REVISED FINAL

SPENT POTLINER REMOVAL PLAN
NORTH ALCOA SITE

EAST ST. LOUIS, ILLINOIS

March 2, 2006

Submitted by:

ALCOA INC.

CITY OF EAST ST. LOUIS

Prepared by:

MFG, INC.

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MFG Project No. 020645

TABLE OF CONTENTS

Page

LIST OF FIGURES

LIST OF APPENDICES

LIST OF ACRONYMS

AOC	Administrative Order on Consent
BMP	Best Management Practices
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
COC	Chemical of Concern
COPC	Chemical of Potential Concern
DOT	Department of Transportation
FFS	Focused Feasibility Study
FS	Feasibility Study
FSP	Field Sampling Plan
HASP	Health and Safety Plan
IEPA	Illinois Environmental Protection Agency
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
PPE	Personnel Protective Equipment
RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigation
RIFS	Remedial Investigation Feasibility Study
RIR	Remedial Investigation Report
SOW	Statement of Work
SPL	Spent Potliner
USEPA	United States Environmental Protection Agency

1.0 INTRODUCTION

This Spent Potliner Removal Plan (Plan) has been prepared as a supplement to the RI/FS workplan pursuant to paragraphs 36 and 38 of the Administrative Order on Consent and Statement of Work (AOC/SOW) for the North Alcoa Site (the "Site"), East St. Louis. The Site includes an area which contains visible remnants of residual spent potliner (SPL) referred to as the former SPL Stockpiling Area (Figure 1). The purpose of this plan is to provide for the removal of those visible remnants of the SPL and transportation of those materials to an off-site facility for appropriate disposal. Activities to identify SPL were summarized in Technical Memorandum 4, which was conducted as part of the Remedial Investigation (Alcoa Inc. and the City of East St. Louis, 2005). Figure 2 is reproduced from Technical Memorandum 4 and indicates the areas of visibly identified piles of SPL. As described in Technical Memorandum 8 (Alcoa Inc. and the City of East St. Louis, 2005), this will be the first of a two-staged process to address the SPL Stockpiling Area. Once the removal is performed, the Remedial Investigation/Feasibility Study (RI/FS) process will be completed in the SPL Stockpiling Area.

SPL exists in this area because activities at Alcoa's former East St. Louis Works included a cryolite (Na_3AlF_6) recovery process, which was initiated in 1939. Cryolite bath is a necessary component of the aluminum smelting process. Due to limited natural deposits of this material, emphasis was placed on recovery of cryolite in SPL. Although no aluminum smelter ever existed at Alcoa's former East St. Louis Works, a cryolite recovery process was built there to receive SPL from Alcoa's smelters in New York. The SPL is physically dug from the aluminum reduction cell cathode using jack hammers and similar equipment. The removal process generates chunks of SPL that are sent for cryolite recovery. Chunks of SPL were shipped to the North Alcoa Site for stockpiling. As needed, the chunks of SPL were then transported to the cryolite recovery process located south of Missouri Avenue. The process of recovering cryolite bath consisted of crushing SPL to a fine granule and then leaching it with a hot caustic solution. The liquor was then thickened, filtered, and neutralized such that the cryolite precipitated. The precipitated cryolite was then filtered and dried with the liquor returning to the refining plant digestion. Residues from the SPL recovery process are typically called "black mud" and contain carbon, have a high pH. and likely contain some fluoride and cyanide.

There is no written record of where SPL was specifically stored at the North Alcoa Site prior to processing. However, there is field evidence to suggest it was stored at the North Alcoa Site in the SPL Stockpiling Area. Visible chunks of SPL remain in this area today. SPL is typically identifiable by the

dark color, blocky shape, and if wetted, by the formation of salts on the surface of the material. Occasionally Prussian blue staining will be visible due to the presence of iron-complexed cyanide.

On March 13, 1989, the United States Environmental Protection Agency (USEPA) added SPL to the federal list of wastes regulated as hazardous under the Resource Conservation and Recovery Act (RCRA) and the list of "hazardous substances" under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). The State of Illinois adopted the listing of SPL as a hazardous waste. SPL became a listed hazardous waste (K088) due to the toxicity of complexed cyanides in the material. RCRA hazardous waste listings are retroactive. While the SPL, which was created and disposed at East St. Louis prior to the listing date, became hazardous waste on the listed date, it is not subject to RCRA regulations unless and until it is "actively managed". Once the pre-1989 SPL at the Site is actively managed it must be handled according to RCRA regulations.

A sampling and analysis program was implemented to generate waste profile information for the on-Site SPL material. The sample collection procedures and analytical results are provided in Appendix A. The analytical results indicate that the SPL material constituent concentrations do not exceed the Land Disposal Restrictions for K088 disposal (Appendix A, Table 1). Therefore, treatment of any on-Site SPL material to meet land disposal restrictions is not required before placement in a hazardous waste landfill. As discussed in Section 2.4. documentation of the ability of permitted off-site hazardous waste facilities to accept the SPL material is provided in Appendix B.

2.0 SPL REMOVAL

The following sections provide information for the removal, management, transportation and disposal of SPL waste. Environmental and safety controls are also described.

2.1 Site Preparation

Site preparation activities will include mobilization and set-up. Prior to contractor mobilization, the SPL piles will be delineated on the ground with flagging and/or spray painting. Decontamination and equipment staging areas will be established during site preparation activities. It is anticipated that the existing roads will be used for mobilizing equipment and establishing equipment routes, with the exception of the interior in the SPL Stockpiling Area where no roads currently exist. Minimal clearing of vegetation is expected to be performed, but may be needed to allow access to the SPL Stockpiling Area.

2.1.1 Stormwater Pollution Prevention Plan

Prior to commencing SPL removal activities, a storm water pollution prevention plan (SWPPP) will be developed and maintained on Site to help personnel reduce the potential for discharge of Chemicals of Potential Concern (COPCs) in storm water. Specifically, the SWPPP will contain best management practices (BMPs) to reduce the discharge of COPCs associated with construction activities to be performed in the SPL Stockpiling Area. The SWPPP will be developed and implemented to achieve general conformance with the Illinois General NPDES Permit No. ILR10 for storm water discharge from construction site activities.

The SWPPP will include the following:

- Site description, including construction activity details;
- Types of controls or BMPs to be implemented, including, erosion and sediment controls and storm water management;
- Maintenance of controls and BMPs;
- Inspection frequency and reporting requirements;
- Identification of non-storm water discharges; and
- Compliance and provision for amending the plan.

2.1.2 Health and Safety Plan (HASP)

The contractor selected to perform the SPL removal will prepare a project-specific HASP. Project-specific HASPs must include, but are not limited to, general site information, site and task hazards, site control, personnel protection, site monitoring, emergency response plan, spill prevention and containment, injury and incident reporting, safety statistics, accident reporting, incident investigation, environmental incident reporting, and auditing. The contractor will also be required to have a Health and Safety Officer on-site at all times during construction. This officer can perform other duties but must be qualified to supervise health and safety of co-workers.

The local emergency response coordinator will be notified prior to implementing the field work described in this plan.

2.1.3 Site Security

The three access gates to the Site will be maintained during this project. At the end of each work day the three gates will be closed and locked. Flagging will be used to delineate the work area. Barricades, warning tape, and/or equipment will be placed in areas to prevent slip, trip, and fall hazards. All contractor personnel must be accounted for while working at the Site. Prior to removal off site, excavated SPL will be staged as required in a secure location (Section 2.3).

2.2 Removal Methods

The objective is to remove visibly identifiable SPL material within the areas shown in Figure 2 and delineated on the ground by flagging and/or spray painting as part of the site preparation activities. The general performance criteria for removal of SPL material is as follows:

- Removal activities will be limited to the discrete areas of SPL identified in Technical Memorandum 4 (and reproduced herein as Figure 2) and delineated on the ground by flagging and/or spray painting.
- Within these discrete areas, removal of SPL will be accomplished by:
  - Using various combinations of mechanized equipment (e.g., bobcat with bucket, front-end loader, backhoe, mechanical grappling arm, etc.), manual labor (e.g., placing a chunk of SPL in a container), or a combination thereof (lift or rolling SPL material into an excavator bucket) to

- Remove the SPL material within the defined areas down to local grade.

These general performance criteria are intended to result in the removal of visibly identifiable chunks of SPL within the defined areas. The criteria are meant to provide flexibility for the removal contractor to employ the most effective equipment, and are not meant to be prescriptive regarding actual removal equipment or techniques.

Once removed, the SPL material may be consolidated to facilitate subsequent loading for off-site transport and disposal. Under US EPA's Area of Contamination (AOC) policy, consolidation of hazardous waste within the AC does not create a new point of hazardous waste generation for purposes of RCRA. If performed, consolidation of the SPL will occur within the AOC of the SPL stockpiling area.

2.3 SPL Management

Once the SPL has been placed into a container, it must then be managed as a K088 listed hazardous waste. Containers are defined under RCRA as "any portable devices in which material is stored, transported, treated, disposed of, or otherwise handled." Examples of containers are: 55-gallon drums, roll-off containers, railroad cars, and tank trucks. Containers of K088 must be managed in a manner that controls, minimizes or eliminates escape of hazardous constituents and also:

- Maintained in good condition to prevent leaks and spills;
- Compatible with SPL;
- Kept closed except when adding or removing SPL;
- Stored away from acids;
- Labeled "Hazardous Waste"; and
- Inspected weekly.

No containers will remain on Site for more than 90 days.

2.4 Off-Site Transportation and Disposal

The SPL waste will be transported off-site as a RCRA hazardous waste by a licensed hazardous waste hauler with the appropriate manifests, permits, training, equipment, insurance and financial responsibility.

K088 will be packaged in clean, leak-proof, vented containers and in accordance with United States Department of Transportation (USDOT) regulations. All transporter procedures, equipment inspection and maintenance, record keeping standards, and past performance will be reviewed against such regulations. The USDOT shipping name for the K088 material is:

Waste aluminum smelting by-products, 4.3, UN 3170, PG III, RQ, (K088).

STCC 48-163-21 applies and is required for rail shipping. 49 CRF 172.102, provision B115, applies for sift-proof packaging provisions.

Equipment used for transportation of K088 waste must be in good condition to prevent failure that may cause a release of K088 to the environment. A hazardous waste manifest must accompany all shipments of SPL and should include a 24-hour contact telephone number for emergency response, generator information, transporter, destination, and description and quality of K088 material.

Once containerized, the K088 material removed from the SPL stockpiling area will be transported to an approved hazardous waste disposal facility pursuant to Paragraph 35 of the AOC/SOW. Facilities that have reviewed the waste profile information and have approved the SPL material (see Appendix B for approval documentation) for disposal are:

- the Clean Harbors Lone Mountain, Oklahoma facility; and
- the Waste Management facility in Emelle, Alabama.

Selection of the actual receiving facility will be performed as part of the contractor selection process.

2.5 Inspections and Site Stabilization

Once the SPL materials have been removed, an inspection of the discrete areas will be performed to assess conditions and document that actions have been performed according to the Plan and that no further removal is necessary or practical.

Clean soil will then be brought to the barren areas within the SPL Stockpiling Area and then spread and graded to achieve a minimum six-inch thick layer. Another inspection will be performed to assure that

the area is properly graded with respect to adjacent grades. The soil will then be fertilized and seeded to provide for a vegetative cover to preclude erosion.

2.6 Decontamination and Demobilization

2.6.1 Personnel Decontamination

On-site workers must evaluate site specific health and safety concerns and assign the appropriate Personnel Protective Equipment (PPE) accordingly. Guidelines for personnel decontamination will be provided in the HASP based on PPE. Disposable PPE will be drummed on-site and disposed of in accordance with all state and federal regulations. Non-disposable PPE will be triple rinsed with the appropriate cleaner, and the generated wastewater will also be drummed and disposed of accordingly. Disposable PPE shall be removed daily or temporarily stored in secured condition to prevent access by the general public.

2.6.2 Equipment Decontamination

All equipment used to remove the SPL materials must be decontaminated prior to leaving the SPL Stockpiling Area. Once the SPL removal is finished, fluids and solids that have contacted the actively managed SPL in the decontamination area are considered K088 and will be placed in appropriate containers for transportation and disposal in accordance with Section 2.4.

2.6.3 Demobilization

All erosion control materials will be removed from the Site All decontaminated equipment will be removed from the Site.

3.0 REPORTING

The SPL removal activities and as-built conditions will be documented in a status report, which will be submitted to US EPA and IEPA within 45 days after the final inspection following completion of the removal action. The report will document the procedures used, materials removed, document off-Site transportation/disposal of the material, and identify additional Site activities as required.

4.0 REMOVAL PLAN SCHEDULE

The following is the tentative schedule for implementation of the Removal Plan.

Event	Date
Agency Approval of Plan	Determined by Agency
Contractor Receive "Notice to Proceed"	Within 90 days of receipt of approval
Contractor starts Work	Within 120 days of receipt of approval
Contractor completes Work	To Be Determined
Final Inspection	To Be Determined
Submit status report	Within 45 days of Final Inspection.

5.0 REFERENCES

Alcoa Inc. and the City of East St. Louis, 2005. Remedial Investigation Report, North Alcoa Site, East St. Louis, Illinois. February 22.

FIGURES

EXPLANATION

Site Boundary

Former SPL Stockpiling Area

N

Scale in Feet

0 300 600

AERIAL PHOTOGRAPHY: SEPTEMBER 1, 2000

NORTH ALCOA SITE
EAST ST. LOUIS, ILLINOIS

Figure 1

SITE LOCATION MAP

PROJECT: 130114	BY: BWB	REVISIONS
DATE: MARCH 2005	CHECKED: BLM	

MFG, INC.
CONSULTING SCIENTISTS AND ENGINEERS

EXPLANATION

Former SPL Stockpiling Area

Discrete SPL Piles

N

Scale in Feet

0 25 50

AERIAL PHOTOGRAPHY: SEPTEMBER 1, 2000

NORTH ALCOA SITE
EAST ST. LOUIS, ILLINOIS

Figure 2

SPL OCCURRENCES WITHIN FORMER STOCKPILING AREA

PROJECT: 130114	BY: BWB	REVISIONS
DATE: MARCH 2005	CHECKED: BLM	

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CONSULTING SCIENTISTS AND ENGINEERS

[redacted]

APPENDIX A

APPENDIX A

SPL Waste Profile Information

MFG, Inc.
A TETRA TECH COMPANY
4807 Spicewood Springs Road
Building IV, 1st Floor
Austin, Texas 78759
512/338-1667
Fax: 512/338-1331

consulting
scientists and
engineers

MEMORANDUM

MFG Project No. 270027

TO: Ronald M. Morosky
Alcoa Remediation Management, Inc.
201 Isabella Street
Pittsburgh, PA 15212

FROM: Bryan McCulley

DATE: March 2, 2006

RE: **FORMER SPENT POT LINING (SPL) STOCKPILING AREA SITE RECONNAISSANCE AND SAMPLING**

On July 21 and 22, 2005, MFG performed a site reconnaissance of the former spent pot lining (SPL) stockpiling area (Figure 1). The primary objective was to collect three samples of SPL chunks for chemical analysis.

SPL Sampling and Analytical Results

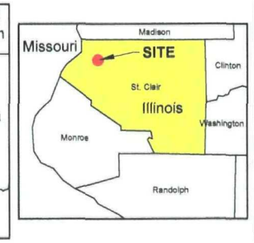
Three surface SPL samples were collected from the former SPL stockpiling area for waste profiling. Figure 1 provides the location of each sample. The samples were collected from chunks of SPL and pulverized to a size <1". Once the chunks were pulverized, the most unweathered portion of the chunk was placed into sample containers and containers put on ice. Samples were transported to Severn Trent Laboratories, Inc. (STL) in St. Louis for analysis. Analyses included cyanide, fluoride, chloride, sulfate, ash content, moisture, heating value, hexavalent chromium, flash point, pH, reactive sulfide, reactive cyanide, pesticides, herbicides, volatiles, semivolatiles, and metals. A summary of the cyanide, reactive cyanide, fluoride, metals, and semivolatiles results are presented as Table 1. Concentrations were reported above the reporting limit for arsenic, barium, chromium (SPL-1), fluoride (SPL-2 and SPL-3), lead (SPL-2), total cyanide, and reactive cyanide (SPL-1). No semivolatiles were reported above the reporting limit for any of the three samples.

Table 1 also includes the Land Disposal Restriction (LDR) treatment standards for K088 material. None of the Table 1 constituents exceed treatment standards.

EXPLANATION

Site Boundary

Former SPL Stockpiling Area



N

Scale in Feet

0 300 600

AERIAL PHOTOGRAPHY: SEPTEMBER 1, 2000

NORTH ALCOA SITE
EAST ST. LOUIS, ILLINOIS

Figure 1

SITE LOCATION MAP

PROJECT: 130114	BY: BWB	REVISIONS
DATE: MARCH 2005	CHECKED: BLM	

MFG, INC.
CONSULTING SCIENTISTS AND ENGINEERS

TABLE 1

SPL SAMPLE ANLAYTICAL SUMMARY INCLUDING LDR (K-088) TREATMENT STANDARDS

Constituents (Chemicals)	Analytical Data Result SPL-1	Analytical Data Result SPL-2	Analytical Data Result SPL-3	Treatment Standards	
	mg/kg	mg/kg	mg/kg		
Metals:					
Antimony	-	-	-	1.15	mg/L TCLP
Arsenic	0.87 B	0 53 B	1.9	26.1	mg/kg
Barium	0.0576 B	0 0997 B	0 082 B	21.0	mg/L TCLP
Beryllium	-	-	-	1.22	mg/L TCLP
Cadmium	<0.015	<0 015	<0 015	0.11	mg/L TCLP
Chromium (total)	0.0089 B	<0.025	<0 025	0.6	mg/L TCLP
Fluoride	<1.0	0 33 B	0.46 B	2.7	na
Lead	<0.25	0.0522 B	<0.25	0.75	mg/L TCLP
Mercury	<0.01	<0.01	<0.01	0.025	mg/L TCLP
Nickel	-	-	-	11.0	mg/L TCLP
Selenium	<0 5	<0.5	<0.5	5 7	mg/L TCLP
Silver	<0.025	<0 025	<0.025	0.14	mg/L TCLP
Cyanide (total)	3.4	9 6	11.3	590	mg/kg total
Cyanide (amendable)/(reactive)	0.041 B	<0.27	<0.27	30	mg/kg total
Semivolatiles:					
Acenapthene	<0.34	<0.36	<0.36	3.4	mg/kg total
Anthracene	<0.34	<0.36	<0.36	3 4	mg/kg total
Benzo(a)anthracene	<0.34	<0.36	<0.36	3.4	mg/kg total
Benzo (g,h,i) perylene	<0 34	<0.36	<0.36	1.8	mg/kg total
Benzo(a)pyrene	<0.34	<0.36	<0.36	3 4	mg/kg total
Benzo(b)fluoranthene	<0.34	<0 36	<0.36	6.8	mg/kg total
Chrysene	<0 34	<0.36	<0.36	3.4	mg/kg total
Dibenz (a,h) anthracene	<0.34	<0.36	<0.36	8.2	mg/kg total
Fluoranthene	<0.34	<0 36	<0.36	3.4	mg/kg total
Indeno (1,2,3-cd)pyrene	<0.34	<0.36	<0.36	3.4	mg/kg total
Phenanthrene	<0 34	<0.36	<0.36	5.6	mg/kg total
Pyrene	<0.34	<0 36	<0.36	8.2	mg/kg total

Note(s):

B - Estimated result Result is less than RL.

APPENDIX B

Disposal Facilities Approval Information

CleanHarbors®
ENVIRONMENTAL SERVICES, INC.

February 28, 2006

Clayton McKay
Consultant
MFG, Inc.

Thank you for considering Clean Harbors Environmental Services, Inc. (Clean Harbors) for your waste management needs. As required by Federal Resource Conservation and Recovery Act regulations found in 40 CFR Part 264.12(b) and all equivalent State hazardous waste regulations, notice is hereby provided that all Clean Harbors facilities that may be used to treat, store, and/or dispose of the hazardous waste described on waste profile CH159962B have the appropriate permits and the capacity to manage these wastes.

We look forward to managing this waste stream for you and a Clean Harbors Representative will contact you promptly regarding pricing details and shipment scheduling information.

If you have any questions or need further assistance, feel free to contact me at the number below.

Sincerely,

Jay Nolan
Waste Acceptance Manager
781-849-1800 ext. 5450

Clean Harbors ENVIRONMENTAL SERVICES, INC.

WASTE MATERIAL PROFILE SHEET

Clean Harbors Profile No. CH159962B

A. GENERAL INFORMATION

GENERATOR EPA-ID: ILSFN0508010
GENERATOR PROFILE No. **CH159962B**
GENERATOR CODE (Assigned by Clean Harbors) *RE1480*
GENERATOR NAME: *Alcoa Inc*
ADDRESS *3201 East Missouri Avenue*
CITY *East St. Louis* STATE *IL* ZIP/POSTAL CODE *62207*
PHONE:

CUSTOMER CODE (Assigned by Clean Harbors) *RE1480*
CUSTOMER NAME: *Alcoa Inc*
ADDRESS *3201 East Missouri Avenue*
CITY *East St. Louis* STATE/PROVINCE *IL* ZIP/POSTAL CODE *62207*

B. WASTE DESCRIPTION

WASTE DESCRIPTION: *Spent Pot Liner (SPL)*
PROCESS GENERATING WASTE (Please provide detailed description of process generating waste):
CERCLA Site Clean Up of SPL Stock Piling Area

C. PHYSICAL PROPERTIES (at 25C or 77F)

PHYSICAL STATE
- ☑ SOLID WITHOUT FREE LIQUID
- POWDER
- MONOLITHIC SOLID
- LIQUID WITH NO SOLIDS
- LIQUID/SOLID MIXTURE
  - % FREE LIQUID
  - % SETTLED SOLID
  - % TOTAL SUSPENDED SOLID
- SLUDGE
- GAS/AEROSOL

NUMBER OF PHASES/LAYERS
1 2 3
% BY VOLUME (Approx.)
TOP
MIDDLE
BOTTOM

VISCOSITY (If liquid present)
- 1 - 100 (e.g. WATER)
- 101 - 500 (e.g. MOTOR OIL)
- 501 - 10,000 (e.g. MOLASSES)
- > 10,000

COLOR
Black/Grey

ODOR
- NONE
- ☑ MILD
- STRONG

Describe: *Ammonia*

BOILING POINT °F (°C)
- <= 95 (<=35)
- 95 - 100 (35-38)
- 101 - 129 (38-54)
- >= 130 (>54)

MELTING POINT °F (°C)
- < 140 (<60)
- 140-200 (60-93)
- ☑ > 200 (>93)

TOTAL ORGANIC CARBON
- <= 1%
- 1-9%
- ☑ >= 10%

FLASH POINT °F (°C)
- < 73 (<23)
- 73 - 100 (23-38)
- 101 -140 (38-60)
- 141 -200 (60-93)
- > 200 (>93)

Actual:

pH
- <= 2
- 2.1 - 6.9
- 7 (Neutral)
- 7.1 - 12.4
- >= 12.5

Actual: *6.00 - 6.40*

SPECIFIC GRAVITY
- < 0.8 (e.g. Gasoline)
- 0.8-1.0 (e.g. Ethanol)
- 1.0 (e.g. Water)
- 1.0-1.2 (e.g. Antifreeze
- ☑ > 1.2 (e.g. Methylene Chloride)

ASH
- < 0.1
- 0.1 - 1.0
- 1.1 - 5.0
- 5.1 - 20.0
- > 20
- Unknown

Actual: *69.50 - 89.90*

BTU/LB (MJ/kg)
- < 2,000 (<4.6)
- 2,000-5,000 (4.6-11.6)
- 5,000-10,000 (11.6-23.2)
- > 10,000 (>23.2)

Actual: *15,500 - 15,900 BTU*

VAPOR PRESSURE (for liquids only) mm Hg

D. COMPOSITION (List the complete composition of the waste, include any inert components and /or debris. Ranges for individual components are acceptable If a trade name is used, please supply an MSDS. Please do not use abbreviations.)

CHEMICAL	MIN - MAX	UOM
Aluminum Oxide	*8.000 - 8.000*	%
Amorphous Silica	*2.000 - 7.000*	%
Calcium Fluoride	*5.000 - 5.000*	%
Carbon	*40.000 - 40.000*	%
Cyanide	*0.000 - 0.200*	%
Iron Sulfide	*0.000 - 1.000*	%
Pot Liner (Spent)	*100.000 - 100.000*	%
Sodium Aluminate	*12.000 - 12.000*	%
Tri-sodium hexafluoroaluminate	*26.000 - 26.000*	%

CHEMICAL	MIN - MAX	UOM

ANY METAL OBJECTs PRESENT? YES ☑ NO
If yes include dimension:

Clean Harbors Profile No. CH159962B

E CONSTITUENTS – Are these values based on testing or knowledge? ☐ Knowledge ☑ Testing

If constituent concentrations are base on analytical testing, analysis must be provided. If based on knowledge, basis of knowledge must be provided below.

RCRA	REGULATED METALS	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL ppm
D004	ARSENIC	5.0		
D005	BARIUM	100.0		
D006	CADMIUM	1.0		
D007	CHROMIUM	5.0		
D008	LEAD	5.0		
D009	MERCURY	0.2		
D010	SELENIUM	1.0		
D011	SILVER	5.0		

RCRA	VOLATILE COMPOUNDS	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL ppm
D018	BENZENE	0.5		
D019	CARBON TETRACHLORIDE	0.5		
D021	CHLOROBENZENE	100.0		
D022	CHLOROFORM	6.0		
D028	1,2-DICHLOROETHANE	0.5		
D029	1,1-DICHLOROETHYLENE	0.7		
D035	METHYL ETHYL KETONE	200.0		
D039	TETRACHLOROETHYLENE	0.7		
D040	TRICHLOROETHYLENE	0.5		
D043	VINYL CHLORIDE	0.2		

RCRA	SEMI-VOLATILE COMPOUND	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL ppm
D023	o-CRESOL	200.0		
D024	m-CRESOL	200.0		
D025	p-CRESOL	200.0		
D026	CRESOL (TOTAL)	200.0		
D027	1,4-DICHLOROBENZENE	7.5		
D030	2,4-DINITROTOLUENE	0.13		
D032	HEXACHLOROBENZENE	0.13		
D033	HEXACHLOROBUTADIENE	0.5		
D034	HEXACHLOROETHANE	3.0		
D036	NITROBENZENE	2.0		
D037	PENTACHLOROPHENOL	100.0		
D038	PYRIDINE	5.0		
D041	2,4,5-TRICHLOROPHENOL	400.0		
D042	2,4,6-TRICHLOROPHENOL	2.0		

RCRA	PESTICIDES AND HERBICIDE	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL ppm
D012	ENDRIN	0.02		
D013	LINDANE	0.4		
D014	METHOXYCHLOR	10.0		
D015	TOXAPHENE	0.5		
D016	2,4-D	10.0		
D017	2,4,5-TP (SILVEX)	1.0		
D020	CHLORDANE	0.03		
D031	HEPTACHLOR (AND ITS EPOXIDE)	0.008		

OTHER METALS	MIN	MAX	UOM
ALUMINUM			
ANTIMONY			
BERYLLIUM			
CALCIUM			
COPPER			
MAGNESIUM			
MOLYBDENUM			
NICKEL			
POTASSIUM			
SILICON			
SODIUM			
THALLIUM			
TIN			
VANADIUM			
ZINC			

NON-METALS	MIN	MAX	UOM
BROMINE			
CHLORINE			
FLUORINE			
IODINE			
SULFUR			

OTHER NON-METALS	MIN	MAX	UOM
AMMONIA			
REACTIVE SULFIDE			
CYANIDE-TOTAL			
CYANIDE AMENABLE			
CYANIDE REACTIVE			

OTHER CHEMICALS	MIN	MAX	UOM
PHENOL			
Total Petroleum Hydrocarbons			

OTHER

HOCs
- ☑ NONE
- < 1000 PPM
- >= 1000 PPM

PCBs
- ☑ NONE
- <50 PPM
- >= 50 PPM

IF PCBS ARE PRESENT, IS THE WASTE REGULATED BY TSCA 40 CFR 761?

YES ☑ NO

ADDITIONAL HAZARD

DOES THIS WASTE HAVE ANY UNDISCLOSED HAZARDS OR PRIOR INCIDENTS ASSOCIATED WITH IT, WHICH COULD AFFECT THE WAY IT SHOULD BE HANDLED?

YES ☑ NO (If yes, explain)

ASBESTOS	INFECTIOUS, PATHOGENIC, OR ETIOLOGICAL AGENT	REDUCING AGENT
DEA REGULATED SUBSTANCES	OXIDIZER	SHOCK SENSITIVE
DIOXIN	OSHA REGULATED CARCINOGENS	SPONTANEOUSLY IGNITES WITH AIR
EXPLOSIVE	PESTICIDE	THERMALLY SENSITIVE
HERBICIDE	POLYMERIZABLE	WATER REACTIVE
FUMING / SMOKING WASTE	RADIOACTIVE	

NONE OF THE ABOVE

Clean Harbors Profile No. CH159962B

F. REGULATORY STATUS

- ☑ YES ☐ NO USEPA HAZARDOUS WASTE? *K088*
- ☐ YES ☑ NO DO ANY STATE WASTE CODES APPLY?
- ☑ YES ☐ NO IS THIS WASTE PROHIBITED FROM LAND DISPOSAL WITHOUT FURTHER TREATMENT PER 40 CFR PART 268?
  LDR CATEGORY: *Meets LDR Standards*
  VARIANCE INFO
- ☐ YES ☑ NO IS THIS A UNIVERSAL WASTE?
- ☐ YES ☑ NO IS THIS A WASTEWATER PER 40 CFR PART 268.2?
- ☐ YES ☑ NO IF ANY WASTE CODES D001, D002, D003 (OTHER THAN REACTIVE CYANIDE OR REACTIVE SULFIDE), D004-D0011, D012-D017 NON-WASTEWATERS, OR D018- D043 APPLY, ARE ANY UNDERLYING HAZARDOUS (UHCs) PRESENT ABOVE UNIVERSAL TREATMENT STANDARDS (UTS)?
- ☐ YES ☑ NO DOES TREATMENT OF THIS WASTE GENERATE A F006 OR F019 SLUDGE?
- ☐ YES ☑ NO IS THIS WASTE SUBJECT TO CATEGORICAL PRETREATMENT DISCHARGE STANDARDS?
  IF YES, SPECIFY POINT SOURCE CATEGORY LISTED IN 40 CFR PART 401.
- ☐ YES ☑ NO IS THIS WASTE REGULATED UNDER THE BENZENE NESHAP RULES? (IS THIS WASTE FROM A CHEMICAL MANUFACTURING, COKE BY-PRODUCT RECOVERY, OR PETROLEUM REFINERY PROCESS?)
- ☐ YES ☑ NO DOES THIS WASTE CONTAIN VOC'S IN CONCENTRATIONS >=500 PPM?
- ☐ YES ☑ NO DOES THE WASTE CONTAIN GREATER THAN 20% OF ORGANIC CONSTITUENTS WITH A VAPOR PRESSURE >= .3KPA (.044 PSIA)?
- ☐ YES ☑ NO DOES THIS WASTE CONTAIN AN ORGANIC CONSTITUENT WHICH IN ITS PURE FORM HAS A VAPOR PRESSURE GREATER THAN 77 KPa (11.2PSIA)?
- ☑ YES ☐ NO IS THIS CERCLA REGULATED (SUPERFUND) WASTE ?
- ☐ YES ☑ NO IS THIS WASTE REGULATED UNDER THE OZONE DEPLETING SUBSTANCE ACT FOR ONTARIO?

G. D.O.T INFORMATION: (Include proper shipping name, hazard class and ID number).

US D.O.T. DESCRIPTION: *RQ, Waste Aluminum smelting by-products or Aluminum remelting by-products, 4.3, UN3170, PG III (K088)*

H. TRANSPORTATION REQUIREMENTS

ESTIMATED SHIPMENT FREQUENCY. ONE TIME WEEKLY MONTHLY QUARTERLY YEARLY ☑ OTHER *CERCLA Remediation*

IF BULK LIQUID OR BULK SOLID PLEASE INICATE THE EXPECTED NUMBER OF LOADS PER SHIPPING FREQUENCY. 1

CONTAINERIZED	BULK LIQUID	☑ BULK SOLID
CONTAINERS/SHIPMENT	GALLONS/SHIPMENT. GAL.	SHIPMENT UOM ☑ TON YARD
STORAGE CAPACITY:	FROM TANKS: TANK SIZE GAL.	PER SHIPMENT 40000.00 MIN 40000.00 MAX
CONTAINER TYPE:	FROM DRUMS	STORAGE CAPACITY *2,000* TON
CUBIC YARD BOX	VEHICLE TYPE:	VEHICLE TYPE:
PALLET	VAC TRUCK	DUMP TRAILER
TOTE TANK	TANK TRUCK	☑ ROLL OFF BOX
OTHER	RAILROAD TANK CAR	INTERMODAL ROLLOFF BOX
DRUM SIZE:	CHECK COMPATIBLE STORAGE MATERIALS.	CUSCO/VACTOR
CONTAINER MATERIAL:	STEEL / STAINLESS STEEL	OTHER
STEEL	RUBBER LINED / FIBERGLASS LINED	
FIBER	DERAKANE	
PLASTIC	OTHER	
OTHER		

I. SPECIAL REQUEST

SPECIFIC DISPOSAL RESTRICTIONS OR REQUESTS: *CERCLA Waste*

SPECIAL WASTE HANDLING REQUIREMENTS: *For landfill at Lone Mountain*

OTHER COMMENTS OR REQUESTS:

J. BIENNIAL / ANNUAL REPORTING INFORMATION

SIC CODE *3334* SOURCE CODE *G43* FORM CODE *W301*

K. SAMPLE STATUS	YES	SAMPLED BY	DATE SAMPLED	WHERE SENT
REPRESENTATIVE SAMPLE HAS BEEN SUPPLIED.	☑ NO			

GENERATORS CERTIFICATION

I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge I also certify that any samples submitted are representative of the actual waste. If Clean Harbors discovers a discrepancy during the approval process, Generator grants Clean Harbors the authority to amend the profile, as Clean Harbors deems necessary, to reflect the discrepancy

AUTHORIZED SIGNATURE	NAME (PRINT)	TITLE	DATE

PROFILE SHEET FOR SPENT POTLINER
CHEMICAL ANALYSES

	SPL-1	SPL-2	SPL-3	Units
Total Cyanide	3.4	9.6	11.3	mg/kg
Fluoride	<1.0	0.33 B	0.46 B	mg/kg
Chloride	32.9	49.8	49.9	mg/kg
Sulfur (Sulfate)	817	1700	5030	mg/kg
Ash	69.5	89.9	86	%
Moisture	2.4	7.2	7.1	%
Heating Value (Btu)	15500	15800	15900	BTU/lb
Total Metals:				
Antimony	1.2	1.3	0.79 B	mg/kg
Arsenic	0.87 B	0.53 B	1.9	mg/kg
Barium	39.0 J	51.4 J	61.9 J	mg/kg
Beryllium	1.1	8.1	1.4	mg/kg
Cadmium	<0.51	<0.54	0.27 B	mg/kg
Chromium	5.4	4.3	4.2	mg/kg
Hexavalent Chromium	<0.41	<0.43	<0.43	mg/kg
Lead	0.77 B,J	5.7J	8.6 J	mg/kg
Mercury	0.011 B	<0.036	0.0091 B	mg/kg
Nickel	10.5 J	6.1J	5.7 J	mg/kg
Selenium	0.44 B	0.27 B	0.23 B	mg/kg
Silver	<1.0	<1.1	<1.1	mg/kg
Thallium	<2.1	<2.2	<2.2	mg/kg
Semi-Volatile Organics:				
Acenapthene	<0.34	<0.36	<0.36	mg/kg
Acenaphthylene	<0.34	<0.36	<0.36	mg/kg
Anthracene	<0.34	<0.36	<0.36	mg/kg
Benzo(a)anthracene	<0.34	<0.36	<0.36	mg/kg
Benzo(a)pyrene	<0.34	<0.36	<0.36	mg/kg
Benzo(b)fluoranthene	<0.34	<0.36	<0.36	mg/kg
Benzo(k)fluoranthene	<0.34	<0.36	<0.36	mg/kg
Benzo(g,h,i)perylene	<0.34	<0.36	<0.36	mg/kg
Chrysene	<0.34	<0.36	<0.36	mg/kg
Dibenzo(a,h)anthracene	<0.34	<0.36	<0.36	mg/kg
Fluoranthene	<0.34	<0.36	<0.36	mg/kg
Fluorene	<0.34	<0.36	<0.36	mg/kg
Indeno(1,2,3-c,d)pyrene	<0.34	<0.36	<0.36	mg/kg
Napthalene	<0.34	<0.36	<0.36	mg/kg
Phenanthrene	<0.34	<0.36	<0.36	mg/kg
Phenol	<0.34	<0.36	<0.36	mg/kg
Pyrene	<0.34	<0.36	<0.36	mg/kg

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

PROFILE SHEET FOR SPENT POTLINER CHARACTERISTICS DETERMINATION

Does the waste exhibit the characteristic of:

	SPL-1	SPL-2	SPL-3	Units
Ignitability, as defined in 40 CFR 261.21?				
Flashpoint	>60.0	>60.0	>60.0	deg C
Corrosivity, as defined in 40 CFR 261.22?				
pH	6	6.4	6.4	No Units
Reactivity, as defined in 40 CFR 261.23?				
Sulfide (reactive)	<22.8	<23.9	<23.9	mg/kg
Cyanide (reactive)	0.041 B	<0.27	<0.27	mg/kg

Toxicity, as defined in 40 CFR 261.24?
(Attach a copy of a complete TCLP toxicity test on a representative sample of your potliner.)

	SPL-1	SPL-2	SPL-3	Units
TCLP Metals:				
Arsenic	<500	<500	<500	ug/L
Barium	57.6 B	99.7 B	82.0 B	ug/L
Cadmium	<15.0	<15.0	<15.0	ug/L
Chromium	8.9 B	<25.0	<25.0	ug/L
Lead	<250	52.2 B	<250	ug/L
Mercury	<10	<10	<10	ug/L
Selenium	<500	<500	<500	ug/L
Silver	<25	<25	<25	ug/L
TCLP Semi-Volatile Organics:				
Pyridine	<100	<100	<100	ug/L
1,4-Dichlorobenzene	<50	<50	<50	ug/L
Hexachloroethane	<50	<50	<50	ug/L
Nitrobenzene	<50	<50	<50	ug/L
Hexachlorobutadiene	<50	<50	<50	ug/L
2,4,6-Trichlorophenol	<50	<50	<50	ug/L
2,4,5-Trichlorophenol	<50	<50	<50	ug/L
2,4-Dinitrotoluene	<50	<50	<50	ug/L
Hexachlorobenzene	<50	<50	<50	ug/L
Pentachlorophenol	<250	<250	<250	ug/L
Chlordane (technical)	<5.0	<5.0	<5.0	ug/L
o-Cresol (2-Methylphenol)	<50	<50	<50	ug/L
m-Cresol and p-Cresol (3-Methylphenol and 4-Methylphenol)	<100	<100	<100	ug/L
Endrin	<0.5	<0.5	<0.5	ug/L
gamma-BHC (Lindane)	<0.5	<0.5	<0.5	ug/L
Heptachlor	<0.5	<0.5	<0.5	ug/L
Heptachlor epoxide	<0.5	<0.5	<0.5	ug/L

Methoxychlor	<1.0	<1.0	<1.0	ug/L
Toxaphene	<20	<20	<20	ug/L
2,4-D	<40	<40	<40	ug/L
2,4,5-TP (Silvex)	<10	<10	<10	ug/L
TCLP Volatile Organics:				
Vinly Chloride	<100	<100	<100	ug/L
1,1-Dichloroethene	<50	<50	<50	ug/L
Chloroform	<50	<50	<50	ug/L
Carbon Tetrachloride	<50	<50	<50	ug/L
1,2-Dichloroethane	<50	<50	<50	ug/L
Benzene	<50	<50	<50	ug/L
Trichloroethene	<50	<50	<50	ug/L
Methyl ethyl ketone (2-Butanone)	<50	<50	<50	ug/L
Tetrachloroethene	<50	<50	<50	ug/L
Chlorobenzene	<50	<50	<50	ug/L

NOTE(S):

B Estimated result. Result is less than RL.

Waste Management National Accounts
2425 South 40th Street
Phoenix, Arizona 85034
602-454-2006
602-454-2042 Fax

February 27, 2006

Mr. Ronald Morosky
Alcoa
201 Isabella Street at 7th Street Bridge
Pittsburgh, PA 15212

RE: K088 Contaminated SPL

Dear Mr. Morosky,

Waste Management has reviewed the analytical summary received on August 19th, 2005, that was submitted for the K088 Contaminated Spent Potliner, located at the Alcoa facility in East St Louis, MO. Waste Management agrees the analytical is sufficient to prove the spent potliner meets treatment standards and can be direct landfilled at our disposal facility located in Emelle, AL. Attached is the Confirmation Letter which confirms final approval of the waste material listed above.

If you have questions or require more information, please contact me at 602-454-2006. We appreciate this opportunity and look forward to being of service to you in the future.

Sincerely,

Mikela Swedler

Mikela Swedler
National Account Representative

CONFIRMATION LETTER

February 27, 2006

RONALD MOROSKY
ALCOA
201 ISABELLA ST
PITTSBURGH, PA 15212

Re: Confirmation Number 4598988

Attention: RONALD MOROSKY

We are pleased to confirm CWM's approval of your waste material as described below. The attached profile for the waste materials was prepared by CWM based upon information provided by you. It is important that no changes be made to the profile without CWM's consent. If the profile meets with your approval, please call 1-800-652-5755 to schedule shipment of your waste materials.

CWM Profile Number:	VC7964 EME
Approved Mgmt. Facility:	CWM, INC. - EMELLE or another CWM or CWM approved facility
Waste Name:	SPENT POTLINER
Disposal Method:	Landfill
Disposal Price:	$ 58.00/Ton - Bulk Solid *10 Ton Per Load Bulk Direct Landfill Minimum*
Transportation Price:	$ 85.00/Ton - Haul Rate (Dump) 22 ton minimum $ 50.00/Each - Liner ** All transportation rates are subject to a variable monthly fuel surcharge, based upon current fuel prices ** - When requesting a container/roll-off delivery or set-in, a fee equal to the trip rate quoted above will be charged. - If WM arrives at the customer's facility for a scheduled pick-up and is not able to load, a charge equal to the trip rate will be assessed and another schedule date will need to be arranged. - Non-conforming loads being rejected at the disposal facility will be charged a fee, equal to the trip rate, for returning the load.
Demurrage:	- $85.00/Hour - After 2 hours of loading time at

February 27, 2006

Re: Confirmation Number 4598988, CWMI Profile Number VC7964 EME

the Generating Facility.
- $85.00/Hour - After 5 hours (not to exceed 10 hours for every 24 hour period) at the Disposal Facility due to errors in manifesting or other required documentation. Minor discrepancies that are easily resolved will not be cause for non-payment of demurrage.

Pricing Conditions:

- Bulk solids pricing based upon a minimum density of 2,000 pounds per cubic yard. Measurement of waste material (including densities for the purpose of computing fees) shall be determined by Waste Management upon delivery to the disposal facility.
- Discrepant loads (receiving analytical is outside profile ranges) may be handled based upon site capabilities, however pricing must be negotiated prior to acceptance of significantly discrepant loads.
- Note that disposal pricing is based on the information from your sales sample. The actual invoice price is determined on the load received.
- If your company requires that a Purchase Order number or other identification number appear on the WM invoice, the number must be noted in section J of the manifest.

Additional Fees:

Drums greater than 55 gal - 1.5 x drum price above
Bulk solid density assumes 2,000 pounds = one cubic yard (Direct landfill/stabilization only)
Direct landfill bulk minimum-10 Ton (Excludes tax)
Incidental liquids in bulk solid loads for direct landfill - (Requires Solidification)-$800/load.
Leaking bulk loads - $200/load minimum clean up, additional labor and materials cost plus 35%.
Tanker, truck, or box wash-outs (RCRA empty) - $250/load minimum or cost plus 35%
WM monthly fuel surcharge - Will vary based on current fual prices
ADEM Approval Fees:
$150.00/Profile - Initial Approval
$150.00/Profile - Renewal or Modification
Waste stream evaluation fee (outside lab) - Cost plus 35% (NOTE: Waste stream evaluation fees will no longer be billed unless a sample has to

February 27, 2006

Re: Confirmation Number 4598988, CWMI Profile Number VC7964 EME

be sent by the Emelle Facility to an outside lab for analysis
Alabama State Tax -
$ 51/Ton or $13/Drum - Hazardous RCRA Waste

Profile Expiration Date: 2/22/08

Special Conditions:

- The first bulk shipments will be held for corroborative testing. No other bulk shipments will be scheduled until analysis is reviewed and approved.
- Waste must not contain free liquids.
- For all restricted hazardous waste, a Land Disposal Notification/Certification Form must be completed and accompany the manifest with each shipment.
- Once approved by the Waste Management laboratory this wastestream was submitted to the Alabama Department of Environmental Management for issuance of an ADEM number. This process can take up to 30 days and is required prior to scheduling this profile for disposal.
- Absorbent materials for landfill must be made of non-biodegradable material as defined by EPA.
- All waste must be accomplished by a properly completed Alabama Hazardous Waste Manifest. Section J of the manifest must contain the state of origin of the material. The waste profile number must appear on the manifest and on the top and side of the containers.
- Modifications to existing profiles due to discrepancies and/or process changes will be subject to the ADEM modification fee.
- To confirm receipt of the above pricing, please sign the last page of this Confirmation Letter and fax back to at (205)652-8102.
- If you have any questions, please contact at 800-652-5755.

Applicable state and local taxes are not included in these disposal prices. All wastes are priced as profiled, invoiced as actually received. Invoices shall be paid no later than thirty (30) days from the date of receipt. All terms are governed by the Agreement previously executed between our companies. The prices quoted above are subject to change by CWM upon thirty (30) days' prior written notice to you unless otherwise specifically provided or per

February 27, 2006

Re: Confirmation Number 4598988, CWMI Profile Number VC7964 EME

the terms of our Agreement. If we have not previously concluded a Service Agreement with your company, one is enclosed for your convenience. Please sign and return it to us as soon as possible. Also, if 'Signature on File' does not appear on the signature line of the Waste Profile Sheet, please sign and return it before scheduling your material.

If you have any questions or would like to make changes to the profile, please contact your representative. Thank you for this opportunity to be of service.
Chemical Waste Management, Inc

GENERATOR'S WASTE PROFILE SHEET

EME VC7964

(_) Check here if this is a Recertification LOCATION OF ORIGINAL CWM, INC. - EMELLE

GENERAL INFORMATION

1. Generator Name: ALCOA Generator USEPA ID: ILSFN0508010

2. Generator Address: 3000 MISSOURI AVE
EAST SAINT LOUIS IL 62205-1125

Billing Address: (_) Same
ALCOA
201 ISABELLA ST
PITTSBURGH PA 15212

3. Technical Contact/Phone: RONALD MOROSKY 412/563-1859

4. Alternate Contact/Phone:

Billing Contact/Phone: RONALD MOROSKY

PROPERTIES AND COMPOSITION

5. Process Generating Waste: ALUMINUM REDUCTION

6. Waste Name: SPENT POTLINER

7A. Is this a USEPA hazardous waste (40 CFR Part 261)? Yes (X) No (_)
B. Identify ALL USEPA listed and characteristic waste code numbers (D,F,K,P,U): K088

State Waste Codes:

8. Physical State @ 70F: A. Solid(X) Liquid(_) Both(_) Gas(_) B. Single Layer (X) Multilayer (_) C. Free liq. range 0 to 0%

9A. pH: Range 0.0 or Not applicable (X) B. Strong Odor (_):describe

10. Liquid Flash Point: < 73F (_) 73-99F (_) 100-139F (_) 140-199F (_) >= 200F (_) N.A. (X) Closed Cup (X) Open Cup (_)

11. CHEMICAL COMPOSITION: List ALL constituents (incl. halogenated organics) present in any concentration and forward analysis

Constituents	Range	Unit Description
NON-TRI CHEMICALS	to	
SPENT POTLINER	100 to 100	%
CYANIDE	3.4 to 11.3	MG/KG
COMMENTS	to	
CYANIDE IS TOTAL CYANIDE	to	
FLUORIDE	0 to 0.46	MG/KG See attach2
TOTAL COMPOSITION (MUST EQUAL OR EXCEED 100%):	100.000000	

12. OTHER: PCBs if yes, concentration N ppm. PCBs regulated by 40 CFR 761 (_). Pyrophoric (_) Explosive (_) Radioactive (_) Benzene if yes, concentration _ ppm. NESHAP (N) Shock Sensitive (_) Oxidizer (_) Carcinogen (X) Infectious (_) Other

13. If waste subject to the land ban & meets treatment standards, check here: X & supply analytical results where applicable.

SHIPPING INFORMATION

14. PACKAGING: Bulk Solid (X) Bulk Liquid (_) Drum (_) Type/Size: BULK Other

15. ANTICIPATED ANNUAL VOLUME: 2000 Units: TONS Shipping Frequency: ONE TIME

SAMPLING INFORMATION Sample Tracking Number: 4598988

16a. Sample source (drum, lagoon, pond, tank, vat, etc.):

Date Sampled: Sampler's Name/Company:

16b. Generator's Agent Supervising Sampling: 17. (X) No sample required (See instructions.)

GENERATOR'S CERTIFICATION

I hereby certify that all information submitted in this and all attached documents contains true and accurate descriptions of this waste. Any sample submitted is representative as defined in 40 CFR 261 - Appendix I or by using an equivalent method. All relevant information regarding known or suspected hazards in the possession of the generator has been disclosed. I authorize CWM to obtain a sample from any waste shipment for purposes of recertification.

Signature on original profile VC7964 (Signature) R M MORSKY SHE MANAGER (Name and Title) (Date)

ATTACHMENT 2

CHEMICAL COMPOSITION: Additional constituents NOT included on page 1 of the Waste Profile

Constituents	Range	Unit Description
CHLORIDE	32.9 to 49.8	MG/KG
SULFUR	817 to 5030	MG/KG
ANTIMONY	0.79 to 1.3	MG/KG
ARSENIC	0.53 to 1.9	MG/KG
ARSENIC	0 to 0.5	MG/L TC
BERYLLIUM	1.1 to 8.1	MG/KG
CADMIUM	0 to 0.27	MG/KG
CHROMIUM	0 to 0.0089	MG/L TC
CHROMIUM	4.2 to 5.4	MG/KG
LEAD	0 to 0.0522	MG/L TC
LEAD	0.77 to 8.6	MG/KG
MERCURY	0 to 0.011	MG/KG
SELENIUM	0.23 to 0.44	MG/KG
BARIUM	0.0576 to 0.0997	MG/L TC
ORGANICS	0 to 0.36	MG/KG
ACENAPHTHENE	to	
ANTHRACENE	to	
BENZO(A)ANTHRACENE	to	
BENZO(B)FLUORANTHENE	to	
BENZO(K)FLUORANTHENE	to	
BENZO(G,H,I)PERYLENE	to	
CHRYSENE	to	
DIBENZO(A,H)ANTHRACENE	to	
FLUORANTHENE	to	
INDENO (1,2,3-C,D) PYRENE	to	
PHENANTHRENE	to	
PHENOL	to	

18. This is a Nonwastewater.

19. If this waste is subject to any California list restrictions enter the letter from below (either A or B.1) next to each restriction that is applicable:
___ HOCs. ___ PCBs. ___ Acid. ___ Metals. ___ Cyanides

20. Identify ALL Characteristic and Listed USEPA hazardous waste numbers that apply (as defined by 40 CFR 261). For each waste number, identify the subcategory (as applicable. check none. or write in the description from 40 CFR 268.41, 268.42, and 268.43).

REF #	A. US EPA HAZARDOUS WASTE CODE(S)	B. SUBCATEGORY Enter the subcategory description. If not applicable. simply check none		C. APPLICABLE TREATMENT STANDARDS			D. HOW MUST THE WASTE BE MANAGED? Enter letter from below
				PERFORMANCE-BASED: Check as applicable		SPECIFIED TECHNOLOGY: If applicable enter the 40 CFR 268.42 table 1 treatment code(s)	
		DESCRIPTION	NONE	268.41(a)	268.43(a)	268.42	
1	K088		X				D
2							
3							
4							
5							
6							
7							
8							
9							
10							

Management under the land disposal restrictions:
A. RESTRICTED WASTE REQUIRES TREATMENT

B.1 RESTRICTED WASTE TREATED TO 268.40 STANDARDS

B.3 GOOD FAITH ANALYTICAL CERTIFICATION FOR INCINERATED ORGANICS

B.4 DECHARACTERIZED WASTE REQUIRES TREATMENT FOR UHCS

B.5 RESTRICTED WASTES TREATED TO ALTERNATE SOIL STANDARD

B.6 RESTRICTED WASTES TREATED TO ALTERNATE DEBRIS STANDARD

C. RESTRICTED WASTE SUBJECT TO A VARIANCE

D. RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT

E. NOT CURRENTLY SUBJECT TO LAND DISPOSAL RESTRICTIONS

21. Is this waste a soil or debris? No: X Yes. Soil: _ Yes. Debris: _

22. Specific Gravity Range: 1.000 to 1.500

23 Indicate the range of each: Units

Cyanides: _ None to _____ _____ Type (free. total. amenable. etc.) _____

Cyanides: _ None to _____ _____ Type (free, total, amenable. etc.) _____

Sulfides: _ None to _____ _____ Type _____

Optional Phenolics: _ None to _____ _____

24. Identify the waste color VARIES . DOT physical state Solid .

25. COMPLETE ONLY FOR WASTES INTENDED FOR FUELS OR INCINERATION

TOTAL

Beryllium as Be _____ ppm

Potassium as K _____ ppm

Sodium as Na _____ ppm

Bromine as Br _____ %

Chlorine as Cl _____ %

Fluorine as F _____ %

Sulfur as S _____ %

26. RECLAMATION, FUELS or INCINERATION PARAMETERS (Provide if information is available)

RANGE

A. Heat Value (Btu/lb): ____-____

B. Water: _____

C. Viscosity (cps): ____@____F _ 100 F _ 150 F

D. Ash: _____ %

E. Settleable solids: _____ %

F. Vapor Pressure @ STP (mm/Hg): ____

G. Is this waste a pumpable liquid? Yes _ No _

H. Can this waste be heated to improve flow? Yes _ No _

I Is this waste soluble in water? Yes _ No _

J. Particle size: Will the solid portion of this waste pass through a 1/8 inch screen? Yes _ No _

27. TRANSPORTATION INFORMATION

A. Is this a DOT Hazardous Material? Yes X No _

B. Proper Shipping Name. . . . . .: RQ. HAZARDOUS WASTE, SOLID, N.O.S.

and Additional Description if required: K088

C. DOT Regulations: North America Hazard Class: 9 Misc.Hazardous Mat'l I.D. NA3077 Packing Group: III

D. CERCLA Reportable Quantity (RQ) and units (Lb, Kg): 1 Lb

E. Non-Bulk code ___ Bulk code 240

F. Special Provisions B54 ___ ___ ___ ___ +++ See DOT Regs for more info

G. Labels Required CLASS 9

28. SPECIAL HANDLING INFORMATION

_ Material Safety Data Sheets Attached

29. OTHER INFORMATION

30. CHEMICAL WASTE MANAGEMENT CERTIFICATION

Chemical Waste Management, Inc. has all the necessary permits and licenses for the waste that has been characterized and identified by this approved profile.

31. OTHER HAZARDOUS CONSTITUENTS Indicate if the waste contains any of the following.

METALS	TCLP Information: Check only ONE for each constituent Use units: ppm, mg/l				TCLP Data	TCA or TOTAL Use units: ppm, mg/l, mg/kg or percent			
						California List			
	Less Than	TC Regulated Level	Equal or More	Waste No.	TCLP Actual	Less Than	Regulated Level	Equal or More	Actual
Arsenic as As	X	5.0 mg/l		D004			500 mg/l		
Barium as Ba	X	100.0 mg/l		D005					
Cadmium as Cd	X	1.0 mg/l		D006			100 mg/l		
Chromium tot Cr	X	5.0 mg/l		D007					
Lead as Pb	X	5.0 mg/l		D008			500 mg/l		
Mercury as Hg	X	.2 mg/l		D009			20 mg/l		
Selenium as Se	X	1.0 mg/l		D010			100 mg/l		
Silver as Ag	X	5.0 mg/l		D011					
Nickel as Ni						X	134 mg/l		
Thallium as Tl						X	130 mg/l		
Chromium Hex							500 mg/l		
Antimony									
Beryllium									
Copper									
Vanadium									
Zinc									

32. OTHER HAZARDOUS CONSTITUENTS Indicate if the waste contains any of the following.

ORGANICS	TCLP Information: Check only ONE for each constituent				TCLP Data	TCA or TOTAL Use units: ppm, mg/l or %
	Less Than	Regulated Level	Equal or More	Waste No.	TCLP Analytical Test Results Use units: ppm or mg/l	
Benzene	X	0.5 mg/l		D018		
Carbon Tetrachloride	X	0.5 mg/l		D019		
Chlordane	X	0.03 mg/l		D020		
Chlorobenzene	X	100.0 mg/l		D021		
Chloroform	X	6.0 mg/l		D022		
m-Cresol	X	200 mg/l		D024		
o-Cresol	X	200.0 mg/l		D023		
p-Cresol	X	200.0 mg/l		D025		
Cresol	X	200.0 mg/l		D026		
2,4-D	X	10.0 mg/l		D016		
1,4 Dichlorobenzene	X	7.5 mg/l		D027		
1,2-Dichloroethane	X	0.5 mg/l		D028		
1,1-Dichloroethylene	X	0.7 mg/l		D029		
2,4-Dinitrotoluene	X	0.13 mg/l		D030		
Endrin	X	.02 mg/l		D012		
Heptachlor. & Hydroxide	X	0.008 mg/l		D031		
Hexachloro-1,3 Butadiene	X	0.5 mg/l		D033		
Hexachlorobenzene	X	0.13 mg/l		D032		
Hexachloroethane	X	3.0 mg/l		D034		
Lindane	X	0.4 mg/l		D013		
Methoxychlor	X	10.0 mg/l		D014		
Methyl Ethyl Ketone	X	200.0 mg/l		D035		
Nitrobenzene	X	2.0 mg/l		D036		
Pentachlorophenol	X	100.0 mg/l		D037		
Pyridine	X	5.0 mg/l		D038		
Tetrachloroethylene	X	0.7 mg/l		D039		
Toxaphene	X	0.5 mg/l		D015		
2,4,5-TP Silvex	X	1.0 mg/l		D017		
Trichloroethylene	X	0.5 mg/l		D040		
2,4,5-Trichlorophenol	X	400.0 mg/l		D041		
2,4,6-Trichlorophenol	X	2.0 mg/l		D042		
Vinyl Chloride	X	0.2 mg/l		D043		

Generator Name: ALCOA Manifest Doc. No.: _____

Profile Number: VC7964 State Manifest No: _____

1. Is this waste a non-wastewater or wastewater? (See 40 CFR 268.2) Check ONE: Nonwastewater X Wastewater _
2. Identify ALL USEPA hazardous waste codes that apply to this waste shipment, as defined by 40 CFR 261. For each waste code, identify the corresponding subcategory, or check NONE if the waste code has no subcategory. Spent solvent treatment standards are listed on the following page. If F039, multi-source leachate applies, those constituents must be listed and attached by the generator. If D001-D043 requires treatment of the characteristic and meet 268.48 standards, then the underlying hazardous constituent(s) present in the waste must be listed and attached.

REF #	3. US EPA HAZARDOUS WASTE CODE(S)	4. SUBCATEGORY ENTER THE SUBCATEGORY DESCRIPTION, IF NOT APPLICABLE, SIMPLY CHECK NONE		5. HOW MUST THE WASTE BE MANAGED? ENTER LETTER FROM BELOW
		DESCRIPTION	NONE	
1	K088		X	D
2				
3				
4				

To identify F039 or D001-D043, underlying hazardous constituent(s), use the "F039/Underlying Hazardous Constituent Form" provided (CWM-2004) and check here: _
If no UHCs are present in the waste upon its initial generation check here: X
To list additional USEPA waste code(s) and subcategoria(s), use the supplemental sheet provided (CWM-2005-D) and check here: _
Disposal facility monitors for all UHCs check here _
If waste will be managed in a system regulated under the CWA, or a Class 1 injection well under the SDWA check here

HOW MUST THE WASTE BE MANAGED? In column 5 above, enter the letter (A, B1, B3, B4, B5, B6, C, D or E) below that describes how the waste must be managed to comply with the land disposal regulations (40 CFR 268.7). Please understand that if you enter the letter B1, B3, B4, B5, B6, or D you are making the appropriate certification as provided below. (States authorized by EPA to manage the LDR program may have regulatory citations different from the 40 CFR citations listed below. Where these regulatory citations differ, your certification will be deemed to refer to those state citations instead of the 40 CFR citations.

A. RESTRICTED WASTE REQUIRES TREATMENT
This waste must be treated to the applicable treatment standards set forth in 40 CFR 268.40.
__ For Hazardous Debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR 268.45."

B.1 RESTRICTED WASTE TREATED TO PERFORMANCE STANDARDS
"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the treatment standards specified in 40 CFR 268.40 without impermissible dilution of the prohibited waste. I am aware there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

B.3 GOOD FAITH ANALYTICAL CERTIFICATION FOR INCINERATED ORGANICS
"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by combustion in units as specified in 268.42 Table 1, I have been unable to detect the nonwastewater organic constituents despite having used best good faith efforts to analyse for such constituents. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

B.4 DECHARACTERIZED WASTE REQUIRES TREATMENT FOR UNDERLYING HAZARDOUS CONSTITUENTS
"I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 or 268.49, to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

B.6 RESTRICTED DEBRIS TREATED TO ALTERNATE PERFORMANCE STANDARDS
"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification and believe that it has been maintained and operated properly so as to comply with treatment standards specified in 40 CFR 268.45 without impermissible dilution of the prohibited wastes. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

C. RESTRICTED WASTE SUBJECT TO A VARIANCE
This waste is subject to a national capacity variance, a treatability variance, or a case-by-case extension. Enter the effective date of prohibition in column 5 above.
__ For Hazardous Debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

D. RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT
"I certify under penalty of law I have personally examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR Part 268 Subpart D. I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

E. WASTE IS NOT CURRENTLY SUBJECT TO PART 268 RESTRICTIONS
This waste is a newly identified waste that is not currently subject to any 40 CFR Part 268 restrictions.

I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature _____ Title _____ Date _____

SOLVENT

If the waste identified on the first page of this form is described by any of the following USEPA hazardous waste codes: F001, F002, F003, F004, F005, and all solvent constituents will not be monitored by the treater, then each constituent MUST be identified below by checking the appropriate box, and this page must accompany the shipment, along with the previous page of this form. If the waste code F039 describes this waste, then the corresponding list of constituents must be attached. If D001-D043 require treatment to 268.48 standards, then the underlying hazardous constituent(s) must also be attached.

SOLVENT WASTE TREATMENT STANDARDS [2]

F001 through F005 spent solvent constituents and their associated USEPA hazardous waste code(s).	Treatment Standard [1]		F001 through F005 spent solvent constituents and their associated USEPA hazardous waste code(s).	Treatment Standard [1]	
	Wastewaters	Nonwastewaters		Wastewaters	Nonwastewaters

[1] All spent solvent treatment standards are measured through a total waste analysis (TCA), unless otherwise noted. Wastewater units are mg/l, nonwastewater are mg/kg.

[2] For contaminated soils using the alternative soil treatment standards, the treatment standards for F001-F005 spent solvents must be a 90% reduction of constituents or less than 10 x the standards listed.

SUBCATEGORY REFERENCE

D001:

A. Ignitable characteristic wastes, except for the 40 CFR 261.21(a)(1) High TOC subcategory.

B. High TOC Ignitable characteristic liquids subcategory based on 40 CFR 261.21(a)(1) - Greater than or equal to 10% total organic carbon.