

MARALCO ALUMINUM

Post Office Box 1167
7730 South 202nd Street
Kent, Washington 98032-3167

206-872-5566

Telex 321156

Aluminum

Ingot
Plate
Billet
Deox

CERTIFIED MAIL

Norm Peck
Julie Sellick
Department of Ecology
4350 - 150th Ave. N.E.
Redmond, WA. 98052

August 4, 1986

This is to complete the verifications and requirements you requested in your letter of May 1, 1986. At the time of my original response (May 23, 1986 letter) we were short some of the requested lab reports. The latest report was just received and all requested reports are enclosed.

The enclosed reports are:

1. N.W. Labs EPtox test results on Bachouse Dust
2. N.W. Labs EPtox test results on Oxides
3. N.W. Labs EPtox test results on Black Dross
4. Biomed Labs Fish bioassay test results on Bachouse Dust
5. DOE Lab Fish bioassay test results on Black Dross

I believe this completes the requested test reports. Please let me know if you have any questions.

Sincerely,

J.P. Lyon
J.P. Lyon

JPL:bp
enclosures

RECEIVED
AUG 10 1986

NORTHWEST LABORATORIES

of Seattle, Incorporated

ESTABLISHED 1896

Technical Services for: Industry, Commerce, Legal Profession & Insurance Industry



530 FIRST AVENUE SOUTH

SEATTLE, WASHINGTON 98134

Telephone: (206) 622-0680

Report To: Maralco Aluminum

Date: February 6, 1986

Report On: Black Dross/EP Toxicity-Metals

Lab No: E 34762

SUBMITTED:

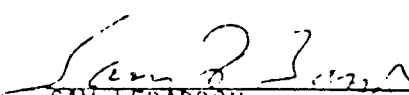
One bulk sample - Identification: "Maralco Kent ~~Black Dross~~"

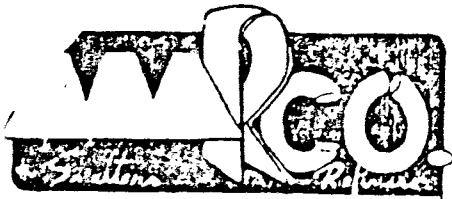
ANALYSIS:

EP extraction procedure for metals in accordance with Washington Dangerous Waste Regulation WAC 173-303.

<u>Metal</u>	<u>Concentration, ppm</u>	
	<u>LA-101111</u>	<u>0122</u>
Cadmium	1	0.18
Chromium	5	0.43
Lead	5	0.72
Silver	5	0.20
Arsenic	4	Less than 0.002
Selenium	1	Less than 0.002
Copper	101111	9.1
Nickel		1.1
Zinc		113
Mercury	10	Less than 0.002
Barium	10	Less than 1.0

NORTHWEST LABORATORIES


SAM LEBARRON



MARALCO ALUMINUM

Post Office Box 1167
7730 South 202nd Street
Kent, Washington 98031

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February 25, 1986

Mr. Wally Swafford
1510 Public Safety Building
Seattle, WA. 98104

Dear Mr. Swafford:

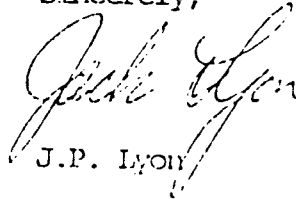
Our company generates a solid waste called Black Dross and we would like clearance to deposit this material in your land fill operations in King County.

The material is black in color and quite dense — about 130 lbs/ft³. Its composition is essentially 50% Aluminum Oxides, 25% Sodium Chloride salt and 25% Potassium Chloride salt. It also contains trace amounts of aluminum metal.

The Washington Dept. of Ecology has run Fish Bioassay tests on it with good results (see attached test #143049) and per your request, we have had an EP Toxicity - Metals test run on it at Northwest Labs. The results are also attached and, I believe, categorize the material "not a dangerous waste" per DOE criteria.

Thank you for your cooperation.

Sincerely,



J.P. Lyon

JPL:bl

attachments

cc: Washington Dept. of Ecology
Jullie Sellick
4350 - 150th N.E.
Redmond, WA. 98052

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of Seattle, Incorporated

ESTABLISHED 1896

Technical Services for: Industry, Commerce, Legal Profession & Insurance Industry



1530 FIRST AVENUE SOUTH

SEATTLE, WASHINGTON 98134

Telephone: (206) 622-0680

Report To: Maralco

Date: July 22, 1986

Report On: Baghouse Dust & Oxides/
EP Toxicity-Metals

Lab No.: E 35813

SUBMITTED:

Two bulk samples of solid material.

IDENTIFICATION:

1. May 1986, Baghouse Dust
2. May 1986, Oxides

ANALYSIS:

Extraction Procedures (EP) Toxicity for Metals per 173-303 WAC, Chemical Testing Methods for Complying with the Dangerous Waste Regulation. Metals analysis only.

RESULTS:

Metal

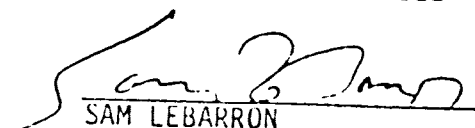
	PPM, milligrams/liter	
	BAGHOUSE DUST Sample #1	OXIDES (SLOTT) Sample #2
Arsenic	*	<0.02
Barium	*	**
Cadmium	0.35	0.69
Chromium	0.19	0.29
Lead	0.07	0.06
Mercury	*	<0.001
Selenium	*	<0.02
Silver	1.03	0.52
Zinc	0.06	57.2
Copper	0	9.3
Nickel	0.17	1.08

Mercury, Selenium, Barium & Arsenic analysis: Robert Orheim

*Sample could not be extracted for this test due to high alkalinity concentration.

**Sample could not be run due to matrix interference

NORTHWEST LABORATORIES


SAM LEBARRON



RESEARCH LABORATORIES, INC.



June 6, 1986

Maralco Aluminum Smelters
7730 South 202nd Street
Kent, Washington 98031

ATTN: Phil Stansfeld

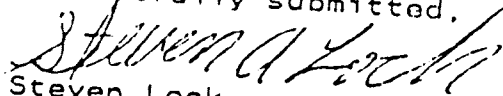
SUBJECT: 96 hour Fish toxicity test using Maralco "Baghouse Dust
May, 1986, BioMed Sample Number 5957

METHODS: The sample was tested for its toxicity to juvenile
rainbow trout (Salmo gairdneri). Testing done in
accordance with guidelines set forth in the State of
Washingtons Biological Testing Methods DOE 80-12,
revised July 1981.

TESTING: The sample was tested in fish at 100ppm and 1000ppm.
There were thirty mortalities at 1000ppm and thirty
mortalities at 100ppm. These results indicate an
extremely hazardous waste. In a phone conversation
with Mr. Phil Stansfeld on 5/27, we were asked to re-
run the test after exposing the baghouse dust to the
environment for at least five days. On 6/4 we ran the
test again, after allowing the sample to "age" for
seven days. There were thirty mortalities at 1000ppm
and 29 at 100ppm. Due to its toxicity, BioMed Sample
No.5957 is considered to be an extremely hazardous
waste in fish.

If you have any further questions or comments, please do not
hesitate to contact us.

Respectfully submitted,


Steven Lock
Fisheries Biologist



Test A 1st Run

DATA SHEET FOR STATIC BASIC ACUTE FISH TOXICITY TEST*

Location: Bio Lab
 Analyst: Carol Cook
 Time: 11:00 AM
 Ending Date: 5/21/86
 Time: 1:00 PM
 Test Organism: Rhyacionia cunicularia
 Required Test Temperature Range: 11.5°C - 12.5°C

Industry/Toxicant: Washburn Paper Mill / Baghouse dust
 Date Sample Collected: May 20

Laboratory Reference Number	Test Container No.	Conc. %	Number of Cumulative Deaths					Dissolved Oxygen (mg/l)					pH 7.5°C					Temperature (°C)					Total Hardness (mg/L CaCO ₃)		Total Alkalinity (mg/L CaCO ₃)		Conductivity (µMHO/cm)		
			0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	C	96	C	96	C	96	
	1	—	0	—	—	—	—	11	11	—	—	—	7.1	—	—	—	—	7.1	12	12	—	—	—	250	250	100	21	100	100
	2	—	0	—	—	—	—	11	11	—	—	—	7.1	—	—	—	—	6.9	12	12	—	—	—	250	250	100	21	100	
	3	—	0	—	—	—	—	11	11	—	—	—	7.1	—	—	—	—	7.1	12	12	—	—	—	250	250	100	21	100	
# 5957	10	100	0	0	—	—	—	11	11	—	—	—	11.5	—	—	—	—	11.1	12	12	—	—	—	250	250	100	21	100	
# 5957	12	100	0	0	—	—	—	11	11	—	—	—	11.5	—	—	—	—	11.1	12	12	—	—	—	250	250	100	21	100	
# 5957	18	100	0	0	—	—	—	11	11	—	—	—	11.1	—	—	—	—	11.1	12	12	—	—	—	250	250	100	21	100	
# 5957	19	1000	0	0	—	—	—	11	11	—	—	—	11.5	—	—	—	—	11.1	12	12	—	—	—	250	250	100	21	100	
# 5957	20	1000	0	0	—	—	—	11	11	—	—	—	11.1	—	—	—	—	11.1	12	12	—	—	—	250	250	100	21	100	
# 5957	21	1000	0	0	—	—	—	11	11	—	—	—	11.5	—	—	—	—	11.1	12	12	—	—	—	250	250	100	21	100	

Sample Description: Baghouse waste
 Average Weight: 16.5g Mean Length: 4.55 cm Longest: 6.0 cm Shortest: 3.5 cm Range: 2.5 cm
 Number of Organisms: 10 fish Dilution: 1:100 Comments: Waste from the mill. Part starts to die.
 Test: to be fed on as per phone conversation with



Test B 2nd Run

DATA SHEET FOR STATIC BASIC ACUTE FISH TOXICITY TEST*

Industry/Institution: Navigation Authority Bargehouse DUSA
 Address: _____
 Collector: _____
 Date Sample Collected: May 1986

Laboratory: Biolined
 Analyst: Steven Rock
 Beginning Date: 5/15/86 Time: 10:00 AM
 Ending Date: 5/15/86 Time: 2:00 PM
 Test Organism: EMERSON TROUT Salmo gairdneri
 Required Test Temperature Range: 11.5°C - 12.5°C

Laboratory Reference Number	Test Container No.	Concn. (%)	Number of Cumulative Deaths					Dissolved Oxygen (mg/l)					pH 25°C					Temperature (°C)					Total Hardness (mg/L CaCO ₃)		Total Alkalinity (mg/L CaCO ₃)		Conductivity (µMHO/cm)	
			0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	96	0	96	0	15
	1	—	0	0	—	—	—	11	11	—	—	—	7.2	—	—	—	7.2	12	12	—	—	—	24.1	24.5	19	174	71	5
	2	—	0	0	—	—	—	11	11	—	—	—	7.2	—	—	—	7.2	12	12	—	—	—	24.1	24.6	26	198	62	6
	3	—	0	0	—	—	—	11	11	—	—	—	7.4	—	—	—	6.8	12	12	—	—	—	24	24.6	22.5	123	91	5
#5957	4	100	0	10	—	—	—	11	11	—	—	—	9.5	—	—	—	9.7	12	12	—	—	—	52.1	44.6	53.8	158	190	14
#5957	5	100	0	9	—	—	—	11	11	—	—	—	9.1	—	—	—	9.6	12	12	—	—	—	51.2	74.5	35.2	62	175	1
#5957	6	100	0	10	—	—	—	11	11	—	—	—	9.7	—	—	—	9.9	12	12	—	—	—	51.9	81.2	43.0	62.8	186	5
#5957	7	1000	0	10	—	—	—	11	11	—	—	—	11.2	—	—	—	11.3	12	12	—	—	—	27.3	26.8	35.5	342	74	1
#5957	8	1000	0	10	—	—	—	11	11	—	—	—	11.3	—	—	—	11.2	12	12	—	—	—	27.2	27.1	30.5	336	67	1
#5957	9	1150	0	10	—	—	—	11	11	—	—	—	11.4	—	—	—	11.2	12	12	—	—	—	27.2	24.9	35.6	342	66	1

Sample Description: Bargehouse Dust May 1986
 Average Weight: 2.07g Mean Length: Subvent Longest: 6.4cm Shortest: 4.8cm Range: 1.6cm
 Number of organisms: 10 fish Dissolved oxygen: 5.26 mg/l Comments: Emerson #5957, sample measured by WRIGHT, this is a pre-test of sample after juvenile fish exposed to etc for five days. Sample tested at 10:00am. No EMU, 24 hr mortality of 100%.