

Harris Corporation – Palm Bay Plant
Palm Bay Boulevard & Conklin Boulevard
Palm Bay, Florida
County: Brevard
District: Central
Site Lead: EPA
Placed on National Priorities List: July 22, 1987
ERIC ID # 3787

Site Description and History

Harris Corporation occupies over 500 acres in Palm Bay, Florida in Township 28S, Range 37E, Section 23 at 28° 02' 04.6882" N, 80° 36' 02.5097" W. There are two major operating divisions at the site; the semiconductor section, and the government systems section. Harris Corporation produces a wide variety of electronic devices and components. In the past, the organic chemicals used in the manufacture of these components were disposed of in percolation/evaporation ponds and discharged into surface ditches.

The General Development Utilities' (GDU) Port Malabar well field is located south of the Harris facility. The well field consists of 18 producing wells ranging in depth from 80 to 110 feet, and serving a population of about 17,000 people. In 1982, volatile organic compounds (VOCs) were found in eight of GDU's water supply wells. In two of the wells, the concentration of VOCs was high enough to cause the Florida Department of Environmental Regulation (FDER, now DEP) to prohibit their use as a potable water supply.

Threat

The direction of ground water flow in the VOC contaminated area is generally to the south, toward a relatively deep cone of depression in the southern part of the GDU well field. There is potential for continued contaminant migration in this direction.

Response Strategy and Status (December 2020)

As an initial aquifer restoration measure, GDU installed an air-stripping unit for VOC removal from the most contaminated GDU wells. The treatment system has been in operation since November 1992.

The FDER and Harris Corporation signed a Consent Agreement in December 1983. According to the terms of the agreement, Harris was to conduct a groundwater investigation at its government systems facility to determine the extent of the contamination, and then begin a groundwater restoration program to improve groundwater quality in the area. To date, 170 monitoring wells have been installed in and around the site. A groundwater recovery and treatment system was installed in May 1995, to remediate the contaminant plumes in the shallow and deep zones of the aquifer. The system was estimated to require continued operation for seven years in order to achieve cleanup goals. These levels may be reached by achieving concentrations specified in the Consent Agreement or by demonstrating that further removal cannot be achieved.

In August 1985, a leak was discovered in a buried solvent line at the Semiconductor Complex. An investigation by Harris indicated that 758 gallons of solvent were lost during the previous eight months. The solvents were located within a 70-foot radius of the line break. Harris began cleanup in December 1985, with the removal of 238 cubic yards of soil. A groundwater recovery and treatment system was installed to address groundwater contamination. A Consent Order addressing further work in the area of the solvent line break was signed in August 1986. Quarterly monitoring of groundwater in the area is continuing.

A groundwater assessment was initiated in April 1986, to address elevated levels of metals in the vicinity of Building 6, Government Systems Complex. In addition, the assessment addressed a sulfuric acid line break under Building 4 (Government Systems) that occurred in November 1986. The assessment report was submitted to FDER in August 1987. The report concluded that contamination is limited to the immediate area of Building 6, and the area of elevated metals is within the capture zone of the recovery wells. Additional wells were installed to monitor the area.

A groundwater assessment was initiated in April 1986, to provide a complete contaminant characterization beneath the Semiconductor Complex, where solvent and other chemicals were improperly disposed of and/or stored. The assessment report was submitted to the FDER in November 1987, and revealed several plumes of VOCs in the 15- and 40-foot zones of the surficial aquifer. The Feasibility Study/Remedial Action Plan (FS/RAP) was finalized in February 1989. The selected remedial alternative consisted of groundwater recovery and treatment. In November 1989, the design and bid documents were finalized. A consent order that stipulated cleanup goals was signed in March 1990. Construction of a groundwater recovery and treatment system was begun in March 1990 and completed in June 1990.

In September 1990, Harris submitted a FS/RAP for Building 100 to DEP for review. A revised FS/RAP was submitted in February 1991, and the FS/RAP was approved by the DEP in July 1991. Harris completed construction of the approved groundwater recovery and treatment system in January 1992, in which the recovery system for Building 100 was hooked up to the existing treatment system.

In December 1990, Harris and the FDER met to determine groundwater cleanup criteria for the Semiconductor Complex and Government Systems Complex. These criteria were presented to the EPA for inclusion in the Consent Decree. A Consent Decree was signed by Harris in March 1991. In October 1991, the FDER approved amendments to the Consent Agreements for the Semiconductor complex and Government Systems complex. In December 1992, the FDER approved three additional amendments to the Consent Agreements. The first amendment pertained to cleanup goal revisions for Operable Unit 2 (OU 2). The Second Amendment revised the cleanup goals for Operable Unit 1 (OU 1) and the third amendment (paragraph A) included Building 100 into OU 1. These amendments were made in accordance with revised cleanup criteria. The risk assessment for OU 2 was completed and approved in March 1994.

In February 1995, the Harris Corporation signed the ROD for OU2. The OU2 ROD recommended that the existing treatment system remain in operation and that pumping will cease from recovery SC-TS4. This well was recovering “clean” groundwater from outside the contaminant plume. The

DEP concurred with the ROD for OU 2 in May 1995. In August 1995, the EPA and DEP agreed, at the request of the Harris Corporation, to remove benzene and bis(2-ethylhexyl) phthalate as constituents of concern from the OU2 ROD. An Explanation of Significant Differences (ESD) was issued in December 1995, to address these modifications in the ROD. In August 1996, the EPA and Harris Corporation negotiated and signed a Consent Decree. The Consent Decree for OU 2 was lodged in August 1996 and signed in January 1997. The 1998 Annual System Performance Review for OU 1 and OU 2 was received in April 1999. System Performance Reviews were completed annually from 1999 through 2007.

In June 2000, the groundwater treatment system at OU 2 was deactivated with EPA approval, and OU 2 was placed in Natural Attenuation Monitoring (NAM). In October 2002, the groundwater treatment system at OU1 was deactivated with EPA approval, and OU 1 was placed in NAM. Select monitor wells are sampled annually. The first Five Year Review Report was prepared in December 2003. The second EPA Five Year Review Report was prepared in April 2009, and recommended the site remain in NAM based upon the groundwater analytical data. Annual groundwater sampling data continues to support the decision for the site to remain in NAM. The groundwater analytical results from the third EPA Five Year Review in 2014 and the fourth Five Year Review in 2018 indicate that natural attenuation is still functioning as a viable remedy for the site.

Schedule

Groundwater monitoring to document the progress of the NAM remedy is ongoing. If annual groundwater data indicate natural attenuation at the site has ceased, or contaminant concentrations are increasing, then either the groundwater recovery and treatment systems at both Operable Units will be reactivated or another form of active remediation will be proposed until remedial action objectives are achieved for groundwater.