Steve Wright

From: Steve Wright [swright@cfaluminum.com]
Sent: Friday, November 30, 2001 8:37 AM
To: Steve Knight; Cathy Laughner
Subject: In-process material sampling

Bill Potts of MDEQ called today. He has completed his review of CFAC's TCLP analysis of 17 in-process materials. Bill is satisfied that none of the materials fail TCLP and are therefore non-hazardous. He was appreciative of CFAC's cooperation in collecting this data. He considers this issue closed for now. I told him his previous letter was all the correspondence we needed and he doesn't need to respond to our submittal of the data.

ED_002345B_00003731-00001

Columbia Falls Aluminum Company
2000 Aluminum Drive
Columbia Falls, MT 59912
(406) 892-8211
(406) 892-8201 fax

November 27, 2001

Mr. William Potts
Air & Waste Management Bureau
Montana Department of Environmental Quality
PO Box 200901
Helena, MT 59620-0901

Re: Results of in-process materials sampling

Dear Mr. Potts:

Enclosed are the analytical results from Northern Analytical for the 9/25/01 sampling event at Columbia Falls Aluminum Company.

The analytical results indicate that none of the sampled materials are hazardous waste. Please call if you have any questions about the enclosed.

Sincerely,

Steve Wright, PE
Environmental & Laboratory Manager

Enclosures

cc: Cathy Laughner, Esq. w/enclosure
Steve Knight w/o enclosure
Brian Hohn w/o enclosure

NORTHERN
Analytical Laboratories, Inc.

602 South 25th Street
P O Box 30315
Billings, MT 59107
Telephone: (406) 254-7226
Fax: (406) 254-1389

***Revised: November 23, 2001**

REPORT TO: ATTN: STEVE WRIGHT
COLUMBIA FALLS ALUMINUM COMPANY
2000 ALUMINUM DRIVE
COLUMBIA FALLS MT 59912

DATE: November 8, 2001
JOB NUMBER: 86-944
SHEET: 1 of 30
INVOICE NO.: 90297

REPORT OF: Solid Waste Analysis – CFAC - In Process Materials

CASE NARRATIVE:
On September 28, 2001, these solid waste samples (laboratory numbers 2001090297-1 through 8) were received in our laboratory for analysis. Tests were conducted in accordance with SW-846 *"Test Methods for Evaluating Solid Waste"*, 3rd Edition, updates I, II, IIA, IIB, III.

The condition of the samples upon receipt at the laboratory is noted on the attached sample receipt checklist. Chain of custody documentation is enclosed.

The results of the analysis are shown on the following pages. A matrix spike for metals was performed for each sample in order to evaluate the effect of the matrix on the metals concentrations. The matrix spike recoveries indicate matrix effects are minimal. A matrix spike was performed for volatile organics on one sample, the cryolite bath. The matrix spike recoveries indicate the matrix effects were found to be negligible. A matrix spike was performed on the coal tar pitch sample for semivolatiles. This sample was predicted to have the most profound matrix effect on the sample analysis as it was most organic in nature. The matrix spike recoveries indicate matrix effects were minimal. Concentrations for the TCLP semivolatiles for the coal tar pitch sample are reported in another sample delivery group.

A < sign indicates the value reported was the practical quantitation limit for this sample using the method described. Concentrations of analyte, if present, below this were not quantifiable.

Footnotes:
(1) The waste is not considered flammable under the conditions of the test.
(2) The methyl ethyl ketone lab control sample recovery is above the stated control limit with no effect on the sample result as the analyte was not detected in the samples.
(3) The pyridine lab control sample recovery is below the stated control limit. The matrix spike recovery was acceptable. The TCLP rule places greater on the matrix spike recovery and surrogate for data validation considerations. The EPA "Technical Assistance Document for Complying with the TC Rule", Section 5-5, states that if the matrix spike and surrogate recovery are above 10% the data should not be rejected. The pyridine data is flagged UJ, estimated quantitation limit, due to the LCS failure.
UJ -The analyte was not detected, the quantitation limit is estimated.

***Revision: Sample descriptions were changed by the client. Chloroform reporting limit revised.**

Reviewed by Kathleen A. Smit
Kathleen A. Smit - Laboratory Manager

Attachments: Chain of Custody
Sample Receipt Checklist

cai

As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of our clients and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval. Test results apply specifically to the samples tested only. The entire report shall not be reproduced, except in full, without the written approval of the laboratory. Samples will be disposed of after testing is completed unless other arrangements are agreed to in writing.

Northern Analytical Laboratories, Inc.

Client Name: COLUMBIA FALLS ALUMINUM CO.

Project No.: CFAC

Project Name: IN PROCESS MATERIALS

Sample No.: 2001090297-1 **Description:** ANODE DUST BAG
Date Received: 09/28/2001
Date Collected: 09/25/2001 **Collected by:** BRIAN HOHN **Matrix:** SOLID WASTE

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
IGNITABILITY				
Burning Rate	0(1)	mm/sec	1030	10/10/2001
REACTIVITY				
Cyanide as HCN (Reactive)	<0.12	mg/kg	7.3.3	10/08/2001
Sulfide as H2S (Reactive)	<100	mg/kg	7.3.4	10/08/2001
TCLP METALS				
Mercury TCLP Digest Date	220	-----	7470A	10/11/2001
TCLP Digest Date	1578	-----	3010A	10/09/2001
TCLP Extraction Date	6143	-----	1311	10/03/2001
Arsenic as As	<0.1	mg/l	6020	10/12/2001
Barium as Ba	0.3	mg/l	6020	10/12/2001
Cadmium as Cd	<0.02	mg/l	6020	10/12/2001
Chromium as Cr	<0.2	mg/l	6020	10/12/2001
Lead as Pb	<0.1	mg/l	6020	10/12/2001
Mercury as Hg	<0.0002	mg/l	7470A	10/12/2001
Selenium as Se	<0.1	mg/l	6020	10/12/2001
Silver as Ag	<0.05	mg/l	6020	10/12/2001
TCLP SEMIVOLATILES				
Data File Number-Semivolatiles	1102011005			
Batch #/Extract Date - EPA 8270	B4113	-----	3510C	10/08/2001
1,4-Dichlorobenzene (SV)	<40	ug/l	8270C	11/02/2001
2,4-Dinitrotoluene (SV)	<40	ug/l	8270C	11/02/2001
Hexachlorobenzene (SV)	<40	ug/l	8270C	11/02/2001
Hexachlorobutadiene (SV)	<40	ug/l	8270C	11/02/2001
Hexachloroethane (SV)	<40	ug/l	8270C	11/02/2001
Nitrobenzene (SV)	<40	ug/l	8270C	11/02/2001
Pentachlorophenol (SV)	<40	ug/l	8270C	11/02/2001
Pyridine (SV)	<40 UJ	ug/l	8270C	11/02/2001
Total Cresol (SV)	<40	ug/l	8270C	11/02/2001
2,4,5-Trichlorophenol (SV)	<80	ug/l	8270C	11/02/2001
2,4,6-Trichlorophenol (SV)	<40	ug/l	8270C	11/02/2001
2-Fluorophenol (Surrogate)	48	% [10-110]	8270C	11/02/2001
Phenol-d6 (Surrogate)	41	% [10-119]	8270C	11/02/2001
Nitrobenzene-d5 (Surrogate)	92	% [27-121]	8270C	11/02/2001

Client Name: COLUMBIA FALLS ALUMINUM CO.

Project No.: CFAC

Project Name: IN PROCESS MATERIALS

Sample No.: 2001090297-1 **Description:** ANODE DUST BAG

Date Received: 09/28/2001

Date Collected: 09/25/2001 **Collected by:** BRIAN HOHN **Matrix:** SOLID WASTE

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
2-Fluorobiphenyl (Surrogate)	81	% [47-122]	8270C	11/02/2001
2,4,6-Tribromophenol (Surrogate)	70	% [36-124]	8270C	11/02/2001
Terphenyl-d14 (Surrogate)	93	% [61-133]	8270C	11/02/2001
TCLP VOLATILES				
Data File Number-Volatiles	1015011007	-----		
Benzene	<5	ug/l	8260B	10/15/2001
Carbon tetrachloride	<5	ug/l	8260B	10/15/2001
Chlorobenzene	<5	ug/l	8260B	10/15/2001
Chloroform	<100	ug/l	8260B	10/15/2001
1,4-Dichlorobenzene	<5	ug/l	8260B	10/15/2001
1,2-Dichloroethane	<5	ug/l	8260B	10/15/2001
1,1-Dichloroethene	<5	ug/l	8260B	10/15/2001
Tetrachloroethene	<5	ug/l	8260B	10/15/2001
Trichloroethene	<5	ug/l	8260B	10/15/2001
Vinyl chloride	<5	ug/l	8260B	10/15/2001
Methyl Ethyl Ketone (2-Butanone)	<100	ug/l	8260B	10/15/2001
1,2-Dichloroethane-d4 (Surrogate)	120	% [73-121]	8260B	10/15/2001
Toluene-d8 (Surrogate)	100	% [91-109]	8260B	10/15/2001
4-Bromofluorobenzene (Surrogate)	94	% [85-115]	8260B	10/15/2001

Northern Analytical Laboratories, Inc.

Client Name: COLUMBIA FALLS ALUMINUM CO.

Project No.: CFAC

Project Name: IN PROCESS MATERIALS

Sample No.: 2001090297-2 **Description:** PRIMARY SCRUBBER BAG

Date Received: 09/28/2001

Date Collected: 09/25/2001 **Collected by:** BRIAN HOHN **Matrix:** SOLID WASTE

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
IGNITABILITY				
Burning Rate	0(1)	mm/sec	1030	10/10/2001
REACTIVITY				
Cyanide as HCN (Reactive)	<0.12	mg/kg	7.3.3	10/08/2001
Sulfide as H2S (Reactive)	<100	mg/kg	7.3.4	10/08/2001
TCLP METALS				
Mercury TCLP Digest Date	220	-----	7470A	10/11/2001
TCLP Digest Date	1578	-----	3010A	10/09/2001
TCLP Extraction Date	6143	-----	1311	10/03/2001
Arsenic as As	0.3	mg/l	6020	10/12/2001
Barium as Ba	0.2	mg/l	6020	10/12/2001
Cadmium as Cd	0.32	mg/l	6020	10/12/2001
Chromium as Cr	<0.2	mg/l	6020	10/12/2001
Lead as Pb	0.2	mg/l	6020	10/12/2001
Mercury as Hg	<0.0002	mg/l	7470A	10/12/2001
Selenium as Se	<0.1	mg/l	6020	10/12/2001
Silver as Ag	<0.05	mg/l	6020	10/12/2001
TCLP SEMIVOLATILES				
Data File Number-Semivolatiles	1102011006			
Batch #/Extract Date - EPA 8270	B4113	-----	3510C	10/08/2001
1,4-Dichlorobenzene (SV)	<40	ug/l	8270C	11/02/2001
2,4-Dinitrotoluene (SV)	<40	ug/l	8270C	11/02/2001
Hexachlorobenzene (SV)	<40	ug/l	8270C	11/02/2001
Hexachlorobutadiene (SV)	<40	ug/l	8270C	11/02/2001
Hexachloroethane (SV)	<40	ug/l	8270C	11/02/2001
Nitrobenzene (SV)	<40	ug/l	8270C	11/02/2001
Pentachlorophenol (SV)	<40	ug/l	8270C	11/02/2001
Pyridine (SV)	<40 UJ	ug/l	8270C	11/02/2001
Total Cresol (SV)	<40	ug/l	8270C	11/02/2001
2,4,5-Trichlorophenol (SV)	<80	ug/l	8270C	11/02/2001
2,4,6-Trichlorophenol (SV)	<40	ug/l	8270C	11/02/2001
2-Fluorophenol (Surrogate)	55	% [10-110]	8270C	11/02/2001
Phenol-d6 (Surrogate)	55	% [10-119]	8270C	11/02/2001
Nitrobenzene-d5 (Surrogate)	92	% [27-121]	8270C	11/02/2001

Client Name: COLUMBIA FALLS ALUMINUM CO.

Project No.: CFAC

Project Name: IN PROCESS MATERIALS

Sample No.: 2001090297-2 **Description:** PRIMARY SCRUBBER BAG

Date Received: 09/28/2001

Date Collected: 09/25/2001 **Collected by:** BRIAN HOHN **Matrix:** SOLID WASTE

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
2-Fluorobiphenyl (Surrogate)	83	% [47-122]	8270C	11/02/2001
2,4,6-Tribromophenol (Surrogate)	90	% [36-124]	8270C	11/02/2001
Terphenyl-d14 (Surrogate)	102	% [61-133]	8270C	11/02/2001
TCLP VOLATILES				
Data File Number-Volatiles	1015011008	------		
Benzene	<5	ug/l	8260B	10/15/2001
Carbon tetrachloride	<5	ug/l	8260B	10/15/2001
Chlorobenzene	<5	ug/l	8260B	10/15/2001
Chloroform	<100	ug/l	8260B	10/15/2001
1,4-Dichlorobenzene	<5	ug/l	8260B	10/15/2001
1,2-Dichloroethane	<5	ug/l	8260B	10/15/2001
1,1-Dichloroethene	<5	ug/l	8260B	10/15/2001
Tetrachloroethene	<5	ug/l	8260B	10/15/2001
Trichloroethene	<5	ug/l	8260B	10/15/2001
Vinyl chloride	<5	ug/l	8260B	10/15/2001
Methyl Ethyl Ketone (2-Butanone)	<100	ug/l	8260B	10/15/2001
1,2-Dichloroethane-d4 (Surrogate)	118	% [73-121]	8260B	10/15/2001
Toluene-d8 (Surrogate)	100	% [91-109]	8260B	10/15/2001
4-Bromofluorobenzene (Surrogate)	95	% [85-115]	8260B	10/15/2001

Client Name: COLUMBIA FALLS ALUMINUM CO.

Project No.: CFAC

Project Name: IN PROCESS MATERIALS

Sample No.: 2001090297-3 **Description:** COKE DRY SCRUBBER BAG
Date Received: 09/28/2001
Date Collected: 09/25/2001 **Collected by:** BRIAN HOHN **Matrix:** SOLID WASTE

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
IGNITABILITY				
Burning Rate	0(1)	mm/sec	1030	10/10/2001
REACTIVITY				
Cyanide as HCN (Reactive)	<0.12	mg/kg	7.3.3	10/08/2001
Sulfide as H2S (Reactive)	<100	mg/kg	7.3.4	10/08/2001
TCLP METALS				
Mercury TCLP Digest Date	220	-----	7470A	10/11/2001
TCLP Digest Date	1578	-----	3010A	10/09/2001
TCLP Extraction Date	6147	-----	1311	10/04/2001
Arsenic as As	<0.1	mg/l	6020	10/12/2001
Barium as Ba	0.1	mg/l	6020	10/12/2001
Cadmium as Cd	<0.02	mg/l	6020	10/12/2001
Chromium as Cr	<0.2	mg/l	6020	10/12/2001
Lead as Pb	<0.1	mg/l	6020	10/12/2001
Mercury as Hg	<0.0002	mg/l	7470A	10/12/2001
Selenium as Se	<0.1	mg/l	6020	10/12/2001
Silver as Ag	<0.05	mg/l	6020	10/12/2001
TCLP SEMIVOLATILES				
Data File Number-Semivolatiles	1102011007			
Batch #/Extract Date - EPA 8270	B4113	-----	3510C	10/08/2001
1,4-Dichlorobenzene (SV)	<40	ug/l	8270C	11/02/2001
2,4-Dinitrotoluene (SV)	<40	ug/l	8270C	11/02/2001
Hexachlorobenzene (SV)	<40	ug/l	8270C	11/02/2001
Hexachlorobutadiene (SV)	<40	ug/l	8270C	11/02/2001
Hexachloroethane (SV)	<40	ug/l	8270C	11/02/2001
Nitrobenzene (SV)	<40	ug/l	8270C	11/02/2001
Pentachlorophenol (SV)	<40	ug/l	8270C	11/02/2001
Pyridine (SV)	<40 UJ	ug/l	8270C	11/02/2001
Total Cresol (SV)	54	ug/l	8270C	11/02/2001
2,4,5-Trichlorophenol (SV)	<80	ug/l	8270C	11/02/2001
2,4,6-Trichlorophenol (SV)	<40	ug/l	8270C	11/02/2001
2-Fluorophenol (Surrogate)	50	% [10-110]	8270C	11/02/2001
Phenol-d6 (Surrogate)	52	% [10-119]	8270C	11/02/2001
Nitrobenzene-d5 (Surrogate)	82	% [27-121]	8270C	11/02/2001

Client Name: COLUMBIA FALLS ALUMINUM CO.

Project No.: CFAC

Project Name: IN PROCESS MATERIALS

Sample No.: 2001090297-3 **Description:** COKE DRY SCRUBBER BAG

Date Received: 09/28/2001

Date Collected: 09/25/2001 **Collected by:** BRIAN HOHN **Matrix:** SOLID WASTE

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
2-Fluorobiphenyl (Surrogate)	75	% [47-122]	8270C	11/02/2001
2,4,6-Tribromophenol (Surrogate)	80	% [36-124]	8270C	11/02/2001
Terphenyl-d14 (Surrogate)	91	% [61-133]	8270C	11/02/2001
TCLP VOLATILES				
Data File Number-Volatiles	1015011009	-----		
Benzene	<5	ug/l	8260B	10/15/2001
Carbon tetrachloride	<5	ug/l	8260B	10/15/2001
Chlorobenzene	<5	ug/l	8260B	10/15/2001
Chloroform	<100	ug/l	8260B	10/15/2001
1,4-Dichlorobenzene	<5	ug/l	8260B	10/15/2001
1,2-Dichloroethane	<5	ug/l	8260B	10/15/2001
1,1-Dichloroethene	<5	ug/l	8260B	10/15/2001
Tetrachloroethene	<5	ug/l	8260B	10/15/2001
Trichloroethene	<5	ug/l	8260B	10/15/2001
Vinyl chloride	<5	ug/l	8260B	10/15/2001
Methyl Ethyl Ketone (2-Butanone)	<100	ug/l	8260B	10/15/2001
1,2-Dichloroethane-d4 (Surrogate)	112	% [73-121]	8260B	10/15/2001
Toluene-d8 (Surrogate)	100	% [91-109]	8260B	10/15/2001
4-Bromofluorobenzene (Surrogate)	98	% [85-115]	8260B	10/15/2001

Northern Analytical Laboratories, Inc.

Client Name: COLUMBIA FALLS ALUMINUM CO.

Project No.: CFAC

Project Name: IN PROCESS MATERIALS

Sample No.: 2001090297-4 **Description:** PIN HOLE PASTE BAG
Date Received: 09/28/2001
Date Collected: 09/25/2001 **Collected by:** BRIAN HOHN **Matrix:** SOLID WASTE

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
IGNITABILITY				
Burning Rate	0(1)	mm/sec	1030	10/10/2001
REACTIVITY				
Cyanide as HCN (Reactive)	<0.12	mg/kg	7.3.3	10/09/2001
Sulfide as H2S (Reactive)	<100	mg/kg	7.3.4	10/09/2001
TCLP METALS				
Mercury TCLP Digest Date	220	-----	7470A	10/11/2001
TCLP Digest Date	1578	-----	3010A	10/09/2001
TCLP Extraction Date	6147	-----	1311	10/04/2001
Arsenic as As	<0.1	mg/l	6020	10/12/2001
Barium as Ba	0.2	mg/l	6020	10/12/2001
Cadmium as Cd	<0.02	mg/l	6020	10/12/2001
Chromium as Cr	<0.2	mg/l	6020	10/12/2001
Lead as Pb	<0.1	mg/l	6020	10/12/2001
Mercury as Hg	<0.0002	mg/l	7470A	10/12/2001
Selenium as Se	<0.1	mg/l	6020	10/12/2001
Silver as Ag	<0.05	mg/l	6020	10/12/2001
TCLP SEMIVOLATILES				
Data File Number-Semivolatiles	1102011008			
Batch #/Extract Date - EPA 8270	B4113	-----	3510C	10/08/2001
1,4-Dichlorobenzene (SV)	<40	ug/l	8270C	11/02/2001
2,4-Dinitrotoluene (SV)	<40	ug/l	8270C	11/02/2001
Hexachlorobenzene (SV)	<40	ug/l	8270C	11/02/2001
Hexachlorobutadiene (SV)	<40	ug/l	8270C	11/02/2001
Hexachloroethane (SV)	<40	ug/l	8270C	11/02/2001
Nitrobenzene (SV)	<40	ug/l	8270C	11/02/2001
Pentachlorophenol (SV)	<40	ug/l	8270C	11/02/2001
Pyridine (SV)	<40 UJ	ug/l	8270C	11/02/2001
Total Cresol (SV)	<40	ug/l	8270C	11/02/2001
2,4,5-Trichlorophenol (SV)	<80	ug/l	8270C	11/02/2001
2,4,6-Trichlorophenol (SV)	<40	ug/l	8270C	11/02/2001
2-Fluorophenol (Surrogate)	58	% [10-110]	8270C	11/02/2001
Phenol-d6 (Surrogate)	58	% [10-119]	8270C	11/02/2001
Nitrobenzene-d5 (Surrogate)	91	% [27-121]	8270C	11/02/2001

Client Name: COLUMBIA FALLS ALUMINUM CO.

Project No.: CFAC

Project Name: IN PROCESS MATERIALS

Sample No.: 2001090297-4 **Description:** PIN HOLE PASTE BAG

Date Received: 09/28/2001

Date Collected: 09/25/2001 **Collected by:** BRIAN HOHN **Matrix:** SOLID WASTE

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
2-Fluorobiphenyl (Surrogate)	85	% [47-122]	8270C	11/02/2001
2,4,6-Tribromophenol (Surrogate)	87	% [36-124]	8270C	11/02/2001
Terphenyl-d14 (Surrogate)	103	% [61-133]	8270C	11/02/2001
TCLP VOLATILES				
Data File Number-Volatiles	1015011010	-----		
Benzene	<5	ug/l	8260B	10/15/2001
Carbon tetrachloride	<5	ug/l	8260B	10/15/2001
Chlorobenzene	<5	ug/l	8260B	10/15/2001
Chloroform	<100	ug/l	8260B	10/15/2001
1,4-Dichlorobenzene	<5	ug/l	8260B	10/15/2001
1,2-Dichloroethane	<5	ug/l	8260B	10/15/2001
1,1-Dichloroethene	<5	ug/l	8260B	10/15/2001
Tetrachloroethene	<5	ug/l	8260B	10/15/2001
Trichloroethene	<5	ug/l	8260B	10/15/2001
Vinyl chloride	<5	ug/l	8260B	10/15/2001
Methyl Ethyl Ketone (2-Butanone)	<100	ug/l	8260B	10/15/2001
1,2-Dichloroethane-d4 (Surrogate)	117	% [73-121]	8260B	10/15/2001
Toluene-d8 (Surrogate)	103	% [91-109]	8260B	10/15/2001
4-Bromofluorobenzene (Surrogate)	99	% [85-115]	8260B	10/15/2001

Client Name: COLUMBIA FALLS ALUMINUM CO.

Project No.: CFAC

Project Name: IN PROCESS MATERIALS

Sample No.: 2001090297-5 **Description:** PIN CLEANING FILTER

Date Received: 09/28/2001

Date Collected: 09/25/2001 **Collected by:** BRIAN HOHN **Matrix:** SOLID WASTE

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
IGNITABILITY				
Burning Rate	0(1)	mm/sec	1030	10/10/2001
REACTIVITY				
Cyanide as HCN (Reactive)	<0.12	mg/kg	7.3.3	10/09/2001
Sulfide as H2S (Reactive)	<100	mg/kg	7.3.4	10/09/2001
TCLP METALS				
Mercury TCLP Digest Date	220	-----	7470A	10/11/2001
TCLP Digest Date	1578	-----	3010A	10/09/2001
TCLP Extraction Date	6150	-----	1311	10/07/2001
Arsenic as As	<0.1	mg/l	6020	10/12/2001
Barium as Ba	0.2	mg/l	6020	10/12/2001
Cadmium as Cd	0.07	mg/l	6020	10/12/2001
Chromium as Cr	<0.2	mg/l	6020	10/12/2001
Lead as Pb	<0.1	mg/l	6020	10/12/2001
Mercury as Hg	<0.0002	mg/l	7470A	10/12/2001
Selenium as Se	<0.1	mg/l	6020	10/12/2001
Silver as Ag	<0.05	mg/l	6020	10/12/2001
TCLP SEMIVOLATILES				
Data File Number-Semivolatiles	1102011009			
Batch #/Extract Date - EPA 8270	B4113	-----	3510C	10/09/2001
1,4-Dichlorobenzene (SV)	<40	ug/l	8270C	11/02/2001
2,4-Dinitrotoluene (SV)	<40	ug/l	8270C	11/02/2001
Hexachlorobenzene (SV)	<40	ug/l	8270C	11/02/2001
Hexachlorobutadiene (SV)	<40	ug/l	8270C	11/02/2001
Hexachloroethane (SV)	<40	ug/l	8270C	11/02/2001
Nitrobenzene (SV)	<40	ug/l	8270C	11/02/2001
Pentachlorophenol (SV)	<40	ug/l	8270C	11/02/2001
Pyridine (SV)	<40 UJ	ug/l	8270C	11/02/2001
Total Cresol (SV)	<40	ug/l	8270C	11/02/2001
2,4,5-Trichlorophenol (SV)	<80	ug/l	8270C	11/02/2001
2,4,6-Trichlorophenol (SV)	<40	ug/l	8270C	11/02/2001
2-Fluorophenol (Surrogate)	61	% [10-110]	8270C	11/02/2001
Phenol-d6 (Surrogate)	59	% [10-119]	8270C	11/02/2001
Nitrobenzene-d5 (Surrogate)	103	% [27-121]	8270C	11/02/2001

Client Name: COLUMBIA FALLS ALUMINUM CO.

Project No.: CFAC

Project Name: IN PROCESS MATERIALS

Sample No.: 2001090297-5 **Description:** PIN CLEANING FILTER

Date Received: 09/28/2001

Date Collected: 09/25/2001 **Collected by:** BRIAN HOHN **Matrix:** SOLID WASTE

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
2-Fluorobiphenyl (Surrogate)	84	% [47-122]	8270C	11/02/2001
2,4,6-Tribromophenol (Surrogate)	85	% [36-124]	8270C	11/02/2001
Terphenyl-d14 (Surrogate)	101	% [61-133]	8270C	11/02/2001
TCLP VOLATILES				
Data File Number-Volatiles	1015011011	----		
Benzene	<5	ug/l	8260B	10/15/2001
Carbon tetrachloride	<5	ug/l	8260B	10/15/2001
Chlorobenzene	<5	ug/l	8260B	10/15/2001
Chloroform	<100	ug/l	8260B	10/15/2001
1,4-Dichlorobenzene	<5	ug/l	8260B	10/15/2001
1,2-Dichloroethane	<5	ug/l	8260B	10/15/2001
1,1-Dichloroethene	<5	ug/l	8260B	10/15/2001
Tetrachloroethene	<5	ug/l	8260B	10/15/2001
Trichloroethene	<5	ug/l	8260B	10/15/2001
Vinyl chloride	<5	ug/l	8260B	10/15/2001
Methyl Ethyl Ketone (2-Butanone)	<100	ug/l	8260B	10/15/2001
1,2-Dichloroethane-d4 (Surrogate)	113	% [73-121]	8260B	10/15/2001
Toluene-d8 (Surrogate)	101	% [91-109]	8260B	10/15/2001
4-Bromofluorobenzene (Surrogate)	98	% [85-115]	8260B	10/15/2001

Client Name: COLUMBIA FALLS ALUMINUM CO.

Project No.: CFAC

Project Name: IN PROCESS MATERIALS

Sample No.: 2001090297-6 **Description:** POTLINES SWEEPINGS BAG

Date Received: 09/28/2001

Date Collected: 09/25/2001 **Collected by:** BRIAN HOHN **Matrix:** SOLID WASTE

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
IGNITABILITY				
Burning Rate	0(1)	mm/sec	1030	10/10/2001
Flash Point (Closed Cup)	NA	-----		
REACTIVITY				
Cyanide as HCN (Reactive)	<0.12	mg/kg	7.3.3	10/09/2001
Sulfide as H2S (Reactive)	<100	mg/kg	7.3.4	10/09/2001
TCLP METALS				
Mercury TCLP Digest Date	220	-----	7470A	10/11/2001
TCLP Digest Date	1578	-----	3010A	10/09/2001
TCLP Extraction Date	6150	-----	1311	10/07/2001
Arsenic as As	<0.1	mg/l	6020	10/12/2001
Barium as Ba	0.2	mg/l	6020	10/12/2001
Cadmium as Cd	0.07	mg/l	6020	10/12/2001
Chromium as Cr	<0.2	mg/l	6020	10/12/2001
Lead as Pb	<0.1	mg/l	6020	10/12/2001
Mercury as Hg	<0.0002	mg/l	7470A	10/12/2001
Selenium as Se	<0.1	mg/l	6020	10/12/2001
Silver as Ag	<0.05	mg/l	6020	10/12/2001
TCLP SEMIVOLATILES				
Data File Number-Semivolatiles	1102011010			
Batch #/Extract Date - EPA 8270	B4113	-----	3510C	10/09/2001
1,4-Dichlorobenzene (SV)	<40	ug/l	8270C	11/02/2001
2,4-Dinitrotoluene (SV)	<40	ug/l	8270C	11/02/2001
Hexachlorobenzene (SV)	<40	ug/l	8270C	11/02/2001
Hexachlorobutadiene (SV)	<40	ug/l	8270C	11/02/2001
Hexachloroethane (SV)	<40	ug/l	8270C	11/02/2001
Nitrobenzene (SV)	<40	ug/l	8270C	11/02/2001
Pentachlorophenol (SV)	<40	ug/l	8270C	11/02/2001
Pyridine (SV)	<40 UJ	ug/l	8270C	11/02/2001
Total Cresol (SV)	<40	ug/l	8270C	11/02/2001
2,4,5-Trichlorophenol (SV)	<80	ug/l	8270C	11/02/2001
2,4,6-Trichlorophenol (SV)	<40	ug/l	8270C	11/02/2001
2-Fluorophenol (Surrogate)	52	% [10-110]	8270C	11/02/2001
Phenol-d6 (Surrogate)	56	% [10-119]	8270C	11/02/2001

Client Name: COLUMBIA FALLS ALUMINUM CO.

Project No.: CFAC

Project Name: IN PROCESS MATERIALS

Sample No.: 2001090297-6 **Description:** POTLINES SWEEPINGS BAG

Date Received: 09/28/2001

Date Collected: 09/25/2001 **Collected by:** BRIAN HOHN **Matrix:** SOLID WASTE

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
Nitrobenzene-d5 (Surrogate)	96	% [27-121]	8270C	11/02/2001
2-Fluorobiphenyl (Surrogate)	87	% [47-122]	8270C	11/02/2001
2,4,6-Tribromophenol (Surrogate)	94	% [36-124]	8270C	11/02/2001
Terphenyl-d14 (Surrogate)	105	% [61-133]	8270C	11/02/2001
TCLP VOLATILES				
Data File Number-Volatiles	1015011012	----		
Benzene	<5	ug/l	8260B	10/15/2001
Carbon tetrachloride	<5	ug/l	8260B	10/15/2001
Chlorobenzene	<5	ug/l	8260B	10/15/2001
Chloroform	<100	ug/l	8260B	10/15/2001
1,4-Dichlorobenzene	<5	ug/l	8260B	10/15/2001
1,2-Dichloroethane	<5	ug/l	8260B	10/15/2001
1,1-Dichloroethene	<5	ug/l	8260B	10/15/2001
Tetrachloroethene	<5	ug/l	8260B	10/15/2001
Trichloroethene	<5	ug/l	8260B	10/15/2001
Vinyl chloride	<5	ug/l	8260B	10/15/2001
Methyl Ethyl Ketone (2-Butanone)	<100	ug/l	8260B	10/15/2001
1,2-Dichloroethane-d4 (Surrogate)	117	% [73-121]	8260B	10/15/2001
Toluene-d8 (Surrogate)	102	% [91-109]	8260B	10/15/2001
4-Bromofluorobenzene (Surrogate)	96	% [85-115]	8260B	10/15/2001

Client Name: COLUMBIA FALLS ALUMINUM CO.

Project No.: CFAC

Project Name: IN PROCESS MATERIALS

Sample No.: 2001090297-7 **Description:** W. PLANT ALUMINA TRANSFER N. BAG

Date Received: 09/28/2001

Date Collected: 09/25/2001 **Collected by:** BRIAN HOHN **Matrix:** SOLID WASTE

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
IGNITABILITY				
Burning Rate	0(1)	mm/sec	1030	10/10/2001
REACTIVITY				
Cyanide as HCN (Reactive)	<0.12	mg/kg	7.3.3	10/09/2001
Sulfide as H2S (Reactive)	<100	mg/kg	7.3.4	10/09/2001
TCLP METALS				
Mercury TCLP Digest Date	220	-----	7470A	10/11/2001
TCLP Digest Date	1578	-----	3010A	10/09/2001
TCLP Extraction Date	6149	-----	1311	10/05/2001
Arsenic as As	<0.1	mg/l	6020	10/12/2001
Barium as Ba	0.2	mg/l	6020	10/12/2001
Cadmium as Cd	0.23	mg/l	6020	10/12/2001
Chromium as Cr	<0.2	mg/l	6020	10/12/2001
Lead as Pb	<0.1	mg/l	6020	10/12/2001
Mercury as Hg	<0.0002	mg/l	7470A	10/12/2001
Selenium as Se	<0.1	mg/l	6020	10/12/2001
Silver as Ag	<0.05	mg/l	6020	10/12/2001
TCLP SEMIVOLATILES				
Data File Number-Semivolatiles	1102011011			
Batch #/Extract Date - EPA 8270	B4113	-----	3510C	10/08/2001
1,4-Dichlorobenzene (SV)	<40	ug/l	8270C	11/02/2001
2,4-Dinitrotoluene (SV)	<40	ug/l	8270C	11/02/2001
Hexachlorobenzene (SV)	<40	ug/l	8270C	11/02/2001
Hexachlorobutadiene (SV)	<40	ug/l	8270C	11/02/2001
Hexachloroethane (SV)	<40	ug/l	8270C	11/02/2001
Nitrobenzene (SV)	<40	ug/l	8270C	11/02/2001
Pentachlorophenol (SV)	<40	ug/l	8270C	11/02/2001
Pyridine (SV)	<40 UJ	ug/l	8270C	11/02/2001
Total Cresol (SV)	<40	ug/l	8270C	11/02/2001
2,4,5-Trichlorophenol (SV)	<80	ug/l	8270C	11/02/2001
2,4,6-Trichlorophenol (SV)	<40	ug/l	8270C	11/02/2001
2-Fluorophenol (Surrogate)	60	% [10-110]	8270C	11/02/2001
Phenol-d6 (Surrogate)	58	% [10-119]	8270C	11/02/2001
Nitrobenzene-d5 (Surrogate)	109	% [27-121]	8270C	11/02/2001

Client Name: COLUMBIA FALLS ALUMINUM CO.

Project No.: CFAC

Project Name: IN PROCESS MATERIALS

Sample No.: 2001090297-7 **Description:** W. PLANT ALUMINA TRANSFER N. BAG

Date Received: 09/28/2001

Date Collected: 09/25/2001 **Collected by:** BRIAN HOHN **Matrix:** SOLID WASTE

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
2-Fluorobiphenyl (Surrogate)	96	% [47-122]	8270C	11/02/2001
2,4,6-Tribromophenol (Surrogate)	83	% [36-124]	8270C	11/02/2001
Terphenyl-d14 (Surrogate)	108	% [61-133]	8270C	11/02/2001
TCLP VOLATILES				
Data File Number-Volatiles	1015011013	----		
Benzene	<5	ug/l	8260B	10/15/2001
Carbon tetrachloride	<5	ug/l	8260B	10/15/2001
Chlorobenzene	<5	ug/l	8260B	10/15/2001
Chloroform	<100	ug/l	8260B	10/15/2001
1,4-Dichlorobenzene	<5	ug/l	8260B	10/15/2001
1,2-Dichloroethane	<5	ug/l	8260B	10/15/2001
1,1-Dichloroethene	<5	ug/l	8260B	10/15/2001
Tetrachloroethene	<5	ug/l	8260B	10/15/2001
Trichloroethene	<5	ug/l	8260B	10/15/2001
Vinyl chloride	<5	ug/l	8260B	10/15/2001
Methyl Ethyl Ketone (2-Butanone)	<100	ug/l	8260B	10/15/2001
1,2-Dichloroethane-d4 (Surrogate)	119	% [73-121]	8260B	10/15/2001
Toluene-d8 (Surrogate)	99	% [91-109]	8260B	10/15/2001
4-Bromofluorobenzene (Surrogate)	103	% [85-115]	8260B	10/15/2001

Client Name: COLUMBIA FALLS ALUMINUM CO.

Project No.: CFAC

Project Name: IN PROCESS MATERIALS

Sample No.: 2001090297-8 **Description:** CRYOLITE BATH
Date Received: 09/28/2001
Date Collected: 09/25/2001 **Collected by:** BRIAN HOHN **Matrix:** SOLID WASTE

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
IGNITABILITY				
Burning Rate	0 (1)	mm/sec	1030	10/10/2001
REACTIVITY				
Cyanide as HCN (Reactive)	<0.12	mg/kg	7.3.3	10/09/2001
Sulfide as H2S (Reactive)	<100	mg/kg	7.3.4	10/09/2001
TCLP METALS				
Mercury TCLP Digest Date	220	-----	7470A	10/11/2001
TCLP Digest Date	1578	-----	3010A	10/09/2001
TCLP Extraction Date	6149	-----	1311	10/05/2001
Arsenic as As	<0.1	mg/l	6020	10/12/2001
Barium as Ba	0.6	mg/l	6020	10/12/2001
Cadmium as Cd	<0.02	mg/l	6020	10/12/2001
Chromium as Cr	<0.2	mg/l	6020	10/12/2001
Lead as Pb	<0.1	mg/l	6020	10/12/2001
Mercury as Hg	<0.0002	mg/l	7470A	10/12/2001
Selenium as Se	<0.1	mg/l	6020	10/12/2001
Silver as Ag	<0.05	mg/l	6020	10/12/2001
TCLP SEMIVOLATILES				
Data File Number-Semivolatiles	1102011012			
Batch #/Extract Date - EPA 8270	B4113	-----	3510C	10/08/2001
1,4-Dichlorobenzene (SV)	<40	ug/l	8270C	11/02/2001
2,4-Dinitrotoluene (SV)	<40	ug/l	8270C	11/02/2001
Hexachlorobenzene (SV)	<40	ug/l	8270C	11/02/2001
Hexachlorobutadiene (SV)	<40	ug/l	8270C	11/02/2001
Hexachloroethane (SV)	<40	ug/l	8270C	11/02/2001
Nitrobenzene (SV)	<40	ug/l	8270C	11/02/2001
Pentachlorophenol (SV)	<40	ug/l	8270C	11/02/2001
Pyridine (SV)	<40 UJ	ug/l	8270C	11/02/2001
Total Cresol (SV)	<40	ug/l	8270C	11/02/2001
2,4,5-Trichlorophenol (SV)	<80	ug/l	8270C	11/02/2001
2,4,6-Trichlorophenol (SV)	<40	ug/l	8270C	11/02/2001
2-Fluorophenol (Surrogate)	58	% [10-110]	8270C	11/02/2001
Phenol-d6 (Surrogate)	58	% [10-119]	8270C	11/02/2001
Nitrobenzene-d5 (Surrogate)	105	% [27-121]	8270C	11/02/2001

Client Name: COLUMBIA FALLS ALUMINUM CO.

Project No.: CFAC

Project Name: IN PROCESS MATERIALS

Sample No.: 2001090297-8 **Description:** CRYOLITE BATH

Date Received: 09/28/2001

Date Collected: 09/25/2001 **Collected by:** BRIAN HOHN **Matrix:** SOLID WASTE

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
2-Fluorobiphenyl (Surrogate)	93	% [47-122]	8270C	11/02/2001
2,4,6-Tribromophenol (Surrogate)	78	% [36-124]	8270C	11/02/2001
Terphenyl-d14 (Surrogate)	107	% [61-133]	8270C	11/02/2001
TCLP VOLATILES				
Data File Number-Volatiles	1015011014	-----		
Benzene	<5	ug/l	8260B	10/15/2001
Carbon tetrachloride	<5	ug/l	8260B	10/15/2001
Chlorobenzene	<5	ug/l	8260B	10/15/2001
Chloroform	<100	ug/l	8260B	10/15/2001
1,4-Dichlorobenzene	<5	ug/l	8260B	10/15/2001
1,2-Dichloroethane	<5	ug/l	8260B	10/15/2001
1,1-Dichloroethene	<5	ug/l	8260B	10/15/2001
Tetrachloroethene	<5	ug/l	8260B	10/15/2001
Trichloroethene	<5	ug/l	8260B	10/15/2001
Vinyl chloride	<5	ug/l	8260B	10/15/2001
Methyl Ethyl Ketone (2-Butanone)	<100	ug/l	8260B	10/15/2001
1,2-Dichloroethane-d4 (Surrogate)	121	% [73-121]	8260B	10/15/2001
Toluene-d8 (Surrogate)	102	% [91-109]	8260B	10/15/2001
4-Bromofluorobenzene (Surrogate)	100	% [85-115]	8260B	10/15/2001

Client Name: COLUMBIA FALLS ALUMINUM CO.

Project No.: CFAC

Project Name: IN PROCESS MATERIALS

Sample No.: 2001090297-9 **Description:** MATRIX SPIKE OF CRYOLITE BATH*

Date Received: 09/28/2001

Date Collected: 09/25/2001 **Collected by:** BRIAN HOHN **Matrix:** SOLID WASTE

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
IGNITABILITY				
Burning Rate	NA	-----		
REACTIVITY				
Cyanide as HCN (Reactive)	NA	-----	-----	
Sulfide as H2S (Reactive)	NA	-----	-----	
TCLP METALS				
Mercury TCLP Digest Date	220	-----	7470A	10/11/2001
TCLP Digest Date	1578	-----	3010A	10/09/2001
TCLP Extraction Date	6149	-----	1311	10/05/2001
Arsenic as As	97	%	6020	10/12/2001
Barium as Ba	95	%	6020	10/12/2001
Cadmium as Cd	105	%	6020	10/12/2001
Chromium as Cr	104	%	6020	10/12/2001
Lead as Pb	100	%	6020	10/12/2001
Mercury as Hg	90	%	7470A	10/12/2001
Selenium as Se	102	%	6020	10/12/2001
Silver as Ag	51	%	6020	10/12/2001
TCLP SEMIVOLATILES				
Data File Number-Semivolatiles	1102011016			
Batch #/Extract Date - EPA 8270	4113	-----	3510C	
1,4-Dichlorobenzene (SV)	69	%	8270C	11/02/2001
2,4-Dinitrotoluene (SV)	76	%	8270C	11/02/2001
Hexachlorobenzene (SV)	53	%	8270C	11/02/2001
Hexachlorobutadiene (SV)	81	%	8270C	11/02/2001
Hexachloroethane (SV)	72	%	8270C	11/02/2001
Nitrobenzene (SV)	76	%	8270C	11/02/2001
Pentachlorophenol (SV)	45	%	8270C	11/02/2001
Pyridine (SV)	55	%	8270C	11/02/2001
Total Cresol (SV)	96	%	8270C	11/02/2001
2,4,5-Trichlorophenol (SV)	69	%	8270C	11/02/2001
2,4,6-Trichlorophenol (SV)	72	%	8270C	11/02/2001
2-Fluorophenol (Surrogate)	58	% [10-110]	8270C	11/02/2001
Phenol-d6 (Surrogate)	60	% [10-119]	8270C	11/02/2001
Nitrobenzene-d5 (Surrogate)	83	% [27-121]	8270C	11/02/2001

* The matrix spike for TCLP Semivolatiles was performed on the Coal Tar Pitch sample.

Client Name: COLUMBIA FALLS ALUMINUM CO.

Project No.: CFAC

Project Name: IN PROCESS MATERIALS

Sample No.: 2001090297-9 **Description:** MATRIX SPIKE OF CRYOLITE BATH*

Date Received: 09/28/2001

Date Collected: 09/25/2001 **Collected by:** BRIAN HOHN **Matrix:** SOLID WASTE

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
2-Fluorobiphenyl (Surrogate)	76	% [47-122]	8270C	11/02/2001
2,4,6-Tribromophenol (Surrogate)	75	% [36-124]	8270C	11/02/2001
Terphenyl-d14 (Surrogate)	91	% [61-133]	8270C	11/02/2001
TCLP VOLATILES				
Data File Number-Volatiles	101501143	-----		
Benzene	99	%	8260B	10/15/2001
Carbon tetrachloride	101	%	8260B	10/15/2001
Chlorobenzene	96	%	8260B	10/15/2001
Chloroform	108	%	8260B	10/15/2001
1,4-Dichlorobenzene	99	%	8260B	10/15/2001
1,2-Dichloroethane	116	%	8260B	10/15/2001
1,1-Dichloroethene	89	%	8260B	10/15/2001
Tetrachloroethene	96	%	8260B	10/15/2001
Trichloroethene	92	%	8260B	10/15/2001
Vinyl chloride	87	%	8260B	10/15/2001
Methyl Ethyl Ketone (2-Butanone)	136	%	8260B	10/15/2001
1,2-Dichloroethane-d4 (Surrogate)	119	% [73-121]	8260B	10/15/2001
Toluene-d8 (Surrogate)	100	% [91-109]	8260B	10/15/2001
4-Bromofluorobenzene (Surrogate)	99	% [85-115]	8260B	10/15/2001

Client Name: COLUMBIA FALLS ALUMINUM CO.

Project No.: CFAC

Project Name: IN PROCESS MATERIALS

Sample No.: 2001090297-10 **Description:** METHOD/EXTRACTION BLANK

Date Received: 09/28/2001

Date Collected: ----- **Collected by:** PREPARED BY LAB **Matrix:** SOLID WASTE

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
REACTIVITY				
Cyanide as HCN (Reactive)	<0.12	mg/kg	7.3.3	10/12/2001
Sulfide as H2S (Reactive)	<100	mg/kg	7.3.4	10/12/2001
TCLP METALS				
Mercury TCLP Digest Date	220	-----	7470A	10/11/2001
TCLP Digest Date	1578	-----	3010A	10/09/2001
TCLP Extraction Date	6143	-----	1311	10/03/2001
Arsenic as As	<0.1	mg/l	6020	10/12/2001
Barium as Ba	<0.1	mg/l	6020	10/12/2001
Cadmium as Cd	<0.02	mg/l	6020	10/12/2001
Chromium as Cr	<0.2	mg/l	6020	10/12/2001
Lead as Pb	<0.1	mg/l	6020	10/12/2001
Mercury as Hg	<0.0002	mg/l	7470A	10/12/2001
Selenium as Se	<0.1	mg/l	6020	10/12/2001
Silver as Ag	<0.05	mg/l	6020	10/12/2001
TCLP SEMIVOLATILES				
Data File Number-Semivolatiles	1031011011			
Batch #/Extract Date - EPA 8270	B4113	-----	3510C	10/09/2001
1,4-Dichlorobenzene (SV)	<40	ug/l	8270C	11/02/2001
2,4-Dinitrotoluene (SV)	<40	ug/l	8270C	10/31/2001
Hexachlorobenzene (SV)	<40	ug/l	8270C	10/31/2001
Hexachlorobutadiene (SV)	<40	ug/l	8270C	10/31/2001
Hexachloroethane (SV)	<40	ug/l	8270C	10/31/2001
Nitrobenzene (SV)	<40	ug/l	8270C	10/31/2001
Pentachlorophenol (SV)	<40	ug/l	8270C	10/31/2001
Pyridine (SV)	<40 UJ	ug/l	8270C	10/31/2001
Total Cresol (SV)	<40	ug/l	8270C	10/31/2001
2,4,5-Trichlorophenol (SV)	<80	ug/l	8270C	10/31/2001
2,4,6-Trichlorophenol (SV)	<40	ug/l	8270C	10/31/2001
2-Fluorophenol (Surrogate)	66	% [10-110]	8270C	10/31/2001
Phenol-d6 (Surrogate)	58	% [10-119]	8270C	10/31/2001
Nitrobenzene-d5 (Surrogate)	89	% [27-121]	8270C	10/31/2001
2-Fluorobiphenyl (Surrogate)	95	% [47-127]	8270C	10/31/2001
2,4,6-Tribromophenol (Surrogate)	79	% [36-124]	8270C	10/31/2001

Client Name: COLUMBIA FALLS ALUMINUM CO.

Project No.: CFAC

Project Name: IN PROCESS MATERIALS

Sample No.: 2001090297-10 **Description:** METHOD/EXTRACTION BLANK

Date Received: 09/28/2001

Date Collected: ----- **Collected by:** PREPARED BY LAB **Matrix:** SOLID WASTE

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
Terphenyl-d14 (Surrogate)	102	% [61-133]	8270C	10/31/2001
TCLP VOLATILES				
Data File Number-Volatiles	1015011006	-----		
Benzene	<5	ug/l	8260B	10/15/2001
Carbon tetrachloride	<5	ug/l	8260B	10/15/2001
Chlorobenzene	<5	ug/l	8260B	10/15/2001
Chloroform	<100	ug/l	8260B	10/15/2001
1,4-Dichlorobenzene	<5	ug/l	8260B	10/15/2001
1,2-Dichloroethane	<5	ug/l	8260B	10/15/2001
1,1-Dichloroethene	<5	ug/l	8260B	10/15/2001
Tetrachloroethene	<5	ug/l	8260B	10/15/2001
Trichloroethene	<5	ug/l	8260B	10/15/2001
Vinyl chloride	<5	ug/l	8260B	10/15/2001
Methyl Ethyl Ketone (2-Butanone)	<100	ug/l	8260B	10/15/2001
1,2-Dichloroethane-d4 (Surrogate)	102	% [73-121]	8260B	10/15/2001
Toluene-d8 (Surrogate)	100	% [91-109]	8260B	10/15/2001
4-Bromofluorobenzene (Surrogate)	97	% [85-115]	8260B	10/15/2001

Client Name: COLUMBIA FALLS ALUMINUM CO.

Project No.: CFAC

Project Name: IN PROCESS MATERIALS

Sample No.: 2001090297-11 **Description:** LABORATORY CONTROL SAMPLE

Date Received: 09/28/2001

Date Collected: ------ **Collected by:** PREPARED BY LAB **Matrix:** SOLID WASTE

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
IGNITABILITY				
Burning Rate	NA	-----		
REACTIVITY				
Cyanide as HCN (Reactive)	0	%	8.3	10/12/2001
Sulfide as H2S (Reactive)	18	%	8.3	10/12/2001
TCLP METALS				
Mercury TCLP Digest Date	220	-----	7470A	10/11/2001
TCLP Digest Date	1578	-----	3010A	10/09/2001
TCLP Extraction Date	NA	-----		
Arsenic as As	90	% [85-115]	6020	10/12/2001
Barium as Ba	92	% [85-115]	6020	10/12/2001
Cadmium as Cd	96	% [85-115]	6020	10/12/2001
Chromium as Cr	90	% [85-115]	6020	10/12/2001
Lead as Pb	97	% [85-115]	6020	10/12/2001
Mercury as Hg	95	% [89-118]	7470A	10/12/2001
Selenium as Se	97	% [85-115]	6020	10/12/2001
Silver as Ag	94	% [85-115]	6020	10/12/2001
TCLP SEMIVOLATILES				
Data File Number-Semivolatiles	1031011012			
Batch #/Extract Date - EPA 8270	B4113	-----	3510C	10/09/2001
1,4-Dichlorobenzene (SV)	76	% [12-120]	8270C	11/02/2001
2,4-Dinitrotoluene (SV)	85	% [22-138]	8270C	10/31/2001
Hexachlorobenzene (SV)	62	% [10-152]	8270C	10/31/2001
Hexachlorobutadiene (SV)	84	% [24-116]	8270C	10/31/2001
Hexachloroethane (SV)	74	% [40-113]	8270C	10/31/2001
Nitrobenzene (SV)	80	% [35-180]	8270C	10/31/2001
Pentachlorophenol (SV)	19	% [15-155]	8270C	10/31/2001
Pyridine (SV)	3 (3)	% [40-160]	8270C	10/31/2001
Total Cresol (SV)	68	% [50-150]	8270C	10/31/2001
2,4,5-Trichlorophenol (SV)	64	% [37-147]	8270C	10/31/2001
2,4,6-Trichlorophenol (SV)	73	% [37-147]	8270C	10/31/2001
2-Fluorophenol (Surrogate)	37	% [10-110]	8270C	10/31/2001
Phenol-d6 (Surrogate)	22	% [10-119]	8270C	10/31/2001
Nitrobenzene-d5 (Surrogate)	97	% [27-121]	8270C	10/31/2001

Client Name: COLUMBIA FALLS ALUMINUM CO.

Project No.: CFAC

Project Name: IN PROCESS MATERIALS

Sample No.: 2001090297-11 **Description:** LABORATORY CONTROL SAMPLE

Date Received: 09/28/2001

Date Collected: ----- **Collected by:** PREPARED BY LAB **Matrix:** SOLID WASTE

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
2-Fluorobiphenyl (Surrogate)	108	% [47-122]	8270C	10/31/2001
2,4,6-Tribromophenol (Surrogate)	89	% [36-124]	8270C	10/31/2001
Terphenyl-d14 (Surrogate)	116	% [61-133]	8270C	10/31/2001
TCLP VOLATILES				
Data File Number-Volatiles	1015011005	-----		
Benzene	99	% [76-112]	8260B	10/15/2001
Carbon tetrachloride	99	% [70-130]	8260B	10/15/2001
Chlorobenzene	97	% [82-112]	8260B	10/15/2001
Chloroform	105	% [70-130]	8260B	10/15/2001
1,4-Dichlorobenzene	94	% [70-130]	8260B	10/15/2001
1,2-Dichloroethane	120	% [70-130]	8260B	10/15/2001
1,1-Dichloroethene	96	% [50-134]	8260B	10/15/2001
Tetrachloroethene	92	% [70-130]	8260B	10/15/2001
Trichloroethene	87	% [81-111]	8260B	10/15/2001
Vinyl chloride	76	% [70-130]	8260B	10/15/2001
Methyl Ethyl Ketone (2-Butanone)	161 (2)	% [70-130]	8260B	10/15/2001
1,2-Dichloroethane-d4 (Surrogate)	105	% [73-121]	8260B	10/15/2001
Toluene-d8 (Surrogate)	101	% [91-109]	8260B	10/15/2001
4-Bromofluorobenzene (Surrogate)	94	% [85-115]	8260B	10/15/2001

Client Name: COLUMBIA FALLS ALUMINUM CO.

Project No.: CFAC

Project Name: IN PROCESS MATERIALS

Sample No.: 2001090297-12 **Description:** MATRIX SPIKE OF ANODE DUST BAG

Date Received: 09/28/2001

Date Collected: 09/25/2001 **Collected by:** BRIAN HOHN **Matrix:** SOLID WASTE

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
TCLP METALS				
Mercury TCLP Digest Date		-----	7470A	10/31/2001
TCLP Digest Date	1620	-----	7010A	10/31/2001
TCLP Extraction Date	6143	-----	1311	10/03/2001
Arsenic as As	99	%	6020	11/01/2001
Barium as Ba	102	%	6020	11/01/2001
Cadmium as Cd	104	%	6020	11/01/2001
Chromium as Cr	106	%	6020	11/01/2001
Lead as Pb	106	%	6020	11/01/2001
Mercury as Hg	115	%	7470A	11/01/2001
Selenium as Se	99	%	6020	11/01/2001
Silver as Ag	98	%	6020	11/01/2001

Client Name: COLUMBIA FALLS ALUMINUM CO.

Project No.: CFAC

Project Name: IN PROCESS MATERIALS

Sample No.: 2001090297-13 **Description:** MATRIX SPIKE OF PRIMARY SCRUBBER BAG

Date Received: 09/28/2001

Date Collected: 09/25/2001 **Collected by:** BRIAN HOHN **Matrix:** SOLID WASTE

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
TCLP METALS				
Mercury TCLP Digest Date	236	-----	7470A	10/31/2001
TCLP Digest Date	1620	-----	3010A	10/31/2001
TCLP Extraction Date	6143	-----	1311	10/03/2001
Arsenic as As	98	%	6020	11/01/2001
Barium as Ba	100	%	6020	11/01/2001
Cadmium as Cd	99	%	6020	11/01/2001
Chromium as Cr	105	%	6020	11/01/2001
Lead as Pb	102	%	6020	11/01/2001
Mercury as Hg	125	%	7470A	11/01/2001
Selenium as Se	98	%	6020	11/01/2001
Silver as Ag	98	%	6020	11/01/2001

Client Name: COLUMBIA FALLS ALUMINUM CO.

Project No.: CFAC

Project Name: IN PROCESS MATERIALS

Sample No.: 2001090297-14 **Description:** MATRIX SPIKE OF COKE DRY SCRUBBER BAG

Date Received: 09/28/2001

Date Collected: 09/25/2001 **Collected by:** BRIAN HOHN **Matrix:** SOLID WASTE

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
TCLP METALS				
Mercury TCLP Digest Date	236	-----	7470A	10/31/2001
TCLP Digest Date	1620	-----	3010A	10/31/2001
TCLP Extraction Date	6147	-----	1311	10/04/2001
Arsenic as As	105	%	6020	11/01/2001
Barium as Ba	108	%	6020	11/01/2001
Cadmium as Cd	110	%	6020	11/01/2001
Chromium as Cr	110	%	6020	11/01/2001
Lead as Pb	112	%	6020	11/01/2001
Mercury as Hg	115	%	7470A	11/01/2001
Selenium as Se	105	%	6020	11/01/2001
Silver as Ag	105	%	6020	11/01/2001

Client Name: COLUMBIA FALLS ALUMINUM CO.

Project No.: CFAC

Project Name: IN PROCESS MATERIALS

Sample No.: 2001090297-15 **Description:** MATRIX SPIKE OF PIN HOLE PASTE BAG

Date Received: 09/28/2001

Date Collected: 09/25/2001 **Collected by:** BRIAN HOHN **Matrix:** SOLID WASTE

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
TCLP METALS				
Mercury TCLP Digest Date	236	-----	7470A	10/31/2001
TCLP Digest Date	1620	-----	3010A	10/31/2001
TCLP Extraction Date	6147	-----	1311	10/04/2001
Arsenic as As	100	%	6020	11/01/2001
Barium as Ba	100	%	6020	11/01/2001
Cadmium as Cd	102	%	6020	11/01/2001
Chromium as Cr	105	%	6020	11/01/2001
Lead as Pb	105	%	6020	11/01/2001
Mercury as Hg	95	%	7470A	11/01/2001
Selenium as Se	100	%	6020	11/01/2001
Silver as Ag	102	%	6020	11/01/2001

Client Name: COLUMBIA FALLS ALUMINUM CO.

Project No.: CFAC

Project Name: IN PROCESS MATERIALS

Sample No.: 2001090297-16 **Description:** MATRIX SPIKE OF PIN CLEANING FILTER

Date Received: 09/28/2001

Date Collected: 09/25/2001 **Collected by:** BRIAN HOHN **Matrix:** SOLID WASTE

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
TCLP METALS				
Mercury TCLP Digest Date	236	-----	7470A	10/31/2001
TCLP Digest Date	1620	-----	3010A	10/31/2001
TCLP Extraction Date	6150	-----	1311	10/07/2001
Arsenic as As	100	%	6020	11/01/2001
Barium as Ba	98	%	6020	11/01/2001
Cadmium as Cd	102	%	6020	11/01/2001
Chromium as Cr	105	%	6020	11/01/2001
Lead as Pb	108	%	6020	11/01/2001
Mercury as Hg	105	%	7470A	11/01/2001
Selenium as Se	100	%	6020	11/01/2001
Silver as Ag	95	%	6020	11/01/2001

Client Name: COLUMBIA FALLS ALUMINUM CO.

Project No.: CFAC

Project Name: IN PROCESS MATERIALS

Sample No.: 2001090297-17 **Description:** MATRIX SPIKE OF POTLINE SWEEPINGS

Date Received: 09/28/2001

Date Collected: 09/25/2001 **Collected by:** BRIAN HOHN **Matrix:** SOLID WASTE

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
TCLP METALS				
Mercury TCLP Digest Date	236	-----	7470A	10/31/2001
TCLP Digest Date	1620	-----	3010A	10/31/2001
TCLP Extraction Date	6150	-----	1311	10/07/2001
Arsenic as As	102	%	6020	11/01/2001
Barium as Ba	100	%	6020	11/01/2001
Cadmium as Cd	105	%	6020	11/01/2001
Chromium as Cr	105	%	6020	11/01/2001
Lead as Pb	108	%	6020	11/01/2001
Mercury as Hg	110	%	7470A	11/01/2001
Selenium as Se	102	%	6020	11/01/2001
Silver as Ag	95	%	6020	11/01/2001

Client Name: COLUMBIA FALLS ALUMINUM CO.

Project No.: CFAC

Project Name: IN PROCESS MATERIALS

Sample No.: 2001090297-18 **Description:** MATRIX SPIKE OF W. PLANT ALUMNIA TRANSFER N.

Date Received: 09/28/2001

Date Collected: 09/25/2001 **Collected by:** BRIAN HOHN **Matrix:** SOLID WASTE

Laboratory Test	Measured Value	Test Units	Test Method	Date of Analysis
TCLP METALS				
Mercury TCLP Digest Date	236	-----	7470A	10/31/2001
TCLP Digest Date	1620	-----	3010A	10/31/2001
TCLP Extraction Date	6150	-----	1311	10/07/2001
Arsenic as As	100	%	6020	11/01/2001
Barium as Ba	98	%	6020	11/01/2001
Cadmium as Cd	100	%	6020	11/01/2001
Chromium as Cr	102	%	6020	11/01/2001
Lead as Pb	105	%	6020	11/01/2001
Mercury as Hg	110	%	7470A	11/01/2001
Selenium as Se	98	%	6020	11/01/2001
Silver as Ag	100	%	6020	11/01/2001

ATTACHMENTS

CFAC
Project or Site Name

In Process Materials
Project Number

Brian Holtz
Sampler Name (Printed)

Brian Holtz
Contact Name

CHAIN OF CUSTODY RECORD

NORTHERN
Analytical Laboratories, Inc.

602 South 25th Street
Billings, Montana 59101
Ph: 406-254-7226 • Fax: 406-254-1389

CFAC
Report to (Firm or Agency)

2000 Aluminum Dr.
Address

Columbia Falls MT 59912
City State Zip

(406) 892-8212 (406) 892-8201
Phone 892-8400 Fax

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	TCLP Metals	TCLP S.V.	TCLP Vols	Ignitability	Reactivity		NOTES	LAB NUMBER
9/25/01	NA	Anode Dust Bag	G	Solid	1	X	X	X	X	X		Metals By 6010 Mercury By 7470	2001090297-1
		Primary Scrubber Bag										Semi Vols By 8270	2
		Coke Dry Scrubber Bag										Volitales By 8240	3
		Pin Hole Paste Bag										Ignitability by 1030	4
		Pin Cleaning Filter										Reactive Cyanide 7.3.3.2 Reactive Sulfide 7.3.4.2	5
		Potlines Sweepings											6
		W. Plant Alumina Transfer N.											7
		Cryolite Bath	↓										
												msct-8	9
												ext. MS	10
												LCS	11

Bag as per Steve Wright

Bag

Relinquished by:	Date	Time	Received by:
[signature]	9/27/01	13:00	
UPS	9-28-01	1010	[signature]

ED_002345B_00003731-00034

NORTHERN
Analytical Laboratories, Inc.

SAMPLE RECEIPT CHECKLIST

Dear Valued Client: This checklist documents the condition of your sample(s) as it (they) arrived at our lab. Please review it and familiarize yourself with its contents. Should you have any questions or comments, please contact us. Thank you for your use of our services.

Client Name: CF AC

Project: In Process Materials

Laboratory Number(s): 2001090297

Checklist Completed by: MJ 9-28-01 (Initials / Date)

Date/Time Received: 9-28-01 1010 (Date / Time)

Received by: D. Jensen

Carrier Name: UPS

Sample Type: Solid waste

	YES	NO
1. Shipping container in good condition?	✓	
2. Custody seals present on shipping container? Condition: Intact ✓ Broken ___	✓	~~✓~~ MJ
3. Chain of custody present?	✓	
4. Chain of custody signed when relinquished and received?	✓	
5. Chain of custody agrees with sample labels?	✓	
6. Custody seals on sample bottles? Condition: Intact ___ Broken ___		✓
7. Samples in proper container/bottle?*	✓	
8. Sample containers intact?*	✓	
9. Sufficient sample volume for indicated test?*		✓
10. Ice/Frozen Blue Ice present in shipping container? (circle one)	✓	
container temperature 1. 5.5 2. ___ 3. ___ * (if <0 or>10)		
11. All samples rec'd within holding time?*	✓	
12. VOA vials have zero headspace? * (if contains >5mm headspace)	NA	
13. Trip Blank received?	NA	

	YES	NO
14. pH check performed by: ___		
15. Metals bottle(s) pH <2?	NA	
16. Nutrient bottle(s) pH <2?		
17. Cyanide bottle(s) pH >12?		
18. Sulfide bottle(s) pH >9?		
19. TOC bottle(s) pH <2?		
20. Phenolics bottle(s) pH <2?		
21. Oil & grease bottle(s) pH <2? (checked by analyst)		
22. DRO/418.1 bottle(s) pH <2? (checked by analyst)		
23. Volatiles (VOA) pH <2? (VOA pH checked by analyst)		
24. Herbicides (515) pH <2? (checked by analyst)		
25. Semivolatiles (525) pH <2? (checked by analyst)		
26. Client contacted?		
27. Person contacted		
28. Date contacted		

NOTES: **Samples may be affected when not transported at the temperature recommended by the EPA for the test you've selected. Please contact the lab if you have concerns about the temperature of your samples.**

* **Critical item - if marked "NO" contact lab manager.**

COMMENTS: # 9 - may not be a minimum of 100 grams as needed for TCLP tests. - Will measure gram weight upon analysis.