



Background Document for First Third Wastes to Support 40 CFR Part 268 Land Disposal Restrictions (Final Rule);

Addendum: Capacity Analysis for K061 Wastes

NOTICE: If the film image
is less clear than this
notice, it is due to the
quality of the document
being filmed

005420

4/6
Addendum To The Background Document
For
First Third Wastes To Support 40 CFR Part
268 Land Disposal Restrictions

Final Rule

Capacity Analysis For K061 Wastes

United States Environmental Protection Agency
Office of Solid Waste
401 M Street, N.W.
Washington, D.C. 20460

August 1991

K61F 001

2075

005421

This document is an addendum to the background document for the First Third wastes to support the 40 CFR Part 268 Land Disposal Restrictions. This document updates the capacity analysis for K061 wastes based on the new treatment standards established for high zinc K061 and on more recent information received by EPA on high zinc K061 generation, management, and treatment. The purpose of this document is to provide information to support EPA's determination that adequate treatment capacity exists for high zinc K061 wastes. EPA notes that the analysis is in some ways academic, given that the time for granting national capacity variances for K061 ended in August 1991. [See RCRA section 3004(h)(2).] Nevertheless, the information on capacity should be useful to the regulated community.

This rule establishes new treatment standards under the land disposal restrictions for high zinc K061 wastes. EPA has determined that sufficient treatment capacity exists to treat these wastes. Although EPA has established numeric treatment standards for high zinc K061 based on the performance of high temperature metals recovery (HTMR), the Agency does not preclude the use of other treatment technologies that can meet the numeric standards established for this waste. In conducting this capacity analysis for high zinc K061 wastes, the Agency has confirmed the earlier estimates for generation volumes of high zinc K061 and again determined that there is sufficient available treatment capacity for these wastes.

Background

K061 is emission control dust/sludge from the primary production of steel in electric arc furnaces. Treatment standards for nonwastewater forms of K061 were promulgated as part of the First Third final rule on August 8, 1988. Two subcategories of nonwastewater forms of K061 were defined: the low zinc subcategory (less than 15 percent zinc) and the high zinc subcategory (greater than 15 percent). The treatment standard for the low zinc subcategory was based on stabilization.¹ For the high zinc subcategory, the final standard was "No Land Disposal Based on High Temperature Metals Recovery as a Method of Treatment" (53 FR 31221). Due to a shortage in HTMR capacity, the effective date was delayed until August, 1990. An interim numerical standard based on the performance of stabilization technology was in effect until that time. The Third Third proposed rule requested comments on the possible extension of the interim standard for high zinc K061 for one additional year (54 FR 48457). Responses from industry indicated that HTMR processes were being built but would not be available by August, 1990. Therefore, EPA extended the interim treatment standard for an additional year until August, 1991. At that point, the standard of "No Land Disposal Based on HTMR" would go into effect.

In the Third Third proposed rule, EPA also proposed to amend the existing treatment standard for high zinc K061 wastes to be remelting in a HTMR furnace. However, since the existing standard was under review by the District of Columbia Court of Appeals, EPA decided not to amend the standard in the Third Third rule. The Natural Resources Defense Council,

¹Low zinc K061 wastes are not addressed in this rule and are therefore not included in this background document.

K61F 001

2076

005422

Chemical Waste Management, Inc., and the Hazardous Waste Treatment Council claimed EPA unlawfully exempted the slag residues that result from the "treatment" of K061 in zinc smelters from the Land Disposal Restrictions. EPA had determined in the First Third rule that it lacked the authority to establish any treatment standards for the slag residues that result from the metals reclamation process, because the furnaces used for metals reclamation are components of an industrial process potentially involved in production, an activity normally beyond EPA's RCRA authority. However, the Court held that EPA had incorrectly interpreted its statutory authority and remanded the issue for further consideration.

This rulemaking is in response to the Court's remand. EPA has determined that K061 slag is subject to RCRA regulations. In addition, the Agency has established new treatment standards for high zinc K061 wastes based on the performance of HTMR.

Response to Comments

In the proposed rule, EPA recognized that generation and management of K061 wastes and the amount of available treatment may have changed since the capacity analysis for K061 was conducted for the First Third rule. Therefore, the Agency requested additional information on the generation and management of high zinc K061 wastes and the capacity of processes that can treat these wastes. Six commenters focused on HTMR capacity issues: Armco Advanced Materials Company, the Steel Manufacturers Association, the Specialty Steel Industry of the United States, Waste Management Inc., the American Iron and Steel Institute, and International Mill Service Inc.. Four commenters noted that there are other treatment processes besides HTMR that can meet the numeric treatment standards: Encycle, Michigan Disposal, Conversion Systems Inc., and Zinox. The information received was used to update the analyses presented below.

Waste Generation

For the First Third rule, data from EPA's National Survey of Hazardous Waste Treatment, Storage, Disposal, and Recycling Facilities (TSDR Survey) was used to estimate that 83.1 million gallons (345,000 tons) per year of K061 (both-high and low zinc) would require alternative treatment capacity (53 FR 31193). Data initially received from commenters on the First Third proposed rule indicated that approximately 75 percent of K061 waste contained 15 percent or more total zinc. Therefore, according to TSDR data 62 million gallons (260,000 tons) per year of high zinc K061 would require treatment capacity. However, this figure may be an underestimate of high zinc K061 generation.

Two other sources have provided the Agency with data on the generation of high zinc K061. The Horsehead Resource Development Company (HRD), the primary commercial facility currently recovering zinc from K061 wastes using HTMR, estimates that approximately 415,000 tons of high zinc K061 will be generated in 1991.

The American Iron and Steel Institute (AISI), which represents most of the generators of K061, estimates that approximately 20 pounds of K061 are generated per ton of steel that is produced (i.e., a waste-to-product ratio of 1 percent.) According to AISI, steel production in 1989 was approximately 98 million tons. Approximately 35 million tons (36 percent) of all steel is produced in electric arc furnaces. Therefore, using the estimated waste-to-product ratio of 1

NOTICE: If the film image
is less clear than this
notice, it is due to the
quality of the document
being filmed

K61F 001

2077

005423

percent, approximately 350,000 tons of K061 was generated in 1989. High zinc K061 is generated during carbon steel production. Since carbon steel accounts for 81 percent of the steel produced in electric arc furnaces, the volumes of high zinc K061 produced in 1989 was approximately 285,000 tons.

Since there is a discrepancy in the estimates of high zinc K061 generation, for the purposes of this capacity analysis, the highest figure, 415,000 tons, was used to estimate the volume of high zinc K061 requiring treatment.

Current Management Practices

AISI estimates that most high zinc K061 that is treated (about 90 percent) currently goes through HTMR. The volume of high zinc K061 being stabilized and subsequently land disposed is therefore low. The Agency believes that this may be due to the existing incentives to recycle high zinc K061. Stabilization and landfilling costs are high, and some states have provided tax incentives not to land dispose hazardous wastes. Thus, the generators of high zinc K061 that are treating their waste are doing so primarily by recycling their wastes through HTMR.

Available HTMR Capacity

The currently available HTMR capacity is estimated to be 533,000 tons per year. In addition, 40,000 tons of HTMR capacity is expected to become available by August, 1991. The following facilities account for the available capacity:

- Three Horsehead Resource Development plants are currently operating with a total annual capacity of 455,000 tons. HRD confirmed that capacity at their Palmerton, Pennsylvania plant is 265,000 tons per year, capacity at their Calumet, Illinois plant is 90,000 tons per year, and indicated that their new Rockwood Tennessee plant is now operational with a capacity of 100,000 tons rather than the expected capacity of 80,000 tons reported in the proposed rule.
- International Mill Services is currently operating two thermal dust treatment plants with a combined yearly capacity of 18,000 tons.
- Zia Technology has a zinc recovery facility capable of processing 60,000 tons per year of high zinc K061. Zia has the potential to process up to 90,000 tons of K061 per year (they are currently permitted for 60,000 tons). Their process can handle both low and high zinc, but there is a penalty for low zinc.
- Laclede Steel Company has contracted with Elkem to construct a HTMR furnace with an annual capacity of 40,000 tons per year. This furnace should be operable in August, 1991.

Therefore, a total of 573,000 tons of HTMR capacity is expected to be available as of August, 1991.

K61F 001



Available Stabilization Capacity

005424

The currently available stabilization capacity reported in the Third Third final rule is approximately 1.3 million tons per year (55 FR 22635). However, greater capacity for treating K061 may now be present. For example, Michigan Disposal, Inc. claims that chemical fixation and stabilization techniques can meet the K061 treatment standards. Michigan Disposal's current stabilization capacity for high zinc K061 is approximately 100,000 tons per year. Additionally, Chem Waste Management and Peoria Conversion Systems may also have stabilization capacity.

Extractive Metallurgy Capacity

In addition to HTMR and stabilization, other effective techniques may be present to treat high zinc K061 waste. For example, Encycle indicates their metal recovery process can treat K061 waste. Their current treatment capacity is approximately 30,000 tons per year, and this capacity is expected to increase to 60,000 tons within a year. Encycle typically recovers zinc and either stabilizes the iron residue or sends it off site as feed. There may be additional facilities that can treat high zinc K061 with extractive metallurgy processes.

Capacity Implications

Based on the data presented above, sufficient HTMR capacity exists to handle the 1991 demand for zinc recovery from K061 wastes. There is also available stabilization and extractive metallurgy capacity that can meet the treatment standards. Therefore, the Agency has determined that there is sufficient capacity to handle the volumes of high zinc K061 requiring treatment under the Land Disposal Restrictions.

K61F 001

2079

Phone Log

005425

Contact: Thomas Janeck, Director of Government and Regulatory Affairs
Company: Horsehead Resource Development (HRD) and
Zinc Corporation of America (ZCA)
Phone: 412-774-1020
Date: 12/06/90
Caller: James Hsu

General Facility Information

Horsehead Resource Development (HRD) and Zinc Corporation of America (ZCA) operate pyrolytic metal recovery facilities in Palmerton, Pennsylvania, and Calumet, Illinois. These processes are used primarily to recover zinc from K061 waste. A zinc recovery facility in Rockwood, Tennessee, is expected to come on line in 1991.

Metals Recovered

HRD recovers zinc from K061. Mr. Janeck indicated that their process can efficiently recover zinc from K061 having a zinc concentration higher than 10 percent.

Process Information

HRD's zinc recovery process does not extract nickel and chromium. Therefore, HRD blends high/nickel/high chromium K061 (generated from stainless and specialty steel manufacturing) with low nickel/low chromium K061 (from carbon steel manufacturing) so that the resultant slag passes the TCLP for nickel and chromium. Mr. Janeck indicated that INMETCO processes most of the high nickel/high chromium K061 because they extract the nickel and chromium. INMETCO's process concentrates zinc in the baghouse dust which is then sent to HRD for zinc recovery.

Mr. Janeck also indicated that the slag from the HRD process meets the stabilization standard set for low zinc K061.

Since fluxes and reductants are added to the process, there is no significant K061 volume reduction as a result of zinc recovery.

K061 Generation and Recovery Capacity

HRD marketing studies suggest that the generation of K061 will increase by approximately six percent from 1990 to 2000. K061 generation is projected to be approximately 500,000 tons in 1991 (this quantity does not include the low zinc, high nickel/high chromium K061, which is estimated to be 10 to 20 percent of the high zinc, low nickel/low chromium quantity).

K61F 001

2080

NOTICE: If the film image
is less clear than this
notice, it is due to the
quality of the document
being filmed

Phone Log (continued)

HRD's estimate of available ITMR capacity in 1991 is:

005426

HRD (Palmerton, PA)	265,000 tons/year
HRD (Calumet, IL)	90,000 tons/year
HRD (Rockwood, TN)	80,000 tons/year
Zinc Nationale (Mexico)	50,000 tons/year
Zia Technology (Texas)	40,000 tons/year
Elkem	40,000 tons/year
<hr/>	
Total 1991 Capacity	565,000 tons/year

Waste Management

Mr. Janeck indicated that there is a strong incentive to recycle the high zinc K061 because:

- (1) Stabilization and landfilling costs are high;
- (2) Generators prefer recycling because it eliminates their long-term liability; and
- (3) Some states (e.g., California) have provided tax incentives not to land dispose.

K61F-001

2008 1

Phone Log

Contact: John Onuska, Director of Marketing

Company: INMETCO

Phone: 412-758-2210

FAX: 412-758-2578 or 9311

Date: 12/12/90

Caller: James Hsu

005427

General Facility Information

INMETCO operates a pyrolytic metals recovery facility in Elwood, Pennsylvania, which consists of a rotary hearth furnace followed by an electric furnace.

Metals Recovered

INMETCO produces an ingot containing iron, nickel, and chromium, which is sold as a feed stock to the stainless steel industry. Based on 1989 estimates (about 52,000 tons per year received), around 40 percent of total mass input goes to this product. About 25 percent results in nonhazardous slag (i.e., meets the TCLP standards for zinc, nickel, and chromium) and is sold as road aggregate. Around 10 percent goes to zinc co-production (typically containing more than 28 percent zinc, about six percent lead, and less than one percent cadmium) and is sold to a zinc reclamation facility (HRD). Other metal-bearing wastes are also processed for chromium (about 89 percent recovery), nickel (about 96 percent recovery), or other metals.

Waste Generation and Treatment Capacity

INMETCO accepts K061 classified as low zinc (less than 15%) which has recoverable amounts of nickel and chromium (generated from stainless and specialty steel manufacturing). Their process concentrates zinc in a baghouse dust to about 28 percent. The dust also contains approximately six percent lead, and one percent cadmium. This dust is sent to Horsehead (HRD) for zinc recovery.

Mr. Onuska is aware of HRD's projections for 1991 high zinc K061 generation. He believes that the volume of low zinc, high nickel/high chromium that is generated will amount to approximately 10 percent of the high zinc, low nickel/low chromium generation volume.

K61F001

2082

NOTICE: If the film image
is less clear than this
notice, it is due to the
quality of the document
being filmed

Phone Log

Contact: Bob Hilton, VP of Sales and Marketing
Company: Conversion Systems Inc., Horsham, PA
Phone: 215-784-0990
Date: 1/24/91
Caller: James Hsu
Subject: Stabilization of K061

005420

Mr. Hilton acknowledged that Conversion Systems Inc. (CSI) is currently stabilizing low zinc K061 (less than 15 percent zinc). CSI manages baghouse filtercake only from Northwestern Steel and Wire's (NWS&W) Sterling, IL, plant. CSI chemically stabilizes the filtercake and disposes it in a Subtitle C landfill on site at the Sterling plant. CSI in 1990 processed 48,000 tons of low zinc K061. Most of the stabilized filtercake passes the TCLP procedure.

K61F 001

2084

NOTICE: if the film image
is less clear than this
notice, it is due to the
quality of the document
being filmed

Phone Log

Contact: Gene Matthews
Company: Peoria Disposal Company, Peoria, IL
Phone: 309-688-0760
Date: 1/25/91
Caller: James Hsu
Subject: Stabilization of K061

005430

Mr. Gene Matthews indicated that Peoria Disposal Company processes only low zinc K061. He estimates that Peoria processed approximately 27,000 tons of low zinc K061 in 1990.

K61F 001

2006/5

NOTICE: If the film image
is less clear than this
notice, it is due to the
quality of the document
being filmed

Phone Log

Contact: Steve Herbst
Company: Chem Waste Management
Phone: 708-218-1500
Date: 1/23/91
Caller: James Hsu
Subject: Stabilization of K061 and Status of Proposed HTMR Facility

005431

Mr. Herbst indicated that Chem Waste Management (CWM) stabilizes predominantly low zinc K061. He does not have information of how much high zinc K061 CWM processes, but he acknowledged that CWM processes very little high zinc K061. CWM has stabilization capacity at their Indiana and Alabama facilities to process K061.

In the K061 background document, CWM submitted a letter to EPA indicating their interest in building a high temperature metals recovery (HTMR) facility in the Jackson, Mississippi area that could manage up to 100,000 tons of K061 per year. Mr. Herbst indicated that the HTMR project has been put on hold, but declined to provide the reason for putting the project on hold.

K61F-001

2086

NOTICE: if the film image
is less clear than this
notice, it is due to the
quality of the document
being filmed

Phone Log

Contact: Robin Fathenthal
Company: Heritage Environmental Services, Inc., Indianapolis, IN
Phone: 317-243-0811
Date: 1/25/91
Caller: James Hsu
Subject: Stabilization of K061

005432

Ms. Fathenthal indicated that Heritage manages very little K061. She estimates that in 1990, Heritage stabilized approximately 5,400 tons of K061. Ms. Fathenthal does not know whether this quantity is high zinc or low zinc K061.

K61F 001

2087

NOTICE: If the film image
is less clear than this
notice, it is due to the
quality of the document
being filmed

Phone Log

Contact: Brian Correa
Company: U.S. Pollution Control Inc., OK
Phone: 405-697-3236
Date: 1/24/91
Caller: James Hsu
Subject: Stabilization of K061

005433

Mr. Correa was not authorized to answer questions on K061 stabilization. He asked that
we provide the questions in writing to:

Mr. Randy Miller (USPCI)
515 West Greens Rd.
Suite 500
Houston, TX 77067.

K61F 001

2088

NOTICE: If the film image
is less clear than this
notice, it is due to the
quality of the document
being filmed

Phone Log

Contact: Bob Desco, Manager of Operations
Company: Dereco, Inc.
Phone: 216-566-0190
Date: 5/18/91
Caller: James Hsu
Subject: Management of K061

005434

Dereco Inc. collects and recycles J&L Specialty Products Corporation's stainless steel baghouse dust (typically low zinc dusts). Dereco periodically receives bleed-off baghouse dust from J&L, and recovers the zinc and lead from the dust using a high-temperature kiln. The recovered product usually contains 65 percent zinc oxide and 3 percent lead oxide, and is sold to zinc smelters. Residual from the high-temperature kiln is recycled back to the J&L smelter.

Mr. Desco indicated that Dereco recycles 14,000 tons of J&L's baghouse dust per year. This arrangement eliminates the need for J&L to ship K061 off site for management. Dereco is currently negotiating with LTV Steel to set up a similar recycling arrangement.

K61F 001

2087

NOTICE: If the film image
is less clear than this
notice, it is due to the
quality of the document
being filmed

Phone Log

Contact: John Cigan
Company: Horseshoe Resource Development (HRD)
Phone: 215-826-8719
Date: 5/21/91
Caller: James Hsu

005435

Waelz Kiln

Mr. Cigan stated that data used for the BDAT was only one trial using high zinc K061. Waelz kilns are large units used to handle K061 from generators in the region. The variability in K061 allows HRD to blend the feed to meet the TCLP standards. However, HRD may have problems achieving the vanadium and thallium (and other trace metals) standards because the BDAT standard was set using an atypical process input. Mr. Cigan indicated that low zinc K061 is mixed with high zinc K061 to achieve the optimal feed, which has to be 20 percent zinc by weight. He also reported that the Rockwood plant will be operational by August 1991.

Flame Reactor

This process targets a different K061 market than the Waelz kiln. Flame reactors are designed to be constructed on-site at arc furnaces to process the K061 dust. The flame reactor is restricted to handle one to three sources of dust. Because the process is different (i.e., slag is different) than the Waelz kiln and the design arrangement does not allow blending of K061; the flame reactor may not achieve the TCLP standards.

K061 Generation

Mr. Cigan revised Thomas Janeck's estimate of the generation of high zinc K061 wastes from 550,000 tons per year to 415,000 tons per year.

K61F 001

2090

NOTICE: If the film image
is less clear than this
notice, it is due to the
quality of the document
being filmed

Phone Log

Contact: John Cigan
Company: Horschad Resource Development (HRD)
Phone: 215-826-8719
Date: 5/22/91
Caller: Mario Kerby

005436

The capacity at the Rockwood, IL facility is 100,000 tons per year. HRD confirmed the available capacity at other HRD facilities. In 1990, 77 percent of the K061 processed was high zinc and 23 percent was low zinc.

K61F 001

2091

NOTICE: If the film image
is less clear than this
notice, it is due to the
quality of the document
being filmed

Phone Log

Contact: Gazi George
Company: Wayne Disposal, Michigan
Date: 5/23/91
Cailer: Mario Kerby

005437

Wayne Disposal was handling large volumes of K061 before the rule. After the rule, they lost half of their K061 business. Wayne believes that EPA should go with the delisting numbers. The wastes they currently stabilize include F006. Their stabilization capacity is 5 million gallons a month (200,000 yd³). Forty percent of their total capacity could be dedicated to K061. They are currently treating 1,500-2,000 yd³/month (conversion factor of 4,000 lbs/yd³).

They will gladly submit data upon a written request.

K61F 001

2092

NOTICE: If the film image
is less clear than this
notice, it is due to the
quality of the document
being filmed

Phone Log

Contact: Norm Kotraba
Company: Zia Technology
Phone: 409-567-7777
Date: 5/21/91
Caller: James Hsu

005438

Mr. Kotraba stated that the TCLP should not affect Zia Technology because they don't landplace any residuals. Their process effluents are: prime Western grade zinc; Rennelt lead bullion; and direct reduced iron pellet (sent to arc furnaces as raw materials).

They are in semi-production mode and are expected to begin commercial production by July 1991. Their process can handle low and high zinc K061, but there is a penalty for low zinc. They currently find it difficult to get a steady stream of K061 to keep their process in operation. If they can get a sufficient flow of K061, the Zia process can potentially process 85,000 to 90,000 tons of K061/year (they are permitted 60,000 tons/yr). Much of this information was presented at a recent EPA/SMA meeting.

K61F 001

2093

NOTICE: If the film image
is less clear than this
notice, it is due to the
quality of the document
being filmed

Phone Log

005439

Contact: Robert Odie

Company: Encycle

Date: 5/22/91

Caller: Mario Kerby

Mr. Odie indicated that available capacity for K061 depends on what they choose to process. The firm has the capacity to process solids of up to 5,000 tons per month. They currently recover zinc. The process they use produces pyrrhic hydroxide as an end product which can be used as a reductant and can be used as a feed. In general, the firm uses higher zinc content materials. At present, most of their capacity is taken up by other wastes. They are planning to take iron hydroxide waste and make it into some other compound since for these wastes the BDAT was not clear. There is no residue generated from the hydrometallurgical process. The other option is to recover zinc and stabilize the iron residue. The firm would like the regulations written in such a way that they can help.

K61F 001

2094

NOTICE: If the film image
is less clear than this
notice, it is due to the
quality of the document
being filmed

005440

APPENDIX A

K061 Capacity Analysis for the
First Third Final Rule

K61F 001

2095

K061

005441

RCRA hazardous waste K061 is described as emission control dust/sludge from the primary production of steel in electric furnaces. K061 is listed as a hazardous waste because of the presence of hexavalent chromium, lead, and cadmium. For K061 containing ≥ 15 percent zinc (high zinc K061), the Agency has identified the BDAT technology to be high temperature metals recovery. For K061 containing < 15 percent zinc (low zinc K061), the Agency has identified the BDAT technology to be stabilization. The TSDR Survey does not contain data that would allow the Agency to differentiate between high zinc and low zinc K061. However, based on information from public comments on the proposed rule, the Agency estimates that 75 percent of the K061 requiring alternative treatment is high zinc K061. Table 2-23 shows the volumes of K061 waste identified by the Agency as requiring alternative treatment.

One waste stream reported in the TSDR Survey (67,920 gallons) was reported as a mixed K061 and K062 stream. After reviewing the survey information, it was determined that the waste stream had been received from an offsite facility and was directly landfilled. Because of this information and the characteristics of the waste codes involved, the Agency assumed that the waste stream is an inorganic solid. The Agency believes that these wastes will likely be segregated upon promulgation of the land disposal restrictions and, therefore, will no longer be generated as a mixed waste stream. To conservatively estimate the volumes of K061 and K062 that will require alternative treatment, the

K61F 001

2096

NOTICE: If the film image
is less clear than this
notice, it is due to the
quality of the document
being filmed

5247s/28

005442

Table 2-23 Capacity Analysis for K061^a

Type of alternative treatment/recovery	1969 volume needing alternative capacity (gallons/year)
High temperature metals recovery	62,357,226
Stabilization	<u>20,785,747</u>
Total	83,142,968

^aBaseline volumes data from TSDR Survey for 1986 (facility responses as of July 22, 1986). Volumes do not include underground injection quantities or contaminated soils.

K61F 001

2077

005443

entire volume of this waste stream was assigned to the BDAT technologies for both K061 and K062, with no resulting impact on capacity variance determinations for those wastes (see below).

The Agency believes that sufficient high temperature metals recovery capacity does not exist for high zinc K061. For the proposed rule (R-4 Ref. 11), EPA analyzed the length of the required to install a BDAT treatment system for K061 waste. Based on this analysis, EPA estimates that a BDAT treatment system could be constructed within two years. This estimate does not include the time required for preparation and approval of RCRA and/or State permit applications because high temperature metal-recovery is considered recycling, and as such, is exempt from RCRA permitting.

Therefore, the Agency is granting a 2-year national capacity variance from the ban effective date for K061 wastes requiring high temperature metals recovery. However, the Agency is setting an interim standard for high zinc K061 based on stabilization.

Several commenters were concerned that commercial facilities with available stabilization capacity were not permitted specifically for K061 waste. However, review of the TSDR Survey data indicates that there is approximately 205 million gallons of existing (not planned) available capacity at facilities that accepted K061 for stabilization in 1986 or said they would accept K061 for stabilization. These facilities included GSX Services of South Carolina, Peoria Disposal Inc., and several CBI

K61F 001

2078

NOTICE: If the film image
is less clear than this
notice, it is due to the
quality of the document
being filmed

005444

facilities. Because they have accepted K061 for stabilization in the past, the Agency assumes the facilities were permitted to stabilize K061 wastes.

Based on the information in the ISDR Survey, the Agency believes that adequate stabilization capacity exists for high zinc and low zinc K061. Therefore, the Agency is not granting a capacity variance from the ban effective date for K061 wastes based on stabilization.

K61F 001

2099

L