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

OFFICE OF
RESOURCE CONSERVATION
AND RECOVERY

JUL 17 2015

Mr. Jody D. Ware
Sales and Marketing Manager
Saint-Gobain Ceramics & Plastics Inc
DBA Corhart Refractories
87 Corhart Rd. Buckhannon, WV 26201

Dear Mr. Ware:

I am responding to your March 30, 2015, letter to Barnes Johnson requesting a regulatory determination under the Resource Conservation and Recovery Act (RCRA) regulations for spent refractory bricks being used to make new refractory bricks to be used in the manufacture of industrial wool glass melting furnaces. More specifically, you would like to know whether the recycling process, which converts hexavalent chromium in the spent refractory brick into trivalent form, as described below, is defined as reuse or reclamation under the RCRA regulations.

As I understand based on your letter as well as follow-up phone conversations, Saint-Gobain SEFPRO/Corhart Refractories ("Saint-Gobain") is a manufacturer of commercial grade chromium refractory bricks used in the construction of industrial wool glass melting furnaces. These furnaces have a limited life cycle and the refractory bricks must be replaced when a furnace is rebuilt. While the chromium contained in new, unused bricks is in trivalent form, a small part of the trivalent chromium in the refractory bricks turns to hexavalent chromium over time in the industrial wool glass melting furnaces.

According to the information you provided, Saint-Gobain has developed a technology which would allow for hexavalent chromium containing bricks, when spent, to be used to make new trivalent chromium refractory bricks, thereby allowing these bricks to be recycled rather than being land disposed. The furnaces would be dismantled at a Saint-Gobain customer's facility by an outside contractor with jackhammers and other demolition equipment. This process generates more manageable sized bricks ranging from fine powders to approximately ten inch square blocks. The rubble would then be loaded into bulk, flexible containers (i.e., bags or "super-sacks"), wrapped with shrink wrap, stowed in an ocean shipping container and exported to France, where the hexavalent chromium containing bricks would be used to make new chromium refractory bricks, where the chromium is in the trivalent form.

Although not discussed in your letter, our understanding from conversations with Saint-Gobain is that the company in France will take the incoming crushed spent hexavalent chromium bricks and treat them either chemically or via high temperature fusion to convert the hexavalent

chromium into trivalent chromium. This treatment of the incoming crushed hexavalent chrome bricks essentially regenerates the chromium back into trivalent chromium, and this treated material then becomes the feedstock to produce new trivalent chromium refractory bricks. Per 40 CFR 261.2(c)(4), regeneration of a secondary material is a form of reclamation, and the reclamation of particular types of secondary materials, such as spent materials, are subject to RCRA regulations.

More specifically, under the RCRA Subtitle C regulations, when the refractory bricks are removed from the dismantled furnace, they would be a "spent material" because they have outlived their usefulness and no longer can be used without being reclaimed (i.e., processed to recover a usable product, or regenerated, as defined in 40 CFR 261.1(c)(4)). Generally, spent materials that are to be reclaimed are "solid wastes" under the RCRA regulations, and generators of the waste need to determine if the waste is a hazardous waste under 40 CFR 262.11. Because the spent refractory bricks contain chromium, it is possible they may meet the definition of hazardous waste based on EPA's Toxicity Characteristic for chromium (261.24, Waste Code D007). However, as stated above it is the responsibility of the generator of the waste to determine whether any waste is hazardous or not under RCRA. If the spent refractory bricks are hazardous waste, they would be subject to all applicable RCRA regulations at 40 CFR Parts 262-266, 268 and 270.

You also asked in your letter whether this recycling activity could be defined as "reuse," which is an important question because a spent material that is used or reused is excluded from RCRA regulation. However, the RCRA regulations at 40 CFR 261.2(e) involving the direct use/reuse of a secondary material as an ingredient or as an effective substitute in a manufacturing process do not apply when the material is being reclaimed and therefore are not applicable in this situation. As described above, our understanding is that the spent refractory bricks must first be treated to regenerate new trivalent brick material used as an ingredient in the production of commercial grade chromium refractory bricks.

As a result, Saint-Gobain's spent refractory bricks would have to be managed as a hazardous waste from the point of generation at the generating facility to the receiving facility in France where the hexavalent chromium containing bricks are ultimately regenerated to produce a feedstock into the manufacturing of commercial grade chromium refractory bricks. Saint-Gobain would have to comply with all applicable RCRA regulations at 40 CFR Parts 262-266, 268 and 270, including those for hazardous waste exports. Because the spent refractory bricks are being exported for regeneration to a country listed in 40 CFR 262.58(a)(1), the exporting facility, or hazardous waste generator, would also have to comply with all applicable RCRA export requirements found at 40 CFR part 262 subpart H—Transboundary Movements of Hazardous Waste for Recovery Within the OECD. These requirements include submittal of an export notice to EPA at least forty-five (45) days prior to the first desired export shipment, obtaining a letter from EPA documenting France's consent to the proposed export, movement documents, contracts, and reporting and recordkeeping.

Should you have any questions or comments, please contact Jim O'Leary at (703) 308-8827 or oleary.jim@epa.gov.

Sincerely yours,

Betsy Devlin, Director
Materials Recovery Waste Management Division

SAINT-GOBAIN

SEFPRO

March 30, 2015

To: Environmental Protection Agency

RE: Determination Request Regarding Recycling, Reuse or Reclamation of Used Refractory Bricks

Dear Mr. Johnson:

We are writing this letter in an effort to ensure that Saint-Gobain SEFPRO/Corhart Refractories is in full compliance with any applicable EPA regulations which may exist for an upcoming project that we discussed with EPA.

The scope of this project is as follows:

Saint-Gobain SEFPRO/Corhart Refractories is a manufacturer of commercial grade Chromium Refractory Bricks used in the construction of industrial wool glass melting furnaces. Our refractory bricks are assembled into customer furnaces that are used to melt glass for the production of wool type insulation products. The furnaces are subject to a limited life cycle and the refractory bricks must be replaced periodically. The chrome in the unused bricks is trivalent. Through use in the glass furnaces a small part of the trivalent chrome turns to hexavalent chrome.

We have developed a technology which allows for the hexavalent-chrome containing brick to be turned back into a useable product identical in nature to its original condition (i.e., trivalent) as opposed to having the hexavalent chrome containing brick being sent to a landfill.

The furnaces are dismantled at our customer's facility by an outside contractor with jackhammers and other demolition equipment. This generates more manageable sized pieces ranging from fine powders to approximately ten inch square blocks. The rubble is then be loaded into super-sacks, wrapped with shrink wrap, stowed in an ocean shipping container and exported to France where the hexavalent chrome containing bricks will be turned back into new bricks. Based on our prior conversations you asked us to request a determination as to whether the process described herein amounts to recycling, reuse or reclamation. Please advise what questions you have in order to make a final determination as to whether this activity is considered by EPA to be recycling, reuse or reclamation and any requirements that must be followed as a result of EPA's determination.

SAINT-GOBAIN CERAMICS & PLASTICS INC DBA CORHART REFRACTORIES
87 CORHART RD BUCKHANNON WV 26201
304-472-4000

We would like to proceed with this project as soon as possible. We commit to get you whatever information you need to make this determination so that we can begin this project.

Thank you,

Jody D. Ware
Sales and Marketing Manager
Saint-Gobain SEFPRO dba Corhart Refractories