

AK Steel ARMCO Hamilton Plant

March 2009

Site Background

The American Rolling Mill Company (ARMCO) Site includes the 125-acre property located at 401 Augspurgen Road, New Miami, Ohio and off-property areas. The southern portion of the 125-acre property consists of a fenced, 92-acre area that was the former location of a coke production area, blast furnaces, wastewater treatment plant, production wells and settling ponds. The northern portion of the property consists of an unfenced, 27 acre rail yard which was the location of air scrubber waste sludge piles and a 4.5-acre landfill. The Great Miami River (GMR) runs along the entire eastern boundary and a portion of the southern boundary of the property. The Baltimore and Ohio Railroad runs along the northern and western boundaries of the property.

The American Rolling Mill Company purchased the property in 1937. The company changed its name to ARMCO Steel Corporation on April 17, 1948, and then to ARMCO Inc. on July 3, 1978. In 1989, ARMCO Inc. conveyed the property to ARMCO Steel Company. AK Steel Corporation was a general partner of ARMCO Steel Limited Partnership. On April 6, 1994, ARMCO Steel Company, LP, conveyed the property to AK Steel Corporation.

ARMCO Inc. manufactured both coke and iron at the site. The coke plant covered about 50 acres in the north-central portion of the south parcel. Nearly 2,000 tons of coke was produced each day. Primary wastes generated at the site included tar decanter sludge from the coke operation and slag and dust from the blast furnace operation. ARMCO also operated a 5.4 acre landfill on the northeast portion of the property from the early 1960s until 1980. The landfill contains primarily K087 sludge--a decanter tank tar sludge from the coke operation. In addition to the K087 sludge, the landfill is composed of rubble, trash, and an unknown amount of various industrial wastes. The landfill is unlined and does not have a leachate control system. There is an un-named drainage creek located along the eastern border of the landfill which discharges 1/4 mile downstream into the Great Miami River (GMR). The former blast furnace area is in the southwest portion of the site and contained numerous buildings and two lagoons. During former operations, ARMCO discharged excess water from the lagoons into the GMR. ARMCO piled/stored excess air pollution control scrubber sludge from coke operations along the railroad tracks to the northeast of the active portion of the facility.

ARMCO discontinued coke operation in 1982 and performed cleanup activities in the coke production area without state or federal oversight or involvement. Since 1993, ARMCO has performed cleanup activities on the settling ponds and sludge pile areas. Neither Ohio EPA nor USEPA have information regarding the extent of these cleanup activities and whether ARMCO conducted post-cleanup sampling of the settling ponds and sludge pile areas.

Ohio EPA studied the Armco Hamilton site in June 1983. A USEPA contractor conducted a screening site inspection of the site in September 1988 and collected samples of soil, sediment, sludge piles, settling ponds, and ground water. Samples were also collected from two nearby municipal water wells, several on-site wells and one nearby residential well. The contractor collected sediment samples from the intermittent stream and the GMR. The results of this sampling revealed contamination in on-site sediment, sludge piles and settling ponds. No contaminants were detected at unsafe levels in any of the drinking water wells sampled in 1988. Another USEPA contractor conducted an expanded site investigation in July 1993. Samples collected showed the presence of contaminants in on-site soils, waste and sediment. In 1993, as part of its expanded site investigation, the contractor collected soil samples from the rail yard portion of the property. These samples showed PAHs, PCBs, arsenic, iron, lead, magnesium, manganese and silver and cyanide were in the soils. The contractor also collected waste samples from the scrubber sludge piles and the settling ponds. PAHs, metals and cyanide were also detected in waste samples collected in these areas. The potential exists for PAHs, PCBs, metals and cyanide to migrate to the groundwater aquifer for several reasons, one being that the aquifer appears locally to consist mostly of homogeneous sands and gravels and the depth to water is approximately 30-50 feet below ground surface.

Two municipal well fields are located within a 0.5 mile radius of the AK Steel property. The New Miami well field has 3 wells located about 1,500 feet northwest of the north parcel of the AK Steel property. The Hamilton North well field is the second well field located in this area. Three monitoring wells were installed in the southern portion of the Armco Hamilton site in 1999. The wells were checked three times between January 2000 and March 2001 and significant levels of contamination were not found. However, the wells, all at the south end of the site, were drilled to a depth of approximately 100 feet and would not capture contaminants located closer to the surface or pollution in the northern part of the site.

Cleanup Progress

An Administrative Order on Consent for a Remedial Investigation/Feasibility Study (RI/FS) was signed by AK Steel and USEPA April 2002. AK Steel's contractor submitted a workplan for the RI/FS and USEPA, its contractors, and Ohio EPA commented on the first and second workplan submittals. AK Steel's contractor submitted the final workplan October, 2004 after the workplan was partially rewritten by USEPA with Ohio EPA input.

USEPA and OEPA have reviewed the draft ecological assessment, human health risk assessment and revised draft Remedial Investigation Report. AK Steel submitted preliminary responses to USEPA and OEPA comments. In September 2007, the company performed a biocriteria study to be included as part of the Baseline Ecological Risk Assessment. In May 2008, after OEPA discovered tar-like material in the riparian area of the Great Miami River at the site, AK Steel performed a Supplemental Remedial Investigation to address data gaps identified as part of the first round of Remedial Investigation. A final draft Remedial Investigation Report was submitted by AK Steel for

USEPA and OEPA review November 2008. The draft Remedial Investigation Report included the additional data collected as part of the Supplemental Remedial Investigation. Comments were generated and sent to the PRP February, 2009. These comments will be addressed and revisions will be made to the final draft RI, including the human health and ecological risk assessment. Applicable or Relevant and Appropriate Requirements (ARARs) are being developed by USEPA and OEPA for the Feasibility Study for the site.

To learn more about U.S. EPA's involvement at this Superfund Site, go to:
<http://www.epa.gov/region5superfund/npl/ohio/OHD074705930.htm>

Ohio EPA/SWDO Contact

Nita Nordstrom, Site Coordinator
e-mail:nita.nordstrom@epa.state.oh.us
Phone: (937) 285-6054
Fax: (937) 285-6404

USEPA Contacts

Remedial Project Manager, U.S. EPA
Pablo Valentin (valentin.pablo@epa.gov)
(312) 353-2886

Community Involvement Coordinator, U.S. EPA
Bob Paulson
(312) 886-0272