as outlined in the previous sampling event (CFAC-001). The baghouse bag has been in-place since February 1999.
- We walked to the Pin Cleaning baghouse where we observed CFAC personnel taking samples from the east plant pin cleaning system. This system was designed to control emissions from shot-blasting anode pins. Two samples were taken. One sample was taken of the material captured in the baghouse and the second was taken from a large cylinder type filter. The Department did not sample this baghouse nor were the samples split with the Department.
- Next, we walked to CFAC's pot rooms 5 and 6 to collect CFAC-003 and CFAC-004. CFAC-003 consisted of taking a composite sample from the floor sweepings collected in a room between pot rooms 5 and 6. The five sub-samples were placed in a clean 32-oz. jar, sealed and labeled. The sample was split with CFAC. Two sub-samples of the Potline Sweepings Baghouse bag filled CFAC-004 sampling event. The same procedure was used as described above when collecting baghouse bag samples. We were told that this bag was changed out in May 2001 and is the only baghouse bag currently in operation. Both sampling jars were properly labeled/sealed and placed back into the original box.
- We drove to the Treatment of Aluminum Crucibles (TAC) baghouse where Mr. Potts collected two sub-samples from the baghouse bag to complete sampling event CFAC-005. The baghouse is used to control emissions from the addition of aluminum fluoride to crucibles of molten aluminum. The samples were split with CFAC and the same procedure described above was used to capture and secure the sample.
- We finished up the morning sampling events by collecting sample CFAC-006 from the Primary Gas Collection System. After climbing four sets of stairs, Mr. Hohn, Mr. Potts, assisted by other members of the CFAC workforce, removed a baghouse bag and placed it into a 5-gallon bucket. The bag samples were taken by cutting 2 inch pieces of fabric from the bag using a utility knife. The sample was placed into a 32-oz. jar, sealed and labeled. The sample was split with CFAC. We were told that this bag has been used for approximately one year. This sample was also placed into the original box awaiting transfer to the ice cooler located in the Department's vehicle.
- After walking back to the Department vehicle, samples CFAC-001 through CFAC-006 was placed into a shipping cooler and covered with a 5-pound bag of ice. We broke for lunch after dropping off Mr. Wright at the main office building.
- After lunch, we met with Mr. Wright and Mr. Hohn, after checking through security, and drove to CFAC potroom house 3. A composite split sample (CFAC-007) of Anode Briquettes was taken from the cells in house 3. Anode briquettes form the anode of the aluminum reduction cell. The briquettes are produced at CFAC by extruding a mixture of coal tar pitch and petroleum coke and fed to the top of the aluminum reduction anodes. Mr. Potts and Mr. Hohn collected a single briquette sample from 40 reduction cells in a single 5-gallon plastic bucket.

The 40 sub-samples were thoroughly mixed in the bucket and several briquettes were then placed into a clean 32-oz. jar. The jar was labeled, sealed and placed into the shipping cooler.

- In addition, we observed Mr. Hohn collecting Cryolite bath samples that was accumulated in super sacks in pothouse room 3. Five grab sub-samples were taken from the sacks on the south side of room 3 and placed into a 5-gallon plastic bucket. These samples, along with ten additional cryolite bath sub-samples, taken from various locations within the cryolite bath storage pile located in the Rod Mill, will be thoroughly crushed and mixed. The Department did not sample these supersacks nor were the samples split with the Department.
- After completing sampling event CFAC-007 we drove to the Rod Mill/Material Storage Emitting Unit. Here we observed Mr. Hohn taking samples from two different piles of cryolite bath. Five grab sub-samples were taken from the cryolite bath accumulated from the basement of the pothouses and five sub-samples were taken from cryolite bath from the pots. These samples were mixed with the samples taken from pothouse room 3 supersacks. A single 6-oz. sample was to be placed in a labeled plastic bag. After seeing the cryolite bath material, Mr. Potts made the decision not to have CFAC split the sample with the Department as previously outlined in attachment B.
- We then drove and walked to Mr. Vaughn Ramsey's office where we observed Mr. Hohn taking reacted alumina ore samples from four 5-gallon buckets labeled "Reactor 1-2-3-4" and dated September 13, 2001. The Department did not sample these buckets nor were the samples split with the Department.
- After finishing the sampling event in Mr. Ramsey's office we walked to the west un-loader building where we observed Mr. Hohn taking samples of unreacted alumina ore along the railroad tracks. The Department did not obtain samples of this material nor were the samples split with the Department.
- We finished up our sampling event with split sample CFAC-008. This composite sample of coal tar pitch was taken from several 5-gallon plastic buckets of coal tar pitch that were stored at the CFAC carbon laboratory. These buckets of coal tar pitch were collected in February 2001, to be used for alternative coke briquette formulation in CFAC's carbon laboratory. The sample was placed in a pre-cleaned 32-oz. jar, sealed and labeled. The jar was placed into the shipping cooler.
- At the end of the sampling inspection, and exit interview in the lab, Mr. Potts filled out and gave a sampling receipt to Mr. Steve Wright. Mr. Johnson completed the Chain of Custody record and gave a signed carbon copy of the record to Mr. Wright. All samples were accounted for in the shipping cooler and Mr. Potts affixed a blue security tape to the cooler. We then drove to CFAC's main office and thanked Mr. Wright and Mr. Hohn for all their time and effort expended to complete this project.

ADDENDUM: After returning to Helena on September 26, 2001, we took the shipping cooler to Energy Laboratories and transferred the samples to Dennis Braun at 2:37 p.m. The Department sampling cooler security seal was broken and the samples were placed in an Energy Laboratory cooler for conveyance to the Energy Laboratory in Billings, MT. A security seal was placed in this cooler and a new chain of custody form was completed. We were told by Energy Laboratory personnel that the sample results would be available in two to three weeks.

In a subsequent conversation between Bill Potts, the Department and John Standish, Energy Laboratory, it was agreed that the appropriate test method for reactive cyanide, solids was EPA method sec. 7.3.3.2. It also was agreed that because of the nature of the sample matrices, Mr. Standish was to telephone the CFAC laboratory, Maxim Technologies Inc, and inform that laboratory of the procedures he intended to follow in preparing the samples for analysis.

WASTE MINIMIZATION REVIEW: None

RECOMMENDATIONS: Wait for laboratory analysis to determine regulatory status of materials sampled at CFAC.

10/11/01
Date of Inspection Report

William Potts
SHW Specialist

Iver L. Johnson
SHW Specialist

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LABORATORY ANALYSIS REPORT

MT Dept of Environmental Quality	Project ID:	PROJ. NO. 5301 CFAC		
W. Potts	Sample ID:	CFAC-001 ANODE DUST CONTROL "BAG"		
PO Box 200901	Laboratory ID:	01-91322-1		
Helena, MT 59620	Sample Matrix:	Waste		
	Sample Date:	25-Sep-01 0920		
	Received at lab:	26-Sep-01	Reported:	19-Oct-01

	Results	Units	Spike Recovery	Reporting Limit	Method	Analyzed	
Cyanide, Reactive	<0.05	ug/g		0.05	Sec. 7.3.3.2	03-Oct-01 1630	ND
TCLP Extraction, Regular Metals					EPA 1311	01-Oct-01 1500	MGS
Arsenic, TCLP	<0.5	mg/l	83%	0.5	EPA 6010	02-Oct-01 2352	RLH
Barium, TCLP	<10	mg/l	84%	10	EPA 6010	02-Oct-01 2352	RLH
Cadmium, TCLP	<0.1	mg/l	99%	0.1	EPA 6010	02-Oct-01 2352	RLH
Chromium, TCLP	<0.5	mg/l	94%	0.5	EPA 6010	06-Oct-01 0432	RLH
Lead, TCLP	<0.5	mg/l	94%	0.5	EPA 6010	06-Oct-01 0432	RLH
Mercury, TCLP	<0.02	mg/l	106%	0.02	EPA 7470	03-Oct-01 1419	CR/FB
Selenium, TCLP	<0.1	mg/l	99%	0.1	EPA 6010	02-Oct-01 2352	RLH
Silver, TCLP	<0.5	mg/l	93%	0.5	EPA 6010	06-Oct-01 0432	RLH
TCLP , Zero Headspace Extraction					EPA 1311	01-Oct-01 1400	MGS
Volatile Organics, TCLP							
Benzene, TCLP	<0.010	mg/l	96%	0.010	EPA 8260B	15-Oct-01 1633	TRR
Carbon tetrachloride, TCLP	<0.010	mg/l	108%	0.010	EPA 8260B	15-Oct-01 1633	TRR
Chlorobenzene, TCLP	<0.010	mg/l	103%	0.010	EPA 8260B	15-Oct-01 1633	TRR
Chloroform, TCLP	<0.010	mg/l	106%	0.010	EPA 8260B	15-Oct-01 1633	TRR
1,4-Dichlorobenzene, TCLP	<0.010	mg/l	80%	0.010	EPA 8260B	15-Oct-01 1633	TRR
1,2-Dichloroethane, TCLP	<0.010	mg/l	102%	0.010	EPA 8260B	15-Oct-01 1633	TRR
1,1-Dichloroethene, TCLP	<0.010	mg/l	90%	0.010	EPA 8260B	15-Oct-01 1633	TRR
Methyl ethyl ketone, TCLP	<0.10	mg/l	83%	0.10	EPA 8260B	15-Oct-01 1633	TRR
Tetrachloroethene, TCLP	<0.010	mg/l	102%	0.010	EPA 8260B	15-Oct-01 1633	TRR
Trichloroethene, TCLP	<0.010	mg/l	98%	0.010	EPA 8260B	15-Oct-01 1633	TRR
Vinyl chloride, TCLP	<0.010	mg/l	74%	0.010	EPA 8260B	15-Oct-01 1633	TRR

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LABORATORY ANALYSIS REPORT

MT Dept of Environmental Quality	Project ID:	PROJ. NO. 5301 CFAC		
W. Potts	Sample ID:	CFAC-002 PASTE PLANT DRY COKE SCRUBBER "BAG"		
PO Box 200901	Laboratory ID:	01-91322-2		
Helena, MT 59620	Sample Matrix:	Waste		
	Sample Date:	25-Sep-01 0928		
	Received at lab:	26-Sep-01	Reported:	19-Oct-01

	Results	Units	Spike Recovery	Reporting Limit	Method	Analyzed	
Cyanide, Reactive	<0.05	ug/g		0.05	Sec. 7.3.3.2	03-Oct-01 1630	ND
TCLP Extraction, Regular Metals					EPA 1311	01-Oct-01 1500	MGS
Arsenic, TCLP	<0.5	mg/l	101%	0.5	EPA 6010	03-Oct-01 0014	RLH
Barium, TCLP	<10	mg/l	104%	10	EPA 6010	03-Oct-01 0014	RLH
Cadmium, TCLP	<0.1	mg/l	101%	0.1	EPA 6010	03-Oct-01 0014	RLH
Chromium, TCLP	<0.5	mg/l	100%	0.5	EPA 6010	03-Oct-01 0014	RLH
Lead, TCLP	<0.5	mg/l	98%	0.5	EPA 6010	03-Oct-01 0014	RLH
Mercury, TCLP	<0.02	mg/l	106%	0.02	EPA 7470	03-Oct-01 1426	CR/FB
Selenium, TCLP	<0.1	mg/l	105%	0.1	EPA 6010	03-Oct-01 0014	RLH
Silver, TCLP	<0.5	mg/l	52%	0.5	EPA 6010	03-Oct-01 0014	RLH
TCLP , Zero Headspace Extraction					EPA 1311	01-Oct-01 1400	MGS
Volatile Organics, TCLP							
Benzene, TCLP	<0.010	mg/l	112%	0.010	EPA 8260B	04-Oct-01 1113	TRR
Carbon tetrachloride, TCLP	<0.010	mg/l	105%	0.010	EPA 8260B	04-Oct-01 1113	TRR
Chlorobenzene, TCLP	<0.010	mg/l	113%	0.010	EPA 8260B	04-Oct-01 1113	TRR
Chloroform, TCLP	<0.010	mg/l	109%	0.010	EPA 8260B	04-Oct-01 1113	TRR
1,4-Dichlorobenzene, TCLP	<0.010	mg/l	80%	0.010	EPA 8260B	04-Oct-01 1113	TRR
1,2-Dichloroethane, TCLP	<0.010	mg/l	117%	0.010	EPA 8260B	04-Oct-01 1113	TRR
1,1-Dichloroethene, TCLP	<0.010	mg/l	98%	0.010	EPA 8260B	04-Oct-01 1113	TRR
Methyl ethyl ketone, TCLP	<0.10	mg/l	100%	0.10	EPA 8260B	04-Oct-01 1113	TRR
Tetrachloroethene, TCLP	<0.010	mg/l	109%	0.010	EPA 8260B	04-Oct-01 1113	TRR
Trichloroethene, TCLP	<0.010	mg/l	100%	0.010	EPA 8260B	04-Oct-01 1113	TRR
Vinyl chloride, TCLP	<0.010	mg/l	71%	0.010	EPA 8260B	04-Oct-01 1113	TRR

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LABORATORY ANALYSIS REPORT

MT Dept of Environmental Quality	Project ID:	PROJ. NO. 5301 CFAC		
W. Potts	Sample ID:	CFAC-003 POTLINE SWEEPINGS		
PO Box 200901	Laboratory ID:	01-91322-3		
Helena, MT 59620	Sample Matrix:	Waste		
	Sample Date:	25-Sep-01 1040		
	Received at lab:	26-Sep-01	Reported:	19-Oct-01

	Results	Units	Spike Recovery	Reporting Limit	Method	Analyzed	
Cyanide, Reactive	<0.05	ug/g		0.05	Sec. 7.3.3.2	03-Oct-01 1630	ND
TCLP Extraction, Regular Metals					EPA 1311	01-Oct-01 1500	MGS
Arsenic, TCLP	<0.5	mg/l	99%	0.5	EPA 6010	03-Oct-01 0021	RLH
Barium, TCLP	<10	mg/l	103%	10	EPA 6010	03-Oct-01 0021	RLH
Cadmium, TCLP	<0.1	mg/l	100%	0.1	EPA 6010	03-Oct-01 0021	RLH
Chromium, TCLP	<0.5	mg/l	98%	0.5	EPA 6010	03-Oct-01 0021	RLH
Lead, TCLP	<0.5	mg/l	95%	0.5	EPA 6010	03-Oct-01 0021	RLH
Mercury, TCLP	<0.02	mg/l	108%	0.02	EPA 7470	03-Oct-01 1430	CR/FB
Selenium, TCLP	<0.1	mg/l	103%	0.1	EPA 6010	03-Oct-01 0021	RLH
Silver, TCLP	<0.5	mg/l	75%	0.5	EPA 6010	03-Oct-01 0021	RLH
TCLP , Zero Headspace Extraction					EPA 1311	01-Oct-01 1400	MGS
Volatile Organics, TCLP							
Benzene, TCLP	<0.010	mg/l	106%	0.010	EPA 8260B	04-Oct-01 2155	TRR
Carbon tetrachloride, TCLP	<0.010	mg/l	106%	0.010	EPA 8260B	04-Oct-01 2155	TRR
Chlorobenzene, TCLP	<0.010	mg/l	113%	0.010	EPA 8260B	04-Oct-01 2155	TRR
Chloroform, TCLP	<0.010	mg/l	108%	0.010	EPA 8260B	04-Oct-01 2155	TRR
1,4-Dichlorobenzene, TCLP	<0.010	mg/l	79%	0.010	EPA 8260B	04-Oct-01 2155	TRR
1,2-Dichloroethane, TCLP	<0.010	mg/l	105%	0.010	EPA 8260B	04-Oct-01 2155	TRR
1,1-Dichloroethene, TCLP	<0.010	mg/l	101%	0.010	EPA 8260B	04-Oct-01 2155	TRR
Methyl ethyl ketone, TCLP	<0.10	mg/l	102%	0.10	EPA 8260B	04-Oct-01 2155	TRR
Tetrachloroethene, TCLP	<0.010	mg/l	108%	0.010	EPA 8260B	04-Oct-01 2155	TRR
Trichloroethene, TCLP	<0.010	mg/l	95%	0.010	EPA 8260B	04-Oct-01 2155	TRR
Vinyl chloride, TCLP	<0.010	mg/l	74%	0.010	EPA 8260B	04-Oct-01 2155	TRR

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LABORATORY ANALYSIS REPORT

MT Dept of Environmental Quality	Project ID:	PROJ. NO. 5301 CFAC		
W. Potts	Sample ID:	CFAC-004 POTLINE SWEEPINGS BAGBAUSE "BAG"		
PO Box 200901	Laboratory ID:	01-91322-4		
Helena, MT 59620	Sample Matrix:	Waste		
	Sample Date:	25-Sep-01 1058		
	Received at lab:	26-Sep-01	Reported:	19-Oct-01

	Results	Units	Spike Recovery	Reporting Limit	Method	Analyzed	
Cyanide, Reactive	<0.05	ug/g		0.05	Sec. 7.3.3.2	03-Oct-01 1630	ND
TCLP Extraction, Regular Metals					EPA 1311	01-Oct-01 1500	MGS
Arsenic, TCLP	<0.5	mg/l	103%	0.5	EPA 6010	03-Oct-01 0029	RLH
Barium, TCLP	<10	mg/l	102%	10	EPA 6010	03-Oct-01 0029	RLH
Cadmium, TCLP	<0.1	mg/l	100%	0.1	EPA 6010	03-Oct-01 0029	RLH
Chromium, TCLP	<0.5	mg/l	98%	0.5	EPA 6010	03-Oct-01 0029	RLH
Lead, TCLP	<0.5	mg/l	96%	0.5	EPA 6010	03-Oct-01 0029	RLH
Mercury, TCLP	<0.02	mg/l	106%	0.02	EPA 7470	03-Oct-01 1433	CR/FB
Selenium, TCLP	<0.1	mg/l	103%	0.1	EPA 6010	03-Oct-01 0029	RLH
Silver, TCLP	<0.5	mg/l	55%	0.5	EPA 6010	03-Oct-01 0029	RLH
TCLP , Zero Headspace Extraction					EPA 1311	01-Oct-01 1400	MGS
Volatile Organics, TCLP							
Benzene, TCLP	<0.010	mg/l	111%	0.010	EPA 8260B	04-Oct-01 2235	TRR
Carbon tetrachloride, TCLP	<0.010	mg/l	104%	0.010	EPA 8260B	04-Oct-01 2235	TRR
Chlorobenzene, TCLP	<0.010	mg/l	114%	0.010	EPA 8260B	04-Oct-01 2235	TRR
Chloroform, TCLP	<0.010	mg/l	99%	0.010	EPA 8260B	04-Oct-01 2235	TRR
1,4-Dichlorobenzene, TCLP	<0.010	mg/l	81%	0.010	EPA 8260B	04-Oct-01 2235	TRR
1,2-Dichloroethane, TCLP	<0.010	mg/l	110%	0.010	EPA 8260B	04-Oct-01 2235	TRR
1,1-Dichloroethene, TCLP	<0.010	mg/l	86%	0.010	EPA 8260B	04-Oct-01 2235	TRR
Methyl ethyl ketone, TCLP	<0.10	mg/l	90%	0.10	EPA 8260B	04-Oct-01 2235	TRR
Tetrachloroethene, TCLP	<0.010	mg/l	110%	0.010	EPA 8260B	04-Oct-01 2235	TRR
Trichloroethene, TCLP	<0.010	mg/l	123%	0.010	EPA 8260B	04-Oct-01 2235	TRR
Vinyl chloride, TCLP	<0.010	mg/l	70%	0.010	EPA 8260B	15-Oct-01 1633	TRR

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LABORATORY ANALYSIS REPORT

MT Dept of Environmental Quality	Project ID:	PROJ. NO. 5301 CFAC		
W. Potts	Sample ID:	CFAC-005 TAC "BAG"		
PO Box 200901	Laboratory ID:	01-91322-5		
Helena, MT 59620	Sample Matrix:	Waste		
	Sample Date:	25-Sep-01 1125		
	Received at lab:	26-Sep-01	Reported:	19-Oct-01

	Results	Units	Spike Recovery	Reporting Limit	Method	Analyzed	
Cyanide, Reactive	<0.05	ug/g		0.05	Sec. 7.3.3.2	03-Oct-01 1630	ND
TCLP Extraction, Regular Metals					EPA 1311	01-Oct-01 1500	MGS
Arsenic, TCLP	<0.5	mg/l	100%	0.5	EPA 6010	03-Oct-01 0036	RLH
Barium, TCLP	<10	mg/l	105%	10	EPA 6010	03-Oct-01 0036	RLH
Cadmium, TCLP	<0.1	mg/l	101%	0.1	EPA 6010	03-Oct-01 0036	RLH
Chromium, TCLP	<0.5	mg/l	100%	0.5	EPA 6010	03-Oct-01 0036	RLH
Lead, TCLP	<0.5	mg/l	98%	0.5	EPA 6010	03-Oct-01 0036	RLH
Mercury, TCLP	<0.02	mg/l	107%	0.02	EPA 7470	03-Oct-01 1445	CR/FB
Selenium, TCLP	<0.1	mg/l	108%	0.1	EPA 6010	03-Oct-01 0036	RLH
Silver, TCLP	<0.5	mg/l	90%	0.5	EPA 6010	06-Oct-01 0439	RLH
TCLP , Zero Headspace Extraction					EPA 1311	01-Oct-01 1400	MGS
Volatile Organics, TCLP							
Benzene, TCLP	<0.010	mg/l	107%	0.010	EPA 8260B	04-Oct-01 2315	TRR
Carbon tetrachloride, TCLP	<0.010	mg/l	105%	0.010	EPA 8260B	04-Oct-01 2315	TRR
Chlorobenzene, TCLP	<0.010	mg/l	114%	0.010	EPA 8260B	04-Oct-01 2315	TRR
Chloroform, TCLP	<0.010	mg/l	98%	0.010	EPA 8260B	04-Oct-01 2315	TRR
1,4-Dichlorobenzene, TCLP	<0.010	mg/l	80%	0.010	EPA 8260B	04-Oct-01 2315	TRR
1,2-Dichloroethane, TCLP	<0.010	mg/l	102%	0.010	EPA 8260B	04-Oct-01 2315	TRR
1,1-Dichloroethene, TCLP	<0.010	mg/l	107%	0.010	EPA 8260B	04-Oct-01 2315	TRR
Methyl ethyl ketone, TCLP	<0.10	mg/l	93%	0.10	EPA 8260B	04-Oct-01 2315	TRR
Tetrachloroethene, TCLP	<0.010	mg/l	105%	0.010	EPA 8260B	04-Oct-01 2315	TRR
Trichloroethene, TCLP	<0.010	mg/l	99%	0.010	EPA 8260B	04-Oct-01 2315	TRR
Vinyl chloride, TCLP	<0.010	mg/l	93%	0.010	EPA 8260B	04-Oct-01 2315	TRR

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LABORATORY ANALYSIS REPORT

MT Dept of Environmental Quality	Project ID:	PROJ. NO. 5301 CFAC		
W. Potts	Sample ID:	CFAC-006 PRIMARY GAS COLLECTION SYSTEM "BAG"		
PO Box 200901	Laboratory ID:	01-91322-6		
Helena, MT 59620	Sample Matrix:	Waste		
	Sample Date:	25-Sep-01 1144		
	Received at lab:	26-Sep-01	Reported:	19-Oct-01

	Results	Units	Spike Recovery	Reporting Limit	Method	Analyzed	
Cyanide, Reactive	<0.05	ug/g		0.05	Sec. 7.3.3.2	03-Oct-01 1630	ND
TCLP Extraction, Regular Metals					EPA 1311	01-Oct-01 1500	MGS
Arsenic, TCLP	<0.5	mg/l	10%	0.5	EPA 6010	03-Oct-01 0050	RLH
Barium, TCLP	<10	mg/l	105%	10	EPA 6010	03-Oct-01 0050	RLH
Cadmium, TCLP	0.3	mg/l	100%	0.1	EPA 6010	03-Oct-01 0050	RLH
Chromium, TCLP	<0.5	mg/l	99%	0.5	EPA 6010	03-Oct-01 0050	RLH
Lead, TCLP	<0.5	mg/l	99%	0.5	EPA 6010	03-Oct-01 0050	RLH
Mercury, TCLP	<0.02	mg/l	106%	0.02	EPA 7470	03-Oct-01 1448	CR/FB
Selenium, TCLP	<0.1	mg/l	108%	0.1	EPA 6010	03-Oct-01 0050	RLH
Silver, TCLP	<0.5	mg/l	91%	0.5	EPA 6010	06-Oct-01 0446	RLH
TCLP , Zero Headspace Extraction					EPA 1311	01-Oct-01 1400	MGS
Volatile Organics, TCLP							
Benzene, TCLP	<0.010	mg/l	101%	0.010	EPA 8260B	04-Oct-01 2356	TRR
Carbon tetrachloride, TCLP	<0.010	mg/l	106%	0.010	EPA 8260B	04-Oct-01 2356	TRR
Chlorobenzene, TCLP	<0.010	mg/l	116%	0.010	EPA 8260B	04-Oct-01 2356	TRR
Chloroform, TCLP	<0.010	mg/l	99%	0.010	EPA 8260B	04-Oct-01 2356	TRR
1,4-Dichlorobenzene, TCLP	<0.010	mg/l	79%	0.010	EPA 8260B	04-Oct-01 2356	TRR
1,2-Dichloroethane, TCLP	<0.010	mg/l	99%	0.010	EPA 8260B	04-Oct-01 2356	TRR
1,1-Dichloroethene, TCLP	<0.010	mg/l	103%	0.010	EPA 8260B	04-Oct-01 2356	TRR
Methyl ethyl ketone, TCLP	<0.10	mg/l	82%	0.10	EPA 8260B	04-Oct-01 2356	TRR
Tetrachloroethene, TCLP	<0.010	mg/l	100%	0.010	EPA 8260B	04-Oct-01 2356	TRR
Trichloroethene, TCLP	<0.010	mg/l	90%	0.010	EPA 8260B	04-Oct-01 2356	TRR
Vinyl chloride, TCLP	<0.010	mg/l	76%	0.010	EPA 8260B	04-Oct-01 2356	TRR

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LABORATORY ANALYSIS REPORT

MT Dept of Environmental Quality	Project ID:	PROJ. NO. 5301 CFAC		
W. Potts	Sample ID:	CFAC-007 ANODE BRIQUETTES		
PO Box 200901	Laboratory ID:	01-91322-7		
Helena, MT 59620	Sample Matrix:	Waste		
	Sample Date:	25-Sep-01 1315		
	Received at lab:	26-Sep-01	Reported:	19-Oct-01

	Results	Units	Spike Recovery	Reporting Limit	Method	Analyzed	
Cyanide, Reactive	<0.05	ug/g		0.05	Sec. 7.3.3.2	03-Oct-01 1630	ND
TCLP Extraction, Regular Metals					EPA 1311	01-Oct-01 1500	MGS
Arsenic, TCLP	<0.5	mg/l	104%	0.5	EPA 6010	03-Oct-01 0057	RLH
Barium, TCLP	<10	mg/l	105%	10	EPA 6010	03-Oct-01 0057	RLH
Cadmium, TCLP	<0.1	mg/l	103%	0.1	EPA 6010	03-Oct-01 0057	RLH
Chromium, TCLP	<0.5	mg/l	100%	0.5	EPA 6010	03-Oct-01 0057	RLH
Lead, TCLP	<0.5	mg/l	97%	0.5	EPA 6010	03-Oct-01 0057	RLH
Mercury, TCLP	<0.02	mg/l	104%	0.02	EPA 7470	03-Oct-01 1452	CR/FB
Selenium, TCLP	<0.1	mg/l	108%	0.1	EPA 6010	03-Oct-01 0057	RLH
Silver, TCLP	<0.5	mg/l	92%	0.5	EPA 6010	06-Oct-01 0500	RLH
TCLP , Zero Headspace Extraction					EPA 1311	01-Oct-01 1400	MGS
Volatile Organics, TCLP							
Benzene, TCLP	<0.010	mg/l	104%	0.010	EPA 8260B	05-Oct-01 0036	TRR
Carbon tetrachloride, TCLP	<0.010	mg/l	87%	0.010	EPA 8260B	05-Oct-01 0036	TRR
Chlorobenzene, TCLP	<0.010	mg/l	108%	0.010	EPA 8260B	05-Oct-01 0036	TRR
Chloroform, TCLP	<0.010	mg/l	94%	0.010	EPA 8260B	05-Oct-01 0036	TRR
1,4-Dichlorobenzene, TCLP	<0.010	mg/l	73%	0.010	EPA 8260B	05-Oct-01 0036	TRR
1,2-Dichloroethane, TCLP	<0.010	mg/l	99%	0.010	EPA 8260B	05-Oct-01 0036	TRR
1,1-Dichloroethene, TCLP	<0.010	mg/l	100%	0.010	EPA 8260B	05-Oct-01 0036	TRR
Methyl ethyl ketone, TCLP	<0.10	mg/l	110%	0.10	EPA 8260B	05-Oct-01 0036	TRR
Tetrachloroethene, TCLP	<0.010	mg/l	92%	0.010	EPA 8260B	05-Oct-01 0036	TRR
Trichloroethene, TCLP	<0.010	mg/l	103%	0.010	EPA 8260B	05-Oct-01 0036	TRR
Vinyl chloride, TCLP	<0.010	mg/l	89%	0.010	EPA 8260B	05-Oct-01 0036	TRR

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LABORATORY ANALYSIS REPORT

MT Dept of Environmental Quality	Project ID:	PROJ. NO. 5301 CFAC		
W. Potts	Sample ID:	CFAC-008 COAL TAR PITCH		
PO Box 200901	Laboratory ID:	01-91322-8		
Helena, MT 59620	Sample Matrix:	Waste		
	Sample Date:	25-Sep-01 1348		
	Received at lab:	26-Sep-01	Reported:	19-Oct-01

	Results	Units	Spike Recovery	Reporting Limit	Method	Analyzed	
Cyanide, Reactive	<0.05	ug/g		0.05	Sec. 7.3.3.2	03-Oct-01 1630	ND
TCLP Extraction, Regular Metals					EPA 1311	01-Oct-01 1500	MGS
Arsenic, TCLP	<0.5	mg/l	108%	0.5	EPA 6010	03-Oct-01 0105	RLH
Barium, TCLP	<10	mg/l	110%	10	EPA 6010	03-Oct-01 0105	RLH
Cadmium, TCLP	<0.1	mg/l	106%	0.1	EPA 6010	03-Oct-01 0105	RLH
Chromium, TCLP	<0.5	mg/l	104%	0.5	EPA 6010	03-Oct-01 0105	RLH
Lead, TCLP	<0.5	mg/l	101%	0.5	EPA 6010	03-Oct-01 0105	RLH
Mercury, TCLP	<0.02	mg/l	107%	0.02	EPA 7470	03-Oct-01 1456	CR/FB
Selenium, TCLP	<0.1	mg/l	114%	0.1	EPA 6010	03-Oct-01 0105	RLH
Silver, TCLP	<0.5	mg/l	54%	0.5	EPA 6010	03-Oct-01 0105	RLH
TCLP , Zero Headspace Extraction					EPA 1311	01-Oct-01 1400	MGS
Volatile Organics, TCLP							
Benzene, TCLP	<0.010	mg/l	107%	0.010	EPA 8260B	05-Oct-01 0116	TRR
Carbon tetrachloride, TCLP	<0.010	mg/l	97%	0.010	EPA 8260B	05-Oct-01 0116	TRR
Chlorobenzene, TCLP	<0.010	mg/l	113%	0.010	EPA 8260B	05-Oct-01 0116	TRR
Chloroform, TCLP	<0.010	mg/l	105%	0.010	EPA 8260B	05-Oct-01 0116	TRR
1,4-Dichlorobenzene, TCLP	<0.010	mg/l	74%	0.010	EPA 8260B	05-Oct-01 0116	TRR
1,2-Dichloroethane, TCLP	<0.010	mg/l	105%	0.010	EPA 8260B	05-Oct-01 0116	TRR
1,1-Dichloroethene, TCLP	<0.010	mg/l	108%	0.010	EPA 8260B	05-Oct-01 0116	TRR
Methyl ethyl ketone, TCLP	<0.10	mg/l	117%	0.10	EPA 8260B	05-Oct-01 0116	TRR
Tetrachloroethene, TCLP	<0.010	mg/l	111%	0.010	EPA 8260B	05-Oct-01 0116	TRR
Trichloroethene, TCLP	<0.010	mg/l	114%	0.010	EPA 8260B	05-Oct-01 0116	TRR
Vinyl chloride, TCLP	<0.010	mg/l	89%	0.010	EPA 8260B	05-Oct-01 0116	TRR

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