

Coleman – Evans Wood Preserving Co.
101 Celery Street
Whitehouse (Jacksonville), Florida
County: Duval
District: Northeast
Site Lead: EPA
Placed on National Priorities List: September 8, 1983
Delisted: May 27, 2014
ERIC ID # 3782
HWC # 009

Site Description and History

The 11-acre Coleman – Evans Wood Preserving Co. (Coleman – Evans) site is located in the Whitehouse community, now part of the City of Jacksonville, in Section 19, Township 02S, Range 25E at 30° 18' 49.2595" N, 81° 50' 37.8598" W. Coleman – Evans operated a wood treatment operation at the site using pentachlorophenol (PCP) as a preservative until 1989. From 1954 to 1970, the company deposited its waste sludge in two unlined disposal pits composed of sand filters. Some sludge has been washed off the site and has contaminated the soil in residential yards adjacent to the site.

Sampling data collected from August through December 1980 by Ecology and Environment, Inc., Jacksonville Bio-Environmental Services and the Florida Department of Health and Rehabilitative Services indicated that contaminants were present in the upper layer of soils and in the shallow groundwater in the vicinity of the disposal pits. In March 1983, a sampling investigation was conducted by Groundwater Technology, Inc., which confirmed the presence of contamination in the shallow soils and in the water table aquifer.

Threat

Contaminated soils have been treated and disposed of onsite with a 2-foot thick cover of clean soil, since they exceed DEP soil cleanup target levels for dioxins. Institutional controls have been established to ensure continued maintenance of the remedy. Sampling of deep private wells from October 1984 through 2003 confirmed that dioxin and PCP levels did not exceed Federal or State drinking water standards. Monitored natural attenuation (MNA) sampling of surficial groundwater indicates that it now meets applicable Federal and State standards on- and offsite.

Response Strategy and Status

In December 1982, the Florida Department of Environmental Regulation (FDER now DEP) and Coleman – Evans signed a Consent Order for a two-phase remedial action study of the site. Compliance with the Consent Order was unsatisfactory. Results from Phase I submitted in August 1983 revealed the need for action beyond that required under the existing Consent Order. To address these deficiencies, a new Consent Order was drafted by FDER in May 1984, which required immediate removal and disposal of contaminated soils, wastewater and groundwater at the site, and sampling of private wells immediately adjacent to the site. Coleman – Evans did not sign this Consent Order.

In September 1984, FDER requested that the EPA take the lead management role on the site and conduct an immediate removal of the waste sludges in the disposal pits. The EPA issued an administrative order to Coleman – Evans in October 1984, requiring Coleman – Evans to take immediate action. Coleman – Evans did not comply and refused site access. EPA was granted site access in federal court in May 1985. An immediate removal of the waste sludges in the disposal pits was conducted in June 1985.

In October 1984, FDER filed a complaint and petitioned for enforcement against Coleman – Evans for the violation of the Consent Order, Florida Statutes, and Department rules. The January 1988 trial determined that Coleman – Evans generated, treated and stored hazardous waste in the onsite sand filters and was out of compliance with FDER regulations. Coleman – Evans was ordered to cease all discharges of waste water until further court order, remove existing sludges from the sand filters, and submit a RCRA permit application to FDER for either an operation or closure permit under RCRA. The original facility ceased treatment operations in the late 1980's but indicated that capital was not available for closure of the sand filters. Coleman – Evans proposed an alternate settlement to FDER regarding site cleanup and future cost recovery. A settlement was not reached.

Field investigations were completed in October 1985, and the Superfund Remedial Investigation (RI) report was completed in April 1986. The RI confirmed PCP contamination in onsite soils as well as in sediments in the drainage ditch off-site. PCP contamination in the surficial aquifer appeared to be limited to groundwater in contact with adjacent soils. A public meeting to discuss the remedial alternatives outlined in the draft Feasibility Study (FS) was held by EPA in July 1986. Onsite incineration of contaminated soils and treatment of ground water associated with soil excavation was selected as the most cost-effective and environmentally sound alternative for site remediation. A Record of Decision (ROD) was signed in September 1986.

EPA initiated remedial design in April 1987 and completed design for soil incineration and groundwater recovery and treatment in July 1988. Design data indicated that four times the originally estimated volume of soil would require remediation. EPA completed initial treatability testing in April 1990 to evaluate the feasibility of using either bioremediation or chemical fixation as the soil remedy rather than the costlier incineration remedy. EPA developed an alternative site cleanup program for contaminated soils, which was documented in an amended ROD, signed in September 1990. The selected alternative included soil washing to separate clean sands, chemical fixation of contaminated sludges, and bioremediation of wash water followed by polishing with a filter system.

Additional site sampling was performed in March and July 1991, which confirmed the presence of dioxin contamination in the groundwater and onsite soils, as well as the existence of free product (diesel fuel) floating on the water table. Treatability studies were completed in January 1992 to determine if the revised remedy would effectively treat dioxin. The results of the treatability studies and technical memorandum data indicated that additional site characterization for dioxin was needed to define the volume and extent of dioxin contaminated soils and refine the proposed treatment scenario.

Additional soil sampling, performed in June and October 1992 and June 1993, confirmed that dioxin contaminated soils existed both onsite and offsite in the drainage ditch area and adjacent residences. EPA Emergency Response conducted removal actions in July and August 1993; excavating contaminated offsite soils and stockpiling the soils on-site along with dismantling and removal of tanks and equipment used in the former wood treating operations. Additional soil and well sampling was performed in the spring of 1994. Sampling results indicated that groundwater contamination is limited in extent and has not migrated into the deeper private wells.

EPA developed a draft Focused Feasibility Study in May 1994 to re-evaluate the soil remedy in light of the new data. A public meeting was held in June 1995 to present the revised soil remedy identified in the draft ROD. EPA's proposed remedy consisted of excavation and treatment of approximately 52,000 cubic yards of soils contaminated with PCP and dioxin. Contaminated soils would be treated by thermal desorption to destroy the contaminants and disposed of onsite. A treatability study was proposed as part of the remedial design to confirm the effectiveness of the remedy. If cleanup goals could not be met by thermal desorption, the site would be capped and groundwater remediation, including free product recovery, implemented.

In response to comments from the DEP regarding the draft ROD, EPA conducted soil leaching tests to determine a site specific remedial goal for PCP in soils protective of groundwater as well as direct exposure to soils. The February 1996 EPA Site Specific Soil Screening Levels Report documented a site specific soil leaching criteria of 2 mg/kg for PCP. EPA also conducted additional offsite soil sampling in July and December 1996 to further delineate the extent of dioxin contamination both onsite and in surrounding residential areas.

EPA Region IV issued an Interim ROD in September 1997, which identified thermal desorption as the selected soil remedy and groundwater recovery and treatment to address contaminated groundwater. A soil dioxin cleanup level of 1.0 µg/kg was identified as the interim cleanup level for the site.

The Soils Remedial Design was completed in January 1999 followed by a public meeting in March 1999 to discuss the upcoming construction activities. The Groundwater Remedial Design was completed in December 1999 and included site dewatering by groundwater recovery and treatment prior to discharge to enable the excavation of contaminated soils located below the groundwater table.

Construction of the soil remedy began in June 1999 and included debris removal, soil excavation and stockpiling, construction of the thermal desorption unit and construction of the water treatment unit based on the Groundwater Remedial Design. Operation of the Groundwater Treatment System commenced during October 2000. The Thermal Desorption Unit (TDU) started full operations in December 2001.

Treatment of the affected soils with the TDU was completed on March 15, 2004. 209,909 wet tons of soils were treated. Following decontamination of the TDU, the unit was demobilized.

A Remedial Design Addendum report, dated September 2004, evaluated what steps may be necessary for remediation of the groundwater at the site. Active groundwater cleanup was originally projected to take ten (10) years with a site cleanup date of 2013 in the 1997 ROD. However, evaluation of the groundwater contamination levels in the 2004 report indicated that the groundwater contamination was significantly reduced as a result of the soil removal, which also included the treatment of some 74.5 million gallons of contaminated water. The report indicated that groundwater contamination levels were significantly lower than the DEP's natural attenuation default concentrations (NADCs), but still exceeded the Primary Drinking Water Standards (onsite only). This led the EPA to propose Monitored Natural Attenuation (MNA) as the selected remedy for the groundwater cleanup. The report concluded that the drinking water standards would be met within a 4 to 5-year time frame (2008 – 2009). DEP concurred with this revised approach to the groundwater cleanup.

In 2005 the remedial activities at the site were reorganized into two Operable Units (OUs 1 & 2). OU1 was further divided into Phase I (onsite soils), and Phase II (surficial groundwater and miscellaneous site activities). OU2 was created to address the remaining offsite dioxin-contaminated soils.

The EPA signed the Final ROD on September 28, 2006. The ROD identified several offsite areas with dioxin contamination, believed to be site related, exceeding the DEP's soil cleanup target level (SCTL) of 7 ng/kg dioxin TEQ. This contaminated soil was excavated and placed onsite under 2 ft of clean soil and the offsite excavation areas were backfilled with clean soil. Since contaminated soil exceeding the DEP's SCTLs will remain onsite, Institutional Controls for the former Coleman – Evans property are necessary to ensure the protectiveness of this remedy. To this end, a restrictive covenant has been executed with the City of Jacksonville, who now owns the Coleman – Evans site.

In June 2011 a round of groundwater sampling was performed. All samples were below the applicable Primary Drinking Water Standards. A second set of groundwater samples were collected and analyzed in June 2012. All the samples in this second round of monitoring were also below their applicable Primary Drinking Water Standards. Based on these results, in November 2012 the EPA submitted a formal letter to DEP stating that they intend to commence the delisting process for this site. DEP concurred with this proposal in a letter signed on September 24, 2013 and the site was formally delisted on May 27, 2014.

Since contamination remains onsite, the EPA will conduct a review, every five years, to evaluate the appropriateness and continued protectiveness of the selected remedy. The next five-year review is scheduled for 2019.