

Florida Steel Company
State Road 710, 35 miles northwest of West Palm Beach
Indiantown, Florida
County: Martin
District: Southeast
Site Lead: EPA
Placed on National Priorities List: December 20, 1982
ERIC ID # 3785

Site Description and History

The Florida Steel Company site is a 150-acre facility located on SR 710 approximately 35 miles northwest of West Palm Beach in Township 39S, Range 38E, Section 35 at 27° 02' 21.5990" N, 80° 30' 23.6600" W. The facility has been inactive since 1982. When active, the facility operated an electric furnace process to recycle steel scrap into steel reinforcing bars used in construction. Originally, the facility disposed of emission control (EC) dust by dumping it on the ground. It is estimated that over 75,000 tons of contaminated dust were dumped in these waste piles. In 1980, Florida Steel changed this disposal practice, and EC dust was collected and transferred to a chemical plant in South Carolina for recovery of lead and zinc.

A review of the operations at Florida Steel indicates that fluids containing polychlorinated biphenyls (PCBs) were probably used during the early 1970s in the casting process, and in some of the hydraulic systems. Florida Steel believes the PCBs were combined with the oily materials collected in the recirculating reservoir. The reservoir was designed to contain and treat the water used in the steel-making process.

Threat

Former site operations resulted in extensive contamination of onsite soils and sludges with lead and PCBs. Soil and wetland remediation have been completed and confirmatory sampling indicates that soil and sediment cleanup goals protective of public and the environment have been met. Groundwater exceeds DEP primary drinking water standards for sodium and radium- 226.

Response Strategy and Status (December 2020)

Florida Steel began removing the waste piles of EC dust in February 1984. The EC dust was shipped to New Jersey Zinc in Palmerton, Pennsylvania, a metal reclamation facility. The removal of 15.0 million pounds of EC dust was completed in July 1984.

A Consent Agreement, incorporating a Remedial Action Plan for the disposition of PCB contaminated soils, was executed by the Florida Department of Environmental Regulation (FDER, now DEP) and Florida Steel in September 1985. Florida Steel completed excavation of all soils containing PCBs at a level of 50 ppm or greater in May 1986, and temporarily placed approximately 11,000 cubic yards in an on-site vault. The vaulted material was incinerated between September 1987, and May 1988. The ash was retained for further treatment due to its high lead content.

A Consent Agreement between FDER and Florida Steel for preparing a Remedial Investigation/Feasibility Study (RI/FS) was executed in September 1987, and an RI/FS Work Plan was approved by DEP in March 1988. Phase I of the RI was completed in October 1988, and Phase II was completed in October 1989. The RI indicated substantial contamination of soil and groundwater, primarily with lead. Subsequent monitoring indicated that the lead originally detected in groundwater did not exceed drinking water standards and that the groundwater contaminants of concern were limited to radionuclides and sodium. A Final Risk Assessment was received in January 1991. The Feasibility Study was received in September 1991.

EPA presented the recommended remedial action for soils at a public meeting in April 1992. EPA signed the Operable Unit 1 (OU 1) Record of Decision (ROD) for soils in July 1992. Excavation and solidification/fixation were selected as the remedy for soils. The final Feasibility Study for remediation of groundwater and wetlands was completed in November 1993. EPA signed the Operable Unit 2 (OU 2) ROD addressing groundwater and wetlands remediation in March 1994 with DEP agreement in November 1994. The remedy for groundwater is groundwater recovery and spray irrigation for controlled recirculation and reduction of sodium and radionuclide concentrations. Metals-contaminated wetland sediments would be excavated, treated, and disposed of with treated site soils.

Design for soil remediation was completed in September 1994. Solidification/fixation began in October 1994 and was completed in April 1996. Wetland remediation began in June 1995 and was completed in January 1996. Solidified soils and sediments were disposed in an onsite lined landfill and capped. Performance monitoring is ongoing to confirm the effectiveness of the remedies in preventing continued sources of groundwater contamination.

EPA approved the design for the groundwater remediation system in December 1995 and construction was completed in November 1996. Full-scale operation of the system began in April 1997. The OU 2 construction completion report was received in December 1997 and determined to be satisfactory. In January 2001, EPA conducted the first five-year review (FYR) at this site. The second FYR was completed in May 2006.

A portion of the site is being considered for redevelopment by the Floridan Natural Gas Storage Company, LLC (FGS). The plans for redevelopment include the installation of one to two natural gas storage tanks and a distribution facility. In July 2007, FGS applied for the environmental resource permit (ERP) necessary for the site redevelopment. FGS is currently working with appropriate agencies to obtain the ERP and other necessary permits. Redevelopment activities are anticipated to begin once all permits are obtained and land use restrictions are established.

Operation and maintenance (O&M) of the groundwater remediation system continued from 1997 until 2009 when the remedial system was damaged by area wildfires and the system was temporarily shut down. This temporary shutdown period has been used to evaluate contaminant rebound in the groundwater plume and to install additional monitoring wells to support evaluation of the effectiveness of the active groundwater remedy and the need to restart the system.

The 3rd FYR in 2011 concluded that data at that time was inconclusive with regard to the need to restart the system and that further groundwater monitoring was also necessary to evaluate a monitored natural attenuation alternative. The FYR also recommended that restrictive covenants be modified to reflect current land parcels and include restrictions on the landfill property to prohibit activities that may impact the integrity of the landfill.

The Declaration of Restrictive Covenant was filed in Martin County in April 2015. This agreement restricts the property use to commercial/industrial and prohibits drilling of water wells and use of the landfill vault on the property.

Semi-annual groundwater monitoring is ongoing. The September 2015 groundwater sampling results were received in November 2015. Monitoring has confirmed that the area extent and magnitude of the plume has been reduced by the previous remedial system operation. However, areas of the plume still exceed standards for sodium and radionuclides on the former facility property as well as in an isolated area offsite. The April 2019 report showed comparable concentrations of sodium and radionuclides to the results of previous sampling events.

There are on-going talks between the Department, EPA, and PRP groups relating to conditional site closure. The Department is currently awaiting EPA's response to closure pathways.

Schedule

The next groundwater sampling event for the site is scheduled for April 2021.