

General Dynamics Longwood

1333 North US Highway 17/92

Longwood, Florida

County: Seminole

District: Central

Site Lead: PRP

Placed on National Priorities List: September 29, 2010

ERIC ID # 3939

Site Description and History

The General Dynamics Longwood site is located at 1333 U.S Highway 17 & 92 in Longwood, Seminole County, Florida in Township 20S, Range 30E, Section 28 at 28° 43' 01.2033"N, 81° 19' 15.7238"W. The General Dynamics site consists of 4 parcels covering 9 acres, and is currently owned by Gould Publications. The site is north of the Sprague Electric Site (a Superfund Alternative site) with residential properties to the south of Sprague, and a school to the east of the two sites. The properties to the north and west of the General Dynamics site are not currently developed. The current business involves wholesaling and warehouse activities. The General Dynamics Corporation reportedly occupied the site from the mid-1960's to the early 1980's. An EPA directed potential responsible party (PRP) search indicated that a number of the past owners/occupants performed electronics cleaning and manufacturing. A solvent degreaser is reported to have been used on site. The site consists of three large manufacturing buildings (Buildings 1, 2 & 3), a maintenance building, Paint and Plating Building and two former drum storage areas. The Paint and Plating building and drum storage areas are likely associated with past operations at the site. Buildings 2 and 3 were reportedly the former manufacturing locations of printed circuit boards and other electronic equipment. These operations reportedly took place between 1959 and 1988 by various tenants.

The site is bordered to the south by the Sprague Electric Corporation site. Sprague Electric was a film capacitor manufacturing and assembly facility which closed in 1992. Sprague reportedly used 1,1,1-trichloroethane (TCA) and trichloroethene (TCE) in a vapor degreaser-cleaning process. The Sprague site is currently being addressed under the EPA Superfund Alternative program in conjunction with the DEP Central District in Orlando, Florida.

Only limited information exists on the operational history at the General Dynamics site. It has been reported that a number of the past owners/occupants, dating back to 1959, performed electronics cleaning and manufacturing. That may have included circuit board manufacturing, parts cleaning and soldering (tin/lead solder). As mentioned above, a solvent degreaser is reported to have been used on site. Based on these reported activities it is likely chlorinated solvents including tetrachloroethene (PCE) and TCE may have been used. 1,1,1-TCA is also commonly used as a vapor degreasing agent. Lead and possibly chromium may also be present as a result of past soldering and plating activities, respectively.

Threat

About 114,742 people within a four-mile radius of the General Dynamics property are provided drinking water from municipal ground water wells. The closest municipal well is located between 0.25 and 0.5 miles from the General Dynamics property.

The majority of environmental assessment work at the General Dynamics site has been performed in conjunction with the Sprague site. However, as a result of contaminant delineation efforts, many of the sampling locations included the General Dynamics property. Elevated levels of VOCs, primarily chlorinated solvents, have been detected in groundwater across both the Sprague and General Dynamics sites. This includes the Floridan aquifer which is the primary source of drinking water in the area. It appears that the majority of this contamination is attributable to former Sprague operations. However, in 2005, highly elevated levels of VOCs were detected in a direct push technology groundwater sample location situated within General Dynamics property Building 3. This location was in close proximity to the former General Dynamics aboveground storage tank and near the suspected location of a former degreaser. The contaminants that were detected included (highest levels): 1,1-DCE (26,500 µg/L), PCE (1,880 µg/L) and 1,1,1-TCA (710 µg/L). This contamination may be attributable to the General Dynamics property site and not related to past activities at the former Sprague site.

Response Strategy and Status (December 2020)

The responsible parties for Sprague Electric are conducting clean-up activities at the Sprague Electric property as well as on the General Dynamics property as part of an Administrative Order of Consent (AOC) with EPA, signed July 30, 2004. The AOC currently includes the Sprague Electric property as well as the western portion of the General Dynamics property.

In late 2008, EPA sent general notice and demand letters were sent to the PRPs for the General Dynamics Longwood site offering Superfund Alternative Site status. General Dynamics was the only PRP to provide a substantive response. The responsible parties did not provide valid information to EPA that refuted their responsibility for the site and General Dynamics refused to sign an Administrative Order on Consent (AOC) to perform the Remedial Investigation and Feasibility Study (RI/FS) for the site. General Dynamics provided extensive comments on the NPL listing package and again denied any responsibility for the site contamination, stating that recent investigation work performed by General Dynamics at the site showed that the site should not be listed on the NPL.

The EPA proposed the General Dynamics Longwood site for inclusion on the National Priorities List (NPL) on April 9, 2009, with the concurrence of the DEP, and placed the facility on the final NPL on September 29, 2010. This action allows expedited assessment and cleanup of the affected properties under the Superfund program.

Four areas of concern (AOCs) were sampled and evaluated for potential soil and groundwater contamination: AOC-A – the former vapor degreaser area (Building 3), AOC-B – the Former Paint and Plating Building, and AOC-C and AOC-D – septic tank drainage fields. The proposed chemicals of potential concern (COPCs) in groundwater are 1,4-dioxane, TCE, vinyl chloride, total chromium, and iron. The proposed COPC in surface and subsurface soils is hexavalent chromium. Soil at AOC-B was previously remediated due to elevated levels of chromium and lead.

The Remedial Investigation (RI) Report, dated December 2015, contains adequate information to define the extent of the Chlorinated Volatile Organic Compounds (CVOC) on the General Dynamics Site (GD) and no contaminants were detected near or above the 1% of pure phase solubility indicating that DNAPL is not expected to be present on-site. Natural attenuation appears to be occurring based on the reduction in contaminate concentrations over time and the presence of VC indicating that that conditions are conducive to reductive dechlorination processes. Concentrations above GCTLs are primarily contained onsite and appear to be declining with time.

A soil removal action was performed in AOC-B with an area of approximately 200 square-feet and a depth between 1 to 2 feet below ground surface (ft. Bgs). The excavation removed 20 tons of soil and confirmation samples were collected and analyzed for total lead, total chromium, and hexavalent chromium. Confirmation soil boring AOC-B-SB11 and AOC-B-SB12 results were below SCTLs for industrial properties but above the Total Chromium Leachability CTL of 28 milligrams/kilogram (mg/kg). To verify leaching will not occur, additional data should be collected to understand the potential impacts to the aquifer systems.

The Remedial Investigation (RI) Report, dated December 2015 was reviewed and all the data that has been collected for the Site and the adjacent Sprague site indicate the presence of contaminants near AOC-A which must be addressed. This residual contamination is, to some extent, superimposed on additional groundwater contamination that is apparently from the adjoining Sprague property. Using the available data, it cannot be determined if other groundwater contamination by organic compounds elsewhere on the GD Site is from a Sprague source, a Site source, or some blending of the two potential sources.

The RI report was revised to include the contaminants near AOC-A in the FS for the Site. The EPA approved the Remedial Investigation Report as submitted in accordance with Section X (EPA Approval of Plans and Submissions) of the Administrative Settlement Agreement and Order on Consent (AOC) for Remedial Investigation/Feasibility Study in effect between General Dynamics and the EPA for the Site.

Remedial investigation/feasibility study (RI/FS) field activities were conducted at the site between April and November 2015. The completed activities included sewer system investigation, groundwater monitoring well redevelopment of some of the existing wells, and groundwater sampling. Additional site assessment activities were performed to define the extent of contamination and support evaluation of remedial alternatives to address site contamination. The RI report was submitted for review in December 2015 and approved on January 19, 2017.

The EPA has reviewed the Draft Feasibility Study Work Plan and approved the report as submitted in accordance with Section X (EPA Approval of Plans and Submissions) of the Administrative Settlement Agreement and Order on Consent (AOC) for Remedial Investigation/Feasibility Study in effect between General Dynamics and the EPA for the Site. In April 2018, the Draft Feasibility Study Report was submitted for review. A finalized version of the Feasibility Study is being drafted. A Human Health Risk Assessment was revised and sent to DEP and EPA on November 12, 2020.

Schedule

Currently, bi-monthly progress status reports are conducted for the site.