

## Summary of AISI Views on CERCLA 108b Hardrock Mining NPRM

### Meeting with Byron Brown

June 20, 2017 11:00 am-12:00 pm

#### Comment

EPA should include iron ore mining among the 59 categories of low risk mining classes that were excluded from the definition of hardrock mining in the CERCLA 108b proposal of Dec 2016.

"§320.60 Applicability (a)(1) The requirements of this subpart apply to owners or operators of hardrock mining facilities within the classes identified in the Federal Register notice issued by EPA at 74 FR 37213 (July 28, 2009) that are authorized to operate, or should be authorized to operate, ..." 82 FR 3503

The 2009 FR Notice stated: "For purposes of this notice, hardrock mining facilities include those which extract, beneficiate or process metals (e.g., copper, gold, iron, lead, magnesium, molybdenum, silver, uranium, and zinc) and non-metallic, non-fuel minerals (e.g., asbestos, gypsum, phosphate rock, and sulfur)." 74 FR 37213

#### Industry Background

The iron ore industry, which is directly reliant on the domestic steel sector, is comprised of eight large, active iron ore mining and processing facilities located in Michigan's Upper Peninsula and the area of Northeast Minnesota known as the Mesabi Iron Range.

- Cliffs owns and/or manages five of these mines, with two mines operated by U.S. Steel and one facility operated by ArcelorMittal USA. These facilities directly employ approximately 4,500 workers.
- The sites where the mines are located vary in size from 4,000 to 17,500+ acres. These sites include open pit mines, processing facilities, stockpiling areas and tailings basins for the deposition of inert earthen material, which is essentially silica sand.

The industry is just emerging from a historic downturn that had its roots in the 2015 – 2016 steel import crisis. During the worst of this commodity recession, six of the eight active domestic iron ore mines were idled for an extended period of time, adversely affecting thousands of workers and their families.

- In the wake of aggressive trade enforcement by the U.S. federal government, the industry is now in the midst of a fledgling recovery and, fortunately, all of our major domestic mines are once again operational. However, the condition of the domestic steel and iron ore sectors remains tenuous at best and we are counting on additional sustained relief from illegal steel imports to result from President Trump's efforts.

In the 1950s and '60s, an innovative process was created to mine low-grade iron-bearing rock (containing ~20% iron), extract the iron from that material, and combine those iron units with bentonite (clay) to form an iron ore pellet containing greater than 60% iron.

- Those pellets are subsequently fired in an indurating furnace to harden the product for shipping. Most domestically-produced iron ore is transported by freighters to blast furnaces on the lower end of the Great Lakes.

## Impact on Iron Ore Mining Operations

The prospect of the iron ore mining sector having to comply with federal CERCLA 108b financial assurance requirements for hardrock mining that are at all similar to the Dec 2016 NPRM would be devastating and impossible to secure.

The formula in the Proposed CERCLA 108b HRM action over-calculates the risk of iron mining.

- The formula estimates FA for the iron ore mining industry to exceed \$8 billion dollars, a figure that exceeds the annual value of domestic iron ore distributed in commerce.
- Further, the financial markets are not available for the amount of FA required. Even if they were it would be cost prohibitive to comply with.
- In developing the rule and cost estimate formula, EPA did not consult with the state agencies responsible for regulating the iron ore industry, EPA's application of non-ferrous risk and cost estimating assumptions is fundamentally flawed and entirely inappropriate.

The 2009 FR notice which first laid out the definition of hardrock mining for purposes of CERCLA 108b does not have a record supporting the inclusion of iron ore mining, and was a final action that did not go through public notice and comment.

The Dec 2016 NPRM specifically called for reconsideration of iron ore mining being classified as high risk for financial assurance purposes. "... EPA further solicits comment on whether classes of mines identified by commenters as presenting a lower level of risk of injury based on facility characteristics and operations could potentially encompass iron ore, phosphate, and uranium mines." 82 FR 3456 (italics added)

- Iron ore mining shares more in common with the mining operations that EPA excluded from the definition of HRM, such as sand and gravel or limestone.

## Iron Ore Mining as a Low Risk Category

According to EPA's own factors, iron ore mining should be considered low risk.

- *Risk factor 1: Annual amount of hazardous substances released to the environment*
  - Tables in the docket listing hazardous substances released from the array of mining categories should not rely on data for "Iron and steel mills" as a surrogate for iron ore mining.
  - Using TRI data from iron and steel mills as a surrogate is inaccurate and misleading as a metric for risk, and thus for inclusion in the definition of HRM for this rule.
  - EPA, Minnesota and Michigan exempted iron ore mining from EPCRA Section 313 Toxic Release Inventory (TRI) reporting. In reaching that determination, EPA concluded:
    - 1. The extraction and beneficiation of iron ore do not routinely use hazardous substances to produce a final product, and toxic chemical releases and transfers were not sufficient quantities to warrant reporting;
    - 2. No facilities were expected to meet the threshold reporting levels under EPCRA
    - 3. Iron ore mining and associated facilities do not make extensive use of toxic chemicals for processing their product
  - Iron ore mining and processing predominantly involves a physical separation process involving use of water, it certainly is not a chemical intensive process such as copper, nickel, gold, lead, zinc, etc.

- The low risk nature of iron ore mining led EPA to include a very narrow list of constituents (iron, TSS, pH) for the ore mining effluent limitation guidelines (ELGs) under the CWA.
- Finally, most of the iron ore mining sites are small quantity generators or conditionally exempt generators of hazardous waste which are sent off-site for treatment.
- *Risk factor 2: Number of facilities in active operation and production*
  - The iron ore industry is small and localized business sector operating eight (8) active facilities, further supporting a low risk profile from a CERCLA perspective.
  - Each open pit mine site included a concentration plant and pelletizing plant
  - 98% of the usable iron ore products in the United States went to steel producers, with the remaining 2% for nonsteel end uses
  - Estimated value of iron ore shipments: \$3.0 – 5.0 billion
- *Risk factor 3: Physical size of the operation*
  - Varies – 4,000 to 17,500+ acres
  - Although the physical size of these operations may be considered large, this industry is governed by an extensive framework of regulations that substantially reduce risks and make any additional requirements under CERCLA 108(b) unwarranted.
  - Formal environmental reviews under NEPA and Minnesota’s Environmental Protection Act (MEPA) have not revealed any material risks associated with iron ore mining.
- *Risk factor 4: Extent of environmental contamination*
  - First, using TRI data from “iron and steel mills” category as a surrogate for iron ore mining is inaccurate and misleading as a metric for risk.
  - Second, it should be clearly stated, no document in the record for the 2009 FRN provides evidence of any kind of high risk for environmental contamination from iron ore mining sites; such evidence in the record is obvious for other types of mining, gold, copper, etc.
  - Many of the former mine pits offer safe and reliable public resources, such as recreational lakes and drinking water sources for some local communities.
  - Finally, the industry is highly regulated which further prevents wide spread potential for contamination.
- *Risk factor 5: Number of sites on the CERCLA Site Inventory (National Priority List (NPL) sites and Non-NPL sites)*
  - This factor ties most directly with the overall purpose of the rule – i.e., to identify mining categories most likely to one day need Superfund monies for cleanup.
  - EPA’s Phase II review of this category identified nine NPL sites (Gold – 6, Copper – 2, Molybdenum – 1)
  - Iron ore NPL and Non-NPL Sites: 0 (there have never been any)
- *Risk factor 6: Government expenditures / Risk factor 7: Projected clean-up expenditures*
  - Both are \$0
- *Risk factor 8: Corporate structure and bankruptcy potential*
  - Larger International Corporations

### Conclusions

In sum, we believe that EPA’s risk factors, assessed correctly, would result in iron ore mining being excluded from the CERCLA 108(b) definition.

We think iron ore mining is low risk and should have been included in the 59 other categories of mining deemed by EPA to be low risk back in 2009 in the FR notice.

Further, the NPRM specifically called out this question regarding the low risk nature of iron ore mining, making a new definition that excludes iron ore mining a logical outgrowth of the public comments received.

The proposed formula for establishing hardrock mining liability includes blast furnace as a mineral processing unit. Blast furnaces are not co-located with iron ore mines, but are in different states. They should not be included in the iron ore mining category for purposes of this CERCLA 108b action.