

# U.S.EPA Investigation Areas(IA) at ArcelorMittal Site, Burns Harbor, Indiana

03/29/10

**Area Name: IA-22** Slabbing Mill Slabber Scale Pile Oil Skimmings Hopper and Mill Scale Management Area  
Description: Slabbing mill slabber scale pile oil skimmings hopper and mill scale management area. This area consists of two steel basins used to collect molten slag from the blast furnaces. Area Status: Active Storage Area for Materials. Waste Classification: NA. EPA Evaluation of Area: Based on a review of the data collected from IA-22, all results for all constituents of potential interest in the waste, soil, and groundwater were below their respective screening levels. No further action is recommended or warranted.

**Area Name: IA-43** Blast Furnace Slag Quench Basins  
Description: Slag quench basins for waste oil (used since 1986) and an adjacent area for storage of mill scale prior to recycling (used since 1969). Area Status: Inactive Storage Area for Material. Waste Classification: NA. EPA Evaluation of Area: Based on a review of the data collected from IA-43, no constituents were found in groundwater at concentrations above conservative screening levels. No further action is recommended or warranted.

**Area Name: IA-18** No. 1 Caster Scale Pile Oil Skimmings Hopper  
Description: A movable steel hopper located on concrete and asphalt that receives oil that is skimmed from the surface of the water in the scale pit. Area Status: Active Storage Area for Material. Waste Classification: NA. EPA Evaluation of Area: Based on a review of the data collected from IA-18, all results for all constituents of potential interest from the soil and groundwater samples were below screening levels. No further action at this IA is recommended or warranted.

**Area Name: IA-38** Riparian Fill Area  
Description: This area consists of 246 acres of riparian fill land constructed from 1982 to 1983 pursuant to permits from the Indiana Department of Conservation and the U.S. Army Corps of Engineers. The area consists of five sub-areas: Basic Oxygen Furnace (BOF) Sludge Processing Area, BOF Sludge Storage Piles, Secondary Wastewater Treatment Plant (SWTP) Sludge Processing/Disposal Area, Mill Scale Piles, and Construction Waste Landfill. Area Status: Active Storage Area for Material. Waste Classification: NA. EPA Evaluation of Area: Based on a review of the data collected from IA-38, all analytical results for all constituents of potential interest in the waste, groundwater, surface water, and air are below conservative screening levels. No further action at this IA is recommended or warranted.

**Area Name: IA-20** Fuel Oil Tank Farm Diked Area, Waste Oil Hopper at No. 1 Fuel Oil Station and Waste Oil Hopper at No. 2 Fuel Oil Station  
Description: This area consists of an storage tank for fuel oil, two steel storage hoppers and the surrounding soil. The area covers approximately 450,000 square feet. The area has been used for fuel oil storage since the late 1960s. Area Status: Inactive Storage Area for Fuel Oil. Waste Classification: NA. EPA Evaluation of Area: Based on the sample results and the anticipated future industrial land use, it was determined that the soil and groundwater at this area met the screening levels and no further investigation or action was warranted.

**Area Name: IA-34** Cold Strip Mill Spent Pickle Liquor Truck Loading Station  
Description: This area is a truck loading station used intermittently since the early 1970s for spent pickle liquor for off-site reuse. Area Status: Truck Loading Area for Material. Waste Classification: NA. EPA Evaluation of Area: Based on the results of the confirmatory sampling as well as the completion of an improved secondary containment device, it was determined that the soil and groundwater at this area met the screening levels and no further investigation or action was warranted.

**Area Name: IA-36** Cosmoline HF-130 Bulk Loading Area  
Description: This is a loading area for virgin, non-hazardous hydraulic fluid. Area Status: Active Loading Area. Waste Classification: NA. EPA Evaluation of Area: Based on an April 10, 1997 Consent Agreement/Consent Order from the EPA, activities in this area included the excavation of soil from the area, collection and analysis of confirmatory soil samples, report preparation, and construction of a new containment structure. Based on the results of the confirmatory sampling as well as the completion of an improved secondary containment device, it was determined that the soil and groundwater at this area met the screening levels and no further investigation or action was warranted.

**Area Name: IA-37** 601 Othouse Bulk Loading Area  
Description: This is an unloading area for virgin lubricants from tanker trucks in use since 1962. Area Status: Active Material Handling Area. Waste Classification: NA. EPA Evaluation of Area: Based on a review of the data collected from IA-37, all results for all constituents of potential interest in the soil and groundwater were below conservative screening levels. No further action is recommended or warranted.

**Area Name: IA-33** Hydrochloric Acid Storage Tank Area for Pickling Lines  
Description: Two spills of spent pickle liquor occurred in this area, one in 1989 and one in 1991. Each spill was cleaned up at the time they occurred through neutralization, excavation of contaminated soil and placement of clean limestone surface material. It was also subsequently paved to prevent future impacts. Area Status: Active Storage Area. Waste Classification: NA. EPA Evaluation of Area: Based on a review of the data collected from IA-33, all results for all constituents of potential interest in the soil and groundwater were below their respective screening levels. No further action is recommended or warranted.

**Area Name: IA-24** 160-inch Plate Mill Main Scale Pile Oil Skimmings Hopper  
Description: This hopper collected oil and greases collected by belt skimmers in the scale pit for temporary storage and subsequent recycling. Area Status: Active Storage Area for Material. Waste Classification: NA. EPA Evaluation of Area: Based on an April 10, 1997 Consent Agreement/Consent Order from the EPA, activities in this area included the excavation of soil from the area, collection and analysis of confirmatory soil samples, report preparation, and construction of a new containment structure. Based on the results of the confirmatory sampling as well as the completion of an improved secondary containment device, it was determined that the soil and groundwater at this area met the screening levels and no further investigation or action was warranted.

**Area Name: IA-26** 160-inch Plate Mill Mechanical Shop Flow Bins and Used Oil Containers  
Description: This area contains bins, containers, and piping for oil and lubricating fluid and has been in use since 1964. Area Status: Active Storage Area for Materials. Waste Classification: NA. EPA Evaluation of Area: Based on a review of the data collected from IA-26, all results for all constituents of potential interest in the soil and groundwater were below their respective screening levels. No further action at this IA is recommended or warranted.

**Area Name: IA-3** Rectangular and Circular Tar Impoundments  
Description: In the early 1970s, the tar decanter removal system at the Coal Chemical Plant reportedly had been purged of all materials over a three-week period because a sufficient had entered the system and interfered with phase separation. The contents of this system were disposed in two basins or impoundments. The impoundments have been unused since then. Area Status: Closed Solid Waste Management Unit. Waste Classification: NA. EPA Evaluation of Area: Based on a review of the data collected from IA-3, all results for all constituents of potential interest from worst-case soil locations were below screening levels. No further action regarding soil at this IA is recommended. Barrene and four PCBs (benzobiphenylene, benzobiphenylene, benzobiphenylene, and dibenz[a,h]anthracene) exceeded screening levels in groundwater at locations close to the boundary of the IA. In 2002, remedial work included stabilization of the tar to improve its leach-back characteristics as well as reduce its leachability, and the construction of a multi-layered cap to minimize the infiltration of rainwater and snow melt. Corrective actions will include deed restrictions, continued groundwater monitoring, and regular cap inspection and maintenance.

**Area Name: IA-6** Coal Field Solid Waste Staging Area and Coal Field Secondary Wastewater Treatment Plant Filtration Area  
Description: The Coal Field Solid Waste Staging Area is an area of approximately 64,000 square feet that was formerly used as a staging/stockpile area for non-hazardous solid wastes. All waste materials were removed from this area in 1991. This staging area is surrounded by the Coal Field Secondary Wastewater Treatment Plant (SWTP) Filtration Area, which contains approximately 44,000 tons of SWTP Filtration Cake that was disposed during 1973 and 1974 as part of pilot tests for the dewatering of the material. Area Status: Closed. Waste Classification: NA. EPA Evaluation of Area: Based on a review of the data collected from IA-6, all results for all constituents of potential interest from the waste and soil samples were below screening levels. No further action regarding the SWTP Filtration Cake and soil at this IA is recommended or warranted.

**Area Name: IA-5** IA-7 Colmaking / By-products Recovery Area and No. 1 Coke Oven Battery Quench Station Basin  
Description: This IA consists of ten sub-areas where by-products from colmaking have been managed and include the Waste Ammonia Liquor (WAL) Storage Pits, the Spent Wash Oil Collection Containers, the Coal Tar Truck Loading Area, the Coal Tar Decanter Sludge Area, the Area Near the Waste Ammonia Liquor Heat Exchangers, the Area Around Tar Decanters, the Area Around Primary Coolers, the Former Loading of a Coke Oven Gas (COG) Condensate Collection Container, and the No. 1 Coke Oven Battery Quench Station Basin. These areas have been combined for purposes of Phase I based on (1) the similarity of the colmaking materials managed in each location and (2) the density of the buildings, equipment, and pipes in this area, which makes separate investigation of individual sub-areas highly impractical. Area Status: Active Production Area. Waste Classification: NA. EPA Evaluation of Area: Based on a review of the data collected from IA-5 and 7, all results for all constituents of potential interest from the soil samples were below screening levels with the exception of benzopyrene. A statistical evaluation of the full data set for this constituent at this IA shows with greater than 99% confidence that the true, representative concentration is below the screening level. Therefore, no further action is recommended for this constituent in soil. MITL implemented a Phase II sampling program and obtained additional soil and groundwater samples. Based on the sample results obtained, it was determined that the soil and groundwater at this area met the screening levels and no further investigation or action was warranted.

**Area Name: IA-39** North Lagoon, South Lagoon, and Old Lagoon  
Description: The two man-made lagoons were constructed in about 1970 by dividing a single, former lagoon (the "Old Lagoon") roughly in two. The lagoons receive clean, treated effluent from the Secondary Wastewater Treatment Plant. The effluent from the lagoons is monitored and conveyed through an NPDES outfall to the Little Calumet River. Area Status: Active Wastewater Treatment Lagoons. Waste Classification: NA. EPA Evaluation of Area: None of the constituents at this IA were found to be present in the groundwater above their respective Phase I screening levels. As a result, no further action is recommended at this IA.

**Area Name: IA-40** Secondary Wastewater Treatment Plant (SWTP) Filtration Area  
Description: This area consists of approximately 500,000 tons of SWTP Filtration Cake disposed in mounds across about 50 acres of land south of the lagoons (IA-39). Most of this filtration cake was disposed between 1967 and 1980. In addition, about 40,000 tons of filter cake was moved to this area in 1987 from the South Landfill (IA-41). About 13,000 tons of dead vegetation and other sediment were also moved to this area from the effluent channel to the lagoons. Area Status: Closed Solid Waste Management Unit. Waste Classification: NA. EPA Evaluation of Area: The Phase I data does not show a release of constituents above conservative screening levels. No further action is recommended at this IA.

**Area Name: IA-42** Secondary Wastewater Treatment Plant (SWTP) Filtration Area  
Description: This area consists of approximately 500,000 tons of SWTP Filtration Cake disposed in mounds across about 50 acres of land south of the lagoons (IA-39). Most of this filtration cake was disposed between 1967 and 1980. In addition, about 40,000 tons of filter cake was moved to this area in 1987 from the South Landfill (IA-41). About 13,000 tons of dead vegetation and other sediment were also moved to this area from the effluent channel to the lagoons. Area Status: Closed Solid Waste Management Unit. Waste Classification: NA. EPA Evaluation of Area: The Phase I data does not show a release of constituents above conservative screening levels. No further action is recommended at this IA.

**Area Name: IA-1** Wastewater Pump Station No. 2 Surface Impoundment  
Description: This area is a former drying bed that Bethlehem used to dry non-hazardous sludge and coke oven gas condensate starting in the early 1970s. The area covers approximately 13,000 square feet. In 1970, Bethlehem excavated the material that remained in the drying bed almost down to the water table and disposed of this material off site. Area Status: Closed Solid Waste Management Unit. Waste Classification: NA. EPA Evaluation of Area: Based on a review of the data collected from IA-1, all soil sample results were below screening levels for all constituents of potential interest. No further action regarding soil at this IA is recommended or warranted. A Phase 2 RFI indicated benzene and toluene are present in the groundwater immediately down-gradient of the impoundment. Additional sampling occurred in September and December 2003. Corrective measures will include deed restrictions and demonstration of plume stability.

**Area Name: IA-2** Secondary Wastewater Treatment Plant (SWTP) Sludge Surface Impoundment (SWTP Sludge Drying Field) / SWTP Sludge Piles  
Description: This area has been used from July 1985 to the present to dry and store non-hazardous sludge from the SWTP. Area Status: Active Storage Area for Material. Waste Classification: Type I waste. EPA Evaluation of Area: Based on a review of the data collected from IA-2, all results for all constituents of potential interest from soil and groundwater samples were below conservative screening levels. No further action regarding this IA is recommended or warranted.

**Area Name: IA-4** Possible Refuse Disposal area Northwest of Tar Impoundments  
Description: 1997 Geophysical Survey by D'Appolonia Environmental Services did not suggest the presence of any industrial sludges, liquids, or potentially mobile contaminants. Area Status: No refuse located at IA. Waste Classification: NA. EPA Evaluation of Area: Based on a review of the data collected from IA-4, all results for all constituents of potential interest from worst-case soil locations were below screening levels. No further action regarding soil at this IA is recommended. Barrene and four PCBs (benzobiphenylene, benzobiphenylene, benzobiphenylene, and dibenz[a,h]anthracene) exceeded screening levels in groundwater at locations close to the boundary of the IA. In 2002, remedial work included stabilization of the tar to improve its leach-back characteristics as well as reduce its leachability, and the construction of a multi-layered cap to minimize the infiltration of rainwater and snow melt. Corrective actions will include deed restrictions, continued groundwater monitoring, and regular cap inspection and maintenance.

**PLSS Info:** Sections 29, 30, 31, & 32  
T37N, R6W  
Portage & Westchester Townships  
Porter County, IN

**Property Address:** 250 West U.S. Highway 12  
Burns Harbor, IN

**Proposed Landfill Info:**  
Approximate Proposed Solid Waste Landfill Boundary  
based on Civil & Environmental Consultants, Inc. drawing  
"Waste Stream Holding Areas", July 2009  
Received by IDEM July 27, 2009

**IDEM Compliance Photos:** CP-7 acquired February 5, 2008. All other compliance photos acquired March 10, 2010.



**Legend:**

- EPA Investigation Area (IA)
- EPA Investigation Area
- IDEM Compliance Photo (CP)
- Proposed Solid Waste Landfill Boundary (approximate)
- ArcelorMittal Parcels

**Scale:**  
0 1,500 3,000 Feet  
0 490 980 Meters

**Mapped By:** Mike Hill, IDEM, Office of Land Quality, Science Services Branch, Engineering & GIS Services, March 18, 2010

**Sources:**

- Bethlehem Steel Corporation, Burns Harbor Division, RCRA Facility Investigation, Phase I, November, 1999
- Parcel information from Porter County's GIS online map. <http://portersm.mysonline.com/>
- ©2005 Indiana Orthophotography (IndoScanMap Framework Data) - ([www.indianamap.org](http://www.indianamap.org))

**Disclaimer:** This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purpose.