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BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

SEP 10 1999

| | | |
|----------------------------------|---|-------------------------|
| IN THE MATTER OF: |) | STATE OF ILLINOIS |
| |) | Pollution Control Board |
| PETITION OF HORSEHEAD RESOURCE |) | AS 00-2 |
| DEVELOPMENT COMPANY, INC. FOR AN |) | (Adjusted Standard - |
| ADJUSTED STANDARD UNDER 35 ILL. |) | RCRA) |
| ADM. CODE 720.131(c) |) | |

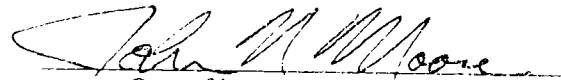
NOTICE OF FILING

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| TO: Dorothy M. Gunn, Clerk ILLINOIS POLLUTION CONTROL BOARD 100 West Randolph Street -- 11 th Floor Chicago, IL 60601 | Peter Orlinsky Assistant Counsel Division of Legal Counsel ILLINOIS ENVIRONMENTAL PROTECTION AGENCY 1701 S. First Avenue, Suite 600 Maywood, IL 60153 |
| Robert Lawley Chief Legal Counsel ILLINOIS DEPARTMENT OF NATURAL RESOURCES 524 S. Second Street Springfield, IL 62701 | |

Please take notice that on Friday, September 10, 1999, we hand delivered to the Clerk of the Pollution Control Board HORSEHEAD RESOURCE DEVELOPMENT COMPANY, INC.'S REPLY TO THE RESPONSE OF THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, a copy of which is attached hereto and served upon you.

Respectfully submitted.

HORSEHEAD RESOURCE DEVELOPMENT
COMPANY, INC.

By 
One of its Attorneys

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THIS FILING IS SUBMITTED ON RECYCLED PAPER

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**HORSEHEAD RESOURCE DEVELOPMENT
COMPANY, INC.'S REPLY TO THE RESPONSE
OF THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY**

Pursuant to 35 Ill. Adm. Code 106.414(b), petitioner Horsehead Resource Development Company, Inc. (HRD), through its attorneys, hereby replies to the Illinois Environmental Protection Agency's (Illinois EPA) Response to Petition for Adjusted Standard filed on August 27, 1999 (Response). HRD's Petition for an Adjusted Standard (HRD Petition) requests an adjusted standard for crude zinc oxide (CZO) produced from the recycling of electric arc furnace dust and smaller quantities of other zinc-bearing hazardous and non-hazardous waste feedstocks. In its response, Illinois EPA agreed that HRD's Petition satisfies the applicable regulatory criteria in 35 Ill. Adm. Code 720.131(c) and recommended that the Board grant the adjusted standard, assuming that HRD satisfactorily responds to two questions and presents supporting evidence at hearing.

HRD agrees with the analyses and recommendations in Illinois EPA's Response, and answers Illinois EPA's two questions in this Reply. In particular, HRD concurs with Illinois EPA that the Board's recently-granted adjusted standard for Big River Zinc Corporation's (BRZ) zinc oxide material has "strong precedential value," and that the relief obtained by BRZ is "virtually the same as the relief sought by HRD." Response at

4 (citing In re Petition of Big River Zinc Corporation for an Adjusted Standard Under 35 Ill. Adm. Code 720.131(c) (April 15, 1999), AS 99-3 (BRZ Opinion and Order), amended May 6, 1999). HRD's CZO and BRZ's zinc oxide material are virtually identical in source, composition, and process suitability, and HRD has demonstrated compliance with the regulatory criteria in 35 Ill. Adm. Code 720.131(c) in a manner similar to BRZ. The remainder of this Reply addresses Illinois EPA's two questions.

1. Comparison with Raw Material

HRD agrees with Illinois EPA's statement that the percentages of zinc, iron, and lead in zinc concentrates produced from mined ore and in CZO are very similar. Response at 3. Illinois EPA asked, however, whether the "higher chlorine content [in CZO] poses any pollution control problems not inherent in the processing of mined zinc."¹ Id. In short, as explained below, the presence of chlorides does not pose any pollution control problems or otherwise impede the processing of CZO.

Direct Feedstock for Zinc Production

One of CZO's uses is as a direct feedstock in zinc production at ZCA's zinc production facility in Monaca, Pennsylvania. See HRD Petition at 13-14. No separate salts removal step is necessary for this use. CZO is blended with other feedstocks (roasted mined zinc concentrate and other low-sulfur zinc oxides) and the combined feedstock is sintered, which results in two materials: zinc sinter and lead concentrate. The salts partition primarily to the lead concentrate, which serves as a feedstock in another processing circuit at the facility. Incidental salts in water from that processing

¹ While HRD reported the elemental presence in terms of "chlorine," this element is present in CZO as "chlorides" or "salts." In the remainder of this Reply, HRD uses the terms chlorides or salts to respond to Illinois EPA's questions.

circuit are discharged to an NPDES-permitted outfall. The zinc sinter is charged to the electrothermic furnace for the final step in the production of zinc metal.

Direct Feedstock for Calcining

CZO also is used as a direct feedstock for calcining at HRD's facility in Palmerton, Pennsylvania. See HRD Petition at 15-17. HRD calcines a portion of the CZO in part for the same reasons that BRZ washes its zinc oxide material. Compare HRD Petition at 16 (calcining of CZO increases the efficiency and longevity of ZCA's sintering product collectors) with BRZ Opinion and Order at 12 (salts could corrode BRZ's refinery equipment). Calcining results in zinc calcine and lead concentrate, and further purifies the CZO by removing the lead and salts, which partition to the lead concentrate. Again, no additional pollution control measures are required. The lead concentrate is processed at an HRD affiliate for metals recovery and the salts are disposed of in a permitted nonhazardous underground injection well. The zinc calcine is sent to ZCA's Monaca, Pennsylvania facility, where it is sintered in combination with CZO and other zinc concentrates.

2. Minimization of Loss

Illinois EPA agrees that HRD satisfactorily minimizes the potential for CZO loss during handling by several means, including:

1. All unloading and conveying operations are enclosed and controlled by Illinois EPA permitted baghouses.
2. The HTMR process produces no wastes and no wastewater discharges.
3. After production, CZO is transferred to railcars in an enclosed, pressurized system, and
4. Off-site transportation of CZO must comply with U.S. Department of Transportation regulations.

Response at 4. While agreeing that HRD minimizes the potential loss of CZO, Illinois EPA suggested in its Response that HRD "address its procedures for dealing with accidental spills, ruptured baghouses, or other environmental concerns." Response at 4. Fundamentally, HRD's process design minimizes the potential for loss of CZO. As explained in HRD's Petition (pages 7-9), CZO is managed entirely in enclosed buildings, containers, and conveyances, and therefore is protected from exposure to the outside environment. Nevertheless, in the highly unlikely event that a spill of CZO occurred, HRD is fully prepared to respond quickly and effectively to prevent exposure and recover the CZO.

Employees trained to respond to emergencies staff HRD's Chicago facility 24 hours, seven days a week. HRD implements a multi-pronged prevention and response strategy, including:

- Employee training programs,
- Inspection and monitoring programs,
- Preventative maintenance,
- Comprehensive housekeeping programs,
- Emergency equipment, and
- Arrangements with appropriate authorities.

These programs and procedures greatly minimize the possibility of a spill of CZO or other material. If a spill of CZO were to occur, however, trained HRD personnel would immediately respond to the spill. The entire area where CZO is managed is paved with asphalt or concrete, which would contain any CZO spill and facilitates removal of the material by industrial vacuum trucks, road sweepers, and other appropriate containment equipment. The recovered CZO would be returned to the recycling process.

An accidental release due to product collector bag failure also is unlikely to occur. HRD operates two Illinois EPA-permitted product collectors, each with 12 compartments. A 24-hour opacity monitor continuously measures exit gases from the product collectors, and an alarm connected to the monitor alerts the kiln operator if opacity levels increase. Given the large number of bags in each compartment, individual failures are unlikely to affect the recycling operation or otherwise require an emergency response. Nevertheless, if a product collector bag or compartment is the suspected cause of a failure, HRD immediately removes the affected unit from service without interruption to the remaining compartments, initiates repairs, and returns the unit to service.

Thus, HRD has well-designed and effective procedures for addressing immediately any contingencies, including those posited by Illinois EPA, demonstrating that CZO is handled carefully to minimize loss.

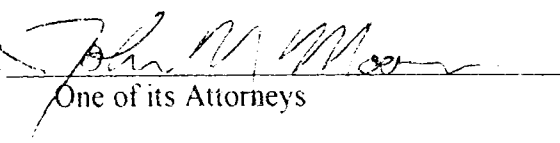
CONCLUSION

WHEREFORE, for the reasons set forth above and in HRD's Petition, which demonstrate that HRD satisfies all the criteria for an adjusted standard, HRD respectfully requests that the Board grant HRD an adjusted standard for CZO produced from the recycling of electric arc furnace dust, and smaller quantities of zinc-bearing hazardous and non-hazardous waste feedstocks.

Respectfully submitted,

HORSEHEAD RESOURCE DEVELOPMENT
COMPANY, INC.

By


One of its Attorneys

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Date: September 10, 1999

CERTIFICATE OF SERVICE

I, the undersigned, on oath state that I served the foregoing HORSEHEAD RESOURCE DEVELOPMENT COMPANY, INC.'S REPLY TO THE RESPONSE OF THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY upon the following in the manner indicated below, this 20th day of July, 1999, in Chicago, Illinois:

Dorothy M. Gunn, Clerk
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