

## SITE HISTORY

The former Glenburn Ground to Air Transmitter (GAT) site (referred to as “the Site”) is located at 114 Lakeview Road in the Town of Glenburn, Piscataquis County, Maine. This Formerly Used Defense Site (FUDS) is approximately 9 acres in size and includes both the former GAT facility property (“on-Site”) (**Figure 1**) and surrounding areas containing groundwater impacted by contaminants originating from the FUDS property (“off-Site”).

The former Glenburn GAT Facility (**Figure 2**) was used by the United States Air Force (USAF) between 1958 and 1967. Several structures were installed across the Site including a pump house, cesspool, two drywells for the facility’s roof drains, a 10,000-gallon underground storage tank (UST) for diesel fuel, and a 1,000-gallon UST for gasoline. A bermed area located south of the current Quonset style salt storage building, across Birch Avenue, was believed to have been used for marksmanship practice by USAF security personnel. The USAF operated the GAT facility on this Site until 1964. During this time, USAF used chlorinated solvents, including trichloroethylene (TCE; also known as trichloroethene), to clean electronics, degrease fittings, clean generators, and prepare surfaces for new paint. Afterwards, waste solvents were either disposed of onto the ground or buried.

In 1967, ownership was transferred from the General Services Administration (GSA) to the Town of Glenburn. Since then, the Town has used the Site for various municipal purposes, including a public works maintenance garage, town hall, emergency rescue building, and for road salt and equipment storage. The Town renovated the building formerly used by USAF, constructed additional buildings (a Public Safety building and a road salt storage building) on Site, and removed the two USTs. The Site is currently covered by mowed grass, gravel and paved roads, and parking lots and contains multiple buildings (Glenburn Municipal Building, Public Safety



**Figure 1: Site Map, Former GAT Property**

Building, and salt storage building), recreational facilities (i.e., basketball courts and a skate park), and a public water supply well (GB-PW-01) for the various municipal buildings (**Figure 3**).

The area surrounding the Site is primarily residential, and suburban development is expected to continue in the region. The Homestead Mobile Home Park occupies several acres adjacent to the southwest corner of the Site and a small subdivision of single-family homes is located north of the former GAT, next to the Lakeview Cemetery. It is expected that current land use of the Site by the Town, as well as the surrounding rural residential land use, will not change in the foreseeable future.

## **FUDS ELIGIBILITY**

Some sites, formerly used by the Department of Defense (DoD), are eligible to be cleaned up by the government under the Defense Environmental Restoration Program, Formerly Used Defense Sites (DERP-FUDS). The Site was determined to be eligible for the DERP-FUDS program in 1998 following completion of an Inventory Project Report prepared for USACE. The DERP eligibility was based on the finding of groundwater contamination that likely resulted from USAF activities at the Site. The U.S. Army is the lead agency and USACE has mission execution authority under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) for the USACE FUDS Program. USACE executes the FUDS Program on behalf of the DoD. The Maine Department of Environmental Protection (MEDEP) has participated by providing regulatory oversight.



**Figure 2: Site View of Former GAT Facility in distance, former Town Office in forefront.**

## **ENVIRONMENTAL INVESTIGATION ACTIVITIES**

A series of environmental investigations have been performed by USACE and MEDEP between 1991 and 2010. Based on the results of environmental investigations and the Decision Document (DD), TCE in groundwater was determined to be the contaminant of concern (COC).

Preliminary Assessment (PA) and Site Inspection (SI), which are usually performed under CERCLA to determine if environmental conditions at the Site have been impacted by release(s) of hazardous substances, were not completed for this Site; however, other investigations performed by the USACE have served the same purpose.

In the mid-1980's, prior to construction of the Town's covered salt storage shed in 1986, MEDEP investigated dissolved road salt contamination of well water that likely originated from the uncontained salt piles kept near the former GAT facility. In the late 1980s the Town removed the two USTs under the direction of MEDEP and found no evidence of leaking from the tanks. In 1991, University of Maine at Orono installed 2 bedrock wells (GB-MW-01 and GB-MW-02) adjacent to the sand/salt shed to monitor the salt contamination in groundwater. Samples collected from these wells contained elevated salt levels and TCE concentrations above the maximum contaminant level (MCL) established by the United States Environmental Protection Agency (USEPA).

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In 1994, the Maine Department of Health and Human Services (MEDHHS) reported TCE concentrations below the MCL in the two Homestead Estates Mobile Home Park public water supply wells (GB-PW-02 and GB-PW-03) located adjacent to and west of the Site. In response to these TCE detections, MEDEP sampled several nearby residential wells and investigated the GAT cesspool area. In 2000, MEDEP expanded their residential well testing program to include additional domestic wells located on Midway Lane, Sunset Avenue, Lakeview Avenue, and in the Pine Grove/Beach Grove area.



**Figure 3: Site View of Former GAT Facility in distance, former Town Office in forefront.**

Once the Site became DERP-FUDS eligible, USACE began sampling 28 residential wells for VOCs in 2002. Although various residential wells were sampled at different times between 2002 and 2006, by 2007, USACE began consistently collecting samples from residential wells biannually (spring and fall) and public water supply wells (GB-PW-02 and GB-PW-03) annually.

In addition to the groundwater investigation and monitoring, USACE also collected soil, soil gas, indoor air, and sub-slab vapor samples. USACE conducted a passive soil gas screening survey in 2003 to identify potential source areas around the former GAT facility. Comprehensive testing performed between 2003 and 2005 did not find any TCE sources. USACE also collected soil gas and soil samples through holes cored in the former GAT facility floor in 2004 and indoor air samples from the facility in 2006. In 2010, additional sub-slab soil vapor and indoor air samples were collected at the former facility to assess whether the vapor intrusion pathway (TCE from groundwater under the building volatilizing into the indoor space) was complete.

A Remedial Investigation (RI) and Feasibility Study (FS) were conducted between 2008 and 2012 to understand the extent of the contamination and the risks it posed. The investigation included: testing and evaluation of on-Property soils and groundwater; completion of a search for a source of TCE on the property; evaluation of bedrock hydraulic gradients and hydrogeologic properties; assessment of the nature and extent of contamination on and off the property; and evaluation of potential risks to humans and the environment. The RI indicated that TCE contamination is present in groundwater beneath the Site and in downgradient areas off-Site. Given the elevated TCE concentrations above the MCL on-Site, the risk assessment concluded that action was necessary to protect potential future residential exposures via ingestion and inhalation to groundwater containing TCE above the Remedial Goal (RG) on-Site.

The DD for the project was finalized in January 2016 and established an RG for TCE. The selected remedy for the Site includes:

- **Monitored Natural Attenuation (MNA):** Tracking the natural breakdown of contaminants in the groundwater.
- **Long-Term Monitoring (LTM):** Regularly testing the groundwater.
- **Alternate Water Supply or Point of Entry Treatment (POET) System:** Providing clean water to residents where TCE concentrations are higher than the Remedial Goal (RG),

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- either through a new water source or a treatment system installed at their property.
- **Monitoring of Indoor Air:** Checking for potential vapor intrusion (harmful vapors entering buildings from contaminated groundwater).
- **Land Use Controls:** Restrictions on how the land can be used to prevent exposure to contamination.

Two Remedial Action Objectives (RAOs), or goals, were determined to be appropriate for the protection of human health use of TCE-contaminated groundwater.

- Prevent ingestion of groundwater containing TCE concentrations (or degradation by-products) above the RG established in the DD.
- Restoring the groundwater within the Site to RGs .

The first Five Year Review (FYR) was finalized in February 2021 to determine if the RAOs defined in the DD had been met, and whether the remedy is protective of human health. The first FYR determined that the first RAO had been met and the second RAO would be met over time based on MNA LTM groundwater data. The first FYR concluded that the remedy at the Site is protective of human health and the environment.

## **FUTURE WORK**

Future work at the Site includes continuing the remedies established in the DD which include: MNA, LTM of groundwater, POET systems for residents with drinking water wells containing TCE above the RG, monitoring of indoor air, and land use controls. In addition, FYRs will be conducted to ensure the future protection of human health and the environment. The second FYR is planned for completion in February 2026.

## **COMMUNITY OUTREACH**

Environmental reports and studies developed as part of the investigation are available at the USACE, New England District and in the local Information Repository located at the Town of Glenburn Municipal Building 144 Lakeview Road, Glenburn, Maine 04401-1412.

### **HOW TO CONTACT US**

If you have questions or comments about the environmental investigation activities, please contact:

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