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

OFFICE OF
SOLID WASTE AND
EMERGENCY RESPONSE
NOW THE
OFFICE OF LAND AND
EMERGENCY MANAGEMENT

JAN 26 2018

John B. King
Breazeale, Sachse & Wilson, L.L.P.
P.O. Box 3197
Baton Rouge, Louisiana 70821

Dear Mr. King:

Thank you for your letter dated September 11, 2017, regarding the applicability of the "generator-controlled exclusion" to secondary materials that would be managed in a planned halogen acid furnace at Formosa Plastics Corporation's facility in Baton Rouge, Louisiana. The State of Louisiana adopted the generator-controlled exclusion from the RCRA definition of solid waste in June 2017.

From your letter, our understanding is that as part of its vinyl chloride manufacturing process, Formosa generates residuals containing high amounts of chlorine at facilities in Baton Rouge and in Texas. Formosa plans to construct a "hydrochloric acid production unit" at the Louisiana facility to process the chlorinated residuals from both of the manufacturing facilities. The process involves burning the halogenated organic compounds to generate hydrochloric acid, which would be used to produce ethylene dichloride, which could then be used in the vinyl chloride manufacturing process at the Baton Rouge facility. The organic content of the chlorinated residuals provides heating value to drive the furnace. The recovery of heating value from the chlorinated residuals is "burning for energy recovery" under the applicable RCRA regulations.

Formosa does not dispute that this hydrochloric acid production unit is a "halogen acid furnace" (HAF) as defined in 40 CFR 260.10; however, they argue that this process would qualify as reclamation under the control of the generator. After reviewing the information provided, EPA finds that the conditional exclusion from RCRA regulation at 40 CFR 261.4(a)(23) is not applicable to this unit, as explained below.

The RCRA definition of solid waste

To determine whether a residual from a manufacturing process (a "hazardous secondary material") is a hazardous waste regulated under RCRA subtitle C, one must first determine whether it is a "solid waste" under the definition in 40 CFR 261.2. Although section 261.2(a)(1) indicates that "*solid waste* is any discarded material that is not excluded under § 261.4(a)," that provision must be read in the context of the rest of the definition of solid waste in section 261.2. Section 261.2(d)(2) directly addresses the regulatory status of secondary materials fed into a HAF: they "are solid wastes when they are recycled in any manner."

HAFs recover both materials and energy. In promulgating the regulations governing boilers and industrial furnaces (BIFs), EPA noted that "there are significant elements of treatment associated with burning in HAFs: toxic organic compounds are destroyed rather than recovered, and the burning if conducted improperly could become part of the waste disposal problem."[1] This also describes Formosa's planned hydrochloric acid production unit: the organic compounds would be burned for energy recovery and be destroyed as an integral part of the chlorine recovery process.

EPA also noted in the BIF rule that materials with high heating value (over 5000 Btu/lb) are considered burned partially for energy recovery and so would be solid waste when introduced into an industrial furnace even if not designated as inherently waste-like.[2] Additionally, the BIF regulation provides that "halogen acid furnaces burning hazardous waste" are not the type of "smelting, melting, and refining furnaces" conditionally exempt from regulation under § 266.100(d).[3]

History of regulating halogen acid furnaces and burning for energy recovery

EPA statements about burning for energy recovery (and the other forms of recycling that involve discard) have been consistent since the earliest hazardous waste findings and regulations. Preamble statements have consistently noted that solid waste exclusions and exemptions do not apply to recycling of "inherently waste-like" materials, recycling of hazardous secondary materials that are "used in a manner constituting disposal," or "burning of hazardous secondary materials for energy recovery."[4]

In its 1990 proposal for regulating BIFs under RCRA, EPA concluded that the halogenated secondary materials fed into HAFs to produce a halogen acid product "contain dozens of appendix VIII constituents not ordinarily found in the raw materials that are normally used to produce chlorine," and "these organic toxicants do not contribute to the hydrochloric acid production;" they are "discarded by thermal combustion." EPA further found that "inefficient combustion of the halogenated organic compounds in wastes fed to a HAF can pose the same risks to human health and the environment as combustion of those wastes in an incinerator, boiler, or other industrial furnace."[5]

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[1] *Final Rule: Boilers and Industrial Furnaces,* 56 FR 7134, 7141 (Feb. 21, 1991).
[2] 56 FR 7141.
[3] Unlike material fed into halogen acid furnaces, materials reclaimed in smelting, melting and refining furnaces are eligible for the generator-controlled exclusion at 40 CFR 261.4(a)(23) (see 40 CFR 261.1(c)(4)).
[4] In promulgating its first RCRA hazardous waste regulations, EPA incorporated fundamental principles about the need to regulate certain materials and processes even when they involve recycling. 50 FR 614, 637 (Jan. 4, 1985).
[5] *Proposed Rule: Boilers and Industrial Furnaces,* 55 FR 17862, 17891-17892 (April 27, 1990).

In its final BIF Rule, EPA found that "wastes burned by HAFs are some of the most toxic generated and regulation of emissions from burning these wastes certainly is needed to protect human health and the environment." Therefore, "in all cases, hazardous waste fed to HAFs, and the HAFs themselves, will be subject to hazardous waste regulations under today's final rule."[6]

History of the Generator-Controlled Exclusion (40 CFR 261.4(a)(23))

The 2007 proposal to revise the definition of solid waste (DSW) included a proposed exclusion for reclamation performed under the control of the generator that

> would not include recycling practices that involve discard of materials. These practices include recycling of inherently waste-like materials… , recycling of materials that are used in a manner constituting disposal… , and burning of materials for energy recovery…[7]

The final 2008 DSW rule and the 2011 proposed revisions to that rule contained similar preamble statements concerning materials and processes that must be regulated even when they involve legitimate recycling.[8]

The 2015 *Final Rule: Definition of Solid Waste* notes that any provisions promulgated as part of the 2008 rule that were not addressed in the 2015 DSW rule remain in effect.[9] Since EPA received no public comments on the eligibility of inherently waste-like materials or halogen acid furnaces for the exclusions, the statements from the earlier preambles stand.

Prior EPA interpretations on halogen acid furnaces

EPA's prior interpretations of the intent and effect of the regulations relating to HAFs have also been clear and consistent. In 1986, EPA provided its initial views on a rulemaking petition submitted by The Dow Chemical Company to classify HAFs as industrial furnaces under RCRA. In its letter, EPA noted the secondary materials burned in HAFs would be considered inherently waste-like and "subject to designation as a solid waste under § 261.2(d)."[10]

In 1993, EPA responded to an inquiry from Borden Chemicals and Plastics in which they stated that secondary materials fed into its HAF unit were used in a continuing production process. EPA stated that it retains jurisdiction over this "burning of highly-chlorinated residuals as ingredients to make halogen acid… in part through the inherently waste-like designation (§ 261.2(d))." EPA also explained that the court decision in *AMC I* cited by Borden regarding recycling in a continuous industrial process does not preclude the Agency from designating certain materials inherently waste-like. The criteria EPA used in 1985 to define inherently waste-like materials also describe elements of discard.[11]

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[6] 56 FR 7141.

[7] *Proposed Rule: Definition of Solid Waste,* 72 FR 14172, 14173 (March 26, 2007).

[8] *Final Rule: Definition of Solid Waste,* 73 FR 64669 (Oct. 30, 2008); *Proposed Rule: Definition of Solid Waste,* 76 FR 44096 (July 22, 2011).

[9] 80 FR 1694, 1695, footnote 1.

[10] "Halogen Acid Furnaces as Industrial Furnaces or Boilers," Letter from Williams to Crary (August 12, 1986), RCRA Online 12711.

[11] Letter from Lowrance to Owens (June 2, 1993), RCRA Online 11751.

EPA has not identified any document where the Agency has expressed a contrary position concerning reclamation of chlorinated residuals in HAFs.

Response to Formosa's arguments

Formosa argues that its hydrochloric acid production unit will be operated with "modern performance testing, maintenance and air emission requirements" and will be highly unlikely to present a threat to human health or the environment. In its final BIF Rule, EPA noted that properly controlled HAF operations "are environmentally advantageous in that they utilize acid values rather than dispose them and therefore should not needlessly be discouraged."[12] At the same time, EPA found that this environmentally beneficial reclamation of highly toxic materials should be conducted only under strict RCRA subtitle C requirements.

Further, the U.S. Court of Appeals for the District of Columbia Circuit has ruled that RCRA § 3004(q) directs EPA to establish RCRA regulations for all hazardous secondary materials that are burned for energy recovery or used to produce fuel.[13] This finding limits EPA's ability to identify types of burning that can be conducted outside of RCRA regulatory requirements.

Conclusion

For the reasons explained above, EPA is unable to concur that the hydrochloric acid production unit at Formosa's Baton Rouge facility could operate as a RCRA-exempt reclamation process under the "generator-controlled exclusion" in 40 CFR 261.4(a)(23). The hazardous secondary materials fed into the HAF would likewise be regulated as hazardous waste. If you have any further questions please feel free to contact me at 703-308-8895, or Ross Elliott of my staff at 703-308-8748.

Sincerely,

Barnes Johnson

Barnes Johnson, Director
Office of Resource Conservation and Recovery

cc: Mr. Elliott Vega, Assistant Secretary
Louisiana Department of Environmental Quality

Ms. Wren Stenger, Director
Multimedia Planning and Permitting Division
U.S. EPA Region 6

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[12] 56 FR 7140.

[13] *NRDC v. EPA*, 755 F.3d 1010 (D.C. Cir. 2014) (overturning the exclusion from RCRA regulation for "comparable fuels").