



State of Ohio Environmental Protection Agency

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P.O. Box 1049
Columbus, Ohio 43216-1049

CERTIFIED MAIL

December 22, 2005

**Re: *Variance from Classification as a Waste
Agmet Metals, Inc.***

Dana Cassidy, Vice President
Agmet Metals, Inc.
7800 Medusa Street
Oakwood Village, Ohio 44146

Dear Mr. Cassidy:

On December 22, 2005, the director of Ohio EPA granted Agmet Metals, Inc. a variance from classification as a waste. This variance allows Agmet to store metal bearing materials before recycling and the metal concentrate product before sale without a Permit. It also requires Agmet to ship the metal concentrate to metal smelters according to the U.S. Department of Transportation regulations instead of the hazardous waste regulations. The variance from classification as a waste is effective on the day of issuance and entry into the director's journal. Both of these occurred on December 22, 2005.

On July 22, 2005, the director of Ohio EPA provided public notice of his decision to tentatively grant the variance from classification as a waste. He received six (6) comments from one interested party during the public comment period. Staff from the Division of Hazardous Waste Management considered the comments. Please find enclosed a copy of the responsiveness summary to the comments. No changes were made to the variance document in response to the comments received.

As a party to this proceeding, you may appeal this variance to the Environmental Review Appeals Commission (ERAC) no later than 30 days after the public notice (See Ohio Revised Code § 3745.04). You may file your appeal with ERAC at the following address: Environmental Review Appeals Commission, 309 South Fourth Street, Room 222, Columbus, Ohio 43215.

If you file an appeal, you must put it in writing. Your appeal must explain why you are appealing the action and the grounds you are using for your appeal. You must send a copy of the appeal to the director of the Ohio Environmental Protection Agency no later than three (3) days after you file it with ERAC.

Bob Taft, Governor
Bruce Johnson, Lieutenant Governor
Joseph P. Koncelik, Director



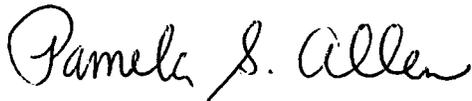
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Ohio EPA is an Equal Opportunity

Dana Cassidy, Vice President
Agmet Metals, Inc.
December 22, 2005
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If you have any questions concerning this variance, please contact Karen Hale of Ohio EPA's Central Office at (614) 644-2927.

Sincerely,

A handwritten signature in cursive script that reads "Pamela S. Allen". The signature is written in black ink and is positioned above the typed name and title.

Pamela S. Allen, Manager
Regulatory and Information Services
Division of Hazardous Waste Management

Enclosures

cc: Karen Hale, RIS, DHWM
Greg Orr/Natalie Oryshkewych, DHWM, NEDO
Frances Kovac, Legal

PUBLIC NOTICE

Cuyahoga County

OHIO EPA GRANTS FINAL VARIANCE FROM CLASSIFICATION AS A WASTE

On December 22, 2005, Ohio EPA granted a final variance from classification as a waste to Agmet Metals, Inc. located at 7800 Medusa Street, Oakwood Village, Ohio 44146 and Agmet Metals, Inc. (Agmet), located at 5533 Dunham Road, Maple Heights, Ohio 44138. The variance from classification as a waste applies to partially reclaimed electroplating wastewater treatment sludge recycled by Agmet and the metal concentrate product.

Why did Agmet request a variance from classification as a waste?

Agmet receives reclaimed electroplating wastewater treatment sludge which it recycles by concentrating the levels of nickel, cobalt, copper, and/or zinc. It then sells the metal concentrate product to smelters. This variance allows Agmet to store metal bearing materials before recycling and the metal concentrate product before sale without a Permit. It also requires Agmet to ship the metal concentrate to metal smelters according to the U.S. Department of Transportation regulations instead of the hazardous waste regulations.

Can I appeal this final variance from classification as a waste?

Yes, if you are an officer of an agency of the state or of a political subdivision, acting in a representative capacity, or any person who would be aggrieved or adversely affected by this variance from classification as a waste, you have the right to appeal this decision to the Environmental Review Appeals Commission (ERAC).

If I decide to appeal this final variance from classification as waste, how and when must I make the appeal?

If you file an appeal, you must put it in writing no later than January 21, 2006. Your appeal must explain why you are appealing the action and the grounds you are using for your appeal. You must file your appeal, according to Ohio Revised Code §§ 3745.04 and 3745.07, with ERAC at the following address: **Environmental Review Appeals Commission**, 309 South Fourth Street, Room 222, Columbus, Ohio 43215. You must send a copy of the appeal to the director of Ohio EPA at the following address no later than three (3) days after you file it with ERAC: **Joseph P. Koncelik, Director of Ohio EPA**, P.O. Box 1049, Columbus, Ohio 43216-1049.

OHIO E.P.A.

DEC 22 2005

ENTERED DIRECTOR'S JOURNAL

**BEFORE THE
OHIO ENVIRONMENTAL PROTECTION AGENCY**

IN THE MATTER OF:

Agmet Metals, Inc.
7800 Medusa Street
Oakwood Village, Ohio 44146

5533 Dunham Road
Maple Heights, Ohio 44138

Applicant

: **Variance from Classification as a**
: **Waste**
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PREAMBLE

It is agreed by the parties hereto as follows:

I. JURISDICTION

This Variance from Classification as a Waste (Variance) is issued to Agmet Metals Inc. (Applicant) pursuant to the authority vested in the Director of the Ohio Environmental Protection Agency (Ohio EPA) under Ohio Revised Code (ORC) §§ 3734.02, 3734.14, 3745.01 and Ohio Administrative Code (OAC) rule 3745-50-23.

II. PARTIES BOUND

This Variance shall apply only to the Applicant and its successors in interest liable under Ohio law. No change in ownership of the Applicant or of the Facility shall in any way alter the Applicant's obligations under this Variance.

III. DEFINITIONS

1. Unless otherwise stated, all terms used in this Variance shall have the same meaning as defined in ORC Chapter 3734. and the rules promulgated thereunder. Whenever the terms listed below are used in this Variance, the following definitions shall apply:

I certify this to be a true and accurate copy of the official document as filed in the records of the Ohio Environmental Protection Agency

Dr. Donip Jackson date 12-22-05

- a. "Accepted at the Facility" or "Accepting at the Facility" or "Accept at the Facility" shall mean that time when Variance Material meeting material specifications is unloaded from the transport vehicle and placed into the Applicant's bulk storage building at the Oakwood Village Facility or the Maple Heights Facility.
- b. "Application" shall mean the response to the criteria listed in OAC rule 3745-50-24 (C) and supporting documents for a variance submitted by Applicant on July 17, 2000, October 30, 2000, January 25, 2001, April 6, 2001 and August 26, 2004, to the Director of Ohio EPA which is attached hereto and incorporated fully herein.
- c. "Calcining or calcination" shall mean the decomposition of metal hydroxides by the removal of water and carbon dioxide using heat to form metal oxide product.
- d. "Calciner" shall mean the unit in which calcination takes place.
- e. "Metal Concentrate Variance Material" is Metal Concentrate that needs no calcination upon receipt at the Maple Heights Facility and is Product.
- f. "F006 Filtercake" shall mean Variance Material that is rejected by Applicant because it cannot be reclaimed by Applicant.
- g. "Facilities" shall mean the Oakwood Village Facility and the Maple Heights Facility together.
- h. "Metal Concentrate" shall mean the metal bearing oxide product produced by the Applicant that is in part produced with Variance Material or Metal Concentrate Variance Material and is destined to be smelted to recover economically feasible nickel, copper, precious metal or tin values.
- i. "Product" shall mean any metal bearing oxide concentrate, whether or not it contains Variance Material, as defined below, and is destined to be smelted to recover nickel, tin, precious metal or copper.
- j. "Variance Material" shall mean metal hydroxide bearing filtercake generated from the dewatering (i.e., reclamation) of sludges generated from the treatment of wastewater from electroplating operations (F006) that is used to produce Metal Concentrate.

IV. FINDINGS

1. Applicant was incorporated on September 11, 1981, to do business in Ohio and is in good standing with the Office of the Secretary of State. Applicant is a "person" as defined in ORC § 3734.01(G) and Ohio Administrative Code (OAC) rule 3745-50-10(A).
2. Applicant operates and maintains a metal hydroxide recycling facility and metal oxide concentrate production facility located at 7800 Medusa Street, Oakwood Village, Ohio 44146 (Oakwood Village Facility) and a metal oxide concentrate product storage, processing and shipping facility at 5533 Dunham Road, Maple Heights, Ohio 44137 (Maple Heights Facility). The metals of value to the Applicant are predominantly nickel, cobalt, copper, tin and zinc.
3. Pursuant to Director's Final Findings and Orders of July 26, 2000, Applicant submitted an Application to the Director, on July 17, 2000 for a variance from classification as a waste for Variance Material and Metal Concentrate in accordance with OAC rule 3745-50-24 (C). Additional information to supplement the original application was submitted on October 30, 2000, January 25, 2001 and April 6, 2001. A variance from classification as a waste was issued to the Applicant on August 10, 2001.
4. On August 26, 2004, Applicant submitted additional information and requested a modification to their existing variance from classification as a waste to include tin-bearing hazardous secondary materials .
5. Applicant serves supplier customers in a variety of industries including the printed circuit board, copper metal finishing industry, chemical, alloy, plating, and fats and oils industries. The materials received from these industries include filtercakes, spent catalysts, grindings, solutions, filters and dusts, which each contain primarily nickel, cobalt, copper, tin and/or zinc.
6. The industrial process used by Applicant to reclaim metal hydroxide bearing materials is calcination. Calcination converts the metal hydroxide in the material to metal oxide, the metallic chemical form which is acceptable to smelters for processing. Calcination is also used in the mineral processing industry to prepare mined ores for smelting.
7. Customers of the Applicant operate electroplating lines that include wastewater treatment systems to treat wastewaters generated from the electroplating operation. A sludge containing approximately 2% solids is generated from the treatment of the wastewaters. This sludge meets the definition of hazardous waste code F006.

These customers reclaim the sludge by dewatering to yield a F006 metal hydroxide filtercake that typically contains 20% to 35% solids and is 6.45% to 17.5% total metal.

8. Variance Material that Applicant calcines and/or processes has economic value due to its nickel, copper, tin and/or precious metal content.
9. The nickel concentration of the Variance Material which Applicant reclaims is similar to that found in mined nickel ore. Naturally occurring nickel ore deposits economically feasible for mining generally contain 1% to 3% nickel. The Variance Material reclaimed by Applicant contains 1.2 % or greater nickel content on a dry weight basis. The similarity of the Variance Material to nickel ore and its value in the market place make Variance Material commodity-like.
10. The copper content of the Variance Material which the Applicant reclaims is similar to that found in mined copper ore. Naturally occurring copper deposits generally contain 1% or less of copper. The Variance Material reclaimed by Applicant contains 1.5% or greater copper content on a dry weight basis. The similarity of the Variance Material to copper ore and its value in the market place make Variance Material commodity-like.
11. The tin content of the Metal Concentrate Variance Material which the Applicant receives, exceeds 0.8% tin and is commodity-like. Eighty percent of the naturally occurring tin deposits are low grade deposits where the tin content is as low as 0.015%. In lode deposits, the ores often contain 0.8-1.0 wt.% of tin.
12. Applicant produces Metal Concentrate that contains tin, nickel, copper and/or precious metal values that are economically feasible for recovery and are marketed to smelters for its tin, nickel, copper, and/or precious metal content. The Metal Concentrate may be smelted solely to recover a single metal or smelted in series to recover several metals contained in the Metal Concentrate.
13. Applicant currently holds contractual agreements under which Applicant will supply Metal Concentrate to owners/operators of smelting operations who recover one or more metals contained in the Metal Concentrate. Applicant's Metal Concentrate must meet customer material specifications for metal concentration and contaminants.
14. The concentration of tin, nickel, copper, and/or precious metal that is economically feasible for recovery from Variance Material and Metal Concentrate is dependent on the metal content of reserves, the production rate of mined ore, and the market value of the metal.

15. Applicant reimburses supplier customers for the tin, nickel and/or copper contained in the Variance Material based on the tin, nickel and/or copper prices listed on the London Metals Exchange (LME). The value of the Metal Concentrate produced by the Applicant is also based on metal prices as listed on the LME.
16. Applicant's Facilities are designed and operated in a manner that minimizes the release of Variance Material and Metal Concentrate to the environment.
17. Applicant has developed and will implement the following plans and procedures: safety, site security, employee training, emergency response, spill response, facility inspections, material profiling acceptance criteria and material specifications.
18. The Application addresses the standards and criteria set forth in OAC rule 3745-50-24 (C) for issuing a variance from classification as a waste in the following manner:
 - a. **The degree of processing the material has undergone and the degree of further processing that is required:**

Applicant's supplier customers, who generate Variance Material, operate electroplating lines. These electroplating lines deposit the desired metal on a plating surface when the metal part is submerged into the metal bath. After metal deposition, the metal part is submerged in a series of rinse tanks, which contain predominately clean water. These tanks are designed to cleanse the surface of metal parts to remove residual plating chemicals. The rinse water is processed by wastewater treatment where it is commingled with other wastewater from different sections of the plating operation. The chemicals that are added to the commingled wastewater cause the metals to precipitate as a sludge during wastewater treatment. The sludge collects at the bottom of the tank.

The supplier customers reclaim the sludge to remove water and form a filtercake . The filtercake typically contains between 20% and 35% solids and is non-free flowing.

Upon receipt of the Variance Material at the Oakwood Village Facility or Maple Heights Facility, Applicant visually inspects the shipment and verifies the metal content of the material per its material profiling acceptance criteria and material specifications. The Variance Material is next unloaded in the storage building and may be mixed with nonhazardous metal bearing waste materials to achieve a feedstock blend with a desirable percent of moisture and percent of organics content. The organics such as fats and oils result from nonhazardous waste materials received from the food industry. The

appropriate percent moisture is necessary to control the heat balance in the calciner.

The Variance Material is moved from the storage building to the calciner on an enclosed conveyor. As previously stated, calcining is a common process used by the mineral processing industry to prepare metal bearing ores for smelting. Calcination releases water and carbon dioxide during heating and converts the metal hydroxides of the filtercake to metal oxides. This process takes place in a rotary calciner (a rotary kiln).

The Metal Concentrate is conveyed to a covered collection container by an enclosed conveyance system. The air pollution control system collects fine product dust particles that exit the calciner in the air stream. This material is also product and moved from the air pollution control equipment to the product collection container by an enclosed system.

The Metal Concentrate is sent directly to the contracted smelter, or to Applicant's Maple Heights Facility for storage, further blending to achieve specific smelter contract specifications, or shipping.

Metal Concentrate Variance Material containing higher concentrations of metal is not processed by calcination. The material is shipped to the Maple Heights Facility for processing and blending to achieve specific smelter specifications prior to shipment and reclamation.

b. The value of the material after it has been reclaimed.

Applicant submitted Exhibit C, Exhibit D and Exhibit CC in the application which demonstrate the value of Variance Material and Metal Concentrate. The value of the Variance Material and the Metal Concentrate is based on the price of nickel, tin and/or copper on the LME. In October 1998, the price of nickel was \$1.76 per pound. In January 2000, the price of nickel per pound was \$4.57. The price of copper was \$0.67 per pound in October 1998 and \$0.78 per pound in January 2000.

To ensure its supply of quality Variance Material, Applicant enters into contracts with all its supplier customers. Also, Applicant holds annual contracts with smelters to supply Metal Concentrate and has working relationships with tin suppliers located both inside and outside the United States.

- c. **The degree to which the reclaimed material is like an analogous raw material:**

Variance Material

The Variance Material is valuable to Applicant for its nickel, copper, tin and/or precious metal content. The nickel content of Variance Material is typically similar to mined nickel ore. Generally, valuable naturally occurring nickel ore deposits contain 1% to 3% nickel. Nickel mines in Ontario and Manitoba yield ores that contain 1.18% and 2.63% nickel, respectively. Nickel Mountain in Oregon, the only commercially operated nickel mine in the United States, yields ore with a nickel content of 0.29% to 0.52%. Applicant buys Variance Material with a nickel content of 1.2% or greater on a dry weight basis. This is comparable to the ores taken from the Canadian mines and more than 2 times the nickel content of the ore taken from the Oregon mine.

Approximately two-thirds of the world's copper resources are porphyry deposits which generally contain 1% or less copper. The most extensive of these deposits are located in western Canada, southwestern United States, Mexico, and South America (*Encyclopedia of Chemical Technology*, Kirk-Othmer, Fourth Edition, 1993, Volume 7, pp. 381 to 426). The minimum copper content of the Variance Material wanted by the Applicant is 1.5% on a dry weight basis.

Applicant evaluates all Variance Material for contaminants that are unacceptable to them and its customers. Exhibit Q and Letter, dated August 26, 2004, lists Applicant's Variance Material specifications. Exhibit B and Exhibit FF contain Applicant's material profile evaluation form. Applicant requires new customers or previous customers with material composition changes to complete a material profile form. The review of the material specifications is done in conjunction with the material profile form. Exhibit Q details material specifications and maximum concentration levels for contaminants mercury, beryllium and cyanide for nickel and copper bearing Variance Material. Applicant verifies the metals content of Variance Material through ICP analysis or x-ray fluorescence.

Metal Concentrate

Applicant's final product, Metal Concentrate, destined for nickel smelting is analogous to ore concentrate prepared by smelters from mined nickel ore. Ore concentrate prepared by smelters contains a nickel content of 10% to 15% on a dry weight basis. Applicant's Metal Concentrate contains between 15% and 22% nickel. As Exhibit Q demonstrates, Applicant's product must contain a minimum annual average nickel content on a dry weight basis and specific contaminant levels for lead, chromium, cadmium, arsenic, and zinc to meet current smelter contract specifications. In addition, the product cannot contain beryllium or mercury, have an odor, or be radioactive.

Metal Concentrate containing 1% or greater copper content is comparable to mined copper resources. Copper resources generally contain 1% or less copper. Precious metal values may also be associated with Metal Concentrate processed primarily for its copper content. Copper bearing Variance Material is often generated by the circuit board industry which also uses precious metals to make its product.

Primary tin is mined predominately in China and smelted in China and Thailand. There are no tin mines in the United States. Eighty percent of the naturally occurring tin deposits are low grade deposits where the tin content is as low as 0.015%. In lode deposits, the ores often contain 0.8-1.0 wt.% of tin.

d. The extent to which an end market for the reclaimed material is guaranteed:

Applicant currently holds a contract with a nickel smelter for Applicant's Metal Concentrate. Applicant has held contracts with this customer since 1992 and has been granted annual contracts to deliver a specified quantity of product to this smelter per year. The smelter uses Applicant's product as feedstock in addition to the smelter's mined ore/concentrate to yield its nickel products. Also, Applicant has held annual contracts with two additional smelters for nickel and nickel/copper bearing Metal Concentrate. Applicant has working relationships with facilities both inside and outside the United States for its tin bearing Metal Concentrate. Applicant's Metal Concentrates have well-established values and end markets.

e. The extent to which the reclaimed material is handled to minimize loss:

The Application includes narrative information and Exhibits regarding the management of Variance Material and Metal Concentrate at the Oakwood Village Facility and the Maple Heights Facility. To ensure the proper handling of Variance Material and Metal Concentrate, the Applicant maintains and implements the following plans and procedures: spill response plan, emergency response, facility inspections, site security, safety, employee training, material profiling acceptance criteria and material specifications. In addition, the materials are stored in buildings designed to minimize loss to the environment.

Applicant provided engineering drawings of the bulk storage building used to store the Variance Material (Exhibit U of the Application) at the Oakwood Village Facility. The building is constructed with a reinforced concrete primary barrier coated with sealer compatible with the Variance Material, a secondary barrier system, and a leachate collection system. The floor of the storage building is sloped away from the doors. A trench drain system is located opposite to the doors of the building and is connected to a double pipe from the liner drains. Both of these pipe systems lead to a pump station. The drain system next leads to two storage tanks. Any piped liquid waste will be collected in the storage tanks. In addition, Applicant implements procedures to prohibit the tracking of Variance Material from the storage building by personnel and equipment.

The Variance Material is conveyed to the calciner using an enclosed system. Also, the Metal Concentrate is conveyed from the calciner and air pollution control equipment to a covered collection container using an enclosed system. Metal Concentrate is transported to smelters and to the Maple Heights Facility according to Department of Transportation (DOT) regulations.

The Applicant provided copies of its spill response plans and facility inspection report forms for the Facilities. The spill response plans include the following information: emergency contacts, areas of the facility where spills might occur, spill clean-up procedures, equipment decontamination procedures, and a spill report form. The form is completed each time a spill event happens. Also included is a list of spill response equipment the Applicant maintains at the Facilities.

The facility specific inspection procedures and report forms list the facility areas that are inspected. The formal inspections are performed twice a week by Applicant's Safety and Pollution Prevention Committee members. Each inspection is documented. The information recorded on the inspection report form includes: description of problem identified, person notified, clean-up method, priority level, and location of problem. Personnel in the storage, shipping, receiving and production areas perform inspections of their areas on a daily basis.

Applicant describes that the Oakwood Village Facility operates 24 hours per day, seven days per week. In the event that the facility closes, the plant supervisor secures the site. If a plant supervisor is unavailable, a contract firm will maintain security.

Applicant fully explains safety procedures and training that all employees must complete. Employees are trained upon hiring and once each calendar year. The training includes proper procedures for: material handling and labeling, shipping, DOT classification, packaging, transportation, respiratory and other employee protection, small quantity hazardous waste generator requirements, emergency response, respiratory protection, general safety rules, accident and injury procedures, good housekeeping, spill response, facility inspections, and recognizing industrial hazards.

f. Other relevant factors.

Other relevant factors regarding the reclamation of Variance Material is the recovery of natural nonrenewable resources, and the reduction of wastes and adverse environmental impacts due to the mining and processing of metal ores.

Vast amounts of energy, water, and chemicals are used to mine and process metals. Mined nickel ore generally contains 1% to 3% nickel. Therefore, to recover one ton of nickel from mined ore, between 33.3 and 100 tons of raw ore must be removed from the earth and processed. Approximately 32 tons to 99 tons of waste rock material is produced.

Copper reserves generally contain less than 1% copper. To recover one ton of copper, approximately 100 tons of copper ore must be mined. Also, this ore is surface mined and an equivalent tonnage of overburden as compared to ore gained is commonly generated.

To yield one ton of nickel from Variance Material, approximately 83 tons of Variance Material having a minimum concentration of 1.2 % nickel content would need to be reclaimed. Approximately 66 tons of Variance Material containing 1.5% copper is needed to gain one ton of copper. However, approximately 65% to 80% of the waste material generated from the calcining of Variance Material for either copper or nickel is water.

Applicant accepted and calcined 1,010 tons of Variance Material in 1999. As of September 2000, Applicant received 1,735 tons of Variance Material. From this Variance Material, approximately 32.9 tons of nickel was recovered from the Variance Material. To replace this amount of recovered nickel, 3294 tons of nickel ore would need to be mined and processed. Furthermore, given the current treatment and disposal options available, the metal values in the Variance Material would likely be lost by landfilling the material if not processed by a metals reclaimer such as Applicant.

The 1992 world economic nickel reserves were estimated to be 47.0×10^6 tons. At the 1992 world rate of mine production, these reserves would be expected to last at least until the year 2050. However, if the annual mine production increases at a rate that reflects a predicted increase in the world primary nickel consumption of 2% annually, these reserves could be depleted before 2030 (*Encyclopedia of Chemical Technology, Kirk-Othmer, Fourth Edition, 1996, Volume 17, pp. 1 to16*). The reclamation of Variance Material reduces the rate of ore mining and conserves a nonrenewable resource.

19. Based upon the information submitted by the Applicant in the Application, the Director finds that the Variance Material and Metal Concentrate Variance Material are not a waste as defined in OAC rule 3745-51-02 once Accepted at the Facility and the Metal Concentrate is not a waste as defined in OAC rule 3745-51-02, provided the conditions of this Variance are satisfied and the Applicant uses the Variance Material to produce Metal Concentrate and the Metal Concentrate is sent for further metal reclamation.

V. GENERAL CONDITIONS

1. All activities undertaken by Applicant pursuant to this Variance shall be performed in accordance with the requirements of all applicable federal, state and local laws, regulations and ordinances.

2. Applicant shall construct, operate, and maintain all of the equipment and Facilities associated with the reclamation process so as to minimize loss or release to the environment of Variance Material or Metal Concentrate as generally described in the Application. Nothing in the preceding sentence, however, shall prohibit Applicant from constructing, operating, maintaining, repairing, improving, enhancing, or changing equipment or the structures of the physical plant associated with the reclamation process so long as Applicant's equipment, structures and reclamation process remain generally consistent and functionally equivalent to those described in the Application. In addition, the Applicant shall comply with the following specific conditions:

a. Applicant shall only Accept at the Facilities for reclamation Variance Material or Metal Concentrate Variance Material that meets the following material specifications for the given constituents:

Dry Basis:

Nickel:	1.2 % minimum concentration, or
Copper:	1.5 % minimum concentration, or
Tin	10% minimum concentration

Copper & Nickle Bearing Variance Material As Received:

Cyanide (total):	590 ppm maximum concentration;
Beryllium:	100 ppm maximum concentration; and
Mercury:	0.20 ppm maximum concentration

b. Applicant shall complete a material profile form and perform laboratory analysis of supplier customer's Variance Material to determine if it is acceptable to Applicant for processing and meets material specifications for Variance Material given in Section V, Paragraph 2.a., above. Applicant shall reevaluate each supplier customer's Variance Material annually and when a significant change to supplier customer's process occurs. Applicant shall retain, on-site at the Oakwood Village Facility, completed material profile forms and laboratory analysis data for the duration that the supplier is a customer.

c. Applicant shall verify by laboratory analysis and/or x-ray fluorescence that each shipment of Variance Material received meets the specifications for nickel, tin and/or copper content for Variance Material given in Section V, Paragraph 2.a., above, and by visual inspection that the Variance Material is dewatered, cohesive, and non-free flowing. The verification must be

documented and the documentation retained on-site at the Oakwood Village Facility by the Applicant for three years.

- d. Applicant shall not Accept at the Facility as Variance Material F006 filtercake that does not meet the material specifications given in Section V, Paragraph 2.a., above, or that meets the material specifications but cannot be reclaimed by the Applicant for any reason.
- e. Except as otherwise provided, Applicant shall inform supplier customers, in writing, that Variance Material sent to Applicant must be accompanied by a hazardous waste manifest (manifest), as defined in OAC rule 3745-50-10 (A)(66), and designated as hazardous waste, F006, in Ohio.
- f. Except as otherwise provided, Applicant shall sign the manifest and comply with OAC rule 3745-65-71, Use of manifest system, regarding the manifest. Manifests shall be retained on-site at the Oakwood Village Facility for three years.
- g. Except as otherwise provided, Applicant shall comply with OAC rule 3745-65-76, Unmanifested waste report, when Variance Material from a supplier customer is Accepted at the Facility with no accompanying manifest. Applicant shall send the required notice to the Ohio EPA according to Section XIII of this Variance.
- h. Applicant shall retain a copy of the bill of lading or shipping paper that accompanied each shipment of Metal Concentrate Variance Material received from supplier customers for three years.
- i. Applicant shall, within 24 hours, contact the supplier customer of the Variance Material or Metal Concentrate Variance Material when it receives Variance Material or Metal Concentrate Variance Material that does not meet the material specifications given in Section V, Paragraph 2.a., above, or that cannot be reclaimed by the Applicant for any reason and inform the supplier customer that the Variance Material or Metal Concentrate Variance Material shipment is rejected. Applicant shall document the reason why the Variance Material or Metal Concentrate Variance Material was rejected and the amount rejected. The documentation shall be retained on-site at the Oakwood Village Facility for three years.

- j. The Applicant shall return rejected Variance Material and Metal Concentrate Variance Material as soon as possible to the supplier customer, or have it transported to a permitted hazardous waste storage, treatment, or disposal facility, or sent for legitimate recycling. Rejected Variance Material or Metal Concentrate Variance Material is F006 Filtercake and must be managed and transported as hazardous waste, code F006, in accordance with all applicable Ohio EPA hazardous waste laws. The Applicant may assume generator duties for the purpose of completing the manifest.
- k. Applicant shall store the Variance Material only at its Oakwood Village Facility in a bulk storage building designed to minimize releases of Variance Material to the environment and to protect the Variance Material from the elements of weather. The bulk storage building shall be maintained with a complete roof, a crack free primary containment barrier compatible with the Variance Material, a secondary containment barrier, and a leachate collection system. The primary and secondary barrier systems shall be constructed and maintained to direct liquids to the leachate collection system.
- l. Metal Concentrate Variance Material can be accepted and stored at the Maple Heights Facility in accordance with the provisions of this Variance.
- m. Applicant shall maintain, revise as necessary, and implement procedures at the Oakwood Village Facility to control the release of Variance Material fugitive dust and the tracking of Variance Material from the bulk storage building by transport vehicles, equipment and personnel.
- n. Applicant shall maintain, revise as necessary, and implement procedures to control the release of Metal Concentrate fugitive dust from collection containers at the Facilities and the storage building at the Maple Heights Facility.
- o. Applicant shall maintain, revise as necessary, and implement the spill response plans for the Facilities provided in Exhibit V and Exhibit Y, respectively, of the Application. Applicant shall document the occurrence of any spill of Variance Material or Metal Concentrate and describe the cause of the spill and the action taken to remediate the spill. The Applicant shall retain the documentation on-site at the respective facility for three years.
- p. Applicant shall maintain, and revise as necessary, facility inspection procedures and implement facility inspections of the Facilities as provided in

Exhibit V and Exhibit W, respectively, of the Application. The designated areas of the Facilities as noted on the Applicant's inspection forms shall be inspected a minimum of twice a calendar week. Each inspection shall be recorded on the inspection form and the form retained on-site at the respective facility for three years.

- q. Applicant shall maintain, revise as necessary, and implement an employee training program regarding the procedures for spill response, facility inspections, Variance Material handling, Variance Material specifications, Metal Concentrate handling and emergency response. Each employee shall be trained upon hiring and once within every twelve months thereafter with regards to his or her duties as they pertain to spill response, facility inspections, Variance Material handling, Variance Material specifications and emergency response. Documentation of training shall be signed by the employee and retained on-site at the Oakwood Village Facility for three years.
- r. Applicant shall record and retain, for as long as this Variance is effective, amounts of Variance Material and Metal Concentrate Variance Material received from each supplier customer, amounts of Metal Concentrate produced, amounts of Variance Material and Metal Concentrate Variance Material rejected from each supplier customer and amounts of Metal Concentrate rejected by Applicant's customers and the reasons why.
- s. Applicant shall report the information required in Section V, Paragraph 2.r., above, to Ohio EPA according to Section XIII of this Variance on an annual basis by March 1st of each year. The first report will be due March 1, 2006. The information requested may be reported in a format of Applicant's choice.
- t. Applicant shall manage and clean up any spills of Variance Material and manage cleanup residuals that cannot be reclaimed as hazardous waste, code F006.
- u. Applicant shall maintain in good working order the condition and integrity of equipment used to handle, store, convey, contain and reclaim the Variance Material and Metal Concentrate. The equipment includes but is not limited to: tanks, containers, bulk storage buildings, secondary containment systems, leachate collection systems, loading and unloading areas, sumps, piping and conveyance systems, blending and sizing equipment, the calciner and associated equipment.

- v. Applicant shall manage as hazardous waste, code F006, in accordance with all applicable Ohio EPA hazardous waste regulations, any unusable residues generated by the Applicant from the storage or reclamation of Variance Material and Metal Concentrate Variance Material.
- w. Applicant shall cease Accepting at the Facility Variance Material when the indoor and outdoor Product storage capacity of the Maple Heights Facility is used to eighty percent of its capacity or when Product is stored at an off-site location.
- x. Applicant shall provide a written notice to Ohio EPA, in accordance with Section XIII, within seven days after the date any of the events described in Section V, Paragraph 2.w., occur. The notification shall describe in detail the reasons for the occurrence of the event(s) and the approximate quantity of Product in storage.
- y. Applicant can resume Accepting at the Facility Variance Material when it demonstrates to Ohio EPA that the conditions which gave rise to the event(s) described in Section V, paragraph 2.w. have changed and the Product is being moved to a nickel and/or copper smelter and no Product is stored at an off-site location or storage capacity of the Maple Heights Facility is less than eighty percent of its capacity. Applicant shall make this demonstration in writing and submit it to Ohio EPA, in accordance with Section XIII, not less than seven days prior to resuming Accepting at the Facility the Variance Material.
- z. In the event that this Variance expires prior to a final action of the Director to renew or reissue this Variance, the Applicant may continue to operate in accordance with the terms and conditions of the expired variance until a new variance is issued or denied provided that:
 - i. The Applicant submitted a complete application for a renewal variance at least one hundred eighty days before the expiration date of this Variance unless permission for a later submittal date has been authorized by the Director prior to the expiration date of this Variance, and
 - ii. Through no fault of the Applicant a new variance has not been issued pursuant to OAC rule 3745-50-23 on or before the expiration date of the previous variance.

- aa. Applicant shall provide a written notice to Ohio EPA, in accordance with Section XIII, within seven days after the date of the events described in Section XI, Paragraph 1. occur.
- bb. Within 30 days after the date any of the events described in Section XI, Paragraph 1. occur, and/or the Applicant no longer engages in the management of Metal Concentrate at the Maple Heights Facility, Applicant shall prepare and submit to Ohio EPA a Sampling and Remediation Plan (SRP) that meets the requirements in OAC rules 3745-55-11(A) and (B)/3745-66-11 (A) and (B),3745-55-97/3745-66-97 and 3745-55-14/3745-66-14, for all areas at the Oakwood Village Facility and/or the Maple Heights Facility, as applicable, where Variance Material and Metal Concentrate is or was managed, stored, and reclaimed and where leachate from the storage of Variance Material is or was conveyed, managed, and/or collected.
- cc. The SRP must be sent to Ohio EPA in accordance with Section XIII. The SRP is subject to Ohio EPA approval. Ohio EPA will notify Applicant, in writing, whether or not it approves of Applicant's SRP. If the SRP is not approved, Ohio EPA will identify the deficiencies or problems in the SRP, in writing. Applicant shall revise the SRP, or submit a new SRP, based on the findings and deficiencies noted in Ohio EPA's statement. At Applicant's request, Ohio EPA agrees to meet and discuss its findings and deficiencies prior to Applicant submitting the revised SRP. The revised or new SRP must be submitted to Ohio EPA for approval within 30 days of receipt of the written statement. If Ohio EPA modifies the unapproved SRP, the modified SRP becomes the approved SRP.
- dd. Upon receipt of the approved SRP, Applicant shall implement the approved SRP, in accordance with the requirements of OAC rules 3745-66-11 (A) and (B), 3745-66-97 and 3745-66-14 and the specifications and schedule in the approved SRP.
- ee. Within 30 days after completion of work required by the approved SRP, Applicant shall submit to Ohio EPA, for review and approval, a certification that the work was conducted in accordance with the approved SRP. The certification must be signed by Applicant and must follow the format in OAC rule 3745-50-42 (D). The signed certification must be submitted to Ohio EPA, in accordance with Section XIII. Ohio EPA retains the right to inspect the Facilities and take samples, photographs and notes, access process records, logs, invoices, analytical data, etc, prior to, during, and subsequent to certification of the SRP. If after inspection and review of the facility to

which the SRP applies, Ohio EPA does not conclude that the facility meets the conditions of the certified SRP, it shall deem the "certified" SRP invalid and cleanup of the facility inadequate.

- ff. Ohio EPA shall prepare and submit a report to the Applicant describing why it invalidated the SRP certification and what the Applicant shall undertake in resolving the deficiencies or problems in order to comply with certification. Within 30 days of this notice, Applicant shall prepare and submit a revised SRP to Ohio EPA indicating how it intends to correct the deficiencies or problems. Upon receipt of approval of the revised SRP, Applicant shall, within 45 days, implement the revised SRP and submit a signed, revised certification of cleanup to Ohio EPA. As illustrated above, Ohio EPA retains the right to inspect the Facilities and Applicant's records to ascertain whether or not the Facilities have satisfactorily been cleaned up.

- 3. The August 10, 2001 Variance is hereby terminated.

VI. ACCESS TO INFORMATION

Applicant shall provide Ohio EPA, upon request and within a reasonable time frame, copies of all information relating to this Variance within its respective possession or control, or within the possession or control of its respective contractors or agents, including but not limited to documents and information related to the issuance, use and implementation of this Variance.

Applicant may assert a claim that documents and other information submitted to Ohio EPA pursuant to this Variance are confidential under the provisions of OAC rule 3745-50-30. If no such claim of confidentiality accompanies the documents and other information when submitted to Ohio EPA, the documents and other information may be made available to the public without notice to Applicant.

No claim of confidentiality shall be made with respect to any data, including but not limited to, all sampling, analytical, monitoring, laboratory or interpretive reports.

Nothing in this Section shall be construed as in any way limiting Ohio EPA's access, inspection and information gathering rights and authorities, including enforcement authorities related thereto, under any applicable statute or regulation.

VII. ACCESS TO SITES

Applicant shall provide Ohio EPA with access, at all reasonable times, including during normal business hours, to the Facilities. Access under this Variance shall be for the purpose of conducting any activity related to this Variance or Ohio EPA's regulatory responsibilities, including but not limited to, the following:

1. Monitoring the implementation or use of this Variance;
2. Conducting sampling;
3. Inspecting and copying records, contracts, and other documents and information related to the implementation or use of this Variance; and,
4. Verifying any data and other information submitted to Ohio EPA.

Nothing in this Section shall be construed as in any way limiting Ohio EPA's access, inspection and information gathering rights and authorities, including enforcement authorities related thereto, under any applicable statute or regulation.

VIII. OTHER APPLICABLE LAWS

All actions taken pursuant to this Variance shall be undertaken in accordance with the requirements of all applicable local, state, and federal laws and regulations. This Variance does not waive or compromise the applicability and enforcement of any other statutes or regulations applicable to Applicant.

IX. OTHER CLAIMS

Nothing in this Variance shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person, firm, partnership or corporation, not a party to these Orders, for any liability arising from, or related to, the operation of Respondent's Facility.

X. REVOCATION

1. The following are causes for revoking a variance during its term:

- a. Noncompliance by the Applicant with any condition of the variance;
- b. The Applicant's failure in the application or during the variance issuance process to disclose fully all relevant facts, or the Applicant's misrepresentation of any relevant facts at any time; or
- c. A determination that the facility is operated in a manner that endangers human health or the environment.

XI. TERMINATION

1. Unless otherwise terminated by the Director, this Variance shall terminate ten (10) years after the effective date of this Variance, or when any of the following events occur:

- a. Applicant no longer owns or operates the Oakwood Village Facility.
- b. Applicant no longer engages in the management of Variance Material at the Oakwood Village Facility.

XII. MODIFICATIONS

This Variance may be modified by agreement of the parties hereto. Modifications shall be in writing and shall be effective on the date entered in the journal of the Director of Ohio EPA.

XIII. NOTICE

All documents required to be submitted by Applicant pursuant to this Variance shall be addressed to:

Ohio Environmental Protection Agency
Northeast District Office
Division of Hazardous Waste Management
2110 Aurora Road
Twinsburg, Ohio 44087

Variance from Classification as a Waste
Agmet Metals, Inc.
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and Ohio EPA Central Office at the following address:

For mailings, use the post office box number:

Ohio Environmental Protection Agency
Division of Hazardous Waste Management
Regulatory Support Unit
Lazarus Government Center
P. O. Box 1049
Columbus, Ohio 43216-1049

For deliveries to the building:

Ohio Environmental Protection Agency
Division of Hazardous Waste Management
Regulatory Support Unit
Lazarus Government Center
122 South Front Street
Columbus, Ohio 43215

or to such persons and addresses as may hereafter be otherwise specified in writing by Ohio EPA.

XIV. RESERVATION OF RIGHTS

Ohio EPA and Applicant each reserve all rights, privileges and causes of action, except as specifically waived in Section XV. of these Orders.

XV. WAIVER

Applicant consents to the issuance of this Variance and agrees to comply with the terms and conditions of this Variance.

Applicant hereby waives the right to appeal the issuance, terms and conditions, and service of this Variance, and Applicant hereby waives any and all rights Applicant may have to seek administrative or judicial review of this Variance either in law or equity.

Notwithstanding the preceding, Ohio EPA and Applicant agree that if this Variance is appealed by any other party to the Environmental Review Appeals Commission, or any

court, Applicant retains the right to intervene and participate in such appeal. In such an event, Applicant shall continue to comply with the terms and conditions of this Variance notwithstanding such appeal and intervention unless this Variance is stayed, vacated or modified.

XVI. EFFECTIVE DATE

The effective date of this Variance is the date this Variance is entered into the Ohio EPA Director's journal.

XVII. SIGNATORY AUTHORITY

Each undersigned representative of a party to this Variance certifies that he or she is fully authorized to enter into this Variance and to legally bind such party to this Variance.

IT IS SO ORDERED AND AGREED:

Ohio Environmental Protection Agency

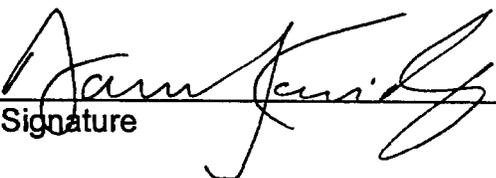


Joseph P. Koncelik
Director

12-16-05
Date

IT IS SO AGREED:

Agmet Metals, Inc.



Signature

October 18, 2005
Date

Dana J. Cassidy
Printed or Typed Name

Vice President
Title

Responsiveness Summary
Ohio EPA's Tentative Decision to Grant a Variance from Classification as a Waste
Agmet Metals

One interested party commented on the proposed variance from the classification as a waste for Agmet Metals. That party was World Resources Company (WRC). Please find below summaries of WRC's comments. Each comment summary is followed by Ohio EPA's response to the comment. A complete copy of WRC's comments is attached to the responsiveness summary. If you have any questions regarding this responsiveness summary, please contact Karen Hale at (614) 644-2917.

- 1. Comment Summary:** Our facilities operate under policy set forth in a memorandum, dated June 21, 1995 by Rich Vaile, Chief, Waste Compliance Branch, Region IX, U.S. EPA. The two principal conclusions of the memorandum are (1) that the blending of hazardous waste such as F006 to meet the specifications of purchasing smelters is hazardous-waste treatment that requires a RCRA Part B permit and (2) that storage of hazardous waste occurring during such recycling requires a RCRA storage permit.

The proposed variance deviates from the national policy. Ohio EPA's decision that upon acceptance by Agmet, F006 is not a waste and consequently a Part B permit is not required ignores the factual "findings" contained in the proposed variance itself that Agmet (1) blends F006 to achieve constituent characteristics of the recycled material meeting smelter specifications and (2) stores F006 at its recycling facility. Those statements demonstrate that Agmet engages in partial reclamation that is both waste treatment and storage. Thus, under established EPA policy, Agmet is required to operate under a RCRA Part B permit for both activities.

Ohio EPA Response: *The memorandum provided is actually a request from Rich Vaile, Chief, Waste Compliance Branch, Region IX, U.S. EPA to other U.S. EPA Region Chiefs for their interpretations and opinions regarding the regulation of F006 that is being recycled. The memorandum contains U.S. EPA's Region IX's regulatory analysis of how F006 is regulated under the hazardous waste rules when recycled. The memorandum does not establish policy. Furthermore, even if it were policy, Ohio EPA cannot require and enforce more stringent regulatory standards through the use of policy or guidance.*

The proposed variance for Agmet does not deviate from the "national policy." The national policy for the recycling of F006 is established in the hazardous waste rules. We agree that when F006 is recycled by reclamation it is impacted by the hazardous waste rules and recycling facilities are subject to regulation under those rules.

Generally, the owner/operator of a facility that reclaims a listed hazardous waste is required to obtain a hazardous waste permit if the material is stored prior to reclamation. The hazardous waste rules also allow for the granting of variances from classification as

a waste for hazardous wastes that are recycled in certain ways. Absent a variance, Agmet would require a hazardous waste storage permit. However, Ohio EPA's review of the application for a variance from the classification as a waste for F006 that generators reclaim and is accepted by Agmet supports Ohio EPA's tentative grant of variance.

The variance that applies to the F006 that Agmet reclaims is a variance from the classification as a waste for material that has been reclaimed but needs to be further reclaimed before a final product is produced. The criteria for this variance is found in Ohio Administrative Code rule 3745-50-24. Ohio EPA is authorized for this rule and is responsible for interpreting, implementing and enforcing the rule. With such a variance, Agmet may operate lawfully, without obtaining a permit for storage.

2. **Comment Summary:** An important principal of EPA's administration of RCRA is to ensure regulatory consistency among authorized states.

Ohio EPA Response: *Ohio EPA is an authorized state responsible for interpreting, implementing and enforcing Ohio EPA's hazardous waste rules. It is our approach to encourage the safe legitimate recycling of hazardous waste to the extent allowed under our rules and state law. Our state statute clearly supports and encourages the recycling of hazardous waste using exemption mechanisms when it is necessary or desirable to facilitate the exchange and use of hazardous waste (Ohio Revised Code § 3734.14).*

3. **Comment Summary:** RCRA provides that an approved state may enact regulations that are more stringent than the federal requirements; but a state cannot, as Ohio EPA now proposes to do once again, administer or establish RCRA regulations that are less stringent than the federal requirements.

Ohio EPA Response: *Ohio EPA is not administering or establishing regulations that are less stringent than the federal requirements. The Ohio EPA variance regulations applicable to the F006 that Agmet reclaims are consistent and equivalent to U.S. EPA's variance regulations. Agmet's variance application demonstrates attainment of the variance criteria given in the rule.*

4. **Comment Summary:** Ohio EPA incorrectly applies the variance procedure to materials accepted for recycling rather than to materials that Agmet has fully recycled and will sell to smelters for final reclamation and recovery of selected metals. At issue is whether the variance has been correctly applied and utilized. According to the Vaile Memorandum, the variance procedure found at 40 CFR 260.30(c) is designed to release from RCRA regulation those materials in which the initial reclamation step is so substantial that the resulting material is more commodity-like than waste-like even though no end-product has been recovered.

Ohio EPA errs in its proposal to grant a variance based on a minimal process step and in so doing ignores the requirement that Agmet's entire processing must be the basis for granting a variance.

Ohio EPA Response: *The variance rules are applicable to secondary materials that have been reclaimed and are destined for further reclamation to produce the final*

product. Nothing in the variance rules requires that "the initial reclamation step is so substantial that the resulting material is more commodity-like than waste-like." The adopted regulatory requirement is that the secondary material be reclaimed. The definition of reclaimed is located in OAC rule 3745-51-01 and states "A material is reclaimed if it is processed to recover a useable product, or if it is regenerated."

The F006 that Agmet accepts has been reclaimed by dewatering and contains a metal content equal to or greater than that of metal containing ore reserves that are mined. Since the reclaimed material will be further reclaimed by Agmet and then a smelter, and a final product recovered, a variance from the classification as a waste is applicable to the dewatered F006.

5. **Comment Summary:** Ohio EPA uses those characteristics of mined ore to establish acceptance criteria for material subject to the proposed variance. The correct application of the variance procedure at 40 CFR 260.30 (c) would be, instead, to compare (1) the material produced by the entire Agmet recycling activity and thereafter sold by Agmet to purchasing smelters with (2) the ore-concentrates used as the normal feedstock for smelting.

Ohio EPA Response: *Ohio EPA does not agree with the commenter. Simply put, ore reserves are a commodity. The dewatered F006 by Agmet meets set material specifications and contains copper, tin or nickel content equal to or greater than that of ore reserves that have economic value and are mined. Therefore, the reclaimed F006 is commodity-like.*

Furthermore, the metal content of the secondary material reclaimed and the processes used are equivalent to those found in the mineral processing industry, and do not resemble waste management. Agmet's receipt and processing of dewatered F006 are analogous to ore beneficiation which is not regulated under the hazardous waste regulations.

6. **Comment summary:** By granting the variance to Agmet, Ohio EPA violates the RCRA mandate for consistent regulation of F006 recycling among all authorized states.

Ohio EPA Response: *No such RCRA mandate exists for the recycling of F006. Ohio EPA hazardous waste rules are consistent with and equivalent to the federal hazardous waste rules and are no less stringent. The rules applicable to variances are part of the hazardous waste rules. We received authorization from U.S. EPA to implement and enforce these rules in lieu of the federal rules. It is Ohio EPA's responsibility to interpret the rules.*

One purpose of the variances from classification as a waste is to tailor the operating and material management requirements for recycling facilities where the recycling of the hazardous waste does not resemble waste management but yet the secondary material is still subject to regulation under the hazardous waste rules. Such a variance is applicable to dewatered F006 reclaimed by Agmet since the metal content of the secondary material reclaimed and the processes used are equivalent to those found in the mineral processing industry, and do not resemble waste management. Agmet's receipt and processing of dewatered F006 are analogous to ore beneficiation which is not regulated under the hazardous waste regulations.



WORLD RESOURCES COMPANY

1600 Anderson Road
McLean, Virginia 22102

Tel: 703.734.9800
Fax: 703.790.7245

August 16, 2005

BY CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Ohio EPA
Lazarus Government Center
Division of Hazardous Waste Management
Attn: Regulatory and Information Services
P.O. Box 1049
Columbus, Ohio 43216-1049

RECEIVED
OHIO EPA
AUG 19 2005
DIV. OF HAZARDOUS
WASTE MGT.

Subject: Comments by World Resources Company, 1600 Anderson Road, McLean, Virginia 22102-1607, Regarding the Public Notice Issued July 22, 2005, entitled "OHIO EPA ISSUES NOTICE OF TENTATIVE DECISION TO ISSUE A VARIANCE FROM CLASSIFICATION AS A WASTE"

Ladies and Gentlemen:

WORLD RESOURCES COMPAY IS AN AFFECTED PARTY

World Resources Company ("WRC"), 1600 Anderson Road, McLean, Virginia 22102-1607, hereby comments regarding the publication dated July 22, 2005, entitled "Ohio EPA Issues Notice of Tentative Decision to Issue a Variance From Classification as a Waste." These comments are provided in accordance with the instruction contained in the public notice.

WRC, as do other recyclers, competes directly with Agmet Metals, Inc., 7800 Medusa Street, Oakwood Village, Ohio 44146, and with Agmet Metals, Inc. (Agmet), 5533 Dunham Road, Maple Heights, Ohio 44138 (collectively "Agmet"), in the business of recycling metal-bearing hazardous waste and other acceptable materials to produce metal-concentrate,¹ which is sold to smelters for the final reclamation and recovery of the contained metals of interest. WRC operates domestic recycling facilities in Pottsville, Pennsylvania, and Phoenix, Arizona, both of which states have been authorized by the U.S. Environmental Protection Agency ("EPA") to administer the Resource Conservation and Recovery Act ("RCRA") hazardous waste program.

WRC's Pottsville and Phoenix facilities operate under policy established by EPA through its Office of Solid Waste and Emergency Response ("OSW"). That policy was established following extensive analysis of WRC's recycling operations at its Phoenix facility by EPA Region IX, which the Region set forth in a memorandum, dated June 21, 1995, by Rich Vaile, the Chief of its Waste Compliance Branch, and which was subsequently discussed

¹ The analysis herein of Agmet's recycling operations shows that until Agmet operates under an interim RCRA Part B permit and Ohio EPA grants a variance concluding that Agmet's recycled output is commodity-like, that output is hazardous waste, even though it is being sold to smelters for final reclamation.

among the other Regions and EPA Headquarters. A copy of this "Vaille Memorandum" including its three attachments, numbered 1 through 3, is enclosed herewith. The Vaille Memorandum was distributed to all Regions and Headquarters specifically for the purpose of establishing consistent national policy concerning F006 recycling. The memorandum reaches two principal conclusions: (1) that the blending of hazardous waste such as F006 to meet the specifications of purchasing smelters is hazardous-waste treatment that requires a RCRA Part B permit² and (2) that storage of hazardous waste occurring during such recycling requires a RCRA Part B storage permit.³ Those conclusions form the basis for, and are in accord with, current EPA policy regulating the partial reclamation of F006 to produce metal-concentrate that is sold to smelters for the final reclamation and recovery of metals.

Those two conclusions apply not just to WRC but to all F006 recyclers operating in the same or similar manner, including Agmet.

However, the proposed variance, like the current one,⁴ deviates from that national policy. Ohio EPA's decision that, upon acceptance by Agmet, F006 is not waste and consequently a Part B permit is not required ignores the factual "findings" contained in the proposed variance itself (at Section IV) that Agmet (1) blends F006 to achieve constituent characteristics of the recycled material meeting smelter specifications and (2) stores F006 at its recycling facility.⁵ Those statements demonstrate that Agmet engages in partial reclamation that is both waste treatment and storage. Thus, under established EPA policy, Agmet is required to operate under a RCRA Part B permit for both activities.

Further, Ohio EPA's proposed continued deviation from EPA's national policy will perpetuate the current variance's significant operational and cost advantages for Agmet, to the economic disadvantage of WRC and other F006 recyclers that must comply with national policy. As the Vaille Memorandum notes:⁶

² Vaille Memorandum, Attachment 1, at pp. 9-11.

³ *Id.* At pp. 11-13.

⁴ Ohio EPA issued Agmet's current variance on August 10, 2001. While the current variance generally shares the defects of the proposed one, a detailed comparison of the two is beyond the scope of these comments.

⁵ Sec. IV, Para. 17(a) (emphasis added):

The Variance Material is next unloaded in the *storage building* and may be *mixed* with nonhazardous waste metal bearing waste materials to achieve a feedstock *blend* with a desirable percent moisture and percent of organics content. The organics such as fats and oils result from nonhazardous waste materials received from the food industry. The appropriate percent moisture is necessary to control the heat balance in the calciner.

* * *

Metal Concentrate Variance Material containing higher concentrations of metals is not processed by calcining. The material is shipped to the Maple Heights Facility for *processing and blending to achieve specific smelter specifications* prior to shipment and reclamation."

See also Sec. V. (GENERAL CONDITIONS), Para. 2.k (emphasis added): "Agmet shall *store* the Variance Material only at its Oakwood Village Facility in a *bulk storage building*...."

⁶ Vaille Memorandum, Attachment 1, at p. 14.

Deviation from EPA's national policy on F006 recycling leads to uneven application of the law and puts compliant recycling facilities and permitted treatment and storage facilities at a competitive disadvantage compared to those operating under looser standards....

THE RCRA PRINCIPLE OF REGULATORY CONSISTENCY AMONG AUTHORIZED STATES

An important principle of EPA's administration of RCRA is to ensure regulatory consistency among authorized states. The principle is fundamental to the operational "health" of the entire F006-recycling industry, because *less stringent* requirements not only violate the state's authority but when allowed by any one authorized state create an *economic imbalance* between its recyclers and those operating in other states in compliance with national policy. Unfair competitive advantage in the marketplace flows to a recycler, such as Agmet, that is allowed to operate under less stringent requirements. Ohio EPA's proposed variance would perpetuate such a regulatory imbalance, in defiance of RCRA's fundamental principle of state-to-state consistency.

F006 recycling involves multi-state operations. Although a company's recycling facilities may, as is the case with Agmet, be located in single state, the generators that are the customers for the recycling services are broadly distributed, and F006 will necessarily be transported across many state borders. Further, as noted above, competitive recycling facilities are located in other authorized states that follow EPA OSW's policy.

EPA OSW seeks to promote as much recycling of F006 as is economically feasible. Because F006 recycling is conducted in multiple authorized states, it is important to the operational health of the entire industry that all recyclers operate under EPA OSW's national policy.

ESTABLISHMENT OF EPA POLICY FOR "PARTIAL RECLAMATION" OF F006 AND REGULATORY REQUIREMENTS THEREUNDER

Following intervention by EPA Region IX to change the manner in which the Arizona Department of Environmental Quality ("ADEQ") required WRC to operate its Phoenix recycling facility, a series of three-party discussions were conducted among WRC, ADEQ, and EPA Region IX. As a consequence of those discussions, EPA Region IX made a thorough analysis of the recycling operations conducted by WRC at its Phoenix facility, in light of applicable RCRA regulations and related policy documents. The analysis was detailed in a memorandum prepared by EPA Region IX, referred to earlier as the Vaille Memorandum, which was distributed to pertinent parties in all EPA Regions and at EPA Headquarters. As noted above, the Vaille Memorandum was the subject of a telephone-conference discussion and an exchange of documents among Headquarters and the Regions. EPA reached a consensus that the Vaille Memorandum correctly establishes national regulatory standards for parties engaged in partial reclamation of F006,⁷ such as WRC and Agmet.

⁷ Statement by Ms. Laura Yoshii, Deputy Director, Hazardous Waste Division, EPA Region IX, at a conference among Region IX, ADEQ, and WRC at San Francisco, California, on July 28, 1995.

Further, upon application by WRC, OSW processed and granted a variance for the metal-concentrate produced by WRC's Phoenix facility.⁸ The variance concludes that, *following recycling* by WRC's Phoenix facility under its interim Part B permit, the *finished metal-concentrate* is commodity-like and not waste. In granting the variance to WRC, OSW applied the policy established by the Vaille Memorandum and adopted by Headquarters and the Regions – a policy from which EPA has never since deviated.

In the case of WRC's Pottsville facility, in 2001 the Pennsylvania Department of Environmental Policy ("DEP") issued the facility an operating permit that required it to operate under conditions essentially defined by the RCRA Part B requirements. In addition, DEP found, in a separate determination comparable to the federal variance procedure,⁹ that the facility's metal-concentrate produced upon finalization of recycling was not waste.

It should be noted that, prior to DEP's issuance of a hazardous-waste recycling permit to WRC's Pottsville facility, Pennsylvania had enacted regulations that defined *all* hazardous-waste recycling to be hazardous-waste treatment. Pennsylvania could do that because RCRA provides that an approved state may enact regulations that are *more stringent* than the federal requirements; but a state cannot, as Ohio EPA now proposes to do once again, administer or establish RCRA regulations that are *less stringent* than the federal requirements.

Subsequently, Pennsylvania revised its regulations to be consistent with the federal model. Thereafter, DEP granted WRC's Pottsville facility a variance determining that the fully recycled metal-concentrate produced at the facility is not waste. The granting of that variance followed the prescribed federal variance procedures as incorporated by reference by DEP. However, WRC was required, as before, to operate the Pottsville facility under a RCRA Part B permit in accordance with established EPA OSW policy.

OHIO EPA INCORRECTLY APPLIES THE VARIANCE PROCEDURE TO MATERIALS ACCEPTED FOR RECYCLING RATHER THAN TO MATERIALS THAT AGMET HAS FULLY RECYCLED AND WILL SELL TO SMELTERS FOR FINAL RECLAMATION AND RECOVERY OF SELECTED METALS

Agmet is engaged in partial reclamation because, under EPA policy, the final reclamation step occurs only with smelting for metal recovery.¹⁰ However, RCRA regulations at 40 CFR § 260.30(c) provide a variance procedure that is incorporated by reference into Ohio regulations and is the basis both of Agmet's current variance and of Ohio EPA's proposal to re-issue it. At issue is whether that procedure has been correctly applied and utilized. How EPA's policy on F006 recycling, particularly as regards the variance procedure, should be applied to Agmet can be more readily seen if we substitute "Agmet" for the

⁸ 67 Fed. Reg. 52,617 (August 13, 2002) (final rule).

⁹ A "co-product determination" pursuant to 25 Pa. Code § 260.2 (1997) (definition of "co-product").

¹⁰ Vaille Memorandum, Attachment 1, at p. 7 (internal quotation markings and footnote omitted): "The line the agency has traditionally drawn between partially and fully reclaimed material when thermal metal recovery is involved is that secondary materials remain wastes until smelting is complete."

pseudonym “XYZ” in the following passage from the Vaile Memorandum (Attachment 1, at p. 8) (original footnotes omitted; emphasis and footnote added):

As further evidence that EPA did consider operations similar to Agmet in writing the definition of solid waste, note that a mechanism was included to allow a variance for partially-reclaimed materials such as Agmet’s. The variance procedure found at 40 CFR § 260.30(c) is designed to release from RCRA regulation those materials in which “*the initial reclamation step is so substantial that the resulting material is more commodity-like than waste-like even though no end-product has been recovered.*” The 1986 *Guidance Manual on the RCRA Regulation of Recycled Hazardous Waste* provides the following as an example of a process that might qualify for such a variance:

An example is *ore concentrate*¹¹ reclaimed from electroplating wastes that must be processed in a smelter before use. The *ore concentrate* is much like a raw material in this case and may be excluded from the definition of solid waste if a variance is granted. *A variance will not be granted if the initial recycling step is minimal.*

Agmet has the option of applying for a variance and attempting to demonstrate to EPA or the state that *its processing has moved the metals in the sludge significantly far down the continuum between waste and beneficial reuse* that [sic] RCRA regulation of the concentrates is unjustified.

It is clear from the last sentence quoted above that the *entire processing carried out by Agmet* should form the basis for Ohio EPA’s determination whether that processing *has moved the metals in the sludge sufficiently far down the continuum between waste and beneficial reuse* that the resulting material may be deemed to be commodity-like and not hazardous waste.

Ohio EPA’s proposed variance is based on the argument that incoming F006, when accepted by Agmet, is commodity-like and not hazardous waste. However, at that point Agmet has performed only a *minimal recycling step*. Specifically, in the language of the Vaile Memorandum, Agmet’s *processing* has not yet “moved the metals in the sludge down the continuum between waste and beneficial reuse.” Acceptance of incoming F006 is only a small part of Agmet’s treatment process. Significantly more expansive and essential are the elaborate steps of calcining, blending, and storing the F006 as detailed in the proposed variance, all of which steps are required to produce material meeting the contractual specifications of purchasing smelters. Although acceptance of the F006 is a part of the recycling process, it must be regarded as *minimal* in consideration of Agmet’s entire treatment process.

Clearly, Ohio EPA errs in its proposal to grant a variance based on a *minimal process step* and in so doing ignores the requirement *that Agmet’s entire processing* must be the basis for granting a variance.

¹¹ The term “ore concentrate” as used in the Vaile Memorandum is synonymous with WRC’s term “metal-concentrate as used in these comments. Cf. discussion of the distinct term “ore-concentrate” on page 6 herein.

Further, the proposed variance is based on comparing Agmet's incoming F006 to raw (i.e., newly mined) ores. But mining is just the first step in the chain of processing steps used to extract metal from mined ores. Smelters almost never use raw ore as feedstock. Rather, they use feedstock termed "ore-concentrate," which, as the name suggests, has been prepared from ore through several processing steps specifically designed to increase the concentration of selected metals. That Agmet prepares material to replace ore-concentrate in smelting is fully evidenced by the fact that Agmet must blend F006¹² to meet smelter specifications. Agmet must do so because the smelters' specifications require much higher metal concentrations than the concentrations for mined ore used in the proposed and current Agmet variances. Ohio EPA uses those characteristics of *mined ore* to establish *acceptance criteria* for materials subject to the proposed variance. The correct application of the variance procedure at 40 CFR § 260.30(c) would be, instead, to compare (1) the material produced by the entire Agmet recycling activity and thereafter sold by Agmet to purchasing smelters with (2) the *ore-concentrates* used as the normal feedstock for smelting.

Nor can Ohio EPA claim that generators, by dewatering their F006 sludge, carry out substantial recycling before shipping it to Agmet. The generators prepare their F006 in the same way regardless whether it will be recycled by Agmet or discarded in a landfill. Dewatering by generators, therefore, cannot be classified as significant recycling or even minimal recycling.

A final defect, both in Agmet's existing variance and in the one now being proposed, is that a variance is being considered *prematurely*. The variance procedure at 40 CFR §260.30(c) can properly be applied only to metal-concentrate that is the end product of a legitimate process of partial reclamation. Agmet, however, is currently out of compliance with EPA OSW's national policy that blending and storage, comprising partial reclamation of F006, can only be conducted pursuant to a RCRA Part B permit. Therefore, *only after* Agmet complies with the requirements for an interim RCRA Part B permit *can Ohio EPA consider granting a variance based on application of the criteria of 40 CFR § 260.30(c) to material that Agmet has fully recycled.*

THE CURRENT AND THE PROPOSED VARIANCES ARE DEFECTIVE AND PROVIDE COMPETITIVE ADVANTAGE IN CONTRAVENTION OF THE REQUIREMENT FOR CONSISTENCY AMONG AUTHORIZED STATES

Ohio is an authorized state. In summary, these comments show conclusively:

- (1) That Ohio EPA cannot regulate the recycling of F006 *less stringently* than is required under the federal regulations,

¹² Specifically, the proposed variance states that Agmet blends some newly accepted F006 with F006 that has already been calcined (Sec. IV, para. 17a):

Metal Concentrate Variance Material containing higher concentrations of metal is not processed by calcining. That material is shipped to the Maple Heights Facility for processing and blending to achieve specific smelter specifications prior to shipment and reclamation.

- (2) That the current variance granted to Agmet and the proposed variance *are defective* because Ohio EPA has incorrectly applied the federal variance procedure at 40 CFR § 260.30(c), and
- (3) That by granting the variances to Agmet, Ohio EPA *violates* the RCRA mandate for consistent regulation of F006 recycling among all authorized states.

Consequently, Ohio EPA must act promptly to correct those regulatory defects and errors and cause Agmet to operate its facilities in accordance with established EPA OSW policy governing F006 recycling activities. This means that Ohio EPA must cause Agmet to apply for and operate under the federal RCRA Part B permit provisions. Only thereafter can Agmet apply for, and can Ohio EPA consider granting, a variance to Agmet pertaining to the fully recycled hazardous waste that it sells to smelters for final reclamation.

Respectfully submitted,



William P. Gotschall, Vice President & General Counsel

Enclosure: as noted

- cc: Thomas P Dunne, Acting Assistant Administrator, Office of Solid Waste and Emergency Response, Environmental Protection Agency, Ariel Rios Building, 1200 Pennsylvania Avenue, NW, Washington, DC 20460
- cc: Thomas V. Skinner, Acting Assistant Administrator, Office of Enforcement and Compliance, Environmental Protection Agency, Ariel Rios Building, 1200 Pennsylvania Avenue, NW, Washington, DC 20460
- cc: Bharat Mathur, Acting Regional Administrator, US EPA Region V, 77 W. Jackson Blvd., Chicago, IL 60604
- cc: Margaret Guerriero, Director, Waste, Pesticides and Toxics Division, US EPA Region V, 77 W. Jackson Blvd., Chicago, IL 60604
- cc: Tinka Hyde, Director, Office of Enforcement and Compliance, US EPA Region V, 77 W. Jackson Blvd., Chicago, IL 60604
- cc: Rich Vaille, Associate Director, Waste Management Division, US EPA Region IX, 75 Hawthorne Street, San Francisco, CA 94105
- cc: Senator John Warner, United States Senate, 225 Russell Senate Office Building, Washington, DC, 20510 (Hand delivery)
- cc: Senator George Allen, United States Senate, 204 Russell Senate Office Building, Washington, DC, 20510 (Hand delivery)
- cc: Representative Tom Davis, United States House of Representatives, 2348 Raybourn House Office Building, Washington, DC, 20515-4611 (Hand delivery)
- cc: Representative Frank R. Wolf, United States House of Representatives, 241 Cannon House Office Building, Washington, DC, 20515-4610 (Hand delivery)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street
San Francisco, CA 94105-3901

JUN 21 1995

ATTORNEY-CLIENT PRIVILEGE - DO NOT RELEASE

MEMORANDUM

SUBJECT: Request for Interpretations of Regulatory Status of
F006 Recycling Claims

TO: RCRA Enforcement Branch Chiefs, Regions I-VIII, X

FROM: Rich Vailhe *Rich Vailhe for R.V.*
Chief Waste Compliance Branch, Region IX

I am writing to you to solicit your opinion on a matter of interest to our Region that we believe has national implications. Region IX has been researching the proper regulatory stance for facilities that claim to be engaged in the recycling of electroplating sludge (F006). In the course of speaking with other Regions and states, we have found that some jurisdictions either have different interpretations of the RCRA regulations that apply to these facilities and the wastes they handle or have elected to use enforcement discretion in implementing those regulations.

Because Region IX is currently attempting to decide on a fair response to facilities in our Region, we are very interested in finding out exactly how other Regions regulate similar facilities. We hope to determine if, how, and why the Regions differ in their application of the recycling regulations. After we have gathered your responses, we will share with you the results of this inquiry and our recommendations for how we should proceed to ensure consistent enforcement of recycling regulations.

Attachment 1 is information on one Region IX facility whose operations are under scrutiny, including the facility's arguments for non-regulation, as well as a potential regulatory scheme presented for discussion purposes. Please consider how your Region does regulate or would regulate such a facility. Attachment 2 is a 1989 memorandum from Sylvia Lowrance on the subject of F006 recycling. Attachment 3 is a series of questions to help guide our discussions. Even if you are not aware of similar facilities in your Region, we would like to know how you view this situation. I hope that you will share this letter with your counterpart in RCRA permitting to gain additional input. We are proposing a conference call for July 11 for all Regions to discuss these issues. More information regarding the conference

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call will be faxed to you. We would appreciate a written response if you are not able to participate in the conference call. Also, please let us know if you are interested in discussing this issue at the National RCRA Enforcement Conference in San Francisco (July 25-27, 1995).

Ron Brown of my staff at 415-744-2142 (fax 415-744-1044) will be coordinating our efforts to gather your responses. He can answer any questions regarding specific information contained in this memorandum. Please contact me at 415-744-2090 if you have any other questions or comments about this request.

Attachments

cc: Gary Jones, Chief, Waste Identification and Enforcement
Policy Branch, OECA (AR4153)
Michael Petruska, Chief, Regulatory Development Branch,
OSWER (SE242)
Steve Chang, Hawaii Department of Health
David Emme, Nevada Division of Environmental Protection
Patrick Kuefler, Arizona Department of Environmental
Quality
Larry Matz, California-EPA, Department of Toxic Substances
Control
Norman Riley, California-EPA, Department of Toxic Substances
Control

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Attachment 1

A. OVERVIEW OF FACILITY OPERATIONS

The XYZ company (XYZ) operates a facility in Region IX that processes metal-bearing hazardous wastes for further metals recovery. XYZ has long argued that its operations are exempt from RCRA regulation, including the need to use hazardous waste manifests for off-site shipments, obtain an Acknowledgement of Consent from foreign countries before exporting, and obtain a RCRA permit for treating and/or storing hazardous waste.

XYZ receives wastewater treatment sludges from electroplating operations throughout the western U.S. and from foreign countries, including Mexico, Japan, Germany, Malaysia, and Taiwan. These sludges are classified as a listed RCRA hazardous waste with Hazardous Waste Number F006. They typically contain chromium, cadmium, lead, nickel, copper, zinc, tin, and, occasionally, precious metals. XYZ claims that it does not accept sludges that have high levels of cyanide, halogens, or undesirable metals such as lead. The sludges from generators arrive at XYZ by truck or rail car, accompanied by hazardous waste manifests listing XYZ as the designated facility.

XYZ's processes are designed to produce a material it calls "concentrates" that are acceptable to smelters for metals recovery. Sludge received from a generator is accepted at XYZ's facility if it matches that generator's pre-approved profile. Accepted sludges are then placed onto an uncovered concrete surface and spread out to dry in the sun. There is a plastic liner beneath the concrete. The drying takes approximately four days in good weather and 40 days in bad. During this time the moisture content is reduced from 75% to 35%. Occasionally gas-powered dryers are used when solar evaporation is too slow to meet processing needs. Once the sludges are sufficiently dry, XYZ claims that it analyzes each generator's sludge and then blends selected sludges together to create a conglomeration that matches the metals specifications contained in contracts with each smelter. If a particular blend of sludges is found to not have a sufficient concentration of some metal specified in a smelter's contract, XYZ will add sludge from a generator that has a higher concentration of that metal until the specification is met. XYZ claims it never removes anything from the sludges except water.

A smelter may recover copper, nickel, tin, or precious metals for further use. XYZ claims that smelters also value XYZ's concentrates because they contain fluxing agents necessary for proper smelter operation. Smelters that have received XYZ's concentrates are located in Arizona, New Mexico, Canada, and Finland, as well as a foreign country that is under treaty obligation not to accept hazardous waste from the United States and a foreign country from which the United States is required by

treaty to obtain consent prior to hazardous waste shipments.¹

XYZ usually charges generators to accept their sludge, except for a small number of generators whose sludge contains more valuable metals, who are paid by XYZ. In approximately 95% of shipments, XYZ receives payment from the smelters for the recovered metals. However, the payment received from the smelters is usually less than what XYZ pays to ship the concentrates to the smelters. XYZ must pay the smelters to accept approximately 5% of shipments.

XYZ does not have a RCRA permit or interim status, nor has it ever submitted a Part A or Part B application. XYZ follows some operating standards mandated for TSDFs, such as contingency planning, worker training, and waste analysis. We do not believe that the facility has a closure plan or financial assurance. XYZ has installed groundwater monitoring wells but indicated that they were improperly installed due to a mischaracterization of local groundwater flows.

¹ XYZ claims that some information on its shipments to foreign countries is confidential.

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B. XYZ'S RATIONALE FOR WHY THE FACILITY AND ITS CONCENTRATES ARE NOT SUBJECT TO RCRA REGULATION:

SUMMARY

XYZ's argument as to why it should not be regulated under RCRA begins by stating that one of the original purposes of RCRA was to promote recycling of hazardous wastes as an alternative to disposal. To meet this objective, EPA chose to place a lesser regulatory burden on hazardous wastes that could be recycled and on the facilities that do the recycling. The F006 sludge that XYZ receives from generators serves as an ingredient in the production process to make the concentrates. As an ingredient, the sludge is not a solid waste pursuant to 40 CFR 261.2(e)(i) and is out of RCRA regulation as soon as XYZ accepts it on site with the intention of processing it. Because accepted sludges are not a solid waste, they do not need to be handled differently from any other commodity, i.e., no manifests need be used for shipments of concentrates, and no permits are needed for any of XYZ's processes or for any storage of the sludges or concentrates. In addition, since the concentrates serve as substitutes for fluxing agents the smelters normally purchase, the concentrates are not solid waste according to 40 CFR 261.2(e)(ii). Regulating the concentrates as hazardous waste raises XYZ's operating costs and limits the number of foreign and domestic smelters which can accept the concentrates and therefore increases the amount of sludge that will have to be landfilled instead of recycled.

XYZ'S REGULATORY ANALYSIS

XYZ uses F006 sludge from hazardous waste generators to make its product, called concentrate. The concentrate is rich in metals and fluxing agents. Because of this, smelters will buy the concentrates from XYZ to use in addition to concentrates made from mined ores. According to 40 CFR 261.2(e)(1)(i), a material is not a solid waste (and therefore not a hazardous waste) when it is recycled by being "used or reused as ingredients in an industrial process to make a product, provided the materials are not being reclaimed." The concentrates are formed solely from the constituents of the sludge; therefore, the sludges are an ingredient of the concentrates.

XYZ's operations are an industrial process in that they involve selection of inputs, creation of a product, and sale of a commodity. The concentrates are a product, as evidenced by the fact that they are sold under contract to smelters. XYZ's drying and blending operations are a production process, not a reclamation process. Reclamation involves separating out something usable from something unusable. XYZ uses all of the sludge constituents (except for some of the water) to create the concentrates. The removal of water increases the value of the inputs by meeting smelter specifications and reducing

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transportation costs. Since nothing other than water is removed, XYZ's operations do not constitute reclamation. In summary, XYZ operations use sludge in an industrial process to make a product without reclamation. Therefore, the inputs to this process are not classified as a solid waste.

In addition, smelters use XYZ's concentrates as a substitute for other fluxing agents, such as sand, which they would otherwise have to purchase to add to natural ore feedstocks. The flux portion of the concentrates is therefore not a solid waste according to 40 CFR 261.2(e)(1)(ii), which exempts materials used as effective substitutes for commercial products. More than half of the weight of a concentrate batch is made up of fluxing agents.

The sludges shipped from generators to XYZ are properly classified as F006 hazardous waste and should be shipped on a hazardous waste manifest. However, at the moment the sludges are accepted by XYZ, they no longer meet the definition of a solid waste because they are an ingredient. Before that time, it is uncertain whether they can be accepted and therefore they are not yet an ingredient.

Past EPA policy statements, such as the Preambles to 1983 Proposed and 1985 Final Definition of Solid Waste and the 1989 Sylvia Lowrance memorandum on recycling of F006 do not deal, even obliquely, with the recycling process carried out by XYZ. Those documents describe waste used for metals recovery that has not gone through an industrial process (like XYZ's), whereas XYZ's concentrates are a manufactured product.

XYZ'S POLICY ANALYSIS

There are no environmental gains from regulating the concentrates as a hazardous waste. The concentrates are already regulated as a DOT hazardous material. Regulating them under RCRA would not impose any additional requirements for handling during transportation, only additional shipping costs and administrative burdens. XYZ already tracks its shipments and maintains records on them.

If the concentrates are regulated by RCRA, XYZ would have to obtain consent from foreign governments before shipping to overseas smelters. Since some of these governments are obligated by treaty not to accept hazardous waste from the United States, the number of potential customers for XYZ's concentrates would be reduced. Even shipments to countries that are willing to accept hazardous waste from the U.S. will be delayed and be more costly due to the RCRA notification and consent procedures.

In fact, the added costs involved in transporting a RCRA-regulated substance would have negative environmental consequences. Due to higher operating costs, XYZ would have to

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charge generators more to accept their sludge or not accept some of the lower-value sludges. This means that more generators will send sludge to landfills. And, instead of recovering metals from XYZ's concentrates, smelters will purchase more natural ore concentrates that have to be mined.

EPA has no regulatory basis for considering the value of incoming sludges or the costs of processing and transporting concentrates in its evaluation of the regulatory status of the concentrates. Whether fees from generators or concentrate sales generate more revenue for XYZ is irrelevant. The fees charged to generators do help supplement the income generated from sale of concentrates. However, XYZ would not even be able to charge these generator fees if it were not for the existence of the contracts to sell the concentrate. Since XYZ relies on both "front-end" and "back-end" fees for its profitability, the legitimacy of XYZ's business should only be evaluated in light of the entire process, from finding and receiving sludges to selling concentrate.

C. POTENTIAL REGULATORY SCHEME

SUMMARY

This section presents a potential alternative analysis (for purposes of discussion) for how and why XYZ's operations should be regulated. Under RCRA regulations, a listed hazardous waste (such as F006) always remains a hazardous waste unless (1) it is recycled by being used directly in a production process (as long as no material is first reclaimed from the waste), (2) it is recycled by being used as an effective substitute for a commercial product, (3) it is returned to the process which generated it for reuse, or (4) it is delisted. XYZ partially reclaims sludges when it dries them. The sludges are not completely reclaimed, however, until they are smelted. Therefore, the sludges are regulated as hazardous waste from the point of generation until the smelting process is completed. XYZ must transport the concentrates on a hazardous waste manifest. Any storage of the sludges or concentrates requires a RCRA permit, as does any treatment of them that is not also a type of recycling. This interpretation of the regulations not only makes legal sense but also fulfills a number of important policy objectives.

REGULATORY ANALYSIS

Definition of Solid Waste:

U.S. EPA lists sludges generated through wastewater treatment of electroplating wastes as a hazardous waste with EPA Hazardous Waste Number F006.² A sludge that is so listed remains a hazardous waste unless it is delisted, or unless it is recycled in one of three ways.³ XYZ claims that its concentrates are not subject to RCRA based on two of these three recycling methods. XYZ argues that (1) it uses incoming sludges as ingredients to make a product,⁴ i.e., its concentrates, and (2) its concentrates are used as effective substitutes for commercial products,⁵ i.e., natural fluxing agents.

To accept the first claim we would have to agree that the concentrates are a product and that reclamation is not involved in their production. A listed sludge such as F006 is regulated as a solid and hazardous waste by RCRA when it is to be recycled by being reclaimed.⁶ When the reclamation is complete, the recovered usable material is no longer a solid or hazardous

² 40 CFR 261.31(a).

³ 40 CFR 261.2(e)(i)-(iii).

⁴ 40 CFR 261.2(e)(i).

⁵ 40 CFR 261.2(e)(ii).

⁶ 40 CFR 261.2(c) Table 1 and 40 CFR 261.3(a)(2)(ii).

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waste.⁷ EPA has categorically stated that recovering metals from F006 sludge in a smelter is an example of reclamation of a hazardous waste and that a smelter is inherently a reclamation operation and not a production process when hazardous waste is involved.⁸ Since smelting of secondary materials is not a production process, the concentrates XYZ sends to the smelters cannot be considered a product. Since XYZ's processing of the sludge is followed by reclamation in the smelter, the sludges received by XYZ and XYZ's concentrates do not meet the conditions for the exit from RCRA regulation found at 40 CFR 261.2(e)(1)(i), which requires that reclamation not be involved in the final recycling step.⁹ Furthermore, as explained below, XYZ's operation itself utilizes partial reclamation.

XYZ has suggested that the operations of the smelter have no bearing on the status of the concentrates. Even if this argument were accepted, the concentrates are still hazardous waste because, like the smelter, XYZ engages in a form of reclamation. The January 4, 1985 Definition of Solid Waste Final Rule states that:

. . . processing operations that do recover or regenerate materials so as to make them available for further use are considered to involve reclamation. Examples are dewatering of wastewater treatment sludges before the dewatered sludges are recycled. . . .¹⁰

XYZ's drying of the sludge by solar heat or gas-powered dryer is, therefore, a type of reclamation, because the unneeded water is removed to allow the sludge to be further recycled. However, it is only partial reclamation, because, in the case of metal-bearing sludges:

The line the agency has traditionally drawn between partially and fully reclaimed material when thermal metal recovery is involved is that secondary materials remain wastes until smelting is completed.¹¹

Since XYZ's concentrates are only a partially reclaimed material, they are still regulated as a solid and hazardous waste until they are finally reclaimed by the smelter through the extraction of metal that is directly usable.

⁷ 40 CFR 261.3(c)(2)(i).

⁸ April 26, 1989 memorandum from Sylvia Lowrance (Attachment 2).

⁹ Regarding the exception for ingredients, the Definition of Solid Waste Proposed Rule states that "This exception does not apply when the . . . sludge . . . is itself recovered or when its contained material values are recovered as an end-product. For example, if a metal-containing sludge is processed to recover its contained metal values, the process constitutes reclamation, and the sludge, if it is listed, is a hazardous waste." 48 FR 14487-8 (April 4, 1983).

¹⁰ 50 FR 639 (January 4, 1985).

¹¹ 55 FR 41173 (August 19, 1991).

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In summary, because incoming sludges are reclaimed and the resulting concentrates are not a product, XYZ does meet either condition for considering incoming sludges to be an ingredient used to make a product without prior reclamation.

As further evidence that EPA did consider operations similar to XYZ's in writing the definition of solid waste, note that a mechanism was included to allow a variance for partially-reclaimed materials such as XYZ's. The variance procedure found at 40 CFR 260.30(c) is designed to release from RCRA regulation those materials in which "the initial reclamation step is so substantial that the resulting material is more commodity-like than waste-like even though no end-product has been recovered."¹² The 1986 Guidance Manual on the RCRA Regulation of Recycled Hazardous Waste provides the following as an example of a process that might qualify for such a variance:

An example is ore concentrate reclaimed from electroplating wastes that must be processed in a smelter before use. The ore concentrate is much like a raw material in this case and may be excluded from the definition of solid waste if a variance is granted. A variance will not be granted if the initial recycling step is minimal.¹³

XYZ has the option of applying for a variance and attempting to demonstrate to EPA or the state that its processing has moved the metals in the sludge significantly far down the continuum between waste and beneficial reuse that RCRA regulation of the concentrates is unjustified.

Secondly, very recently XYZ has argued that the concentrates substitute for fluxing agents that the smelters normally purchase and are therefore exempt from regulation according to 40 CFR 261.2(e)(1)(ii).^{14, 15} While the smelters may value the fluxing properties of the concentrates,¹⁶ they do not treat the concentrates as if they are consciously making a substitution. The smelters have standards for the concentrates based on minimum levels of valuable metals and maximum levels of undesirable substances. The payment given to or fee paid by XYZ is based on the extent to which these levels are met. Unlike these other

¹² 50 FR 655 (January 4, 1985).

¹³ March 1986, pages 1-10 and 1-11.

¹⁴ Prior to 1995, XYZ always argued that 40 CFR 261.2(e)(1)(ii) did not apply to the concentrates.

¹⁵ Note that the exemption in 40 CFR 261.2(e)(ii) applies to the substitute itself. In XYZ's argument, it is not the incoming sludges that are a substitute, but the finished concentrates. Therefore, if this exclusion applied, the material XYZ handles would still be regulated up to the point at which processing of the concentrates was completed.

¹⁶ It is not yet known to what extent smelters do in fact view the fluxes in the concentrates as substitutes for their normal fluxes.

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parameters, smelters do not specify minimum levels of flux materials, nor do payments or fees depend on these levels. XYZ does not measure this parameter or select for it during blending.

Incidental substitution probably does take place, but quite clearly it is not the major reason that smelters accept XYZ's sludges. The purpose for any relationship between the smelter and XYZ is reclamation of metals. EPA chose not to regulate secondary materials that are to be used as direct substitutes for commercial products because if a material could be used without any further processing it would be assumed to have value similar to a raw material, which would ensure its safe handling. Likewise, EPA does regulate materials that must be reclaimed before being used as ingredients because the necessary step of reclamation indicates that more value must be added to the material through processing before it carries the same value as a raw material. The reason a business relationship exists between XYZ and a smelter is that the concentrates have some metal values which can be recovered. Since the metals must first be reclaimed by the smelter before they are commodity-like, the concentrates fall under the regulatory structure EPA developed for materials that still need to have some value added before safe handling is assumed.

The conclusion of the above analyses is that the F006 sludge shipped from the generator to XYZ remains regulated until smelting is completed and the sludges are RCRA-regulated during the entirety of XYZ's handling of them. This means that, absent a variance under 40 CFR 260.31(c), XYZ must transport the concentrates under a hazardous waste manifest and obtain a permit for storage or treatment activities that are unrelated to the recycling process.

Treatment Requirements:

The above analysis demonstrates that the materials, incoming sludges and outgoing concentrates, are hazardous wastes. The next question is whether XYZ engages in activities with that waste that would cause the facility itself to be regulated. A facility that treats or stores hazardous waste is required to obtain a RCRA permit for that activity.¹⁷ Recycling is a form of treatment, but it is a type of treatment for which EPA generally does not require a permit.¹⁸ Therefore, if a facility is engaged only in recycling, it does not need a permit. However, a facility that recycles hazardous waste and also stores the waste before or during recycling does need a permit for the storage.¹⁹

¹⁷ 40 CFR 270.1(c).

¹⁸ 40 CFR 261.6(c)(1). The major exception to this principle is that boilers and industrial furnaces burning hazardous waste for energy recovery do require a permit.

¹⁹ 40 CFR 261.6(c)(1).

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To be considered "treatment" an activity must change a waste's "physical, chemical, or biological character or composition" for one of the purposes listed in 40 CFR 260.10 and 40 CFR 270.2, such as to make it "amenable for recovery." Some types of recycling would be covered under this definition, since some recycling processes are designed to change the character of wastes to recover resources. Therefore, in order to evaluate whether XYZ's processes are treatment that is exempt because it is recycling or, on the other hand, treatment that requires a permit because it does not involve recycling, we must evaluate whether XYZ is engaged in use, reuse, or reclamation, i.e., recycling.²⁰ The above analysis found that use or reuse do not occur²¹ and that the evaporation of water from the sludge is reclamation; reclamation is a form of recycling, which is a type of treatment that does not require a permit.

However, XYZ does more than merely evaporate water. It blends together sludges from various generators to meet its contractual obligations to smelters. This blending is designed to change the composition of the waste with respect to certain elements such as non-ferrous metals, precious metals, and undesirable constituents. The blending meets the first part of the definition of treatment because it is a process designed to change the physical or chemical composition of the waste.

The second part of the definition of treatment involves evaluating the purpose of the process in question. XYZ states that the purpose of blending is to combine sludges of different metals values in order to meet smelter specifications. Some sludges contain levels of undesirable constituents that exceed a particular smelter's specifications; some sludges contain levels of valuable elements that fall below specifications set by a particular smelter. XYZ mixes these sludges with those with more desirable qualities. If, after blending, a concentrate shipment does not meet specifications, XYZ will add sludges with higher concentrations of whatever constituents the original blend was lacking.

If a generator's sludge would not normally be accepted for recovery by the smelter for which it is destined, then that sludge would not be considered "amenable for recovery" in the absence of some sort of processing. If XYZ accepts such a sludge and then mixes that sludge with others so that its metals were later recovered by that smelter, then XYZ made that sludge amenable for recovery. For example, XYZ may receive a sludge with 1% copper from a generator. This sludge could be blended

²⁰ A material is considered "recycled" if it is "used, reused, or reclaimed," according to 40 CFR 261.1(c)(7).

²¹ "Use" and "reuse" were already ruled out since the sludges do not qualify as ingredients in a production process or substitutes for commercial products.

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with other generators' sludges, all of which have higher copper concentrations. The resulting mixture could be sent to a smelter whose minimum acceptable copper concentration is 3%. Without XYZ's processing, the sludge containing 1% copper could not be recovered in that smelter. XYZ would then be engaging in treatment by changing the composition of a waste in order to make it amenable for recovery.

Changing the composition of a waste to make it amenable for recovery is treatment. However, that activity does not require a permit if it is also recycling;²² in this case, the relevant type of recycling to consider is reclamation. The blending of sludges does not meet the definition of reclamation because no components of the original sludges are separated by this activity.²³ The January 4, 1985 Federal Register final rule explains that "processing steps that do not themselves regenerate or recover material values and are not necessary to material recovery are not reclamation."²⁴ Because blending does not recover any material from the sludges, it is not reclamation and therefore not recycling. Since XYZ's blending process sometimes constitutes treatment (whenever unacceptable sludges are mixed with acceptable sludges), but is not recycling, XYZ is required to obtain a treatment permit for the blending operation if it accepts a sludge that is not acceptable to a smelter based on its own constituents.

Storage Requirements:

A facility that stores hazardous waste is required to obtain a permit for that storage. "Storage" is defined as the "holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere."²⁵ As demonstrated earlier, the sludges handled by XYZ are a hazardous waste from the time of their generation until they are completely reclaimed, and they remain a hazardous waste throughout XYZ's handling of them. At the conclusion of XYZ's handling of the sludges, they are treated elsewhere (by being smelted to reclaim metals). Therefore, if XYZ holds these sludges for any length of time it could need a permit to store.

However, XYZ is a facility that partially reclaims, and therefore recycles, hazardous waste. Such facilities do not need to obtain a storage permit as long as they do not "store recyclable materials before they are recycled."²⁶ Facilities that store after recycling is completed do not need permits because after the recycling is completed the materials that were

²² 40 CFR 261.6(c).

²³ 40 CFR 261.1(c)(4).

²⁴ 50 FR 639 (January 4, 1985).

²⁵ 40 CFR 260.10 and 40 CFR 270.2.

²⁶ 40 CFR 261.6(c)(1).

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originally hazardous waste have been either used, reused, or reclaimed and are no longer solid nor hazardous wastes and are therefore outside of RCRA regulation.²⁷ But XYZ does not complete the recycling process. Rather, recycling of these sludges is completed by the smelter. Therefore, any storage by any party that occurs prior to the end of smelting requires a permit.

While it is true that "the recycling process itself is exempt from regulation,"²⁸ the January 4, 1985 Federal Register expands on EPA's intent in granting the storage permit exemption for the recycling process:

We also stress that very few facilities recycle wastes without first storing them. In this regard we note that tanks or containers in which some incidental settling occurs but which are used primarily for storage are subject to regulation under the storage facility permit standards. This is in keeping with the policy of the current regulation that only the actual process of recycling is to be left unregulated.²⁹

This indicates that only the act of recycling, and not storage incidental to recycling, is unregulated. Therefore, if XYZ is storing sludge while recycling is not taking place, they must obtain a storage permit.

XYZ intermittently stores hazardous waste without recycling as a normal part of its operations. The section entitled "Treatment Requirements" above concludes that recycling only takes place during the evaporation of water from the sludge, not during blending operations. Since recycling (evaporation) at XYZ is mostly dependent upon heat from the sun and low humidity, these elements must be present for recycling to continue.³⁰ In short, if the sludge is not losing moisture, XYZ is not recycling. If XYZ is not recycling, it needs a permit for storage during the non-recycling time.

XYZ claims that sludges received are immediately placed onto its "solar process receptacles" where they are spread out to maximize the surface area of sludge brought into contact with the air. During rain, XYZ claims that it pushes the sludge into piles to minimize the amount of sludge that can come in contact with moisture and covers the piles with a tarpaulin. This has the effect of reducing the area of the sludge available for

²⁷ 40 CFR 261.3(c)(2)(i) states that materials reclaimed from hazardous waste and used beneficially are not solid nor hazardous wastes.

²⁸ 40 CFR 261.6(c)(1).

²⁹ 50 FR 652 (January 4, 1985).

³⁰ XYZ claims to use a gas-powered dryer to dry the sludge when natural evaporation is not fast enough. However, the capacity of the dryers is not sufficient to process all of the sludge on site at once.

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evaporation and minimizing contact between the air and sludge. Since the receptacles are not under a roof, rain water will land on the receptacles and come into contact with the sludge. During rain storms or high humidity the recycling process stops since the sludge stops losing water and starts gaining water. During these periods recycling is not occurring. Since XYZ is holding the sludges without recycling them, a storage permit is required.

XYZ also stores waste without a permit before concentrated and blended sludges are shipped off site. XYZ states that concentrates are shipped when sampled and packaged, a process that XYZ says takes between two and five days. This step occurs after the concentrates have been deemed sufficiently dry and ready for shipment. In other words, recycling is completed when the sampling and packaging begins. Therefore, XYZ needs a permit for storage of hazardous waste after its processing is completed.

It is possible that a permit could not be granted for XYZ's current operation. F006 non-wastewaters are prohibited from land disposal unless specified treatment standards are met.³¹ "Land disposal" is defined in 40 CFR 268.2(c) as "placement in or on the land, . . . and includes, but is not limited to, placement in a . . . waste pile. . . ." A "pile" is defined by 40 CFR 260.10 as "any non-containerized accumulation of solid, nonflowing hazardous waste that is used for treatment or storage and that is not a containment building." Sludges in XYZ's drying pads meet the definition of a waste pile because the pads do not contain the waste; that is, the pads do not shape the waste but rather the waste's shape is a result of its own physical properties.³² Section 3004(j) of the Solid Waste Disposal Act defines land disposal as "any placement of such hazardous waste in a . . . waste pile. . . ." Merely placing waste in a pile seems to be sufficient to meet the statutory definition of land disposal, regardless of whether a structure is in place to form a barrier between the waste and the soil.

POLICY ANALYSIS

In addition to EPA's long-held legal interpretation that partially reclaimed materials, such as XYZ's concentrates, are RCRA-regulated, a number of policy considerations also support regulation as a hazardous waste. The first such consideration is that XYZ's concentrates are very similar in form and composition to the originally generated sludges, which were listed by EPA because of their toxic constituents and potential for mishandling. Only water is removed by XYZ during processing; all hazardous constituents of the original F006 remain.

³¹ 40 CFR 268.34(c).

³² April 2, 1987 memorandum from Marcia Williams entitled "Regulatory Classification of Three and Four-Sided, Floored Structures."

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Second, the incentive for mishandling sludge still exists for the concentrates. XYZ claims that its concentrates are always "sold" as a product and therefore should not be subject to RCRA's shipping protocols. However, it appears as though for approximately 5% of their shipments XYZ actually has to pay the smelters to accept the concentrates. Even in the case of shipments for which XYZ does receive payment from the smelter, XYZ usually pays more to transport the concentrates to the smelter than it receives in payment. XYZ has little economic incentive to assure proper handling since sometimes it actually loses money if its shipment are transported all the way to the smelter. Also, the possibility for transportation mishaps is exacerbated by the unusually long transit times of some of XYZ's outgoing shipments. Some shipments have involved prolonged storage in foreign countries before smelting. If the shipments are handled as hazardous waste, XYZ would have to ensure delivery within specific timeframes.

Furthermore, deviation from EPA's national policy on F006 recycling leads to uneven application of the law and puts compliant recycling facilities and permitted treatment and storage facilities at a competitive disadvantage compared to those operating under looser standards. Without a permit, XYZ is not required to maintain funds for closure, prepare a closure plan, or carry an insurance policy. And, while XYZ may be following some operational standards for permitted facilities, EPA or the state would have no authority to ensure that these practices continue if the facility is declared to be exempt from RCRA.

Not regulating this material as a hazardous waste also affects the implementation of other parts of RCRA that may at first not appear to be related to XYZ's operations. Smelters receiving hazardous waste for recycling must obtain a storage permit unless they process the waste immediately,³³ and those smelting hazardous waste for metals recovery are subject to certain boiler and industrial furnace (BIF) requirements.³⁴ Other states and Regions will be unable to properly regulate smelters receiving XYZ's concentrates if they are unaware that the smelter is handling hazardous waste.

XYZ argues that more F006 will be landfilled if it is not allowed to operate free of RCRA regulation.³⁵ However, slag from copper smelting operations that do not use RCRA-listed waste is specifically excluded from regulation, regardless of its

³³ 40 CFR 261.6(c).

³⁴ 40 CFR 266.100(c).

³⁵ XYZ has not provided information as to what quantity of sludges currently accepted by XYZ would instead be landfilled if XYZ were subject to RCRA regulation.

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constituents.³⁶ Since most of the contents of XYZ's concentrates winds up as smelter slag, the majority of the original F006 would be disposed of on the land anyway in uncontrolled piles or impoundments. (According to XYZ, over half of the weight of the concentrate is fluxing agents which will end up in the slag, and 99% of the chromium contained in the concentrate will wind up in the slag.) In contrast, if the concentrates are regulated as F006, then the slags only escape regulation if they are below certain levels for F006 constituents and are disposed of in a Subtitle D landfill. Also, the smelter would be required to submit a notification and certification regarding those levels and the destination landfill to EPA or the state.³⁷ Keep in mind though that even in this more conservative handling of the slags, they will ultimately be placed on the land.

Finally, the regulation of this material has implications for international relations because most of XYZ's off-site shipments go to foreign countries. If this material is not regulated as a hazardous waste it is not required to go through RCRA's international notification and consent procedure, and foreign governments would then not have the opportunity to deny receipt of these loads.³⁸ Further, the U.S. has entered into treaties with various foreign countries that require the U.S. to notify them of exports of hazardous waste and obtain their consent. Failure to regulate XYZ's concentrates under RCRA could lead to the U.S. being in violation of these treaties. Because of the sensitivity of international issues, RCRA export procedures are one of the few areas that are not delegated to authorized states.

³⁶ 40 CFR 261.4(b)(7)(i).

³⁷ 40 CFR 261.3(c)(2)(ii)(C).

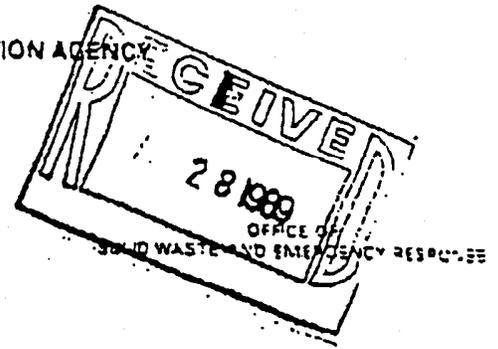
³⁸ Another Region IX facility did ship minimally-processed F006 to Asia without the consent of the foreign government after it was able to convince the state in which it operated that the F006 was a product. It is unclear whether that waste was ever recycled.

Attachment 2



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

APR 26 1989



MEMORANDUM

SUBJECT: F006 Recycling

FROM: Sylvia K. Lowrance, Director
Office of Solid Waste (OS-300)

TO: Hazardous Waste Management Division Directors
Regions I-X

It has come to the attention of EPA Headquarters that many of the Regions and authorized States are being requested to make determinations on the regulatory status of various recycling schemes for F006 electroplating sludges. In particular, companies have claimed that F006 waste is being recycled by being used as: (1) an ingredient in the manufacture of aggregate, (2) an ingredient in the manufacture of cement, and (3) feedstock for a metals recovery smelter. The same company may make such requests of more than one Region and/or State. Given the complexities of the regulations governing recycling vs. treatment and the definition of solid waste, and the possible ramifications of determinations made in one Region affecting another Region's determination, it is extremely important that such determinations are consistent and, where possible, coordinated.

Two issues are presented. The first issue is whether these activities are legitimate recycling, or rather just some form of treatment called "recycling" in an attempt to evade regulation. Second, assuming the activity is not sham recycling, the issue is whether the activity is a type of recycling that is subject to regulation under sections 261.2 and 261.6 or is it excluded from our authority.

With respect to the issue of whether the activity is sham recycling, this question involves assessing the intent of the owner or operator by evaluating circumstantial evidence, always

a difficult task. Basically, the determination rests on whether the secondary material is "commodity-like." The main environmental considerations are (1) whether the secondary material truly has value as a raw material/product (i.e., is it likely to be abandoned or mismanaged prior to reclamation rather than being reclaimed?) and (2) whether the recycling process (including ancillary storage) is likely to release hazardous constituents (or otherwise pose risks to human health and the environment) that are different from or greater than the processing of an analogous raw material/product. The attachment to this memorandum sets out relevant factors in more detail.

If the activity is not a sham, then the question is whether it is regulated. If F006 waste is used as an ingredient to produce aggregate, then such aggregate would remain a solid waste if used in a manner constituting disposal (e.g., road-base material) under sections 261.2(c)(1) and 261.2(e)(2)(i) or if it is accumulated speculatively under section 261.2(e)(2)(iii). Likewise, the F006 "ingredient" is subject to regulation from the point of generation to the point of recycling. The aggregate product is, however, entitled to the exemption under 40 CFR 265.20(b), as amended by the August 17, 1988, Land Disposal Restrictions for First Third Scheduled Wastes final rule (see 53 FR 31197 for further discussion). However, if the aggregate is not used on the land, then the materials used to produce it would not be solid wastes at all, and therefore neither those materials nor the aggregate would be regulated (see section 261.2(e)(1)(i)).

Likewise, cement manufacturing using F006 waste as an ingredient would yield a product that remains a solid waste if it is used in a manner constituting disposal, also subject to section 265.20(b). There is an additional question of whether the cement kiln dust remains subject to the Bevill exclusion. In order for the cement kiln dust to remain excluded from regulation, the owner or operator must demonstrate that the use of F006 waste has not significantly affected the character of the cement kiln dust (e.g., demonstrate that the use of F006 waste has not significantly increased the levels of Appendix VIII constituents in the cement kiln dust leachate). [NOTE: This issue will be addressed more fully in the upcoming supplemental proposal of the Boiler and Industrial Furnace rule, which is pending Federal Register publication.]

For F006 waste used as a feedstock in a metals recovery smelter, the Agency views this as a recovery process rather than use as an ingredient in an industrial process and, therefore, considers this to be a form of treatment that is not currently regulated (see sections 261.2(c) and 261.6(c)(1)). Furthermore, because this is a recovery process rather than a production process, the F006 waste remains a hazardous waste (and must be

managed as such prior to introduction to the process), and the slag from this process would normally be considered a "derived from" F006 waste. However, for primary smelters, the slag may be considered subject to the Bevill exclusion provided that the owner or operator can demonstrate that the use of F006 waste has not significantly affected the hazardous constituent content of the slag (i.e., make a demonstration similar to the one discussed above for the cement kiln dust). [NOTE: In the supplemental proposal of the Boiler and Industrial Furnace rule noted above, the Agency will be proposing a definition of "indigenous waste" based on a comparison of the constituents found in the waste to the constituents found in an analogous raw material. Should the F006 waste meet the definition of an "indigenous waste," the waste would cease to be a waste when introduced to the process and the slag would not be derived from a hazardous waste.]

Also, you should be aware that OSW is currently reevaluating the regulations concerning recycling activities, in conjunction with finalizing the January 8, 1988 proposal to amend the Definition of Solid Waste. While any major changes may depend on RCRA reauthorization, we are considering regulatory amendments or changes in regulatory interpretations that will encourage on-site recycling, while ensuring the protection of human health and the environment.

Headquarters is able to serve as a clearinghouse to help coordinate determinations on whether a specific case is "recycling" or "treatment" and will provide additional guidance and information, as requested. Ultimately, however, these determinations are made by the Regions and authorized States. Attached to this memorandum is a list of criteria that should be considered in evaluating the recycling scheme. Should you receive a request for such a determination, or should you have questions regarding the criteria used to evaluate a specific case, please contact Mitch Kidwell, of my staff, at ~~202~~ ~~455-0551~~ (202) 260-4805

Attachment

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Attachment 3

QUESTIONS FOR DISCUSSION

1. Which of the following is closest to your Region's position on this type of operation:

A. Less regulatory than XYZ's view.

Sludge from the generators is used as an ingredient to make a product, i.e., XYZ's concentrates. Therefore, sludge is unregulated from the point of initial generation and need not be manifested to XYZ. The processing of sludges and the concentrates themselves are therefore also unregulated.

B. Agree with XYZ's position entirely.

Sludge ceases to be regulated once received on-site. As such, subsequent handling or shipping of the sludge is not subject to any RCRA regulation.

C. Agree partially with XYZ.

Sludge is unregulated after concentrates are made because they serve as substitutes. Manifests for off-site shipments and permits are not required.

D. Agree partially with potential regulatory scheme.

Sludge is regulated until it is reclaimed by the smelter. XYZ must use manifests, but does not need a RCRA permit for treatment and/or storage.

E. Agree entirely with potential regulatory scheme.

XYZ must use manifests for off-site shipments and obtain a permit for treatment and/or storage.

F. More stringent than potential regulatory scheme.

Would not allow such a facility to operate, even with a permit. (For example, because placement of restricted waste in waste piles is prohibited.)

2. Please explain why your Region has this view.

3. Do you have any facilities in your Region that claim to recycle F006? (Please indicate names and locations.)

4. What are the differences between the facility in your Region and XYZ?

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5. What requirements do you or the states impose on this facility regarding:

Manifesting incoming material?
Manifesting outgoing shipments?
Exports of F006-derived material to foreign countries?
Permits for storage or treatment?
Specifications on incoming materials?
Specifications on outgoing shipments?
Special operating conditions?

6. Have regulatory interpretations different from your own that were made by other Regions or states regarding F006 recycling hampered your enforcement or permitting efforts?

7. Have you been approached by persons wishing to start an operation similar to XYZ's in your Region?

8. What regulatory requirements did you tell this person would have to be met?

9. What would you tell a person who wanted to start an operation similar to XYZ's in your Region?