VERMONT AIR NATIONAL GUARD BASE, BURLINGTON VT
SITE #77-0043

STREET ADDRESS: Poor Farm Road, Colchester VT

CONTACT:
LT JOHN FERRARO, ENVIRONMENTAL MANAGER
Environmental Management Office
10 Falcon Street
South Burlington VT 05406-5868
(802) 660-5966
john.ferraro@vtburl.ang.af.mil

SITE STATUS (5/2002):
Environmental investigation and cleanup activities are underway at five areas of the site (see attached figure for locations).

SITE 1 – FORMER FIRE DEPARTMENT TRAINING AREA/OLD LANDFILL
Site 1 encompasses approximately 10 acres of woods and grassland in the northeastern portion of the VT ANG base. The former Fire Department Training Area (FDTA) is located in the central portion of the site. Fire training activities were conducted in this area from 1960 to 1980, and included utilization of one primary and possible one secondary burn area. During the period of use, the FTDAs were excavated to create a shallow depression for the retention of ignitable liquids. During fire training exercises, various quantities of ignitable liquids were dispersed into the burn pits and ignited, then extinguished. The primary fuel for the burn pits was jet fuel (JP-4), although a wide variety of liquids were used as fuel during the course of operations in this area. Fire training exercises were conducted an average of 26 times per year from 1960 to 1973, and an average of 12 times per year from 1973 to 1980. It is estimated that approximately 700,000 gallons of fuel was dispersed into the burn pits between 1960 and 1980. In addition, from 1979 to 1980, approximately 1500 gallons of various mixtures of acetone, cyclohexane, methyl ethyl ketone, methanol, propyl alcohol, and waste paint pigments were collected from the surrounding community and burned.

Fuel-related contaminants have been detected in soils in the FTDA. Free-phase petroleum has been detected and remains present in monitoring wells installed in Site 1 area. Groundwater contamination, including petroleum and chlorinated volatile organic compounds, extends from Site 1 to beyond the base property boundary on Poor Farm Road and across to the Country Club Estates property.

SITE 2 – FORMER CONSTRUCTION/DEMOLITION DEBRIS LANDFILL

Site 2 encompasses approximately two acres and is located in the southeastern portion of the base. It is situated on a steep eastward sloping escarpment. Site 2 has been used for

the disposal of construction and demolition debris since 1960. The site is bound to the east by a lowland marsh area.

Investigations at Site 2 have revealed the presence of chlorinated volatile organic compounds, petroleum hydrocarbons, metals and pesticides in soil and groundwater in this area. The most significant issue is the presence of volatile organic compounds in groundwater.

SITE 3 - PETROLEUM/OIL/LUBRICANTS FACILITY
and
SITE 4 - STORMWATER DRAINAGE DITCH AREA

Site 3 consists of an abandoned dry well locate adjacent to the west wall of the fuel transfer pump house and the contaminated area downgradient of the dry well. Once every 3 years from 1954 to 1984, maintenance of the fuel system called for draining approximately 300 to 400 gallons of jet fuel into the floor drain of the transfer pump house, which discharged to the dry well. As much as 20,000 of jet fuel may have been discharged to the dry well as a result of this procedure.

Site 4 consists of a partially covered drainage ditch located immediately south and parallel to Poor Farm Road along the northern boundary of the Vermont ANG base. Surface drainage from the Petroleum/Oil/Lubricants facility area, the flight line, and parking apron areas was conveyed to the drainage ditch via a stormwater/surface water collection and subsurface piping network. Spilled fuel and other contaminants from the portions of the base served by the stormwater system was also discharged to this area.

Contamination in the vicinity of Site 3 and 4 was discovered in 1988 when a strong petroleum hydrocarbon odor was detected during the installation of a sanitary sewer line in the western portion of Site 4. Fuel-related contaminants were detected in soils near the transfer pump house and drainage ditch. Free-phase petroleum was detected in monitoring wells installed in the vicinity of the transfer pump house and drainage ditch. Groundwater contamination, including petroleum and low levels of chlorinated volatile organic compounds, extends from Site 3 to beyond the base property boundary on Poor Farm Road.

In 2000, elevated free product levels observed in existing recovery and monitoring wells in the Site 3 area led to the discovery of a leak in the underground piping system for the POL facility. An unknown quantity of JP-8 jet fuel was released to the subsurface as a result of this leak. The failed line was taken out of service, and free product recovery efforts were augmented to address this new release.

A remedial program consisting of bioventing, free product recovery and intrinsic remediation is currently in place to address contamination at these two sites. An expanded free product recovery system is planned for installation in 2002 to address the additional release of fuel.

SITE 5A - FORMER FLIGHTLINE FUEL PITS

And

SITE 5B – FORMER FLIGHTLINE AREA UNDERGROUND STORAGE TANKS

A hydrant system previously existed at the base for refueling aircraft on the flightline area. Fuel was stored at the Petroleum, Oil and Lubricants facility (Site 3), pumped to two fifty-thousand gallon underground storage tanks located near the flightline (Site 5B), pumped to six below ground concrete refueling pits located adjacent to the taxiway (Site 5A), and finally to fuel dispensing hydrants located on the taxiway (Site 5A). In 1998, the excavation, removal and closure of the USTs, refueling stations and associated subsurface piping revealed petroleum hydrocarbon soil contamination in the vicinity of the USTs and the refueling pits. Supplemental investigation work performed in November-December 2000 revealed both soil and groundwater contamination.

Additional investigation and remedial action work is planned for Site 5B in 2002. This will include installation of a soil vapor extraction system and additional delineation of the extent of soil and groundwater contamination. Due to access issues, additional work at Site 5A has been postponed.