

A-C Sons – formerly Continental Turpentine & Rosin
Shamrock, Florida
County: Dixie
District: Northeast
Site Lead: Waste Cleanup Program
Approved for Cleanup: June 24, 2004
HWC # 156

Site Description

The A-C Sons/Continental Turpentine & Rosin (CTR) site is located in Shamrock, Florida, approximately 1 mile northwest of Cross City, Florida. The property is situated in the South ½ of Township 09S, Range 12E, Section 32 and the North ½ of Township 10S, Range 12E, Section 05 at 29° 38' 54.8678" N, 83° 08' 39.0074" W. The property is relatively flat with an approximate elevation of 44 feet (NAVD88). The site is located on the edge of a wetland area that covers much of Dixie County. The property is bounded to the west by a small creek that flows south towards US Highway 19. Scattered residences are located within a ½-mile radius of the site. The site consists of the remnants of the Continental Turpentine & Rosin Corporation facility and is characterized by one nonfunctioning production well with water tower, and numerous concrete foundations from manufacturing, storage, and office buildings. Trees and vegetation comprise the northern property boundary, and dense vegetation is located on the eastern end of the property.

History

CTR manufactured turpentine at the facility from 1958 until late 1984. The facility produced turpentine by steam distillation of crushed pine stumps. Due to the decrease in demand for turpentine products and lack of raw materials, the facility converted to a rosin manufacturing facility in 1981. In December 1984, a release of toluene occurred in the tank farm area when a rusted transfer pipe ruptured during closeout operations.

In May 1985, the property was sold to A-C Sons Company, Inc. Simultaneously with the execution of the warranty deed transferring the property to A-C Sons, an Indemnity Agreement was executed between CTR and A-C Sons whereby CTR agreed to be responsible for environmental corrective actions at the site for a period of 10 years from May 31, 1985. On October 25, 1991, A-C Sons executed a quitclaim deed returning the property to CTR. On June 22, 1992, a quitclaim deed was executed by representative of Continental, deeding the property back to A-C Sons. A-C Sons executed a disclaimer, and the property was abandoned.

In 1993, a site inspection was conducted by ABB Environmental Services, Inc. for the Florida Department of Environmental Regulation (FDER, now DEP) to determine the presence and nature of contamination at the site. The inspection noted that benzene, chromium, and lead were in concentrations above the drinking water standards. ABB concluded that A-C Sons should take measures to restrict public access to the property and address onsite potential sources of contamination. In May 1992, and in February 1999, due to citizens' concerns, the Dixie County Health Department sampled seven private wells and one community well near the site for metals and VOCs. None of the private wells showed signs of groundwater degradation from CTR site.

In 1999, a DEP site inspection revealed that large quantities of waste, including construction and demolition debris, used tires, animal remains, and drums were illegally disposed on the site. Surface water bodies on the site were heavily impacted by the operations of the turpentine manufacturing process. Percolation ponds on the western edge of the property were covered by a thick layer of a tar-like substance. A total of 21 monitor wells were installed during the SIS investigation. Results from this investigation indicated that onsite groundwater quality had been impacted by organic chemicals; benzene, toluene, ethylbenzene, xylenes, turpentine compounds, TRPH, and other unidentified compounds.

The Department of Health (DOH), Bureau of Environmental Toxicology, completed a Health Consultation for the site in 1999. Conclusions of the Health Consultation were: (1) The Cross City municipal wells number 1, 2 and 3 were in compliance with state water drinking regulations; (2) Drinking water from the tested private wells was not a health threat; and (3) Owners of private wells should have their water “tested periodically to monitor the quality of the drinking water”. In addition, the DOH, Bureau of Environmental Toxicology completed an analysis of cancer rates for Dixie County in May 1999. The survey results indicated that no excess cancer rates existed from exposure to chemicals used at the site.

The U.S. Environmental Protection Agency (EPA) Emergency Response Section began a Superfund hazardous substances removal between May and December 2001. The emergency removal included the removal of all sludge pits, drums, and other debris and was a short-term cleanup intended to stabilize and clean up part of the site that posed an imminent and substantial threat to human health and the environment.

The DEP Waste Site Cleanup Section initiated soil and groundwater assessment in August 2004. Fieldwork activities included repairs to the fence and gates along the main access road, placement of warning signs, and the collection of numerous soil and groundwater samples.

At the DEP request, the DOH conducted potable well sampling. The December 2002 and March 2005 results identified six potable wells with levels of arsenic above the maximum contaminant level (MCL) of 0.010 mg/L. The DOH notification to the homeowners and the potable wells with samples above the MCL were entered into the DEP Water Supply Restoration Program.

The Site Assessment Report was approved by DEP in April 2006. Additional Arsenic and SPLP leachability samples were taken to verify and compare the on-site levels of Arsenic with background levels. In June 2006, an Interim Source Removal (ISR) and Remedial Alternative Evaluation (RAE) were submitted to DEP for approval. The ISR recommended addressing the contaminated soil and groundwater on site, primarily toluene and TRPHs in excess of the Natural Attenuation Default Criteria (NADC). The ISR would include excavation, land farming, confirmation testing, backfilling, and site restoration activities.

In August 2006, five monitor wells were abandoned prior to excavation and land-farming, which had occurred in Zone 1. The Zone 1 land-farmed soils indicated they were below the soil cleanup target levels (SCTLs) for TRPHs, and were returned to the excavated area as clean backfill.

In April 2007, land-farming activities in Zones 1, 2 and 3 were completed. Soils from these zones were tested and found to be below the SCTLs for toluene and TRPHs. In July 2007, all land-farming activities were completed and confirmatory soil sampling indicated that arsenic soil contamination remains in the vicinity of the onsite tower.

In December 2009, Geosyntec recommended excavating additional areas onsite with exceedances of arsenic above the commercial/industrial SCTL; DEP concurred with the recommendation. In August 2010, the Interim Source Removal (ISR) was completed and a report was submitted to DEP for review. A total of 437.8 tons of contaminated soils were removed from the site and clean backfill was placed into the excavated areas.

Threat

Site assessment revealed a number of contaminants including benzene, toluene, xylene, lead, total recoverable petroleum hydrocarbons (TRPHs), and volatile organic compounds (VOCs) related to the disposal practices and manufacturing processes of the facility.

The U.S. Environmental Protection Agency (EPA) Emergency Response Section began a Superfund hazardous substances removal in May 2001, at the former Continental Turpentine & Rosin Corporation site. The emergency removal was a short-term cleanup intended to stabilize and clean up part of the site that posed an imminent and substantial threat to human health or the environment. The emergency removal was completed in December 2001 and included the removal of all sludge pits, drums, and other debris. The risk of direct exposure to soil contamination exceeding applicable cleanup target levels for site contaminants of concern was mitigated by a series of excavations and land-farming between August 2006 and May 2007.

Once the property was abandoned and the gates and fencing which secured the property fell into disrepair, the property became an uncontrolled dumping ground for large volumes of solid waste, construction and demolition debris, used tires, and dead animals. The property also became a target for vandalism. Fires were set by vandals and involved burning rosin and other chemicals throughout 1992 and 1993.

The DEP has repeatedly repaired the fence and requested assistance from the county in controlling unauthorized access to the site.

Response Strategy and Status (June 2016)

The Decision Memo was approved on August 12, 2013. The recommended remedy is institutional controls limiting the property to commercial/industrial use, to include preventing the installation and use of potable wells onsite; the arsenic contamination for the surrounding area has been determined to be natural occurring and will no longer be a focus for the program. DEP will attempt to enter into an Institutional Control with the property owners; a Title Search and an Attorney Opinion of Title has been done to determine who the Real Property Owner (RPO) is; neither CTR nor A-C Sons are claiming responsibility for the property.

The DEP attempted to contact officers of the A-C Sons Corporation in reference to the proposed institutional control recommend in the approved Decision Memo for the site and provide notice that it is the owner's responsibility to secure the site from vandalism and trespassing. The representatives of A-C Sons, the property owner according to a recent title search, did not respond.

Groundwater monitoring indicates that overall, COCs are continuing to decrease and are not migrating offsite. In August 2008, Geosyntec recommended natural attenuation monitoring (NAM) for groundwater; DEP concurred with their recommendation. The monitoring frequency was adjusted to biennial in 2014.

The results of the July 2015 groundwater sampling event included exceedances of isopropylbenzene and toluene in groundwater.

Schedule

The DEP is working to negotiate site access with the new property owner to complete a site inspection and determine the condition of existing wells. The next biennial groundwater monitoring event is due in July 2017.