

Skippers
2409 North Cocoa Boulevard (US Highway 1)
Cocoa, Florida
County: Brevard
District: Central
Site Lead: Waste Cleanup Program
Approved for Cleanup: March 15, 1993
ERIC ID # 3864

Site Description and History

The Skippers III, Inc. site is located on a 0.4-acre lot on highway US 1 in a commercial area of the City of Cocoa in Township 24S, Range 36E, Section 17 at 28° 23' 34.0810" N, 80° 44' 54.6580" W. The facility was an electroplating operation, which conducted copper, gold, nickel, silver, and zinc plating as well as aluminum anodizing. Prior to 1984, chromium plating was also conducted at the site. The facility was in operation from 1972 until mid-October 1988. Investigations revealed that contamination of the site occurred due to improper storage of chemicals and wastes and the discharges through holes drilled in the floor of the process area, which allowed drainage via PVC pipes, directly onto the ground.

Threat

Cadmium, chromium, lead, nickel, and thallium have been detected in groundwater at concentrations exceeding Florida primary drinking water standards in onsite monitoring wells. Secondary drinking water standards for aluminum, iron, and manganese have also been exceeded. Elevated levels of arsenic and chromium were detected in onsite soils. Soils exceeding concentrations that would pose an unacceptable health threat were excavated and disposed of offsite in 1999.

Response Strategy and Status (December 2020)

Following a complaint filed with Florida Department of Environmental Regulation (FDER, now DEP), a RCRA compliance inspection was conducted in March 1989 which revealed improper storage of hazardous wastes, illegal discharges of hazardous wastes to the ground via the septic system, and inadequate security precautions. A joint inspection conducted by EPA and FDER in May 1989 identified continued storage and safety violations. Following the May 1989 inspection, FDER contractors installed a security fence around the site. In May 1989, soil samples were collected which indicated elevated levels of arsenic, cadmium, chromium, lead, and silver, as well as significant levels of cyanide. Because of the investigation, an FDER Notice of Violation (NOV) was issued to the facility.

In June 1989, four wells were drilled onsite, and soil and groundwater samples were collected which indicated further soil contamination by cadmium, lead, silver, and cyanide. The high percentage of suspended particles in the groundwater samples indicated that the onsite wells had not been adequately developed and that the elevated levels of arsenic, barium, chromium, lead, mercury, selenium, silver, and cyanide were not representative of actual groundwater quality.

In January 1990, following identification and segregation of the onsite wastes and reagent chemicals, the EPA Emergency Response and Control Section completed removal of the liquid wastes and 2 cubic yards of visibly contaminated soil. Additional sampling of the monitoring wells and the soils beneath the plating areas of the onsite building was conducted in January 1992 and October 1992. Soil sample data indicated low levels of contamination under the onsite building. Analysis of the groundwater samples suggested that Florida primary and secondary drinking water standards were still being exceeded.

The Skippers III, Inc. site was recommended and approved for state-funded cleanup in March 1993. In May 1993, FDER contractors repaired the security fence and secured the onsite buildings which had been damaged by vandalism. In addition to repairs, the fence on the north and west property boundaries was relocated to correct for encroachment onto adjacent properties. A Contamination Assessment work plan was completed in January 1994. The assessment scope of work included groundwater, soil, and sediment sampling to determine the current extent of contamination.

Implementation of the Contamination Assessment was significantly delayed as the Department pursued permission for site access to perform the necessary fieldwork. Additionally, during this time, DEP also procured new Waste Site Cleanup Contractors. Foster-Wheeler was selected to implement the Contamination Assessment. The Contamination Assessment Report (CAR) was submitted to the DEP in July 1997. The CAR confirmed limited groundwater contamination which exceeded Florida primary drinking water standards for nickel and cadmium, as well as Florida secondary drinking water standards for aluminum and iron. Surface soils over most of the site contained arsenic exceeding residential health-based guidance levels. Soils under the wooden flooring of the process building contained arsenic exceeding both residential and industrial health-based guidance levels. A comparison with offsite background soil sampling results confirmed that the elevated arsenic concentrations onsite were due to the former electroplating operation and were not naturally occurring.

In May 1998, the Department signed a Decision Memorandum identifying soil removal with groundwater monitoring as the selected site remedy. The remedial design was completed in December 1998. Soil removal was completed in May 1999. A monitoring program was implemented to confirm the continued decline in groundwater contaminant levels.

In 2006 three additional wells were installed offsite and sampled to determine if cadmium contamination had migrated offsite and to determine if the iron exceedances in groundwater samples were naturally occurring or not. Based on the results of these samples, it was determined that cadmium groundwater contamination had not migrated offsite and that the upgradient iron levels are comparable to the onsite values.

In November 2007, a comprehensive review of the site remedy was performed to determine if the current remedial strategy was appropriate or if modifications to the remedy are indicated. This report recommended conditional closure in accordance with Chapter 62-780(680)(2) Florida Administrative Code (FAC).

A single real property owner (RPO) has acquired all three former site parcels and the DEP Office of General Counsel is assisting the project manager to coordinate, prepare and implement Institutional Controls (restrictive covenants) for the site. Additional deep soil sampling performed onsite in support of the preparation of a Site Rehabilitation Completion Report has indicated more extensive contamination with nickel than previously detected. Also, a point of compliance (POC) well installed onsite near the US 1 right-of-way in March 2013, exhibited nickel concentrations above the MCL indicating that the plume had migrated offsite. Additional soil sampling was performed to delineate the nickel source area and a temporary point of compliance (TPOC) well (removed after 24 hours) installed at a location on the east side of US 1 in May 2014, indicated that the plume did not completely cross the US 1 right-of-way. Based on these data, an additional interim source removal was completed in July 2015, and additional post active remediation groundwater monitoring is being performed per Chapter 62-780 FAC.

A permanent TPOC well has been installed on the east side of US 1 now that highway construction is completed. A sampling event conducted after this well was installed indicates that this TPOC well, as well as the POC well inside the site property line are both below cleanup levels for all contaminants of concern. One additional property-line well was installed on the south property line and sampled for the April 2019 groundwater monitoring report. Results from this and the other wells sampled indicate that the plumes are completely on site (one nickel and one cadmium), < ¼ acre total area and appear to be stable or shrinking.

Schedule

Since the plumes are stable, the DEP will propose site closure using institutional controls.