

Defense Fuel Support Point

Newington

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The Defense Fuel Support Point - Newington (DFSP) (FFID - NH197152484700) is located on the Piscataqua River in Newington approximately 3 miles northwest of downtown Portsmouth, New Hampshire. Following its construction in the 1950s the DFSP mission was to receive, store, and deliver jet propulsion fuel (primarily aviation gas and JP-4) for the former Pease Air Force Base and employed 1 military and 11 civilians before closing in February 1990. The US Air Force retains ownership the property. The DFSP also supplied fuel by tank truck to New Hampshire State Military Reservation in Concord and Fort Devens in Massachusetts.

The 14.9 acre DFSP site has a docking pier for unloading fuel from barges and tankers, and a truck loading rack. The fuel was stored in two 80,000 barrel and four 50,000 barrel underground storage tanks (USTs) at this facility. The USTs are constructed of steel and have a 12-inch concrete and 4-foot soil cap. During cleaning operations in April 1981, an explosion at Tank 3 destroyed the top of the tank, which remains out-of-service. Prior to the closure of Pease Air Force Base, fuel was pumped approximately 1.25 miles from the DFSP up to the base through 8- and 10-inch pipelines. The tanks and the pipelines were temporarily closed in 1990, drained and cleaned, and have remained inactive ever since.

Since 1983, several subsurface investigations have been conducted both on and off-site. Five discrete contaminated areas were identified at the site. Remedial efforts began in 1984 with free-phase floating product recovery, and progressed to an integrated effort combining soil vapor extraction treatment, groundwater extraction and soil removal.

The groundwater contamination impacts at DFSP were identified at the piping manifold (the piping and valve system to route the fuel between the delivery pier, storage tanks, Pease Air Force Base and the truck filling station), the stormwater lagoon, two underground oil/water separator tanks and the truck filling station, commonly called the truck rack. Some valves and flanges at the manifold had leaked directly onto the ground for an undetermined period of time. Fuels that did not evaporate infiltrated into the upper soil horizon and percolated downward to groundwater. A concrete pad for containing leaking fuel and runoff was installed in the fall of 1982 and was removed in 1996 to facilitate the removal of soils in the manifold area.

One of the underground oil/water separator tanks (OWS2) was located directly adjacent to the manifold area and was designed to receive runoff from the manifold area concrete pad. This tank over-flowed on February 3, 1983. The investigation of this overflow included excavating around OWS2 which revealed a broken 4-inch cast iron inlet pipe and an appreciable quantity of fuel in the ground near the top of the tank. Approximately 2,500 gallons of fuel were recovered from the excavation. The tank and all lines feeding it were removed in 1991. Free-phase fuel was measured in monitoring wells in the area of the manifold and OWS2 (manifold area). There was no evidence that fuel migrated from the area to the Piscataqua River.

From April of 1984 to June of 1986 a total of 1,154 gallons of product were recovered from the manifold area with a fuel recovery trench and well. Additional active remediation was conducted

at the manifold area, starting in January of 1992, where approximately 4,300 pounds of petroleum hydrocarbons were removed from the subsurface soil by multi-point dewatering/treatment and SVE. All identified free-phase floating product was recovered. Subsequent routine monitoring showed that there was another occurrence of floating fuel products in the subsurface. As a result the Remedial Action Plan was revised to provide for removing contaminated soils from all contaminated areas on the site, including the truck rack, OWS1 and the manifold area.

In October of 1996 approximately 500 tons of soil was removed from the site and transported for off-site thermal treatment and disposal. Subsequent analyses showed that the removal successfully lowered contaminants in the truck rack and the OWS1 areas. The Department issued a Certificate of Completion in October of 1997 stating that the active remediation of identified impacted soil had been completed.

The groundwater quality at the site has been managed via groundwater monitoring networks consisting of up to 19 monitoring wells. A Groundwater Management Permit (GMP) was issued in 1995. Because groundwater quality met New Hampshire's Ambient Groundwater Quality Standards in the samples collected from the required monitoring wells in 2014 and 2015, continued monitoring under the GMP was temporarily waived by NHDES pending review of the Air Force's planned site decommissioning actions anticipated for 2017. Site decommissioning will include the removal of the site's USTs, fuel distribution systems and associated structures. Closure assessment will be conducted on the pipelines. The fuel docking pier is planned for removal from the Piscataqua River. The Department anticipates submittal in 2016 of appropriate permits and work plans detailing the permanent closure actions for our review and comment.