

Plattsburgh Air Force Base

New York

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EPA REGION 2

Congressional District(s): 23

Clinton
Plattsburgh

NPL LISTING HISTORY

Proposed Date: 7/14/1989

Final Date: 11/21/1989

Site Description

The 3,440-acre Plattsburgh Air Force Base site served as a tactical wing in the Air Force Strategic Air Command from 1955 to 1991, when it was reassigned as an Air Refueling Wing under the Air Mobility Command. From 1955 to 1995, hazardous wastes were generated from activities including aircraft operation, testing and maintenance, fire fighting exercises, the discharge of munitions, and landfill operations. The site is located in a mixed use area consisting of industrial and commercial enterprises, as well as private residences. It is bordered on the north by the Saranac River and the city of Plattsburgh, and on the south by the Salmon River. Lake Champlain, located east of the base, forms approximately one mile of the base boundary. Approximately 2,000 people obtain drinking water from private wells located within 3 miles of the base. Volatile organic compounds (VOCs) were found in shallow monitoring wells downgradient of the hazardous materials storage area at the Defense Reutilization and Marketing Office (DRMO Site) during investigations conducted by the Air Force in 1987. Since that time, the Air Force has conducted Preliminary Assessments (PAs), Site Investigations, and Remedial Investigations at over fifty sites at the base. This includes sampling and analysis of soil, groundwater, surface water, and sediment.

Site Responsibility: This site is being addressed through Federal actions.

Threat and Contaminants

Unburned off-spec JP-4 jet fuel and waste solvents used during activities at the Fire Training Area have contaminated soils and groundwater, resulting in a groundwater plume consisting of fuel-related compounds and chlorinated solvents. The chlorinated solvent portion of the plume extends across the base and is over one mile in length. It reaches within 2000 feet of Lake Champlain. The fuel-related portion extends approximately 2,500 ft across the base. Four unlined landfills were utilized at the base during various periods of operation for disposal of household wastes and construction debris, and hazardous wastes may have been dumped periodically in the landfills. Leachate from two of the landfills was found to be contaminated with VOCs (including fuel-related compounds) and pesticides, and VOC contamination was detected in groundwater downgradient of the landfills. Soils contaminated with DDT were found at the DRMO storage/maintenance area, the result of leaking drums used to store pesticides at the site. Spillage of solvents used at the Building 2774 and Heavy Equipment Maintenance Facilities contaminated soil and groundwater with dichlorobenzene, trichloroethene (TCE) and other VOCs. The failure of an underground storage tank (UST) used to store waste solvents at the Nose Dock 8 Facility resulted in soil and groundwater contamination with chlorinated solvents. Operations at a number of other sites at the base have produced additional areas of contamination.

Potential exposures include direct contact with or inhalation of contaminants found in soil and surface water. Although groundwater at the base is not currently used as a drinking water supply (drinking water is supplied by the City of Plattsburgh), offbase residents living in close proximity to the base could be exposed to contaminants if infiltration of private groundwater wells were to occur. Exposure could also occur if property transferees were to install drinking water wells. Contaminant migration in groundwater and surface water has been studied and addressed on a basewide level with respect to the potential for negative impacts on human and ecological receptors associated with Lake Champlain, the Salmon River, the Saranac River, and offbase groundwater users. Additional studies are underway related to potential health risks due to soil vapor intrusion into buildings by VOCs. Although not all studies are complete, nor all remedies implemented, all areas of known contamination have been addressed via institutional controls contained in Records of Decision (RODs), and property transfer and lease documents.

Cleanup Approach

Contamination at the base thus far has been addressed through a series of interim (Removal) and Remedial Actions.

Additional interim actions are currently in progress, and may be continued as long term Remedial Actions. Additional cleanup actions other than those specified in this fact sheet could still be necessary based on the results of current and future investigations to be conducted at the base.

Initial Actions Completed:

Removal Action: DRMO Storage/Maintenance Area: This facility consisted of several small buildings used for storage and office space and an adjacent, paved open storage area. Its function was to handle materials discarded by the Air Force, such as transformers and refrigerators, that might have had reclaimable components. One or more drums stored at the site leaked pesticides onto site soils resulting in contamination with DDT and other pesticide compounds. A Removal Action consisting of the excavation of approximately 600 cubic yards of DDT-contaminated soil was conducted in 1992. The soil was disposed off-site.

Removal Action: Civil Engineering Squadron (CES) Pesticide Tank: This UST received rinse water from the washing of pesticide containers and application equipment. It was suspected that the tank had leaked, and as a result, a Removal Action was conducted in 1992. The tank and surrounding soil to a depth of two feet were excavated and disposed offsite. The excavated soil was found to be contaminated with dursban, a commonly used pesticide. The tank contents were tested and found to contain dursban and methoxychlor. The tank contents were also disposed offsite.

Removal Action: Industrial Pre-Treatment Facility: This facility received wastewater from airplane washrack and painting facilities. A tank that formed the basement of the building was suspected of leaking, which would have caused the surrounding soils to be contaminated with lead and other compounds. A Removal Action, consisting of the removal of the tank contents to a publicly owned treatment works (POTW) and filling of the tank with concrete was conducted in 1993.

Removal Action: Building 2774: This building contained a former hazardous materials/waste storage area. Soils at the site were found to be contaminated with dichlorobenzene, metals, and organics, and a groundwater plume consisting of solvent-related contamination extends downgradient from the site. An initial Removal Action consisting of the excavation of soils contaminated with more than 200 parts per billion (ppb) of dichlorobenzene was conducted in 1992. The contaminated soils were disposed offsite at an incinerator. A second Removal Action at this site, consisting of the installation and operation of Soil Vapor Extraction (SVE), bioventing, and biosparging systems for treatment of soils contaminated by chlorinated solvents and fuel-related compounds, was initiated in December 1996. Sampling conducted in late 2001 indicated that the Removal Action had successfully remediated site soils. Signature on a Record of Decision (ROD) documenting this and calling for no further action for site soils took place in July 2002. The removal systems were shut down on July 12, 2002. Groundwater contamination at the site is being addressed as part of the FT-002 / Industrial Area Groundwater Operable Unit.

Removal Action: Old Small Arms Range: Soils at this site were contaminated with lead due to the discharge of small arms used by base personnel during target practice. Most of the contamination was found in the earthen berm used as a backstop for fired bullets. A Removal Action was conducted in 1994 during which soils were excavated and screened to remove bullets. Soils remaining from the screening process were solidified using a cement based agent and then crushed. Based on soil sampling results from the initial Removal Action, an SI was conducted at the site in 1995 to more precisely delineate the full extent of lead contamination in site soils. As a result of the SI, additional soil excavation and offsite disposal was conducted in 1996 and 1997, during which 647 tons of lead contaminated soil, located in separate areas of the site, were excavated and disposed of. Additional sampling to confirm that cleanup was complete at this site was conducted in 2000. Arsenic contamination was discovered and subsequently delineated. A ROD calling for excavation of arsenic-contaminated soils was signed in May 2001

Removal Action: Heavy Equipment Maintenance Facility: Soils contaminated with fuel-related compounds and solvents released at this site were excavated in 1997. Soils were excavated to a depth of approximately four feet and were then sampled to determine the appropriate treatment and disposal methods. Soils with greater than 5 ppm of TCE were disposed offsite and soils with less than 5 ppm of TCE (approximately 8,000 cubic yards) were placed in the base landfarm. After confirmatory sampling showed that the soils had been adequately remediated, the soils were used as fill elsewhere onbase.

Removal Action: Munitions Maintenance Squadron Site: These facilities were used from 1954 to 1991 for the maintenance, storage and handling of munitions-related items. Contaminants of concern in site soils include toluene and various carcinogenic polynuclear aromatic hydrocarbons (PAHs). A Removal Action consisting of the excavation of "hot spots" in site soils (specifically those near the former waste accumulation area at the site) was conducted in August 1997. After confirmatory sampling showed that the soils had been adequately remediated, the soils were used as fill elsewhere onbase. A second Removal Action was initiated during the Summer of 2000 at the former location of a previously-removed underground storage tank (UST) at this site. Approximately 500 cubic yards of soil contaminated with fuel-related compounds was excavated and disposed offsite. A ROD calling for ozone sparging of site groundwater contaminated with naphthalene and vinyl chloride was signed in September 2008.

Removal Action: Fire Training Area Source Operable Unit: Operation of a removal system (aquifer drawdown, pumping, and skimming) for free product found at the top of the groundwater table at the site commenced in April 1993. The

Removal Action became a Remedial Action with the signing of a ROD for this OU in March 2001. Approximately 19,500 gallons of free product were recovered under the Removal Action.

Removal Action: Nose Dock 8 Aircraft Maintenance Facility: A UST/sump at this facility ruptured in 1987, releasing approximately 2,000 gallons of hazardous wastes (mainly solvents) into the surrounding soils. As a result of the release, a groundwater contaminant plume consisting mainly of TCE and its derivatives developed downgradient of the site. In 1997, the Air Force conducted an onsite Treatability Study involving soil vapor extraction (SVE), with groundwater extraction and treatment to lower the water table to enhance the SVE operation. The Treatability Study was terminated in October 1997 but the remedial system operated continuously since installation. The sump and surrounding soils were removed in 1999. Additional investigation of the site was conducted during 2000 and 2001, and the need for additional remedial activities was studied through a Feasibility Study (FS) and Supplemental Evaluation. Since that time, ongoing groundwater monitoring has shown that the levels of all contaminants of concern have decreased below ARARS. Soil confirmatory sampling and sub-slab soil vapor intrusion sampling was conducted at the site in 2007, and contaminants were found to be within acceptable levels. A ROD calling for no further action was signed in September 2008.

Additional Areas of Concern: The Air Force investigated fourteen additional sites at the base as "EBS Factors". These involved previously unevaluated sites that were contained within parcels that were considered highest priority for the purpose of property transfer. Several of the sites required small scale cleanups.

Remedial Actions Completed:

Landfill LF-023: This 500 by 800 by 30 foot landfill received domestic wastes and construction debris from 1966 to 1981. Soil and fill are contaminated with metals, organics, and PCBs. The maximum volume of fill is estimated to be 406,000 cubic yards. The Remedial Action implemented at this site includes a NYSDEC Part 360 Landfill Cap (single impermeable layer), landfill gas detection/management system, long term groundwater monitoring, and institutional controls. Construction of the remedy was completed in September 1994.

Landfill LF-022: This 500 by 1200 by 30 foot landfill received domestic wastes from 1959 to 1966. Soil and fill are contaminated with metals and organics. The volume of fill is estimated to be 524,000 cubic yards. The Remedial Action implemented at this site includes a landfill cap, gas detection/management system, long term groundwater monitoring, and institutional controls. Construction of the remedy was completed in September 1995.

Landfill LF-024: This one acre construction / demolition landfill was used from 1980 to 1986. Soil and fill are contaminated with metals. EPA's Presumptive Remedy for Military Landfills was selected for remediation of this site. The remedy includes a native soil cover, long term groundwater monitoring, and institutional controls. Construction of the remedy was completed in November 1997.

Landfill LF-021: Landfill LF-021. This six acre landfill was used from 1956 to 1959 for the disposal of municipal wastes, construction and demolition debris, and sludge from the base waste water treatment plant. Soil and fill are contaminated with VOCs, SVOCs, PCBs, and pesticides. EPA's Presumptive Remedy for Military Landfills was selected for remediation of this site. The remedy includes a native soil cover, long term groundwater monitoring, and institutional controls. Construction of the remedy was completed in December 1997. Because treated soils from the base landfarm were used for the soil cover at this landfill, the Air Force estimates that over a million dollars in disposal and fill costs were saved by the Department of Defense. The base landfarm consisted of approximately 20,000 cubic yards of soil excavated mainly during the basewide UST and Oil/Water Separator removal project. Treatment in the landfarm consisted of the tilling of soils until sampling results indicated that the soils had been adequately remediated.

Old Small Arms Range: A ROD documenting the previous Removal Actions at the site (removal of lead-contaminated soils), and calling for excavation of additional arsenic-contaminated soils, was signed in May 2001. Soil excavation began in the summer of 2001. Confirmatory sampling conducted after the initial excavation revealed that additional soil needed to be removed. This was conducted in the Spring and Summer of 2002. A Final Remedial Action Closure Report, dated August, 2003, documented the soil excavation and offsite disposal performed as required under the Record of Decision. Based upon this report, and a September 2003 site inspection performed by EPA, EPA found the site remediation to be acceptable.

Records of Decision:

Records of Decision (RODs) for source control at landfills LF-022 and LF-023 were signed on September 30, 1992. A separate ROD for groundwater, surface water, and sediment at Landfill LF-023 was signed in March 1995. The groundwater, surface water, sediment ROD includes institutional controls (deed restrictions on withdrawal of groundwater) and additional long term groundwater monitoring, and requires that additional actions be taken if groundwater criteria specified in the ROD are exceeded. RODs were signed for the other two landfills at the base (LF-021 and LF-024) in March 1997.

DRMO Storage/Maintenance Area: A No Further Action ROD documenting successful completion of the Removal Action at this site (see above) was signed in March 1993. Groundwater investigation and remediation at this site is being

addressed as part of the Fire Training Area / Industrial Area (FTA/IA) Groundwater Operable Unit.

Pesticide Tank ROD: A No Further Action ROD documenting successful completion of the Removal Action at this site (see above) was signed in March 1995.

Non-Destructive Inspection Facility and Aerospace Ground Equipment Facility: RODs addressing soils at these sites were signed in April 1998. The RODs call for implementation of Institutional Controls including deed/lease restrictions that will limit development of the sites to non-residential uses and deed/lease restrictions prohibiting the withdrawal of groundwater from the sites. Groundwater at the sites is being addressed as part of the FTA/IA Groundwater Operable Unit RI/FS, and groundwater monitoring at the sites will be included in the FTA/IA remedial action.

Heavy Equipment Maintenance Facility: A ROD documenting completion of the previous Removal Action at the site (excavation and treatment/disposal of 9,000 cubic yards of fuel and chlorinated solvent-contaminated soils), and calling for no further action at the site, was signed in September 2000.

Old Small Arms Range: A ROD documenting the previous Removal Actions at the site (removal of lead-contaminated soils), and calling for excavation of additional arsenic-contaminated soils, was signed in May 2001.

Fire Training Area Source Operable Unit: This site consists of an open area used from 1960 to 1989 for training of the base's fire department. JP-4 jet fuel was originally burned on the open ground and in airplane mock-ups, eventually four unlined pits were used. Waste solvents and other compounds were also burned at the site. Although two of the pits were eventually lined with cement and stabilized, large quantities of jet fuel and solvents infiltrated soils and groundwater at the site. A ROD calling for continuation of the previously installed removal systems, with upgrade and expansion, was signed in March 2001.

Building 2774 Aircraft Engine Maintenance Facility: A ROD documenting completion of the two previous Removal Actions at the site (excavation and offsite disposal of 200 cubic yards of fuel and chlorinated solvent-contaminated soils, and operation of SVE, Bioventing, and Biosparging systems), and calling for no further action at the site, was signed in July 2002. Groundwater contamination at the site is being addressed as part of the FT-002 / Industrial Area Groundwater Operable Unit.

Fire Training Area / Industrial Area (FTA/IA) Groundwater Operable Unit Interim ROD. An interim ROD addressing fuel and solvent contamination in groundwater at the Fire Training Area (Site FT-002) and in the industrial area of the base was signed in June 2003. The remedy consists of three interceptor trenches, extraction and treatment of groundwater withdrawn from the plume core and one of the trenches, extensive long term groundwater monitoring, a contingency for treatment of groundwater withdrawn from the other two trenches and discharged to a drainage area, and institutional controls (ICs) to address remediation of the contaminant plume.

Munitions Maintenance Squadron Site: A ROD documenting two previous Removal Actions conducted at the site (excavation of "hot spots" in site soils near the former waste accumulation area (August 1997), and excavation and offsite disposal of soil contaminated with fuel-related compounds at the former location of an underground storage tank (UST) (summer 2000), and calling for ozone sparging of site groundwater contaminated with naphthalene and vinyl chloride, was signed in September 2008. Remedy Design and construction has been completed and a report documenting completion of the Interim Remedial Action is currently underdevelopment.

Nose Dock 8 Aircraft Maintenance Facility: The results of long term groundwater monitoring showed that the levels of all contaminants of concern had decreased below ARARS. Soil confirmatory sampling and sub-slab soil vapor intrusion sampling conducted at the site in 2007 showed that contaminants were within acceptable levels. A ROD documenting previous response actions at the site (soil vapor extraction (SVE), with groundwater extraction (and treatment) to lower the water table to enhance SVE operation (1997-2008), and removal of the ruptured sump and surrounding soils (1999)), and calling for no further action, was signed in September 2008.

Remedial Actions In Progress:

Fire Training Area Source Operable Unit: The Remedial Action currently underway at the 15 acre site consists of the original Removal Action systems with modifications and upgrades. This includes pumping of groundwater at the site to achieve an approximately two foot drawdown of the water table in the unconfined aquifer, Bioventing of site soils to a depth of 35 feet (including the "smear zone" exposed by the aquifer drawdown), Soil Vapor Extraction (SVE) with off-gas treatment at one of the former pits where chlorinated solvent contamination was most extensive, and treatment of the extracted groundwater at the site treatment plant via air stripping and carbon adsorption. System design was completed in August 2003. Construction was completed in December 2003. Operational testing was conducted and continuous system operation commenced in January 2004. An inspection of the systems was conducted by EPA and NYSDEC in March 2004. An Interim Remedial Action Report (RAR) was developed and approved by EPA in September 2004. The Report determined that construction was complete and that the remedial activities conformed with the remedy selected in the March 2001 ROD. Sampling of site soils was conducted from 2007 through 2011, and it appears that the soils may have been adequately remediated. The system was shut down temporarily during 2009 to determine contamination

rebound effect. Data is currently being compiled and a report recommending that the system be permanently shut down is currently under development.

Fire Training Area / Industrial Area (FT-002 / IA) Groundwater Operable Unit: The interim remedy consists of three interceptor trenches, extraction and treatment of groundwater withdrawn from the plume core and one of the trenches, extensive long term groundwater monitoring, a contingency for treatment of groundwater withdrawn from the other two trenches and discharged to a drainage area, and institutional controls (ICs) to address remediation of the contaminant plume. To address concerns regarding possible off-base migration of the FT-002 plume prior to final remedy selection, sentry wells were installed on the eastern side of the base during 1997. System design was completed in September 2003. Construction was completed in February 2005. Operational testing was conducted and continuous system operation commenced in May 2005. An inspection of the systems was conducted by EPA and NYSDEC in October 2005. An Interim Remedial Action Report (RAR) was developed and approved by EPA in September 2006. The Report determined that construction was complete and that the remedial activities conformed with the remedy selected in the June 2003 Interim ROD. Signature on the final ROD has been delayed due to recent developments regarding the potential health risks from soil vapor intrusion (SVI) of VOCs into buildings located above and near the plume. SVI sampling was conducted from 2007 through 2010, and the ROD is currently being finalized. The ROD will call for all of the components of the interim remedy, the installation of Soil Vapor Extraction (SVE) systems at 3 buildings where elevated levels of VOCs were detected during SVI sampling, and land use controls / institutional controls (LUC/ICs) to be implemented through deed restrictions that will prohibit groundwater use and discharge, prohibit residential use of the property, and impose an IC for SVI that will call for additional SVI evaluations in the event of changes in building use and SVI evaluations or the installation of SVI mitigation systems at any new buildings to be constructed in the future. The erecting of any structures within a specified distance of the remedial components and any activities that could interfere with operation of the remedy will also be prohibited across the entire OU.

Future Records of Decision

RODs are planned for 3 additional Operable Units (OUs) at the base:

Fire Training Area / Industrial Area (FT-002 / IA) Groundwater Operable Unit: See above section on Remedial Actions In Progress.

Building 2612: A ROD calling for the excavation of approximately 200 cubic yards of chromium-contaminated sediment is planned for this OU. The ROD will include an IC prohibiting occupation of the building located on the site (2612) due to SVI concerns. An SVI study was conducted at Building 2612 in 2007 as part of the FT-002 SVI investigations, and elevated levels of TCE were detected in the subslab samples. Groundwater at the site is included in the FT-002 Groundwater OU.

Flightline: A ROD calling for Institutional Controls to address potential ecological risks resulting from metals contamination in site soils is currently under development. Groundwater at this site is included in the FT-002 Groundwater OU. It is anticipated that the ROD will also document investigations and small scale cleanups conducted at a number of sites known as Environmental Baseline Survey (EBS) Factors. These sites were investigated and cleaned up prior to the transfer of several parcels that were considered by the local reuse authority to be of highest priority for resale and subsequent reuse by the local community.

Cleanup Progress

Activities involving the removal of contaminants from soils and groundwater have reduced and will continue to reduce the potential for exposure to contamination at Plattsburgh AFB. Selection of final remedies for the last of the Installation Restoration Program (IRP) sites, through Records of Decision (RODs) is currently underway. Several Air Force Decision Documents were previously completed for sites that were closed after the Preliminary Assessment / Site Investigation (PA/SI) stage.

Site Facts: Cleanup at Plattsburgh Air Force Base is conducted under the Installation Restoration Program established by the DoD in 1978 to identify, investigate, and control hazardous contaminants at DoD facilities. The base was slated for closure in 1993 under the Defense Base Closure and Realignment Act of 1990 (BRAC), and was formally closed on September 30, 1995. In accordance with Presidential directive, environmental cleanup has been expedited in order to promote early reuse by the community. The entire base was initially made ready for reuse by the community through two 55 year leases in furtherance of conveyance (LIFCs), one accomplished through a Public Benefit Transfer (PBT) of 1709 acres, and the other through an Economic Development Conveyance (EDC) of 1674 acres. Prior to the two LIFCs, 22 leases (covering the entire base) were evaluated by EPA for the interim and long term use of various parcels and facilities at the Base. Each lease required a formal Finding of Suitability To Lease (FOSL), and an SEBS. Participation by the regulatory agencies during the entire leasing and property transfer process is required by federal regulations. Twenty Findings of Suitability To Transfer (FOSTs), with associated Site Specific Environmental Baseline Surveys (SEBSs), were subsequently reviewed by EPA and signed by the Air Force. These FOSTs covered 2,331 acres of the Base, and

all of this property has been transferred to private parties. A Finding of Suitability for Early Transfer (FOSET) for an additional 337 acres of base property was submitted by the Air Force and approved by EPA's Regional Administrator, NYSDEC's Commissioner, and New York State's Governor in July 2009. That property has been transferred to the local reuse authority for subsequent sale to various private entities. A FOSET for the remaining 777 acres of the Base is currently under development by the Air Force. This property will be transferred to Clinton County for use as a county airport after approval of the FOSET.

Site Repositories

Feinberg Library, State University of New York (SUNY)

Plattsburgh Campus, Plattsburgh, New York 12901

EPA Superfund Records Center, 290 Broadway, 18th Floor, New York, NY 10007-1866