## 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_00005569-00001

*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 |

# 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 |
|---|---|---|---|---|
| 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_00005569-00034

**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.