ILLINOIS POLLUTION CONTROL BOARD
March 19, 1998

IN THE MATTER OF:	)	
	)	
PETITION OF CHEMETCO, INC. FOR	)	AS 97-2
ADJUSTED STANDARD FROM 35 ILL.	)	(Adjusted Standard - RCRA)
ADM. CODE 720.131(a) AND (c)	)	

GEORGE M. VON STAMWITZ AND RICHARD L. WATERS OF ARMSTRONG, TEASDALE, SCHLAFLY, & DAVIS APPEARED ON BEHALF OF PETITIONER;

CHRISTOPHER P. PERZAN APPEARED ON BEHALF OF THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY; and

JAMES L. MORGAN APPEARED ON BEHALF OF THE ILLINOIS ATTORNEY GENERAL'S OFFICE.

OPINION AND ORDER OF THE BOARD (by K.M. Hennessey):

Chemetco, Inc. (Chemetco) owns and operates a secondary metal smelting facility in Hartford, Madison County, Illinois. Chemetco uses its furnaces to produce anode copper and crude solder from used, metal-bearing materials. This proceeding concerns a material that Chemetco refers to as "zinc oxide," which Chemetco currently stores in a bunker at its facility. Chemetco asks that the Board determine that the zinc oxide is not a solid waste when Chemetco removes it from the bunker for recycling. Chemetco believes that if the Board does not grant it this determination, Chemetco will have to landfill the zinc oxide on-site.

Chemetco seeks this determination pursuant to 35 Ill. Adm. Code 720.131(a) and (c). Chemetco asks that the Board's non-solid waste determination last for five years and three months to allow Chemetco enough time to sell the zinc oxide stored in the bunker. The Illinois Environmental Protection Agency (IEPA) opposes Chemetco's request.

While the Board certainly encourages recycling, the Board finds that Chemetco has not provided sufficient evidence to establish that Section 720.131(a) applies in this case. Chemetco also failed to provide all of the information that section requires. In addition, the Board finds that Chemetco failed to provide sufficient evidence to demonstrate that Section 720.131(c) applies, nor has it provided all of the information that section requires. The Board therefore must deny Chemetco's petition for an adjusted standard.

PROCEDURAL HISTORY

Overview

Chemetco filed its petition on August 9, 1996. IEPA filed a response and an amended response, to which Chemetco filed replies.[1] In its amended response, IEPA recommended that the Board deny Chemetco's request under Section 720.131(c), but grant the request under Section 720.131(a) with a number of conditions. IEPA Am. Resp. at 21-22.

Chief Hearing Officer Michael Wallace held a hearing on March 11, 1997. Both parties filed post-hearing briefs, and Chemetco also moved to supplement the record after the hearing.

In response to Chemetco's motion to supplement the record, the Board ordered another hearing. See Petition of Chemetco, Inc. for an Adjusted Standard From 35 Ill. Adm. Code 720.131(a) and (c) (May 15, 1997), AS 97-2, slip op. at 2. The Board limited the subject of the second hearing to the documents Chemetco sought to add to the record through its motion. Chief Hearing Officer Michael Wallace held the second hearing on August 26, 1997.[2] Neither party chose to file briefs after the second hearing.

IEPA's Second Amended Response

On August 14, 1997, before the second hearing, IEPA filed a second amended response. In its second amended response, IEPA changed its position on Chemetco's request under Section 720.131(a), and now recommends denial.

Chemetco filed a reply on August 22, 1997, stating in part that the Board should reject IEPA's second amended response. Reply at 3. The Board treats this portion of Chemetco's reply as a motion to strike IEPA's second amended response. IEPA, treating the same portion of Chemetco's reply as a motion to strike, filed a response on August 25, 1997.

In its reply, Chemetco argues that IEPA's second amended response violates 35 Ill. Adm. Code 106.715 because IEPA filed it after the first hearing. Reply at 3. The Board disagrees.

Section 106.715 provides in pertinent part:

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[1] Chemetco's petition is cited as "Pet. at _." IEPA's initial response, filed on September 9, 1996, is cited as "IEPA Resp. at __." Chemetco's reply (filed September 19, 1996) to IEPA's response is cited as " Chem. Reply at _." IEPA's amended response, filed January 28, 1997, is cited as "IEPA Am. Resp. at _."

[2] The transcript of the March 11, 1997, hearing is cited as "Tr.1 at _;" the transcript of the August 26, 1997, hearing is cited as "Tr.2 at _." Chemetco's hearing exhibits are cited as "Chem. Exh. _;" IEPA's hearing exhibits are cited as "IEPA Exh. _."

> The Agency may amend its response even if the petitioner has not amended its petition. In such instance, a response may only be amended prior to close of the hearing if a hearing is held . . . . 35 Ill. Adm. Code 106.715.

The Board's procedural rules contemplate the possibility of having more than one hearing on an adjusted standard. See 35 Ill. Adm. Code 106.415(a) ("The Board will hold at least one public hearing prior to granting an adjusted standard.") and 106.416(b) ("The Board will issue such orders as the Board deems appropriate, including, but not limited to . . . directing that further hearings be held.") When that happens, as it did here, IEPA may amend its response before the close of the final hearing. Accordingly, the Board denies Chemetco's motion to strike IEPA's second amended response.

FINDINGS OF FACT

The Bunker and its Contents

Chemetco owns and operates a secondary metal smelter at Route 3 and Oldenberg Road in Hartford, Madison County, Illinois. Tr.1 at 9; Chem. Exh. 14 at 2. Chemetco's facility includes a bunker that is approximately 365 feet by 310 feet. It is made of concrete and has walls and a floor, but no roof. Tr.1 at 11, 83, 107, 117-118; Chem. Exh. 14 at 3-4.

The bunker contains three types of materials. First, the bunker contains approximately 30,000 to 40,000 tons of zinc oxide. Tr.1 at 10-11, 29-30, 114-115. Chemetco moved the zinc oxide to the bunker in 1984 or 1985. Before then, Chemetco kept the material in an on-site "pile . . . used to store and dry zinc oxide from the zinc oxide lagoons" at the facility. The bunker stands at the location of the former zinc oxide pile. Tr.1 at 131; Chem. Exh. 14 at 2-5, 11, Fig. 2-2. No zinc oxide or other material has been added to the bunker since September 1985. Tr.1 at 8, 11; Chem. Exh. 14 at 5.

Chemetco presented some evidence on how it currently generates zinc oxide (discussed below at pages 4 and 5), but no evidence explaining how it generated the zinc oxide now in the bunker. The record suggests that the process that Chemetco uses now is different than the process it used when it generated the zinc oxide now in the bunker. See IEPA Resp., Attachment 5 at 36.

Chemetco presented test results for metals present in two samples of the bunker's zinc oxide. The average metals content in the two samples is as follows:

zinc	25.0%
lead	11.4%
copper	7.25%

iron	2.045%
tin	1.77%
nickel	0.325%
cadmium	0.28%
silver	0.236%

Tr.1 at 70; Chem. Exh. 9.

The second type of material that the bunker contains is "soil excavated during the closure" of the former zinc oxide pile, as well as areas at the facility known as the "zinc oxide lagoons" and the "cooling water canal." Chemetco's consultant's report describes these three areas as "hazardous waste management units," but there is no evidence on the types of hazardous wastes managed in these areas. Chem. Exh. 14 at 2-3, 5, Fig. 2-2. The amount of soil in the bunker from these areas is something less than 40,000 tons. Chem. Exh. 14 at 3. Chemetco provided no test results regarding the excavated soil itself. However, Chemetco performed EP toxicity tests for lead and cadmium on soil samples from beneath the former zinc oxide pile to determine how much soil to excavate. Chem. Exh. 14 at 4-5, 11, Fig. 2-3.

The third type of material that the bunker contains is an estimated 23,500 tons of slag. Chem. Exh. 14 at 3, 5, 8. Chemetco presented no evidence on how it generated the slag. Chemetco placed the slag over the other materials in the bunker to suppress emissions of dust into the air. Tr.1 at 11, 82, 103; Chem. Exh. 14 at 7-8.

None of the zinc oxide has been removed from the bunker since being placed there. Tr.1 at 126-127, 131; Chem. Exh. 14 at 3-5. According to the petition (Pet. at 2), the material accumulated because the market for zinc oxide was very volatile in the 1980s, but the Board finds that Chemetco presented no evidence to support this assertion.

Chemetco's Current Operations

Chemetco would like to sell the zinc oxide in the bunker along with the zinc oxide that it currently generates. Accordingly, a brief overview of Chemetco's current operations is necessary.

Chemetco currently employs approximately 150 people at the facility. Tr.1 at 65. Chemetco receives various used, metal-bearing materials (number two copper, red brasses, yellow brasses, radiators, industrial skimmings, and copper and tin fines). Using its furnaces, Chemetco produces anode copper (an 825 pound mold of 99.2% pure copper) and crude solder (a 10,000 to 15,000 pound mold of lead and tin) from these materials. The anode is eventually processed into wire bar, copper wire, and copper bar, while the solder is sold to a refiner to make pure lead and pure tin. Tr.1 at 9, 65-67; Chem. Exh. 1.

Chemetco has a device called a wet scrubber that uses water to capture air-borne particulates from its smelting process. Chemetco generates approximately 900 to 1,000 tons of zinc oxide each month from the wet scrubber. The average metals content in nine samples of the zinc oxide from current operations is as follows:

zinc	28.308%
lead	15.746%
copper	7.378%
tin	2.774%
iron	1.343%
cadmium	0.371%
nickel	0.129%
silver	0.014%.

Tr.1 at 10, 24, 34, 47, 50, 67-68, 70; Chem Exh. 1, 5, 10.

From the wet scrubber, the zinc oxide is moved through settling ponds, settling cells, and a filter press at the Chemetco facility, after which it is taken to an on-site building known as the fines building. In the fines building, Chemetco mixes the zinc oxide with a generally equal amount of "copper/tin fines," which Chemetco purchases or receives for free.

The copper/tin fines have greater concentrations of certain metals than the zinc oxide, but Chemetco did not provide a breakdown of metals concentrations specific to the copper/tin fines. Chemetco adds the copper/tin fines to the zinc oxide to increase the content of certain metals and thereby increase value. Tr.1 at 11, 32-34, 44, 72-74, 97-99; Tr.2 at 48-49; Chem. Exh. 1, 5, 11, 18. This roughly 50/50 blend is referred to below as the "blended material."

Information on the blended material's metals concentrations is set forth in a shipping document:

copper	22.8%
zinc	9.5%
iron	2.7%

nickel 0.5%

Tr.2 at 22, 63; Chem. Exh. 18.

Chemetco's Proposed Removal of Materials from the Bunker

Chemetco would like to sell the bunker's zinc oxide, along with its currently generated zinc oxide, under the arrangements described below at pages 7 and 8. Tr.1 at 16-17, 34-35, 56-57, 128-131; Tr.2 at 28. Chemetco estimates that it would take approximately five to six years to sell all of the zinc oxide in the bunker. Tr.1 at 16. Chemetco proposes to prepare the bunker's zinc oxide for shipment off-site by moving it through the existing equipment and facilities used for its currently generated zinc oxide, with certain modifications. Tr.1 at 72-74, 77-78, 97-99.

Chemetco would add water to the bunker so as to create a slurry of the zinc oxide, enabling it to be pumped out. Tr.1 at 100, 108-109; Chem. Exh. 14 at 5, 7. If necessary, Chemetco would use heavy equipment to push the zinc oxide toward the pump. Tr.1 at 120-121; Chem. Exh. 14 at 5, 7. The slurry would be pumped to the settling ponds, at which point it would commingle with the currently generated zinc oxide. From there, the material would move to the settling cells and then to two filter presses for dewatering. Tr.1 at 17, 72-73, 79, 82-84, 94, 96, 98-99; Chem. Exh. 11, 14 at 5, 7.

The resulting zinc oxide "filter cake" would be loaded into dump pans for trucking to the fines building, where it would be blended with copper/tin fines. The blended material would be loaded into container trailers in the fines building for transport to barges. Tr.1 at 72-73, 88-89, 92, 99; Chem. Exh. 11, 14 at 7.

Because of the additional volume of zinc oxide, Chemetco would add one worker per shift to operate the settling cells and filter presses, and use a second filter press that is at the facility but currently not in full use. Tr.1 at 16-17, 73-74, 79, 92-94, 98-99. Chemetco acknowledged that the settling ponds and settling cells are merely a means of getting the bunker's zinc oxide to the filter presses; the material could go directly from the bunker to a filter press. However, there may not be enough room to set up a filter press next to the bunker. Tr.1 at 77-79, 97.

Chemetco plans to segregate the bunker's slag from the zinc oxide. The slag would be removed from the bunker and placed with "the current slag production." Tr.1 at 104-105; Chem. Exh. 14 at 8. Chemetco does not plan to segregate the bunker's excavated soil from the zinc oxide. Instead, the soil would become part of the slurry and shipped off-site with the zinc oxide. Tr.1 at 122-123.

The bunker's zinc oxide, which is exposed to precipitation, has a moisture content of approximately 45%. Water ponds in one corner of the bunker. Tr.1 at 83, 100, 117-118. During the year before the first hearing, a liquid leaked out of a wall of the bunker into a secondary containment area for the bunker. Tr.1 at 117, 119. Chemetco's consultant testified

that the bunker was secure as of the first hearing, but no evidence was offered as to how the leakage was repaired or what measures, if any, Chemetco had taken to prevent such leakage in the future. Tr.1 at 124. In addition, Chemetco has not calculated whether the process of removing zinc oxide from the bunker, which includes adding water to the bunker, would affect the bunker's structural integrity. Tr.1 at 117-118.

Chemetco had a 3,000 to 5,000 cubic yard "spill" of zinc oxide in September 1996 from a "former stormwater pipe." Tr.1 at 118-119; Chem. Exh. 14 at App. 4. On cross-examination, neither Chemetco's environmental coordinator nor its consultant knew exactly where the spill came from and neither could say that it did not come from the settling ponds. Tr.1 at 94, 119. Chemetco offered no evidence on what measures, if any, it had taken to prevent such a spill in the future.

Chemetco's Arrangements to Sell Zinc Oxide

Chemetco had arrangements to sell the blended material to two overseas entities—Elmet, S.L. (Elmet), of Spain, and Metabel B.V. (Metabel), of Holland.[3]

Elmet Arrangement

The arrangement with Elmet was described as a one-year renewable agreement for up to 3,000 metric tons[4] of the blended material per month. Tr.1 at 10-14, 20, 23, 25, 31-32, 53, 57; Tr.2 at 44, 59-60; Chem. Exh. 1, 5, 19. The arrangement was renewed for 1997 and Elmet and Chemetco expected the arrangement to continue. Tr.2 at 9, 28, 39, 46; Chem. Exh. 5, 19. In exchange for the blended material, Chemetco receives red brass, which is valued at the market price set by the copper board in the United States. Tr.1 at 14-15, 32-33, 45, 59; Tr.2 at 41, 64-65; IEPA Exh. 5. The red brass is not produced from the blended material. Tr.1 at 59; Tr.2 at 41. The blended material's value is based on the respective percentages of metals in the blended material and the market price for those metals set by the London Metals Exchange. Tr.1 at 45-47, 64-65.

Chemetco and Elmet keep accounts on these transactions and Chemetco periodically pays money to Elmet to make up for imbalances resulting from red brass being more valuable than the blended material. Tr.1 at 15, 32-33; Tr.2 at 38, 46-47. Chemetco makes a profit on the Elmet transactions. Tr.1 at 15-16, 64.

Chemetco's zinc oxide transactions with Elmet date back to 1994. Chemetco has not sold zinc oxide to anyone else since that time and, as of the first hearing, it was selling all of its currently generated zinc oxide to Elmet. Tr.1 at 10, 12-13, 19-20, 24-25, 133; Tr.2 at 58-59; Chem. Exh. 3, 4, 12; IEPA Exh. 2, 5.

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[3] The Board did not consider arrangements that were not finalized.

[4] A metric ton equals 2,204.62 pounds.

Elmet acquires the blended material for three reasons. First, Elmet's furnaces recover metals from the blended material, including copper, tin, lead, gold, silver, palladium, and platinum. Elmet recovers the metals in the form of black copper shots, which Elmet apparently sells. Chemetco failed to provide evidence on whether or how much of each metal in the blended material or in the zinc oxide itself is recovered. Chemetco maintained that the silver and gold recovered by Elmet come solely from the zinc oxide, but Chemetco provided no test results showing any gold present in its zinc oxide. Nor did it provide any test results confirming that the blended material contains palladium or platinum. Second, in Chemetco's Exhibit 5, Elmet stated that "[z]inc metal when in contact with injected oxygen, in a certain atmosphere," provides extra heat to Elmet's smelting process, which lowers its energy costs. There was no evidence on how much heat the zinc contributes to this process. Third, the blended material increases the zinc content of the oxides collected from Elmet's filter, making Elmet's oxides more attractive to zinc producers. Tr.1 at 13, 30-31, 34; Tr.2 at 41-42; Chem. Exh. 1, 5.

Metabel Arrangement

The arrangement with Metabel is to last from April 1, 1997 (*i.e.*, after the first hearing) to March 31, 1998. This arrangement calls for Metabel to acquire 400 metric tons per month of the blended material "for further refining." Tr.1 at 18-19, 34-35, 53, 128-130; Chem. Exh. 15. Chemetco provided no other information as to what Metabel will do with the blended material. The document described as the Metabel agreement has a pricing provision that appears to rely on the London Metals Exchange. Tr.1 at 18-19, 128-130; Chem. Exh. 15. Chemetco provided no information on its expected profit, if any, from this arrangement.

DISCUSSION

Chemetco asks the Board to determine that zinc oxide in the bunker is not a solid waste once Chemetco removes it from the bunker for recycling. Tr.1 at 104; Pet. at 6; Chem. Reply at 2. The status of materials as "solid wastes" is significant because under the laws and regulations that Congress and the United States Environmental Protection Agency (USEPA) have established, only those materials that are "solid wastes" can be regulated as "hazardous wastes" under Subtitle C of RCRA[5] and the corresponding Illinois laws and regulations. Accordingly, materials that are not solid wastes are not subject to the hazardous waste regulations.

In addition, materials that are not solid wastes, and therefore not hazardous wastes, are not subject to the rules that apply to the recycling of hazardous wastes or the export of hazardous wastes. See 35 Ill. Adm. Code 721.106, 722.Subpart E. Chemetco maintains that

[5] RCRA means the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended, 42 U.S.C. 6901 *et seq*. See 35 Ill. Adm. Code 720.110.

without the requested determination, Chemetco will have to landfill the bunker's zinc oxide on-site.[6] Tr.1 at 16; Pet. at 1-2.

Chemetco seeks this determination under Section 720.131(a) and (c). Pet. at 1. Those subsections provide standards and criteria for the Board to use in determining, on a case-by-case basis, whether certain materials, that would otherwise be considered solid wastes, are not solid wastes. See 35 Ill. Adm. Code 720.130; see also 35 Ill. Adm. Code 106.903(b). The Board considers subsections (a) and (c) in turn.

Initially, we note that the Board regulations at issue are substantively identical to regulations that USEPA promulgated under RCRA. We also note that the Board has never before issued a final opinion and order interpreting the solid waste determination provisions of Section 720.131(a) or (c). Accordingly, the Board from time to time refers to USEPA guidance and preamble language interpreting the federal counterpart to the Board regulations at issue.

Regulatory Framework: Section 720.131(a)

Section 720.131(a) reads in part as follows:

> a) The Board will determine that those materials that are accumulated speculatively without sufficient amounts being recycled are not solid wastes if the applicant demonstrates that sufficient amounts of the material will be recycled or transferred for recycling in the following year. . . . 35 Ill Adm. Code 720.131(a).

It is important to note that the relief that Section 720.131(a) affords is available only for those materials that have been "accumulated speculatively." That term is defined in part as follows:

> A material is 'accumulated speculatively' if it is accumulated before being recycled.[7] A material is not accumulated speculatively, however, if the person accumulating it can show that the material is potentially recyclable and has a feasible means of being recycled; and that -- during the calendar year (commencing on January 1) -- the amount of material that is recycled, or transferred to a different site for recycling, equals at least 75 percent by weight or volume of the amount of that

[6] The Board notes that a determination that this zinc oxide is not a solid waste is not necessarily a prerequisite to its recycling. For example, hazardous wastes may be recycled, subject to the restrictions outlined in 35 Ill. Adm. Code 721.106.

[7] "A material is 'recycled' if it is used, reused or reclaimed." 35 Ill. Adm. Code 721.101(c)(7).

> material accumulated at the beginning of the period. . . . (Materials that are already defined as solid wastes also are not to be included in making the calculation.) Materials are no longer in this category once they are removed from accumulation for recycling, however. 35 Ill. Adm. Code 721.101(c)(8).

The speculative accumulation provision allows USEPA "to regulate certain secondary materials, intended for recycling, as solid wastes if the person claiming their waste was excluded did not recycle sufficient quantities of these materials within a calendar year." RCRA Permit Policy Compendium, 9441.1993(08) (May 6, 1993, letter to William C. Rankin from Sylvia K. Lowrance, Director, Office of Solid Waste, USEPA). In explaining the need for the provision, USEPA noted "the large number of recycling damage cases where secondary materials that were overaccumulated over time caused extensive harm." 50 Fed. Reg. 614, 635 (Jan. 4, 1985).

It is also important to note that materials that are already defined as solid wastes do not become solid wastes under this provision.[8] In other words, materials may become solid wastes by being accumulated speculatively only if they are not otherwise solid wastes. As USEPA explains:

> [T]his provision applies to all spent materials, sludges, and by-products not already defined as solid and hazardous wastes and that are accumulated before any type of recycling. The provision thus applies to secondary materials not otherwise considered to be wastes when recycled . . . . Thus, if [certain] materials are overaccumulated, they would be considered to be hazardous wastes and would become subject to regulation . . . . The provision does *not* apply to secondary materials that already are wastes when they are recycled . . . . 50 Fed. Reg. 614, 635 (Jan. 4, 1985) (emphasis in original).

Therefore, the Board holds that a petitioner seeking the relief that Section 720.131(a) provides must prove, as a threshold matter, that its material has become a solid waste only because it has been accumulated speculatively, and not for some other reason. This requires the Board to consider, as a threshold matter, how a material has become a solid waste.

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[8] The speculative accumulation provision "is not applicable to those materials already defined as solid wastes . . . . This is evident in the definition of 'accumulated speculatively' . . . which states that ' . . . (Materials that are already defined as solid wastes also are not to be included in making the calculation.)'." RCRA Permit Policy Compendium, 9497.1989(02) (Oct. 19, 1989, letter to E.L. Williams, Jr., from Edwin F. Abrams, Chief, Review Section, Office of Solid Waste and Emergency Response, USEPA.)

How Do Materials Become Solid Wastes?

To "determine if a secondary material is a RCRA solid waste when recycled, one must examine both the material and the recycling activity involved." 50 Fed. Reg. 614, 619 (Jan. 4, 1985). In doing so, the Board considers three factors.[9] See 35 Ill. Adm. Code 721.102(c). The first factor is which of several categories the material fits into: "spent materials;" "sludges;" or "by-products." See 35 Ill. Adm. Code 721.102(c) and 721.Appendix Z. Each of these terms is specifically defined, and whether a material is, for example, a "spent material" or a "sludge" depends primarily on how it is generated. For example, a "sludge" is "any solid, semi-solid or liquid waste generated from a municipal, commercial or industrial wastewater treatment plant, water supply treatment plant or air pollution control facility exclusive of the treated effluent from a wastewater treatment plant." See 35 Ill. Adm. Code 721.101(c)(2) (refers to 35 Ill. Adm. Code 720.110). However, an extensive discussion of the definitions of these terms is not necessary for our purposes.[10]

The second factor is whether the material is an unlisted "characteristic" hazardous waste or a "listed" hazardous waste. See 35 Ill. Adm. Code 721.102(c) and 721.Appendix Z. Generally, a solid waste is a hazardous waste if it exhibits a "characteristic" of hazardous waste (*i.e.*, it is toxic, corrosive, ignitable, or reactive) or if it is "listed" as hazardous waste (*e.g.*, it comes from a specific type of process, such as electroplating). See 35 Ill. Adm. Code 721.103, 721, Subparts C and D.[11]

The third factor that determines whether a material to be recycled is a solid waste is the recycling activity involved—*i.e.*, whether the material will be "used in a manner constituting disposal," "burned for energy recovery," or "reclaimed," or whether the material is "accumulated speculatively" before being recycled. See 35 Ill. Adm. Code 721.102(c) and 721.Appendix Z.

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[9] In some cases, the regulations require the Board to consider other factors. Section 721.102(d) provides that specified materials are solid wastes when recycled in any manner. See 35 Ill. Adm. Code 721.102(d). Section 721.102(e) provides that materials are not solid wastes when recycled in specified ways. See 35 Ill. Adm. Code 721.102(e). However, the record does not indicate that these provisions are relevant here.

[10] "Spent material," "sludge," and "by-product" are defined at 35 Ill. Adm. Code 721.101(c)(1), (2), and (3), respectively. There are other categories of materials, but the record does not indicate that they are relevant in this case.

[11] The definition of "solid waste" applies only to materials that are also "hazardous waste" for purposes of the regulations implementing Subtitle C of RCRA. See 35 Ill. Adm. Code 721.101(b)(1). As USEPA explained, "[a]lthough hazardous wastes are a subset of solid wastes under RCRA, [USEPA's] regulatory authority under Subtitle C applies only to hazardous wastes. Since the present regulations apply only to Subtitle C, we have chosen to make the definition of solid waste applicable to those materials that also are hazardous wastes." 50 Fed. Reg. 614, 616, n. 3 (Jan. 4, 1985).

These factors, when considered together, determine whether and how a material becomes a solid waste. (The relationship between these factors is set forth in Section 721.102(c) and Appendix Z to Part 721. A portion of Appendix Z is attached as Attachment 1.) Whether and how a material becomes a solid waste in turn determines whether Section 720.131(a) applies. This is illustrated by the following three examples:

> Example 1—A sludge is listed as a hazardous waste in Section 721.131 or 721.132 and it will be reclaimed. Under Section 721.101(c)(3) and Appendix Z to Part 721, this material is a solid waste.[12] It has become a solid waste for a reason other than speculative accumulation. Therefore, Section 720.131(a) does not apply.
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> Example 2—A by-product is not listed in Section 721.131 or 721.132 but it exhibits a characteristic of hazardous waste, and it will be burned for energy recovery. Under Section 721.101(c)(2) and Appendix Z, this material is a solid waste. It has become a solid waste for a reason other than speculative accumulation. Therefore, Section 720.131(a) does not apply.
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> Example 3—A by-product is not listed in Section 721.131 or 721.132 but it exhibits a characteristic of hazardous waste, and it will be reclaimed. Although this is the same material considered in second example, it is not a solid waste because it will be reclaimed instead of burned for energy recovery. See 35 Ill. Adm. Code 721.102(c)(3); see also Attachment 1 and 50 Fed. Reg. 614, 619 (Jan. 4, 1985) (same material's status as a waste or not can vary depending on how it is to be recycled). If this material is accumulated speculatively before being reclaimed, it would become a solid waste because of the speculative accumulation provision (and most importantly, only because of the speculative accumulation provision). Thus, in this example, the relief that Section 720.131(a) provides would be available.

Does Section 720.131(a) Apply Here?

In order to determine whether Chemetco is eligible for the relief that Section 720.131(a) provides, therefore, it is Chemetco's burden to prove that the bunker's zinc oxide became a solid waste only because it was accumulated speculatively. See 35 Ill. Adm. Code

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[12] "[T]he determination of whether or not a material being reclaimed is a solid waste is made at the point of generation. . . . The recycling activity is viewed prospectively; that is, the status of certain secondary materials is determined by knowing how the material is going to be recycled." RCRA Permit Policy Compendium, 9441.1993(08) (May 6, 1993, letter to William C. Rankin from Sylvia K. Lowrance, Director, Office of Solid Waste, USEPA).

106.808 and 720.133. As discussed, that question depends on: (1) which of the categories of material the zinc oxide in the bunker fits into (*i.e.*, is it a spent material, a sludge, etc.); (2) whether the material is characteristic or listed hazardous waste; and (3) how it will be recycled (*i.e.*, by reclamation, burning for energy recovery, etc.). These factors are considered below.

Is the Zinc Oxide in the Bunker a Spent Material, a Sludge, or a By-product?

While one consultant's report refers to the zinc oxide in the bunker as "sludge," Chemetco provided no evidence on how the material was generated. Chem. Exh. 6. Chemetco, at best, implies that the bunker's zinc oxide came from the same source as its currently generated zinc oxide, the wet scrubber. Tr.1 at 10-11. This does not satisfy Chemetco's burden. As a result, there is insufficient evidence for the Board to decide if the bunker's zinc oxide is a "spent material," a "sludge," or a "by-product."

Is the Zinc Oxide in the Bunker a Characteristic or Listed Hazardous Waste?

Even if there was sufficient evidence for the Board to find that the material is a sludge or a by-product, Chemetco failed to provide enough evidence to establish whether the material is a characteristic or listed hazardous waste. As is evident from Section 721.101(c) and Appendix Z to Part 721, this information can determine whether a material to be recycled is or is not a solid waste.

The only evidence potentially addressing whether the material exhibits a characteristic of hazardous waste is one sentence in a consultant's report stating that "[t]esting has shown the zinc oxide, which is being sold . . ., to be extraction procedure toxic for lead." Chem. Exh. 14 at 3. This is not enough. Not only is it unclear whether this sentence refers to the bunker's zinc oxide, but Chemetco provided no other information on the test method and no test results.[13] Furthermore, IEPA stated in its Second Amended Response that the bunker's zinc oxide may be a listed hazardous waste—K069 "Emission control dust/sludge from secondary lead smelting" at 35 Ill. Adm. Code 721.132. IEPA Am. Resp. at 2. Chemetco provided no evidence responsive to this.

Further questions on how to categorize the material are raised by the presence in the bunker of soil that Chemetco proposes to ship off-site with the zinc oxide. The soil may be contaminated with hazardous waste because it was excavated from several areas described as "hazardous waste management units."[14] Chemetco provided no test results of this soil and we do not know what types of hazardous wastes may have been managed in these areas. This information could determine whether the bunker's zinc oxide is a characteristic or listed hazardous waste. Chemetco failed to address this issue.

How will the Zinc Oxide in the Bunker be Recycled?

[13] In testing for the hazardous waste characteristic of toxicity, the "extraction procedure" may refer to the EP toxicity test or the Toxicity Characteristics Leaching Procedure (TCLP). The TCLP test replaced the EP toxicity test. See 35 Ill. Adm. Code 721.124.

[14] "Hazardous waste management unit" is defined at 35 Ill. Adm. Code 720.110.

Likewise, Chemetco failed to provide sufficient evidence to establish that the bunker's zinc oxide will be recycled in such a way that Section 720.131(a) may apply. We know that Elmet recovers metals from the blended material in the form of black copper shots, which Elmet apparently sells. This could be reclamation.[15] Yet we do not know whether or how much of each metal in the zinc oxide is recovered. Chemetco also maintained that the silver and gold Elmet recovers come from the currently generated zinc oxide and not from the copper/tin fines. But Chemetco provided no test results showing any gold present in the currently generated zinc oxide (or the bunker's zinc oxide). Chemetco also did not prove that neither gold nor silver are present in the copper/tin fines.

Moreover, Elmet acquires the blended material for another reason as well—because its zinc content gives Elmet's smelting process extra heat, which lowers Elmet's energy costs. This could be burning for energy recovery. While we do not know how much heat the zinc contributes to the process, test results show that zinc is the predominant metal in both the currently generated zinc oxide and the bunker's zinc oxide. USEPA states that where a facility burns an unlisted, characteristic by-product to recover both energy and materials, it is burning for energy recovery, not reclaiming—that is, the facility "is considered to be burning a hazardous waste, even though the waste is an unlisted by-product, and even though there is some material recovery." 50 Fed. Reg. 614, 631 (Jan. 4, 1985).

As for what Metabel will do with the blended material, we only know that it is acquiring it "for further refining." This is not enough information for the Board to determine how the blended material will be recycled.

In summary, the Board finds that Chemetco has not shown that the relief provided by Section 720.131(a) is available. The Board emphasizes that it is not holding that the zinc oxide in the bunker is or is not solid waste; rather, Chemetco simply has not established that Section 720.131(a) applies here.[16]

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[15] "A material is 'reclaimed' if it is processed to recover a usable product, or if it is regenerated. Examples are recovery of lead values from spent batteries and regeneration of spent solvents." 35 Ill. Adm. Code 721.101(c)(4).

[16] Chemetco's request for relief also does not easily fit within Section 720.131(a) because Chemetco has requested that the Board's determination attach only when the zinc oxide is removed from the bunker. Under Section 720.131(a), that determination would attach to the zinc oxide while in the bunker, not upon its removal. Furthermore, the parties did not address whether the term "the following year," which is used twice in Section 720.131(a), limits when persons may seek relief under that section. Given the Board's ruling, however, these issues are not material at this time.

Section 720.131(a) Factors

The Board also finds that Chemetco did not provide all of the information that the Section 720.131(a) factors require. These factors are discussed in turn below.

Section 720.131(a)(1): The manner in which the material is expected to be recycled, when the material is expected to be recycled, and whether this expected disposition is likely to occur (for example, because of past practice, market factors, the nature of the material or contractual arrangements for recycling).

As discussed above at page 14, Chemetco has not provided the Board with adequate information on how the material is "expected to be recycled." In addition, there is also considerable uncertainty as to whether and when the bunker's zinc oxide would be recycled. Chemetco had been shipping the blended material to Elmet for several years and there was evidence that Elmet and Chemetco expected the arrangement to continue. Nevertheless, the arrangement was for only one year at a time and Chemetco estimated that it would take approximately five to six years to sell the bunker's zinc oxide while continuing to sell the zinc oxide it currently generates. In fact, on this record, the only actual arrangements Chemetco had to sell the blended material were to last until the end of 1997 (Elmet) or until the end of March 1998 (Metabel). Moreover, we do not know what impact the soil in the bunker may have on the likelihood that the bunker's zinc oxide will be recycled, or on the timing of its recycling.

The Board finds that Chemetco did not provide all of the information that Section 720.131(a)(1) requires.

Section 720.131(a)(2): The reason that the applicant has accumulated the material for one or more years without recycling 75 percent of the volume accumulated at the beginning of the year.

Chemetco stated that it accumulated the zinc oxide in the bunker because the market for the material was very volatile in the 1980s. Chemetco made this statement in its petition and introduced no evidence at hearing to support it. This is insufficient to meet Chemetco's burden under Section 720.131(a)(2).

Section 720.131(a)(3): The quantity of material already accumulated and the quantity expected to be generated and accumulated before the material is recycled.

Although we do not know how it was generated, the evidence shows that there is approximately 30,000 to 40,000 tons of zinc oxide in the bunker. Chemetco established the quantity of zinc oxide that it currently generates from its wet scrubber (approximately 900 to 1,000 tons per month). Chemetco proposes to handle these materials together once they enter the settling ponds.

The Board cannot say, however, how much material is expected to be generated and accumulated "before the material is recycled." To answer this, we would need to know whether and when the material would be recycled. As noted above in the discussion of the first factor, there is much uncertainty on this point, even assuming that Chemetco's rate of generating zinc oxide would not increase. The Board finds that Chemetco has not met its burden under Section 720.131(a)(3).

Section 720.131(a)(4): The extent to which the material is handled to minimize loss.

Chemetco stated that it would add water to the zinc oxide before removing it from the bunker. Although this measure should minimize air emissions while the material remains moist, Chemetco failed to provide information on how other losses, such as spills, would be minimized. For example, Chemetco has not calculated whether adding water to the bunker or other removal activities would affect the bunker's structural integrity. We also know that a bunker wall had recently leaked. In addition, Chemetco had a large spill of zinc oxide in September 1996, yet neither Chemetco's environmental coordinator nor its consultant knew exactly where the spill came from and neither could say that it did not come from the settling ponds Chemetco proposes to use for handling the bunker's zinc oxide. Chemetco offered no evidence on what measures, if any, it had taken to prevent such leakage and spillage in the future.

The Board finds that Chemetco failed to provide all of the information that Section 720.131(a)(4) requires.

Section 720.131(a)(5): Other relevant factors.

Given the absence of evidence on the first four factors, the Board does not consider it appropriate to determine whether other factors are relevant.

In summary, the Board finds that Chemetco did not provide sufficient information under Section 720.131(a)(1), (2), (3), or (4).

Section 720.131(c) Materials That Have Been Reclaimed But Must Be Reclaimed Further Before Recovery Is Completed

Section 720.131(c) reads in part as follows:

> c) The Board will determine that those materials that have been reclaimed but must be reclaimed further before recovery is completed are not solid wastes if, after initial reclamation, the resulting material is commodity-like (even though it is not yet a commercial product, and has to be reclaimed further). . . . 35 Ill. Adm. Code 720.131(c).

To be eligible for this provision, the material must have been initially reclaimed but require further reclaiming before recovery is completed. The definition of when a material is "reclaimed" is set forth above in footnote 15. USEPA explains that a material is reclaimed if (1) "material values . . . are recovered as an end-product of a process (as in metal recovery from secondary materials)," or (2) it is "processed to remove contaminants," thereby restoring the material to its "usable original condition." 50 Fed. Reg. 614, 633 (Jan. 4, 1985).

A waste being reclaimed remains a waste until reclamation is completed. Reclamation is not completed until the end-product of the process is recovered. A non-solid waste determination under Section 720.131(c) applies only to wastes after they have been initially reclaimed. See 50 Fed. Reg. 614, 620, 633-634, 655 (Jan. 4, 1985). In discussing its federal counterpart, USEPA explains that the provision is designed to address those situations where "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." 50 Fed. Reg. 614, 655 (Jan. 4, 1985).

The Board cannot find that Section 720.131(c) applies because there is insufficient evidence to prove that the bunker's zinc oxide has been initially reclaimed. In addition, Chemetco failed to provide all of the information that the Section 720.131(c) factors require. Those factors read as follows:

> 1) The degree of processing the material has undergone and the degree of further processing that is required;
>
> 2) The value of the material after it has been reclaimed;
>
> 3) The degree to which the reclaimed material is like an analogous raw material;
>
> 4) The extent to which an end market for the reclaimed material is guaranteed;
>
> 5) The extent to which the reclaimed material is handled to minimize loss;
>
> 6) Other relevant factors. 35 Ill. Adm. Code 720.131(c).

Under the first factor, Chemetco presented no evidence on what processing the material has undergone. As USEPA states, the "more substantial the initial processing, the more likely the resulting material is to be commodity-like." 50 Fed. Reg. 614, 655 (Jan. 4, 1985). Without information on this initial processing, the Board is not in a position to assess how substantial it was. As discussed above, Chemetco has not fully explained the additional processing that the material would undergo. Chemetco presented no evidence on the third factor. As for the fourth factor, the same deficiencies pointed out above in the discussion of the first factor under Section 720.131(a) are deficiencies here as well. Similarly, Chemetco

failed to address adequately the fifth factor under Section 720.131(c) for the same reasons it failed to address adequately the fourth factor under Section 720.131(a), discussed above.

In summary, the Board finds that by failing to establish that the zinc oxide in the bunker has been initially reclaimed, Chemetco has not shown that the relief provided by Section 720.131(c) is available. The Board also finds that Chemetco failed to present all of the information that section requires.

CONCLUSION

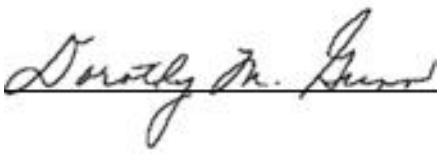
The Board finds that the evidence fails to demonstrate that Section 720.131(a) applies here. Specifically, Chemetco has not shown that the zinc oxide in the bunker is a solid waste only because it has been accumulated speculatively. In addition, the Board cannot find that Section 720.131(c) applies because the evidence does not establish that the zinc oxide has been initially reclaimed. Chemetco also failed to present all of the information required by Section 720.131(a) and (c). The Board therefore denies Chemetco's request. The Board emphasizes, however, that Chemetco may file another adjusted standard petition to provide the evidence necessary to support the non-solid waste determination it seeks.

This opinion constitutes the Board's findings of fact and conclusions of law in this matter. This case is dismissed and the docket is closed.

IT IS SO ORDERED.

Section 41 of the Environmental Protection Act (415 ILCS 5/41 (1996)) provides for the appeal of final Board orders to the Illinois Appellate Court within 35 days of service of this order. Illinois Supreme Court Rule 335 establishes such filing requirements. See 172 Ill. 2d R. 335; see also 35 Ill. Adm. Code 101.246, Motions for Reconsideration.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above opinion and order was adopted on the 19th day of March 1998, by a vote of 7-0.



Dorothy M. Gunn, Clerk
Illinois Pollution Control Board

ATTACHMENT 1

Table

	*1	*2	*3	*4
Spent materials	Yes	Yes	Yes	Yes
Sludges (listed in Section 721.131 or 721.132)	Yes	Yes	Yes	Yes
Sludges exhibiting a characteristic of hazardous waste	Yes	Yes	No	Yes
By-products (listed in Section 721.131 or 721.132)	Yes	Yes	Yes	Yes
By-products exhibiting a characteristic of hazardous waste	Yes	Yes	No	Yes

* * *

Yes - Defined as a solid waste
No - Not defined as a solid waste

*1 - Use constituting disposal (Section 721.102(c)(1))
*2 - Burning for energy recovery or use to produce a fuel (Section 721.102(c)(2))
*3 - Reclamation (Section 721.102(c)(3))
*4 - Speculative accumulation (Section 721.102(c)(4))

35 Ill. Adm. Code 721.Appendix Z.