

*Site CT-999-0108-
New London*

1294 Pleasant Valley Road North
Groton, Connecticut

Prepared for **Optasite, Inc.**
One Research Drive, Suite 200C
Westborough, Massachusetts 01581

Prepared by **VHB**/Vanasse Hangen Brustlin, Inc.
54 Tuttle Place
Middletown, Connecticut

December 2006

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Transportation, Land Development, Environmental Services
54 Tuttle Place
Middletown, Connecticut 06457

Site
Investigator



Daniel McGinley, Environmental Scientist

Technical
Review



for Michael Libertine, LEP, Director of Environmental Services, CT

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Executive Summary

At the request of Optasite, Inc. (Optasite) Vanasse Hangen Brustlin, Inc. (VHB) conducted a Phase I Environmental Site Assessment (PESA) of a proposed wireless telecommunications Facility at 1294 Pleasant Valley Road in Groton, Connecticut (identified herein as the "host property").

The PESA was conducted to identify potential areas of environmental concern at and within the vicinity of the Site based on a review of available environmental information and observations of the Site/host property for overt evidence of a release or threat of a release of oil or hazardous materials (OHM). The scope of services for this PESA included a historical review, federal and state environmental database search, state and municipal regulatory file reviews, and a perimeter Site reconnaissance.

The PESA was conducted in conformance with the ASTM E 1527-00 Standard Practice for Environmental Site Assessments. This PESA is subject to the terms of the Agreement between VHB and Optasite, as well as the Limitations included in Appendix A. VHB understands that Optasite may enter into a lease agreement with the current owner to construct a telecommunications Facility on the host property.

Site Characteristics and Vicinity

The host property is currently occupied by the Paws Place Kennels, located on the west side of Pleasant Valley Road North. The Site is an undeveloped parcel located within the north-central portion of the host property, situated approximately 200 feet west and down-gradient of the boarding kennel, and gravel parking lot. The proposed Site presently consists of a cleared circular area approximately 150 feet in diameter, resembling an unfenced horse corral.

The Site, and subject of this assessment, includes a proposed ± 50 -foot by ± 50 -foot ground lease utility compound area and its associated access/utilities easement. Optasite is proposing to install a ± 150 -foot tall monopole within the utility compound area to be developed for future use by service providers. Future transmission/reception antenna will be attached to the monopole and associated ground equipment will be installed at the base of the monopole. Access to the Site will be provided via the existing asphalt-paved driveway originating from Pleasant Valley Road North, followed by a proposed gravel drive and a ± 20 -foot access/utility easement extending in a westerly direction off the existing asphalt drive towards the proposed compound area (See Figure 2 for a Site Schematic).

Surrounding land use in the vicinity of the host property is primarily residential, with some commercial development. Residential properties are located to the east, and south along Pleasant Valley Road North, with some industrial-commercial properties on the U.S. Naval Reservation to the west and southwest, between Corsair and Thresher Avenues. Forested land and a horse corral abuts the Site/host property to the north.

Site History

VHB reviewed available public records, historical topographic maps, and historic aerial photographs filed at the Connecticut State Library for information regarding the host property/Site. Additional historical topographic maps were reviewed on Maptech's website (<http://historical.maptech.com>).

According to historic photographs and topographic maps reviewed, the host property/Site appears to exist as vacant land since at least the mid 1800's to 1975. The Town of Groton Assessor's property record card lists the present boarding kennel as being constructed in 1975. The host property appears undeveloped, forested land in the 1970 aerial photograph, and cleared in the 1974 aerial photograph. The boarding kennel is clearly visible in the 1985 aerial photograph. The current deed for the host property indicates that JFM Enterprises acquired the property from 4 Paws Resort LLC on June 20, 2002. 4 Paws Resort acquired the property from David S. Ray on October 23, 2000, and deeds between private parties continue back to June 25, 1975, when Nettie G. Mudgett sold one-half of the property to Robert E. Fluery and the other half to Robert E. Rohner, Jr.

Environmental Regulatory Review

VHB reviewed federal and state environmental databases in accordance with the ASTM E 1527-00 Standard Practice for Environmental Site Assessments using the *FirstSearch Technology Corporation's* Environmental FirstSearch™ Report. VHB also reviewed available files at the Connecticut Department of Environmental Protection (CTDEP) and select Groton municipal offices regarding the Site/host property.

The Site/host property is not listed on any of the environmental databases queried by FirstSearch™. In addition, no information regarding the host property was found in the CTDEP's records and database of spills and State-listed properties to supplement information provided in the database review. None of the adjoining properties are identified on the FirstSearch™ report. VHB personnel reviewed the listings identified within the specified search radii, and none of these listings are expected to have any direct effect on environmental conditions at the Site/host property due to the relative location and nature of the listing.

Site Observations

VHB performed a Site reconnaissance on November 3, 2006 that included observations of exterior portions of the host property for overt evidence of OHM. VHB was not provided with interior access to the kennel buildings or storage shed located on the Site/host property; observations were limited to exterior portions of the Site and immediate surrounding vicinity. A Site Schematic is provided in Figure 2 and photographs taken during the Site reconnaissance are provided in Appendix D.

The ±3.66-acre host property currently consists of approximately 80 percent undeveloped forested land, ±5 percent is a paved drive and gravel parking area, ±5 percent is a cleared horse corral and ±10 percent is a boarding kennel. The boarding kennel structure is a ±2,524 square-foot single-story wood structure improved within the central region of the host property. An asphalt-paved driveway runs west off Pleasant Valley Road North, currently providing access to the gravel parking lot abutting the north side of the boarding kennel. A dirt path continues west from the gravel parking lot, down to the proposed Site located approximately 200 feet west of the boarding kennel. The proposed Site presently consists of a cleared circular area approximately 150-feet in diameter, resembling an unfenced horse corral.

A small steel storage container is situated approximately 50 feet west of the boarding kennel, between the building and the proposed Site. A small backhoe and row boat is also situated between the kennel and the proposed Site. A stone wall borders the north side of the path, and separates the host property from an active horse corral on the northern abutter's land.

No overt evidence of OHM was observed at or within the vicinity of the Site. Based on municipal information reviewed and interviews with municipal personnel, a septic system and potable well exist on the host property.

Conclusion and Recommendations

The results of this PESA did not identify the presence of significant environmental concerns at the Site. It is VHB's opinion that no further investigations are warranted at this time.

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Introduction

At the request of Optasite, Inc (Optasite) Vanasse Hangen Brustlin, Inc. (VHB) conducted a Phase I Environmental Site Assessment (PESA) of a proposed wireless telecommunications Facility at 1294 Pleasant Valley Road North in Groton, Connecticut (identified herein as the "host property").

The PESA was conducted to identify potential areas of environmental concern at and within the vicinity of the Site based on a review of available environmental information and observations of the Site/host property for overt evidence of a release or threat of a release of oil or hazardous materials (OHM). The scope of services for this PESA included a historical review, federal and state environmental database search, state and municipal regulatory file reviews, and a perimeter Site reconnaissance.

The PESA was conducted in conformance with the ASTM E 1527-00 Standard Practice for Environmental Site Assessments. This PESA is subject to the terms of the Agreement between VHB and Optasite, as well as the Limitations included in Appendix A. VHB understands that Optasite may enter into a lease agreement with the current owner to construct a telecommunications Facility on the host property.

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Site Description

Location Description

The ±3.66-acre host property is currently occupied by the Paws Place boarding kennels. The Site is located within the north-central portion of the host property, situated approximately 200 feet west of the kennels and gravel parking area. The host property is identified by the Town of Groton's Assessor's Office on Map No. 17, Block 80, Lot 10. Based on information provided by Optasite, the coordinates for the Site are 41° 23' 57.00" latitude and 72°04' 45.00" longitude.

Site and Vicinity Characteristics

The Site, and subject of this assessment, includes a proposed ±50-foot by ±50-foot ground lease utility compound area and its associated access/utilities easement. Optasite is proposing to install a ±150-foot tall monopole within the utility compound area to be developed for future use by service providers. Future transmission/reception antenna will be attached to the monopole and associated ground equipment will be installed at the base of the monopole. Access to the Site will be provided via the existing asphalt-paved driveway originating from Pleasant Valley Road North, followed by a proposed gravel drive and ± 20-foot access/utility easement that will extend in a westerly direction off of the existing asphalt drive towards the proposed compound area (See Figure 2 for a Site Schematic). The Site currently exists as a cleared circular area resembling an unfenced horse corral.

Surrounding land use in the vicinity of the host property is primarily residential, with some commercial. Residential properties are located to the east, and south along Pleasant Valley Road North, with some commercial-industrial properties on the U.S. Naval Reservation approximately 0.25 mile to the west, between Corsair and Thresher Avenue. Forested land and a horse corral abuts the Site/host property to the north.

Physical Setting

The USGS 7.5-Minute 1984 Uncasville Quadrangle topographic map was used to characterize the general topography of the Site (see Figure 1). The Site is located approximately 162 feet above mean sea level. Groundwater flow in the vicinity of the Site is assumed to be in a westerly direction towards the Thames River, located approximately 0.66 mile from the

Site/host property. Buck Pond is the nearest surface water body, approximately 0.50 mile to the southwest.

The groundwater near the Site is classified by the Connecticut Department of Environmental Protection (CTDEP) is listed as a GA groundwater area. The GA classification indicates groundwater within the area of existing private water supply wells or an area with the potential to provide water to public or private water supply wells.

Soils in the vicinity of the Site are classified as Thin till (Surficial Materials Map of Connecticut, 1992).

Bedrock geology underlying the Site is identified as part of the Proterozoic Massif with a possible intrusion from the Mamacoke Formation. (Bedrock Geological Map of Connecticut, John Rogers, 1985).

The Federal Emergency Management Agency (FEMA) National Flood Insurance Program (NFIP) Flood Zone Mapping Community Panel FZMCP dated August 15, 1984 for the Town of Groton, Connecticut indicates that the Site is located within Zone C (area of minimal flooding).

Based on the Town of Groton Wetlands and Watercourses Map (August, 1980), the Site is not located within a mapped wetland area.

Description of Structures

The host property is developed with a single-story $\pm 2,524$ square-foot dog boarding kennel located within the eastern portion of the host property. A ± 785 square-foot office is situated on the east side of a $\pm 1,300$ square-foot wood dog shelter with kennel runs, and a ± 442 square-foot kennel building at the west end. A small steel storage shed is located approximately 50 feet west of the kennel.

Current and Past Uses of Site and Adjoining Properties

VHB personnel reviewed available public records including historical topographic maps (dated 1854, 1868, 1941, 1952, 1984, and 1989) historic aerial photographs (dated 2004, 1985, 1974 and 1970). VHB also reviewed available Sanborn Fire Insurance Maps at the Connecticut State Library. No Sanborn coverage exists for the area of the host property. An additional topographic map dated 1989 was reviewed on Maptech's website (<http://historical.maptech.com>).

Historic Topographic Maps

Topographic maps dated 1854, 1868, 1941, 1952, 1984, and 1989 depict a residence south of the Site/host property, along Pleasant Valley Road North. Route 12 first appears on the 1952 topographic map. The 1984 topographic map reveals a large area of structural development at the U.S. Naval Reservation west of the Site/host property and east of the Thames River.

Historic Aerial Photographs

The 2004 and 1985 aerial photographs depict the host property similar to its current configuration, with the existing buildings where they are now. There are no buildings apparent in the 1970 and 1974 aerial photographs. The Site/host property appears cleared with agricultural fields visible on the north abutter's parcel, and forested land further north. Forested land also appears to the east and southeast. The U.S. Naval Reservation is apparent in the 1970, 1974, and 1985 aerial photographs, west of Route 12.

City Directories

The most recent available Town of Groton directory at the Connecticut State Library is the 1979 edition, with no residents listed on Pleasant Valley Road North.

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Records Review

VHB conducted regulatory file reviews to help identify properties in the vicinity of the Site/host property that have had a release or pose a threat of release of OHM, and which may potentially impact the environmental quality of the Site. VHB reviewed federal and state environmental databases using the *FirstSearch Technology Corporation's* Environmental FirstSearch™ Report. VHB also reviewed select files at the CTDEP Bureaus of Water and Waste Management and select Groton municipal offices. Pertinent file information discussed herein is provided in Appendix C.

Environmental Database Search

VHB reviewed the following FirstSearch™ environmental databases, including: National Priorities List (NPL); Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS); Resource Conservation and Recovery Act (RCRA) Treatment, Storage, and Disposal (TSD) facilities list; RCRA Corrective Actions (COR); RCRA generators (GEN); RCRA no longer registered (NLR) generators; Emergency Response Notification System (ERNS); state hazardous waste sites; state list of spills sites; Active Solid Waste Landfill (SWL) facilities; registered underground storage tanks (USTs); and Leaking USTs (LUSTs). The FirstSearch™ report is attached in Appendix B. Database search radii were chosen generally in accordance with the ASTM E 1527-00 Standard Practice for Environmental Site Assessments, as outlined below.

DATABASE	ASTM SEARCH RADIUS	NUMBER OF SITES WITHIN SEARCH RADIUS
NPL sites	1 mile	7
CERCLIS sites	0.5 mile	6
RCRA TSD	0.5 mile	1
RCRA COR	1 mile	1
RCRA Generators	0.25 mile	0
RCRA NLR	0.25 mile	0
ERNS	0.25 mile	0
State Hazardous Waste Sites	1 mile	12
State Spills	0.5 mile	5
SWL facilities	0.5 mile	0
Registered UST's	0.25 mile	0
LUSTs	0.5 mile	5

The Site/host property is not listed on any of the above referenced environmental databases queried by FirstSearch™. None of the adjoining properties are identified on the FirstSearch™ report. The listings identified within the specified search radii have been reviewed by VHB personnel. None of these listings are expected to have any direct effect on environmental conditions at the Site due to the relative location and nature of the listing. Most of the listings identified on the FirstSearch™ report are associated with the Groton Naval Submarine Base, including the NPL, CERCLIS, RCRA, and State listings.

VHB reviewed non-geocoded listings (properties with minimal or no address information) identified by FirstSearch™ within the specified search radii. None of these listings appear to be associated with the host property or the adjoining properties.

State Record Sources

VHB searched the CTDEP's records and database of spills and State-listed properties to supplement information provided in the database review. No information was found regarding known environmental conditions at the Site/host property.

Municipal Record Sources

Select municipal offices were visited to obtain information regarding Site/host property history and use, zoning, and oil or hazardous materials use, storage, release, and/or disposal practices that may have occurred at the Site/host property.

Assessor's Office

Based on the Town of Groton Assessor Office records, the host property consists of ±3.66 acres of land identified on Assessor's Map No. 17, Block 80, Lot 10. The host property is currently owned by JFM Enterprises LLC. Two single-story wood buildings connected by a 1,300 square-foot dog shelter with kennel runs are located within the eastern portion of the host property. The entire structure totals ±2,524 square-feet.

Town Clerk's Office

Deeds and Easements for the host property located at the Groton Town Clerk's Office include the following:

- Volume 774, page 624. According to the deed, JFM Enterprises acquired the property from 4 Paws Resort LLC as recorded on June 20, 2002.
- Volume 721, page 770. According to the deed, 4 Paws Resort LLC acquired the property from David S. Ray on October 23, 2000.

- Volume 651, page 124. According to the deed, David S. Ray acquired the property from Robert F. Fluery on September 30, 1997.
- Volume 356, page 585. According to the deed, Robert F. Fluery acquired the property from Robert E. Rohner Jr. on October 6, 1981.
- Volume 356, page 591. According to the Easement, Robert E. Fluery granted Robert E. Jr. and Rosemary W. Rohner a perpetual easement for the purpose of planting and maintaining trees and other protective vegetation on October 5, 1981.
- Volume 290, page 92. According to the deed, Robert F. Fluery and Robert E. Rohner Jr., their heirs and assigns forever, each acquired one-half interest in the property from Nettie G. Mudgett on June 25, 1975.

There were no environmental liens identified for the host property during the municipal file review. A certified title search where environmental liens would be definitively identified is not within the scope of services for this investigation. A title company is capable of completing a full title and environmental lien search.

Building Department

VHB conducted a file review of the Town of Groton's Building Department records. According to Department personnel, no building files exist for the host property.

Planning and Zoning Department

VHB conducted a file review of the Town of Groton's Planning and Zoning Department records. Based on current zoning regulations, the host property is located within an RU-20 parcel, zoned for rural 20,000 square-foot minimum lot size.

Department of Public Health

VHB conducted a file review of the Town of Groton's Health Department records for the host property. According to Ms. Janice Costin, there was one complaint filed in 1998 concerning the disposal of canine waste. After inspecting the premises, the Groton Health Department revealed no evidence of canine waste.

VHB also contacted Ryan McCanon at the Ledge Light Health District. According to Mr. McCanon, there were no files pertaining to the Site/host property.

Fire Marshal's Office

VHB conducted a file review of the Town of Groton Fire Marshal records. No files exist for the host property.

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Perimeter Site Reconnaissance

VHB performed a Site reconnaissance on November 3, 2006 that included observations of exterior portions of the host property for overt evidence of OHM. VHB was not provided with interior access to the kennel buildings or storage shed located on the Site/host property; observations were limited to exterior portions of the Site and immediate surrounding vicinity. A Site Schematic is provided in Figure 2 and photographs taken during the Site reconnaissance are provided in Appendix D.

General Observations

The ± 3.66 -acre host property currently consists of approximately 80 percent undeveloped forested land; ± 5 percent is a paved drive and gravel parking area, ± 5 percent is a cleared horse corral and ± 10 percent is a boarding kennel. A $\pm 2,524$ square-foot single-story boarding kennel structure is improved within the eastern region of the host property. An asphalt-paved driveway runs west off Pleasant Valley Road North, currently providing access to the gravel parking lot abutting the north side of the boarding kennel. A dirt path continues west from the gravel parking lot, down to the proposed Site located approximately 200-feet west of the boarding kennel. The proposed Site presently consists of a cleared circular area approximately 150-feet in diameter, resembling an unfenced horse corral.

A small steel storage container is situated approximately 50 feet west of the boarding kennel, between the kennel and proposed Site. A small backhoe and row boat is situated between the kennel and proposed Site. A stone wall borders the north side of the path, and separates the host property from an active horse corral, which is located on an adjacent property.

No overt evidence of OHM was observed at or within the vicinity of the Site.

Storage Tanks

A 250-gallon above ground oil tank is located approximately 10 feet from the south side of the kennel office on the host property. Based on municipal information reviewed and interviews with municipal personnel and Jennifer Macierowski of JFM Enterprises, a septic tank is located on the north side of the entrance driveway, near Pleasant Valley Road North, with a potable well further west, near the end of the existing gravel access drive. During the

Site reconnaissance no evidence of USTs (i.e. vent/fill pipes) or ASTs were observed at or within close proximity of the Site.

Utilities

The host property is serviced via aboveground utilities. Based on information provided by Optasite, the Site will be serviced via underground utilities that will follow a proposed utilities easement.

The host property is serviced via a potable well, with overhead electric service available from Pleasant Valley Road North. Based on information provided by Optasite, the proposed Site does not require a water and/or sewage connection.

Indications of Polychlorinated Biphenyls

No overt evidence of polychlorinated biphenyl (PCB) containing equipment (i.e. pad or pole mounted transformers) were observed at or within close proximity to the Site.

References

Assessor's Office, Town of Groton, file review, November 2006.

Building Department, Town of Groton, file review, November 2006.

Boyden Library's online digital Sanborn Map database review, <http://www.boydenlibrary.org>, October 2006.

Fire Marshal's Office, Town of Groton, file review, November 2006.

FirstSearch™ Technology Corporation Environmental FirstSearch™ Report, November 2006.

Health Department, Town of Groton, file review, November 2006.

Heritage Consultants, LLC., review of historic aerial photographs dated 1970, 1974, 1985 and 2004.

Historic USGS topographic maps dated 1854, 1868, 1941, 1952, 1984, and 1989.

CTDEP file review, November 2006.

Vanasse Hangen Brustlin, Inc.
PHOTOLOG DOCUMENTATION
1294 Pleasant Valley Road North
Groton, Connecticut



Photo 1: View of Paw's Place Boarding Kennel and paved parking lot.



Photo 2: View of proposed Site, facing west.

Vanasse Hangen Brustlin, Inc.
PHOTOLOG DOCUMENTATION
1294 Pleasant Valley Road North
Groton, Connecticut

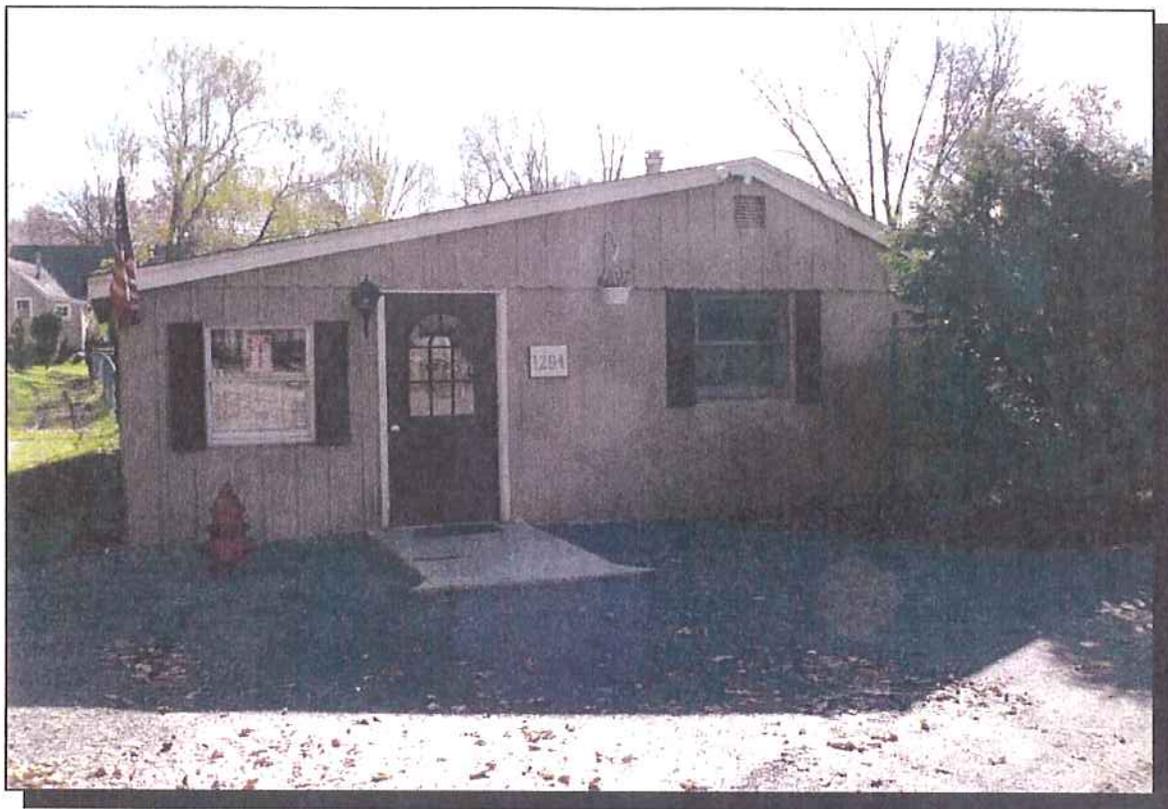


Photo 3: View of Paw's Place Boarding Kennel office.