

Solitron Microwave
Cove Road, ¾ mile east of US Highway 1
Port Salerno, Florida
County: Martin
District: Southeast
Site Lead: EPA
Placed on National Priorities List: July 27, 1998
ERIC ID # 3903

Site Description and History

The Solitron Microwave site is located on Cove Road, approximately ¾ mile east of US Highway 1 in Port Salerno, Martin County in Township 38S, Range 41E, Section 25 at 27° 08' 08.7930" N, 80° 11' 56.3688" W. Solitron manufactured and electroplated microwave components and miniature-size frequency connectors and cable as well as solid state resistor networks from 1968 until January 1987. Prior to that time, from 1963 to 1968, General R.F. Fittings operated the site. The company reportedly conducted plating operations similar to Solitron's.

The site property comprises almost 20 acres. Approximately 8 acres were reportedly used for business purposes. The remaining property, not associated with site operations, is covered with small trees and brush. Existing site features include the Solitron plant building, the former hazardous waste storage building, percolation pond, industrial waste treatment plant (IWTP), two septic fields, several concrete sumps, and paved areas. The nearest residences are within 1,000 feet of the site to the north and northeast.

The IWTP was dismantled in 1988, and approximately 260 cubic yards of metals contaminated sediments were removed from the pond in 1989, under the direction of The Florida Department of Environmental Regulation (FDER, now DEP).

Threat

Tetrachloroethene (PCE) was used at the facility and generated as a spent solvent during electroplating operations. PCE and its degradation products (trichloroethene, 1,1-dichloroethene, *cis*-1,2-dichloroethene and vinyl chloride) have all been detected in the groundwater sampled from both onsite and offsite monitoring wells and private wells in the site vicinity.

Response Strategy and Status (December 2020)

In November 1983, the DEP instructed Solitron to conduct soil and groundwater contamination assessments at the facility, based upon observations made during a facility inspection. Contaminants of concern at the time were primarily cyanides and heavy metals. Solitron removed approximately 260 cubic yards of sediment from the Percolation Pond in 1989, and remediated sediments from the former wastewater discharge pond to DEP's satisfaction. Based upon a review of the soil assessment conducted in the IWTP area, the DEP concluded no further action was necessary in that location.

Groundwater monitoring for volatile organic compounds (VOCs) began in 1984, when four monitor wells were sampled. From 1988 to 1991, 38 additional monitor wells were installed at both onsite and offsite locations to assess groundwater quality. The site was proposed for inclusion

on the National Priorities List (NPL) in March 1998, and finalized on the NPL on July 27, 1998. The EPA began remedial investigation (RI) sampling at the site in 1998. Soil, sediment, surface water, and groundwater samples were collected and analyzed. Results confirmed the presence of groundwater contamination onsite above drinking water standards. The EPA conducted additional sampling during the spring of 1999. The Martin County Health Department initiated a residential sampling program of various offsite private wells to the north and east of the site in from 1991 through 1999.

The EPA completed the remedial investigation/feasibility study (RI/FS) in 2001, and the Record of Decision (ROD) was issued on November 1, 2001. The overall cleanup plan for the site was outlined in the ROD as follows:

- Extend public water lines to homes located north and east of the site within $\frac{3}{8}$ mile of the site.
- Excavation and offsite disposal of 330 cubic yards of contaminated soil from a small area near the south side of the site, and replacement with clean fill.
- In situ chemical oxidation to treat the highest levels of groundwater contamination onsite and just to the north of the site.
- After short-term cleanup goals are met, the groundwater will be monitored to ensure that contaminant levels naturally degrade to the long-term cleanup goals.
- Institutional controls in the form of deed restrictions to ensure that contaminated groundwater from the site is not used for drinking purposes until the cleanup standards are met, and to ensure that soil beneath the existing buildings is sampled and treated appropriately if the buildings are disturbed in the future.

In May 2002, the EPA and the DEP entered into a Superfund State Contract Agreement for Phase One Remedial Action Credit (Agreement) at the site. Under the Agreement, the DEP provided \$1,400,000 in funding to Martin County to implement Phase 1 remedial action activities, which consisted of installing waterline extensions to approximately 150 homes north and east of the site. This remedial action was necessary to ensure safe drinking water to area residents and was consistent with the ROD. The waterline extensions were completed in May 2003.

Groundwater data collected from the 2002 sampling event indicated a significant decrease in VOC concentrations from levels detected in the 1999 sampling event. The data indicated natural attenuation was occurring, based upon increased concentrations of PCE daughter products. The EPA and DEP agreed that implementation of chemical oxidation would not be necessary and may even be detrimental to the natural attenuation process. The remedial strategy for the site was modified to soil excavation for remediation in the source area and Monitored Natural Attenuation (MNA) for the downgradient groundwater contaminant plume.

In April 2003, 530 cubic yards of chlorinated solvent/VOC contaminated soil was excavated from the source area to a depth of 7 feet below ground level. The soil underwent waste characterization and was disposed of at a suitable landfill. The excavated area was backfilled with clean fill and the site was cleared and sold for redevelopment to a local Martin County developer for use as an industrial park. During the redevelopment of the site, the original building slab was removed by

the redeveloper. EPA remobilized to the site to take advantage of this opportunity and removed the remaining contaminated soil located beneath the footprint of the former Soliton Microwave Devices building.

In September 2004, the EPA submitted a draft Explanation of Significant Differences (ESD) to explain why the selected remedy described in the ROD was not implemented. The DEP reviewed the draft ESD and provided comments to the EPA. The Sampling and Analysis Plan for the MNA sampling was submitted to DEP and approved. The Remedial Action (RA) phase began in late 2004. Quarterly MNA sampling began at the site in 2005. Groundwater sampling was conducted semi-annually from 2006 to 2008. Annual groundwater sampling began in 2010.

The first EPA Five-Year Review (FYR) was conducted in 2009. The report concluded contaminant levels were steadily decreasing at the site and natural attenuation of the contaminants appeared to be taking place. Groundwater monitoring data presented in the March 2011 Monitored Natural Attenuation Sampling and Cleanup Status Report indicated that natural attenuation of groundwater contamination is occurring. Annual groundwater monitoring data from the June 2012 Monitored Natural Attenuation Sampling and Cleanup Status Report indicate natural attenuation of groundwater contaminants continues to occur. Calculated attenuation rates for monitor wells where ROD goals were exceeded predicted the achievement of ROD cleanup standards within 25 years of June 2012. The most recent EPA FYR was conducted in February 2014 and groundwater monitoring data indicate natural attenuation of groundwater contaminants continues to occur.

The site was transferred to the Florida Department of Environmental Protection in August 2014 as required under CERCLA for cost share Superfund sites. MNA continues as the remedy and is successfully working. The DEP will perform all future groundwater monitoring activities and MNA remedy evaluations.

Groundwater analysis continued between March and June 2017, with work included for monitoring well replacement.

The third Five Year Review (FYR) was completed by the EPA in 2019. The site remains protective of human health and the environment, and natural attenuation processes continue to occur.

In the 2020 sampling event, the VOH plume extends offsite and appears to be delineated. Six wells were restored following construction that took place and the assigned contractor recommends continues annual monitoring. Passive Diffusion Bags (PDBs) were installed for the prospective 2021 annual sampling event.

Schedule

Annual groundwater monitoring may continue depending on budgetary restraints.