Abandoned blower pads, 12 pads 9" x 7'
Concrete pad, 23' x 23'
Concrete pads, 2 pads 12' x 9"

Site T-2: 60 SY
A/C condenser pads, two 6' x 13''.
Cable way pads, 3' x 23'.
Main transformer pads, two 5' x 5'.
DI Glycol Cooler pads:
5 pads 21.5' long, 12" wide, 20" high.
2 pads 51' long, 12" wide, 25" high.
1 pad 31' long, 12" wide, 25" high.
5 pads 2' x 2'.

Site T-3: 60 SY
A/C condenser pads, two 6' x 13''.
Cable way pads, 3' x 23'.
Main transformer pads, two 5' x 5'.
DI Glycol Cooler pads:
5 pads 21.5' long, 12" wide, 20" high.
2 pads 51' long, 12" wide, 25" high.
1 pad 31' long, 12" wide, 25" high.
5 pads 2' x 2'.

d) Vehicle Parking Non-Organizational (Parking) (Cat Code: 852262 - VEH PKING N/ORGN) Facility Number: 00059

- 977 Square yards of gravel parking space as follows:

Site T-1: Four areas totaling 6400 square feet, yielding 711 square yards.
Site T-2: 20' x 60' of gravel parking area yielding 133 square yards.

Site T-3: 20' x 60' of gravel parking area yielding 133 square yards.

e) Helicopter Landing Pad (Cat Code: 116663 - PAD HELICOPTER) Facility Number: 00060

- 50' x 50' concrete helicopter pad, at site T-1, yielding 277.7 square yards. Pad has four ADB-ALNACO Model 953M recessed lights and 16 raised edge lights, ADB-ALNACO Model L-861.

6. Land

a) Land, Fee Purchase (Land) (Cat Code: 911146 - LAND, FEE PUR) Facility Number: 00095

- 1012 Acres of land Air Force owned purchased 14 December 1989.

b) Land, Fee Condemnation (Land) (Cat Code: 911142 - LAND, FEE CONDEMN) Facility Number: 00096

- 262 Acres of land condemned through the power of eminent domain 14 December 1989.

Chain of Title

Table 1 - OTHB-E Properties Acquired by U.S. Air Force by Land Purchase or Fee Condemnation							
Transmitter							
Grantor	Grantee	Tract ID	Acerage	Grant Date	Book	Page	Method of Acquisition
Kennebec River Pulp & Paper Co.	USA	100	257	5/27/1975	853	908	Fee Condemnation
Scott Paper Co.	Kennebec River Pulp & Paper Co.			8/2/1965	724	224	
Scott Paper Co.	USA	101	3.28	2/27/1976	861	483	Land Purchase
Hollingsworth & Whitney Co.	Scott Paper Co.			10/29/1954	561	541	
Frank E. Haines	Hollingsworth Whitney Co.			2/27/2020	351	484	
Coburn Heirs Inc.	Hollingsworth Whitney Co.			12/23/1947	508	86	
Scott Paper Co.	USA	102	77.51	3/5/1976	861	454	Land Purchase
Scott Paper Co.	USA	103	0.5	2/27/1976	861	483	Land Purchase
Scott Paper Co.	USA	104	63.25	8/15/1984	1152	60	Land Purchase
Scott Paper Co.	USA	105	9.27	8/15/1984	1152	66	Land Purchase
Bingham Land Co.	USA	106	56.84	8/23/1984	1152	76	Land Purchase
Frank E. Hall	Bingham Land Co.			12/31/1890	260	382	
Edward Heath	Bingham Land Co.			9/30/1903	260	253	
S.D Warren Company	USA	107	314.42	6/16/1987	1351	84	Land Purchase
Scott Paper Co.	S.D Warren Company			6/30/1986	1316	200	
see above	Scott Paper Co.						
S.D Warren Company	USA	107-1	59.48	6/16/1987	1351	84	Land Purchase
Bingham Land Co.	USA	108	59.82	6/13/1987	1351	95	Land Purchase
Charles Blood; Hollon E. Shaw Jr.	USA	109	52.569	6/10/1986	1263	309	Land Purchase
John Redmond	Charles Blood; Hollon E. Shaw Jr.			10/10/1973	835	187	
Elvina Greeley	John Redmond			2/10/1973	825	902	
Arthur Greeley	Elvina Greeley			2/10/1954	556	174	
Horace Greeley	Arthur Greeley						inherited
Lander Land Co.	Horace Greeley			6/27/2013	312	495	
S.D Warren Company	USA	107-2	108.02	6/16/1987	1351	84	Land Purchase
S.D Warren Company	USA	107-3	2.73	6/16/1987	1351	84	Land Purchase
S.D Warren Company	USA	107-4	77.59	6/16/1987	1351	84	Land Purchase
Bingham Land Co.	USA	108-1	110.05	6/13/1987	1351	95	Land Purchase
Bingham Land Co.	USA	108-2	36.15	6/13/1987	1351	95	Land Purchase
Bingham Land Co.	USA	108-3	8.52	6/13/1987	1351	95	Land Purchase

Table 1 - OTHB-E Properties Acquired by U.S. Air Force by Land Purchase or Fee Condemnation (Cont'd.)

Transmitter (Cont'd.)

Grantor	Grantee	Tract ID	Acerage	Grant Date	Book	Page	Method of Acquisition
Central ME Power	USA	110	34.16	9/17/1987	1375	308	Land Purchase
Scott Paper Co.	Central ME Power			12/8/1975	860	48	
see above	Scott Paper Co.						
Bingham Land Co.	Central ME Power			2/19/1976	861	319	
see above	Bingham Land Co.						

All records for the Transmitter Site are located at the Somerset County Registry of Deeds in Skowhegan, ME

Table 2 - OTHB-E Property Easements to U.S. Air Force

Transmitter							
Grantor	**Grantee**	**Tract ID**	**Acerage**	**Grant Date**	**Book**	**Page**	**Method of Acquisition**
Bingham Land Co.	USA	102E	0.74	3/5/1976	861	457	Land Purchase
Scott Paper Co.	USA	103E-1	5.04	2/27/1976	861	487	Land Purchase
Scott Paper Co.	USA	103E-2	26.6	2/27/1976	861	490	Land Purchase
S.D Warren Company	USA	107 Main Access	19.56	6/16/1987	1351	84	Land Purchase
S.D Warren Company	USA	107 Secondary Access	0.68	6/16/1987	1351	84	Land Purchase
S.D Warren Company	USA	107 Crossing	1.03	6/16/1987	1351	84	Land Purchase
S.D Warren Company	USA	107-4 Main Access	5.8	6/16/1987	1351	84	Land Purchase
S.D Warren Company	USA	107E	11.21	6/16/1987	1351	81	Land Purchase
Central ME Power	USA	110-5E	1.53	9/17/1987	1375	308	Land Purchase
Central ME Power	USA	110-6E	2.05	9/17/1987	1375	308	Land Purchase
Central ME Power	USA	110-8E	1.37	9/17/1987	1375	308	Land Purchase
Central ME Power	USA	110E	1.458	9/17/1987	1375	306	Land Purchase
Central ME Power	USA	110E-1	0.216	9/17/1987	1375	306	Land Purchase
Matthew J. Owens Jr.	USA	111E	0.661	6/23/1987	1353	163	Land Purchase
Andrew Shaw	Matthew J. Owens Jr.			12/27/1971	813	235	
Gertrude Pendexter et als	Andrew Shaw			7/19/1971	808	326	
Robert Jaques et aux	Roger Pendexter; Andrew Shaw			11/17/1964	708	95	
Emile Beaudoin	Robert Jaques			3/16/1964	691	383	
Earl Lister	Emile Beaudoin			3/25/1963	668	387	
Minnie Chatto; Crystal Miller; Leafy Strout; Leamon Grant	Earl Lister			6/3/1949	586	398	
Carl Hensley	USA	112E	2.667	2/27/1987	1325	335	Land Purchase
Bruce G. Lane	Carl Hensley			6/20/1983	1092	25	
Robert Smith	Bruce G. Lane			8/31/1970	799	813	
Robert Jaques et aux	Robert Smith			11/17/1964	708	95	
see above	Robert Jaques						

Table 2 - OTHB-E Property Easements to U.S. Air Force (Cont'd.)

Transmitter (Cont'd.)

Grantor	Grantee	Tract ID	Acerage	Grant Date	Book	Page	Method of Acquisition
Wilbur & Marianne Moore	USA	113E	2.262	8/18/1987	1383	297	Fee Condemnation
Theophilas Vallas; Willis Tryron	USA	114E	2.498	8/18/1987	1383	280	Fee Condemnation
Arthur B. & Marjorie S. Stetson	USA	115E	1.1	6/30/1986	1270	60	Land Purchase
Patricia Bouton	Arthur B. & Marjorie S. Stetson			12/19/1973	837	671	
Schuyler C. Burrill	Patricia Bouton			1/5/1973	824	735	
Schuyler C. Burrill & Dwight Right	Schuyler C. Burrill			6/2/1930	408	24	
North Anson Reel Co.	USA	116E	1.185	7/14/1986	1276	175	Fee Condemnation
Cates Family	North Anson Reel Co.			2/2/1972	813	1016	
Stanley B. Hill	USA	117E	1.647	10/1/1986	1294	41	Fee Condemnation
Stella Hill	Stanley Hill			7/21/1952	546	68	
Frances L Warrell	USA	118E	2.555	9/30/1987	1383	288	Fee Condemnation
Frances L Warrell	USA	119E	1.053	9/30/1987	1383	288	Fee Condemnation
Frances L Warrell	USA	119E-1	0.617	9/30/1987	1383	288	Fee Condemnation
Donald L Cates	USA	120E	0.25	9/30/1987	1383	305	Fee Condemnation

Tract 106E-1 is the same land as described in the Land Purchase deed for Tract 103 in Table 1.

All records for the Transmitter Site are located at the Somerset County Registry of Deeds in Skowhegan, ME

OTHB Radar System East and West Coast Sites Documentation Package for Compliance with Section 106 of the National Historic Preservation Act and 36 CFR 800.11(e), Protection of Historic Properties

OVER-THE-HORIZON BACKSCATTER (OTHB) RADAR SYSTEM EAST AND WEST COAST SITES

DOCUMENTATION PACKAGE FOR COMPLIANCE WITH SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT AND 36 CFR 800.11(e), PROTECTION OF HISTORIC PROPERTIES

ENVIRONMENTAL DIVISION (A7V)
INSTALLATIONS AND MISSION SUPPORT DIRECTORATE (A7)
HQ AIR COMBAT COMMAND
LANGLEY AIR FORCE BASE, VIRGINIA
26 JULY 2005

CONTENTS

1.0. DESCRIPTION OF THE PROPOSED UNDERTAKING, 36 CFR 800.11(e)(1)

1.1. Background: The Over-the-Horizon Backscatter (OTHB) Radar System

Near the end of the Cold War era, the United States Air Force developed a radar system for the purpose of detecting large formations of enemy bombers at great distances from the homeland, increasing the likelihood of successful interception. Known as the Over-the-Horizon Backscatter (OTHB) radar system, two such facilities were constructed, one on each coast of the continental United States (Figure 1). Additional OTHB facilities were planned to cover other approaches to the U.S., but were never built.

The OTHB radar system was developed in the early 1970s to provide all-altitude, long-range surveillance of aerial approaches to the United States. The functional components of the OTHB radar require geographically separated transmit and receive sites. The radar system operates in the high frequency band of the electromagnetic spectrum. The purpose of the system is to detect and track targets at greater distances than was possible with conventional line-of-sight radars. Each system included transmitter, receiver, and operations sites. OTHB radar systems used the ionosphere to refract outgoing radar waves and return signals, enabling the system to detect and track targets that would otherwise be hidden by the curvature of the earth, at ranges of up to 1,800 nautical miles (Figure 2). Processed data was communicated from the receiver location to the operations site for correlation with known aircraft positions.

The OTHB radar system was built by General Electric (GE) beginning in 1986. The Air Force accepted control of the system in December 1990. Just after the facilities were placed into operation in 1991, the Cold War ended and along with it their purpose for existence. Subsequently that year, the National Oceanic and Atmospheric Association (NOAA) began to use the OTHB-E for environmental monitoring (Figure 3). Later, the Air Force was directed by Congress to refocus operations at the OTHB-E site to counter-narcotics surveillance. Currently, no radar activity is taking place at either site. Both the east and west coast OTHB facilities are in limited operations status, manned 40-hours per week to preserve the physical and electrical integrity of the facilities. The transmitter site, receiver site, and operations building are currently staffed by two contract personnel each.

Now the Air Force is considering disposal and reuse options for the East and West Coast sites. In general, architectural/engineering resources need to be at least 50 years old to be considered for inclusion on the National Register of Historic Places. Constructed between 1986 and 1989, the OTHB East and West Coast radar facilities are less than 50 years old, but could be eligible for listing in the National Register of Historic Places under special criteria G. While the installations were operational for a period of only three months (November 1990-January 1991) before being placed in caretaker status, they are unique and represent important technological developments, and merit eligibility for listing on the NRHP.

For the purposes of compliance with Section 106 of the National Historic Preservation Act and 36 CFR 800, Protection of Historic Properties, the Air Force considers these inactive radar stations to be eligible for listing on the National Register of Historic Places, based on their ultimate operational defense role in the Cold War and their place in the development of radar technology.

This documentation package is intended to support consultation among the Air Force, the State Historic Preservation Officers of Maine, California, Oregon, Idaho and Washington, and the Advisory Council on Historic Preservation per 36 CFR 800 regarding potential adverse effects to these historic properties from proposed disposal or reuse options. The Area of Potential Effect for this action consists of the areas within the fenced limits of the operations center and the fenced and disturbed areas associated with the receive and transmit sites and antenna fields, at both east and west coast sites.

1.2. OTHB-West Description

The OTHB-West facility consists of three sites located in California, Oregon, and Idaho (Figure 4). The three sites making up the west coast system were constructed between 1987 and mid- 1989. The testing phase for the radar system began in the spring of 1989 and the system was accepted from the contractor by ESD in November of 1990. The system reached its highest operational capability in January, 1991.

The transmitter site, located near Christmas Valley, Oregon, occupies land which is managed by the Air Force and has been withdrawn from public use by the U.S. Bureau of Land Management (BLM). The site is locally referred to as Buffalo Flats. The three sectors of antennae oriented 60 degrees from each other require approximately 1,200 acres (Figure 5). The three antenna systems consist of a back screen made of eight-inch square corrosion-resistant wire mesh. The back screen is supported by 49 steel towers, 65 feet high, spaced along a 5,000 foot axis supported by 49 concrete foot pads. Located directly behind the back screen are a series of copper tube "wave guides" that run the length of the back screen. The antenna towers vary in height from approximately 45 to 135 feet and are approximately 3,640 feet long. In front of each back screen and antenna array is a ground screen of galvanized metal mesh which extends approximately 750 feet in front of each of the back screens and covers approximately 255 acres (85 acres per array). An eight foot high wooden security fence located approximately 100 feet in front of the ground screen encloses the entire site and some facilities (approximately 19,280 feet per antenna system or 58,294 feet total).

The receiver site, located near Tulelake, California, is leased from the U.S. Forest Service (USFS), Doublehead Ranger District, and is in the Rimrock Lake area. The facility consists of three sectors of antennae situated on approximately 2,800 acres (Figure 6). Each sector supports an antenna array 8,000 feet long comprised of a line of 134 steel towers 65 feet high and about 60 feet apart with a 65 foot-high back screen. A ground screen extends out 1,000 feet in front of the arrays along their entire length. It is estimated the ground screen covers approximately 462 acres (154 acres per array). The

receiver also has eight foot high wooden security fencing in front of the antenna arrays and some buildings (approximately 19,280 feet per array, 57,480 feet total).

The OTHB-West operations center was located at Mountain Home Air Force Base, Idaho. The operations center consisted of a 60,000 square foot building, F.2215, which contained the equipment for processing information from the transmitting and receiving sites (Figures 7 and 8). This facility, built in 1988, is a permanent, 55,455 square foot building, constructed primarily of concrete masonry materials. Centrally located approximately four blocks northeast of the flight line, the facility is a large, three story, rectangular shaped building, characterized by a tall, barbed wire fence at the entrance and two dish-antennas located near the northwestern end of the building. Its current use is as Group headquarters.

1.3. OTHB-East Description

The OTHB-E site is composed of three parcels of land: a transmitter site, a receiver site, and an operations building (Figure 9). The transmitter site is 1,274 acres located eight miles north of the towns of Moscow and Bingham in Somerset County, ME (Figure 10). The 1,060 acre receiver site is located six miles north of Columbia Falls in Washington County, ME (Figure 11) and the former operations center, Building 510, is located at Bangor Air Guard Station (AGS) (Figure 15). That facility was turned over to the Air Guard on 1 September 2004, being no longer needed by ACC for its original purpose. The OTHB-East transmitter and receiver sites are each composed of three sectors of antennae, each of which cover approximately 60 degrees of the horizon (Figures 12-14). On the transmitter site each sector contains an antenna array that is 3,630 feet long and 35 to 135 feet high. A groundscreen of copper mesh runs along the entire length of each antenna, extending out 750 feet in front of each. Similarly, at the receiver site, each sector supports an antenna array 4,980 feet long with a 65 foot high backscreen. A groundscreen extends out 1,000 feet in front of the arrays along their entire length.

1.4. Description of the Proposed Undertaking

In the future, it is foreseeable that the Air Force will seek to terminate real property interests in the OTHB East and West sites. In such a case, the purpose of the action for the OTHB-East sites in Columbia Falls and Moscow would likely be to transfer custody to the General Services Administration for eventual disposal. At the OTHB-West site, after demolition of the existing facilities, control of the lands for the transmitter site and receiver site would pass back to the owners, the U.S. Forest Service (USFS) and the U.S. Bureau of Land Management (BLM). The former operations building for OTHB-West is located on Mountain Home Air Force Base (AFB), Idaho and is currently used for a group headquarters function.

At present, the proposed action directly affects only the OTHB West site, although eventually the East site may also be proposed for disassembly and disposal. The proposed undertaking at the West site consists of the disassembly in late summer 2005, of a total of 549 metal antenna structures, 717 acres of metal ground screen, and 115,764

linear feet of wood fence and posts from the Tulelake, California and Christmas Valley, Oregon radar sites. At the radar transmitter site in Christmas Valley, Oregon, 45 miles of 3 to 6 inch diameter copper wave-guide tube and balun domes would also be removed. Once this action is completed at the OTHB West sites, it is foreseeable that the Air Force will team with BLM and USFS to determine the fate of the other infrastructure associated with the sites (i.e., roads, buildings, and power lines). As it stands in the current lease contracts between the BLM, USFS, and the Air Force, the Air Force is to return the sites back to these agencies in their natural state.

2.0. IDENTIFICATION ACTIONS AND RESULTS, 36 CFR 800.11(e)(2-3)

The Area of Potential Effects (APE) for this action is within the boundaries of each of the component sites for both the East and West Coast OTHB radar installations.

2.1. OTHB-West

2.1.1. Transmitter Site

The Christmas Valley, Oregon, Transmitter Site occupies land which is managed by the Air Force and has been withdrawn from public use by the BLM. The area is commonly referred to as Buffalo Flat. A portion of the Buffalo Flat transmitter site area was surveyed for cultural resources prior to the construction of the installation (Air Force 1983). The survey located 20 Native American sites as well as hundreds of isolated Native American artifacts, yielding a site density of approximately one site every 42 acres. Diagnostic artifacts suggest that the area was first occupied between 7,500 to 10,000 years before present. The site density is likely a representative sample of the entire Buffalo Flat area (Air Force 1983).

Historical architectural structures were not associated with this site. At the time of the environmental assessment for the construction of the OTHB facilities, cultural resource concerns were addressed and cleared for both the construction activities and the associated land use withdrawal. As a result, an extensive mitigation plan was not required (Air Force 1991). A search of the National Register Information System (NRIS) for Lake County, Oregon located 16 properties listed on the National Register of Historic Places (NRHP). None are within or adjacent to the project area (NRIS 2005). Traditional cultural resources have not been identified within the OTHB transmitter site area.

2.1.2. Receiver Site

The Tulelake Receiver Site is located in the Rimrock Lake area, on the Doublehead Ranger District of the Modoc National Forest, Siskiyou County, California. The USFS considers this area to have a high sensitivity for the presence of cultural resources. In compliance with procedures outlined in Section 106 of the National Historic Preservation Act (NHPA), the project area was surveyed prior to facility construction. The survey was performed by Basin Research in 1985 and 1986 (Air Force 1987), examining 5,430 acres. The work identified a total of 133 Native American sites, 59 Native American isolates/localities, one historic grave, and two historic isolate/localities. Diagnostic

artifacts located by the survey place the earliest occupation of the area at approximately 7,000 years before present, but the work of others in adjacent areas suggests people may have been in the region as early as 10,000 years before present (Air Force 1987).

In June of 1987, a Memorandum of Agreement (MOA) was signed between the Air Force, USFS and the California State Historic Preservation Office (SHPO) that stipulated mitigation measures, including additional archaeological survey. In compliance with the MOA, the Modoc National Forest conducted five additional surveys, locating 75 archaeological sites on 1,855 acres (Personal Communication, Gates 2005). A search of the National Register Information System for Siskiyou County, California located 17 properties listed on the National Register of Historic Places (NRHP). None are within or adjacent to the project area (NRIS 2005). Traditional cultural resources have not been identified within the OTHB receiver site area.

2.1.3. Operations Site

The former OTHB-West operations building, F.2215 at Mountain Home AFB, was initially identified in 1994 as important within base and national Cold War contexts. Based on the information available at the time, the Idaho SHPO did consider the structure to be significant. However, in 2004, the significance of the OTHB facility was further assessed by both the Architectural Historian and the Historic Preservation Planner at the Idaho SHPO who determined it was not eligible for the Register. This determination stemmed mainly from the fact the facility was not used as intended during the Cold War and did not meet Criterion G. Mountain Home AFB concurred with this determination in May 2004.

Regarding the OTHB-West and East transmitter and receiver stations: as noted in the Background section, the Air Force, for the purpose of compliance with Section 106 of the National Historic Preservation Act and 36 CFR 800, does consider the these facilities eligible for the Register, based largely on their unique engineering design and technological significance.

2.2. OTHB-East

2.2.1. Transmitter Site

In 2003, Air Combat Command commissioned an archeological survey of the transmitter site, anticipating its eventual disposal. No archeological sites were discovered at the Moscow transmitter station. No traditional cultural resources are known to exist at the transmitter site in Moscow.

2.2.2. Receiver Site

No detailed cultural resources survey was conducted at the transmitter and receiver sites prior to construction in the 1980s, but the Maine SHPO did report that Native American artifacts were known to occur on the surface of the latter site. In 2003, Air Combat Command commissioned an archeological survey of the receiver site, anticipating its

eventual disposal. Survey at the Columbia Falls station identified three small Native American archeological sites (77.7 ME, 77.8 ME, and 77.9 ME) and one historic archeological site (ME 860-001).

The historic site produced cut and wire nails, cast iron woodstove fragments, ceramics, window and bottle glass, shell casings, and sheet metal. The investigators concluded that site ME 860-001 consists primarily of a surface concentration of historic artifacts dating no earlier than the late nineteenth century. Evidence of features was not identified on either the surface or within any of the shovel test units excavated within the site area. The site was considered the likely remains of a seasonal hunting camp which fell into disuse before or soon after the purchase of the property by the Air Force.

No traditional cultural resources are known to exist at the receiver site in Columbia Falls. However, property adjacent to the receiver site in Columbia Falls is reported as being owned by the Mi'kmaq and the Passamaquoddy Native American tribes. The Mi'kmaq are a First Nations People of Nova Scotia and include the Aroostook Band of Mi'kmaqs, a federally recognized tribe at Presque Isle. The Mi'kmaq people have free border-crossing rights between Canada and the U.S. The Passamaquoddy Tribe of Maine is a federally recognized tribe of the Wabanaki group. Ancestors of these or other Native American groups utilized the area prior to European occupation of the region. Present members of the Mi'kmaq and Passamaquoddy tribes are reported to use the property adjacent to the Columbia Falls site to conduct seasonal work on blueberry fields.

2.2.3. Operations Site

The former operations facility for OTHB-East was located in Building 510 on the Maine Air Guard Station at Bangor Internation Airport (Figure 15). This modern facility was declared excess to ACC needs and turned back to the Air Guard for their use in September 2004. As with the OTHB-West operations facility, the OTHB related equipment had been removed some years earlier from Building 510.

3.0. DESCRIPTION OF EFFECTS ON HISTORIC PROPERTIES AND RELATED ACTIONS, 36 CFR 800.11(e)(4-6)

3.1. OTHB-West

3.1.1. Transmitter Site

The significant historic fabric of the radar facility itself will be adversely affected by its removal from the site. Equipment removal activities are not expected to impact archaeological or traditional resources under the Proposed Action. If resources are inadvertently discovered during equipment removal, all work would halt at that location, the ACC Cultural Resource Manager would be notified, and proper procedures for the discovery of unanticipated resources would be completed prior to work resuming, in coordination with the appropriate SHPO. Archaeological resources are not expected to be impacted by equipment removal. Existing access roads, water systems, electrical lines

and buildings would not be disturbed. The activities of the removal would occur in the same areas disturbed by the construction of the facilities in late 1980s. Equipment used for the removal such as semi tractor trailers, excavators, cranes, and loaders, would be confined to existing roadways and areas of previous disturbance. Future management of identified archaeological resources within the site area will be accomplished by the respective federal agencies to which control of the property is reverting: the U.S. Forest Service and the Bureau of Land Management.

3.1.2. Receiver Site
See description for 3.1.1. The same applies for the receiver site.

3.1.3. Operations Site
F.2215 has been determined to be not eligible for the National Register by the Air Force and the Idaho SHPO. Therefore, there will be no adverse effect to historic properties from the undertaking.

3.2. OTHB-East

3.2.1. Transmitter Site
Although disassembly and/or disposal of the East Site is not proposed at this time, such is anticipated at some future date. This would adversely affect the historic fabric of the radar facilities themselves. Equipment removal activities would not be expected to impact archaeological or traditional resources. If resources are inadvertently discovered during equipment removal, all work would halt at that location, the ACC Cultural Resource Manager would be notified, and proper procedures for the discovery of unanticipated resources would be completed prior to work resuming, in consultation with the Maine SHPO. Archaeological resources are not expected to be impacted by equipment removal. The activities of the removal would occur in the same areas disturbed by the construction of the facilities in late 1980s. Equipment used for the removal such as semi tractor trailers, excavators, cranes, and loaders, would be confined to existing roadways and areas of previous disturbance.

As control of the property encompassing the site is expected to leave the federal government in the future, there would be an adverse effect to identified archaeological resources.

3.2.2. Receiver Site
See description for 3.2.1. The same applies for the receiver site.

3.2.3. Operations Site
Building 510 remains in use by the Air Guard, though in a capacity unrelated to the subject of this undertaking, the OTHB. The significance of OTHB rests primarily on the nature of the unique radar capability of the system, exemplified in the transmitter and receiver stations. However, the operations facilities will be included in the HABS/HAER

recordation proposed as part of the overall mitigation of the current and potential future undertakings related to OTHB.

4.0. PROPOSED MITIGATION MEASURES, 36 CFR 800.11(e)(4)

In order to mitigate unavoidable adverse effects from the proposed undertaking, Air Combat Command shall accomplish the following actions.

4.1. Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) Recordation

Conduct HABS/HAER Level II, documentation and recordation of the OTHB radar system represented by the East and West Coast facilities, as specified by the *Secretary of the Interior's Standards and Guidelines for Architectural and Engineering Documentation* (48 Fed. Reg. 44730-44734) and incorporating pertinent requests of the affected SHPOs. Provide draft copies of this documentation to the SHPOs of California, Oregon, Idaho, and Maine for review and comment. Provide final copies of the documentation to these parties after receipt and consideration of their comments, if any.

4.2. Archaeological Investigations and Documentation

The Air Force will complete Phase II archaeological evaluations of significance for the three sites identified on the OTHB-East receiver site: 77.7 ME, 77.8 ME, and 77.9 ME. The Air Force will coordinate the results of the Phase II investigation with the Maine SHPO and determine if any or all of the sites are significant and eligible for the National Register. If the sites are found to be eligible, the Air Force will consult with the Maine SHPO concerning a Phase III data recovery plan and will implement such a plan prior to disposing of the property from federal ownership. Archaeological investigations and documentation will comply with the *Secretary of the Interior's Standards and Guidelines for Archeological Documentation* (48 Fed. Reg. 44734-44737) and such stipulations, if any, that may be added by the Maine SHPO.

5.0. REFERENCES

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2003 Proposed Land Disposal: Over the Horizon Backscatter – East Radar System Sites, Moscow and Columbia Falls, Maine. Final Environmental Assessment and Baseline Survey. Langley AFB, VA: HQ Air Combat Command.

U.S. Air Force
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1997 Searching the Skies: the Legacy of the United States Cold War Defense Radar program. Langley AFB, VA: HQ Air Combat Command.

6.0. CORRESPONDENCE

MAINE HISTORIC PRESERVATION COMMISSION
55 CAPITOL STREET
65 STATE HOUSE STATION
AUGUSTA, MAINE
04333

ANGUS S. KING, JR.
GOVERNOR

EARLE G. SHETTLEWORTH, JR.
DIRECTOR

February 21, 2003

ACC Program Office
11817 Canon Blvd.
Suite 402
Newport News, VA 23606
Att: Elizabeth Pruitt, Project Manager, Geo-Marine, Inc.

Project: MHPC #0350-03 - Over The Horizon Backscatter - East Radar System Site
Location: Moscow, ME

Dear Ms. Pruitt:

In response to your recent request, I have reviewed the information received February 10, 2003 to initiate consultation on the above referenced project. This project was reviewed pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended.

Based upon the potential Cold War significance of the subject site, I have concluded that it will require an architectural survey and subsequent assessment of its eligibility for inclusion in the National Register of Historic Places. Therefore, it is incumbent upon you or the applicant to contract for such survey and research as will be necessary to make a determination of National Register eligibility. A list of Architectural Historians approved for work in Maine is enclosed.

Please contact Mike Johnson of my staff if we can be of further assistance in this matter.

Sincerely,

Earle G. Shettleworth, Jr.
State Historic Preservation Officer

EGS/mj
enc:

PHONE: (207) 287-2132

PRESERVING MAINE'S PAST

FAX: (207) 287-2335

MAINE HISTORIC PRESERVATION COMMISSION
55 CAPITOL STREET
65 STATE HOUSE STATION
AUGUSTA, MAINE
04333

ANGUS S. KING, JR.
GOVERNOR

EARLE G. SHETTLEWORTH, JR.
DIRECTOR

February 21, 2003

ACC Program Office
11817 Canon Blvd.
Suite 402
Newport News, VA 23606
Att: Elizabeth Pruitt, Project Manager, Geo-Marine, Inc.

Project: MHPC #0354-03 - Over The Horizon Backscatter - East Radar System Site
Location: Columbia Falls, ME

Dear Ms. Pruitt:

In response to your recent request, I have reviewed the information received February 10, 2003 to initiate consultation on the above referenced project. This project was reviewed pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended.

Based upon the potential Cold War significance of the subject site, I have concluded that it will require an architectural survey and subsequent assessment of its eligibility for inclusion in the National Register of Historic Places. Therefore, it is incumbent upon you or the applicant to contract for such survey and research as will be necessary to make a determination of National Register eligibility. A list of Architectural Historians approved for work in Maine is enclosed.

Additionally, I have concluded that the topographic setting of the entire Columbia Falls Air Force Station is sensitive for prehistoric archaeology and has never been surveyed by a professional archaeologist. Therefore, we are requiring that you or the applicant contract for a Phase I prehistoric archaeological survey of the entire area within the station boundaries.

A list of qualified contract archaeologists is enclosed along with material explaining the Phase I/II/III approach to archaeological survey. This office must approve any proposal for archaeological fieldwork.

Please contact Mike Johnson of my staff if we can be of further assistance in this matter.

Sincerely,

Earle G. Shettleworth, Jr.
State Historic Preservation Officer

EGS/mj
enc:

PHONE: (207) 287-2132

FAX: (207) 287-2335

MAINE HISTORIC PRESERVATION COMMISSION
55 CAPITOL STREET
65 STATE HOUSE STATION
AUGUSTA, MAINE
04333

JOHN ELIAS BALDACCI
GOVERNOR

EARLE G. SHETTLEWORTH, JR.
DIRECTOR

RECEIVED JUL 26 2005

July 22, 2005

Ms. Melissa M. Green
Geo-Marine Incorporated
550East 15th St.
Plano TX 75074-5708

RE: MHPC 0351-03, Moscow and Columbia Falls, OTHB-E Radar Stations, Phase I archaeological survey

Dear Ms. Green:

I have reviewed the Phase I archaeological survey report by Geraldine Baldwin, John Milner Associates, for these OTHB-E properties. We accept the survey report as written, and the results of the survey as negative for the Moscow property, and three prehistoric sites (77.7, 77.8, and 77.9) requiring Phase II survey on the Columbia Falls radar installation.

Sincerely,

Dr. Arthur Spiess
Senior Archaeologist

arthur.spiess@maine.gov

cc: Geraldine Baldwin, John Milner Assoc.

PHONE: (207) 287-2132

FAX: (207) 287-2335

Figure 1. Projected radar coverage from OTHB sites on both coasts of the U.S.

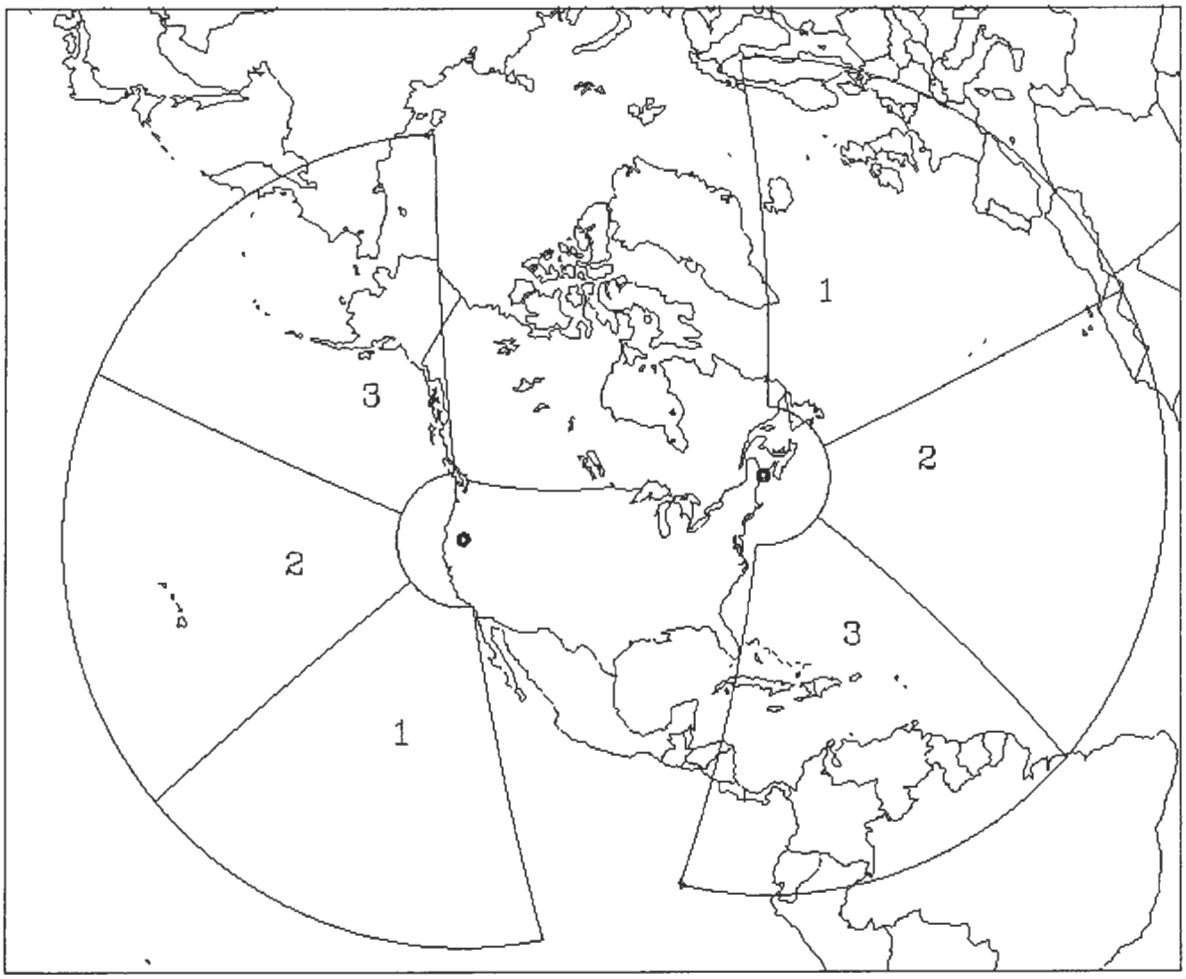

Figure 2. Example of the completed transmitting array

Figure 3. NOAA use of OTHB for long range weather reconnaissance

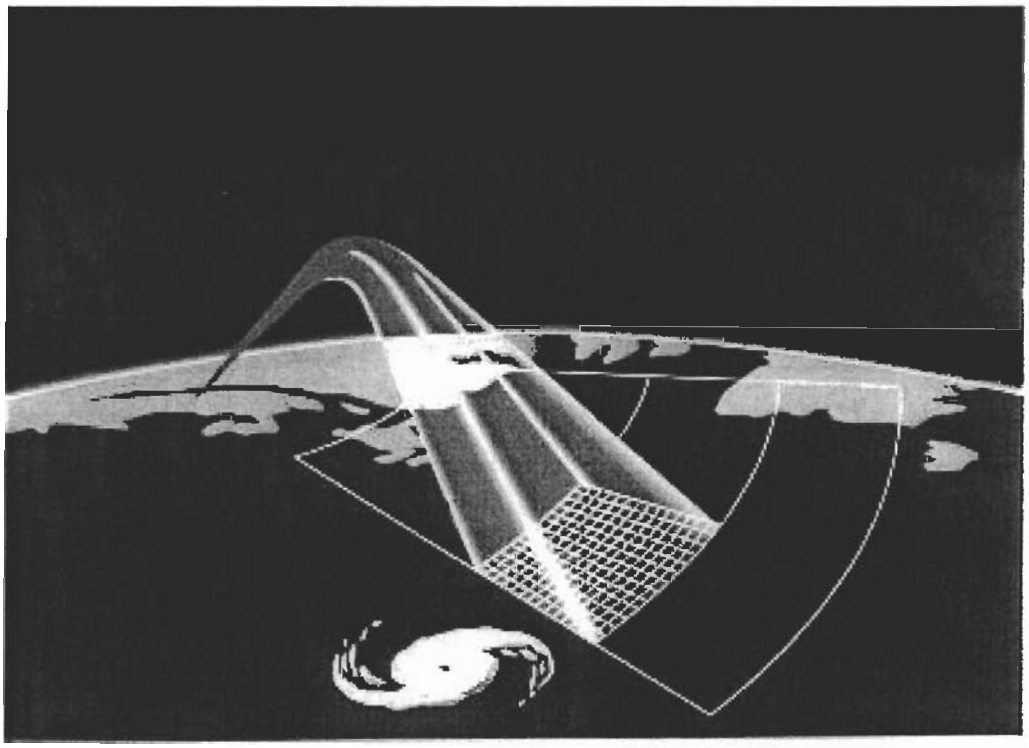

Figure 4. Location of OTHB West Coast Sites in California, Idaho, and Oregon

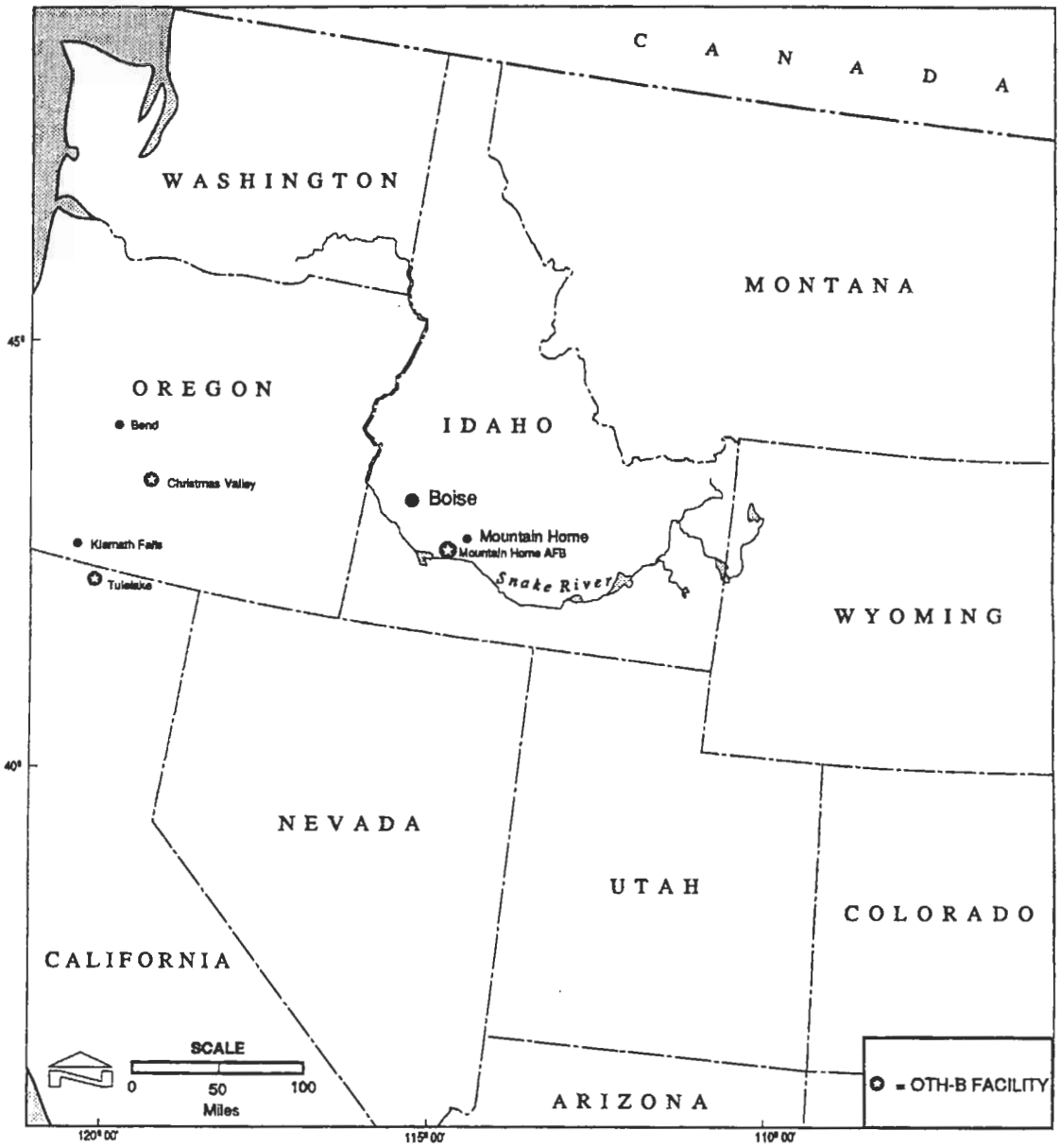

Figure 5. Transmitter Site Layout, OTHB West

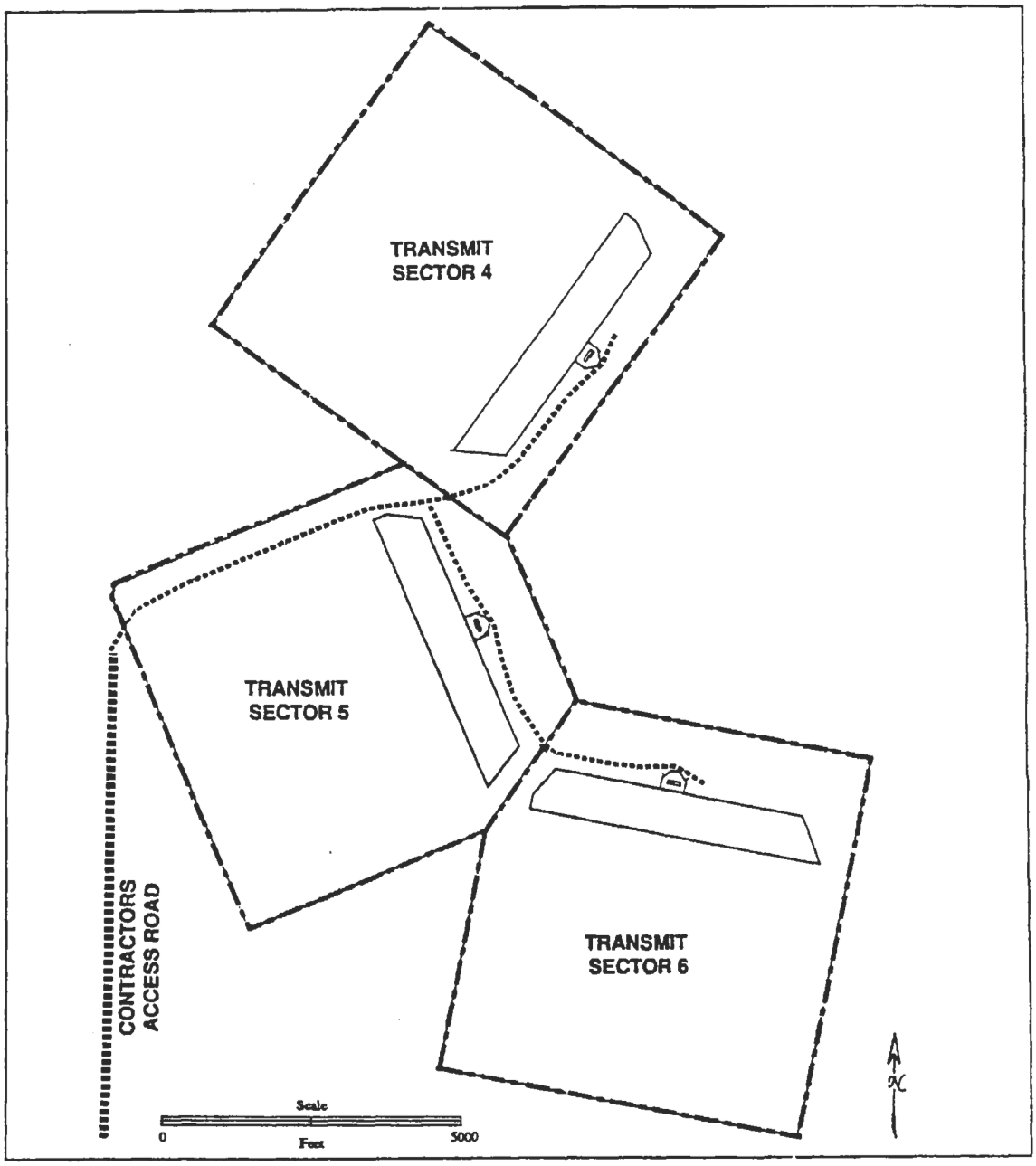

Figure 6. Receiver Site Layout, OTHB West

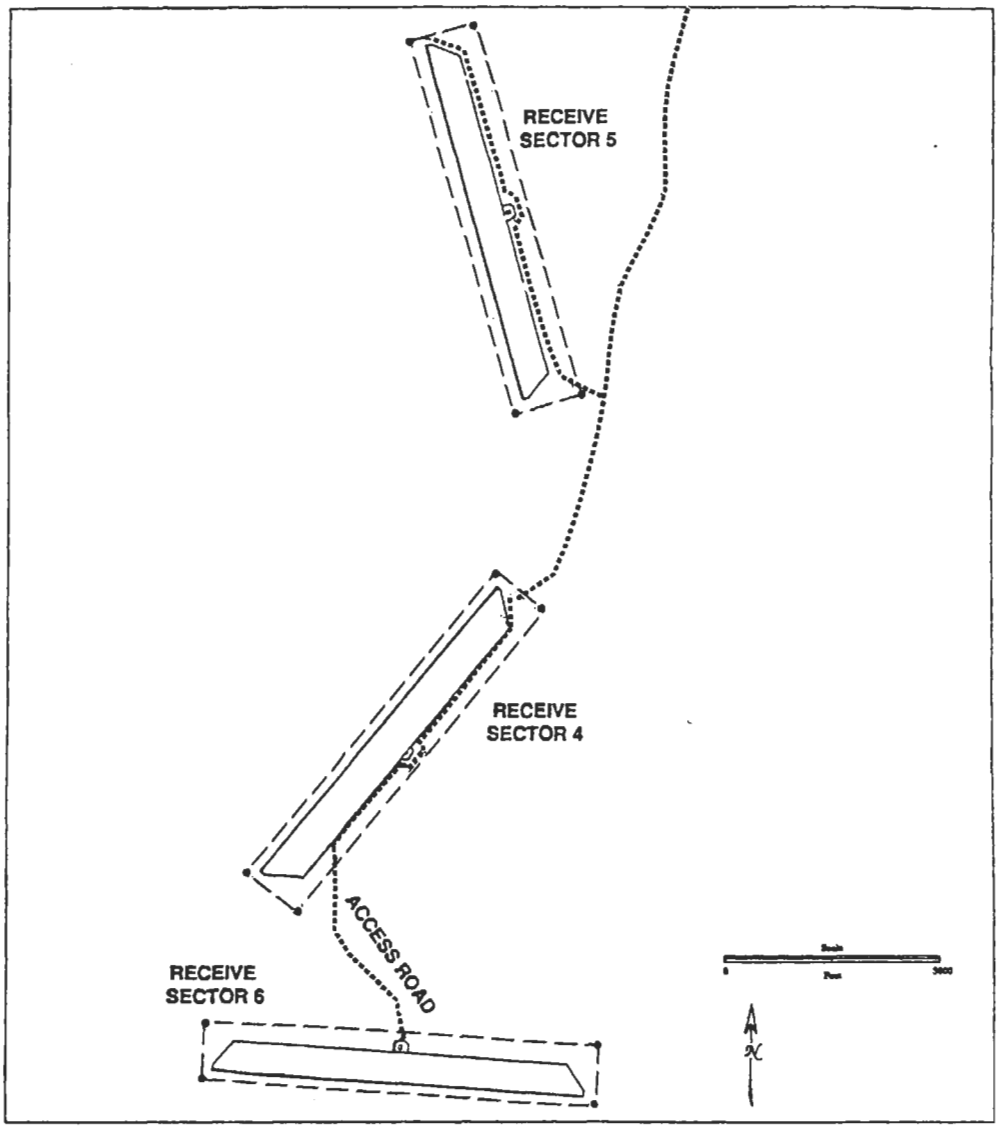

Figure 7. Former OTHB Operations Building, Mountain Home AFB

Resource No. 15059, Real Property No. 2215, Group Headquarters (OTH-B)

Figure 8. Site of Former OTHB Operations Building (2215), Mountain Home AFB

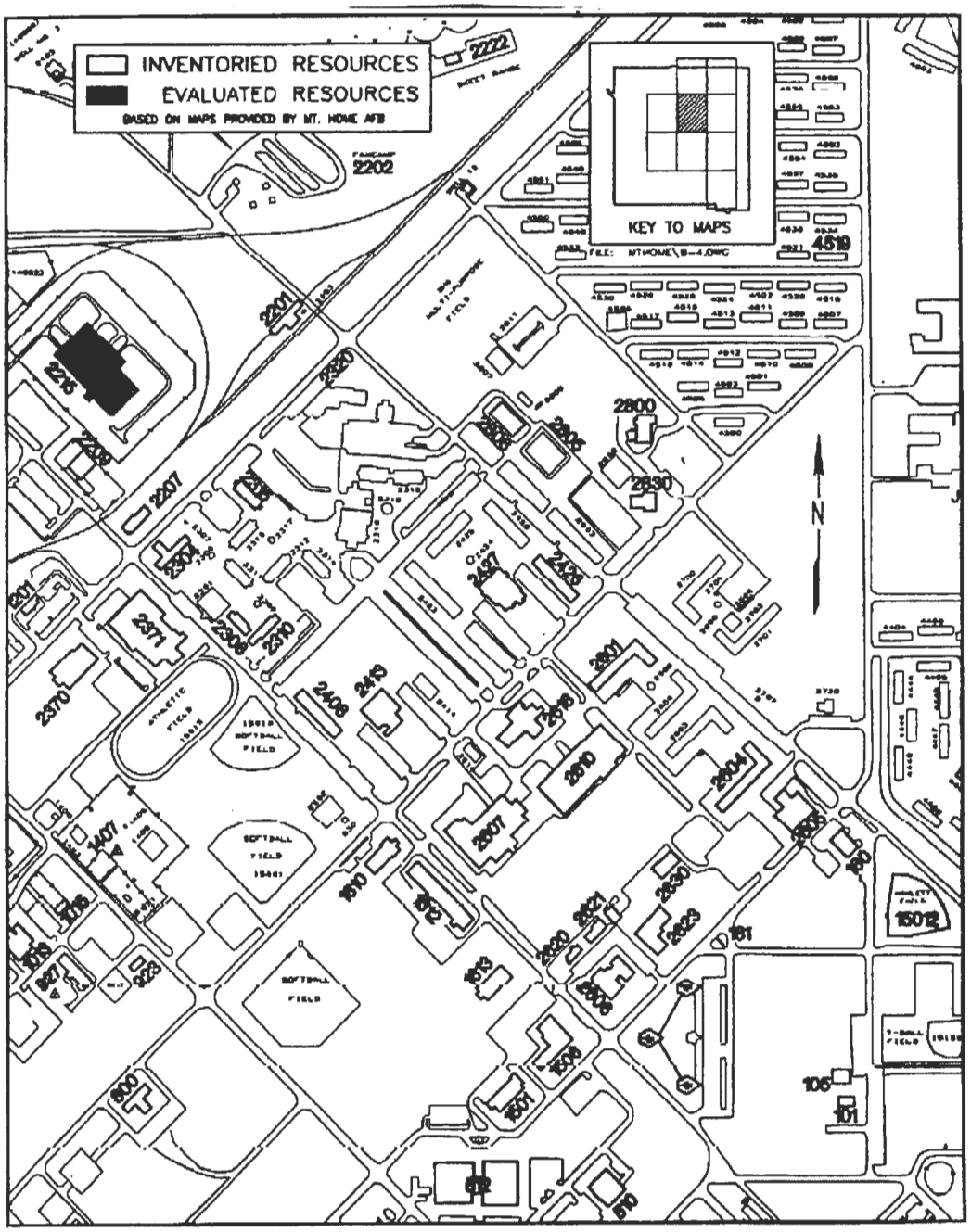

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Figure 9. Location of OTHB East Coast Sites in Maine

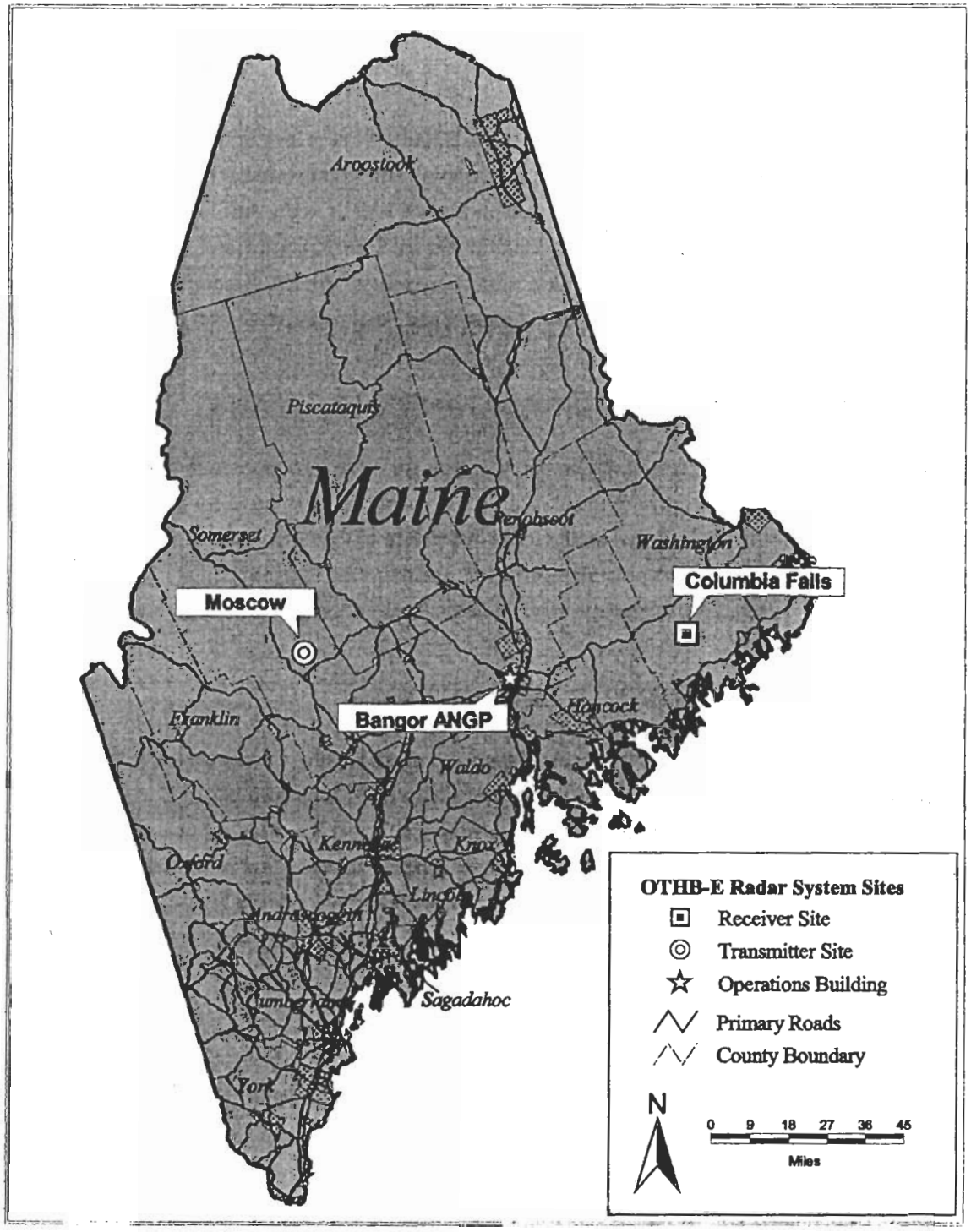


Figure 10. Transmitter Site Layout, OTHB East

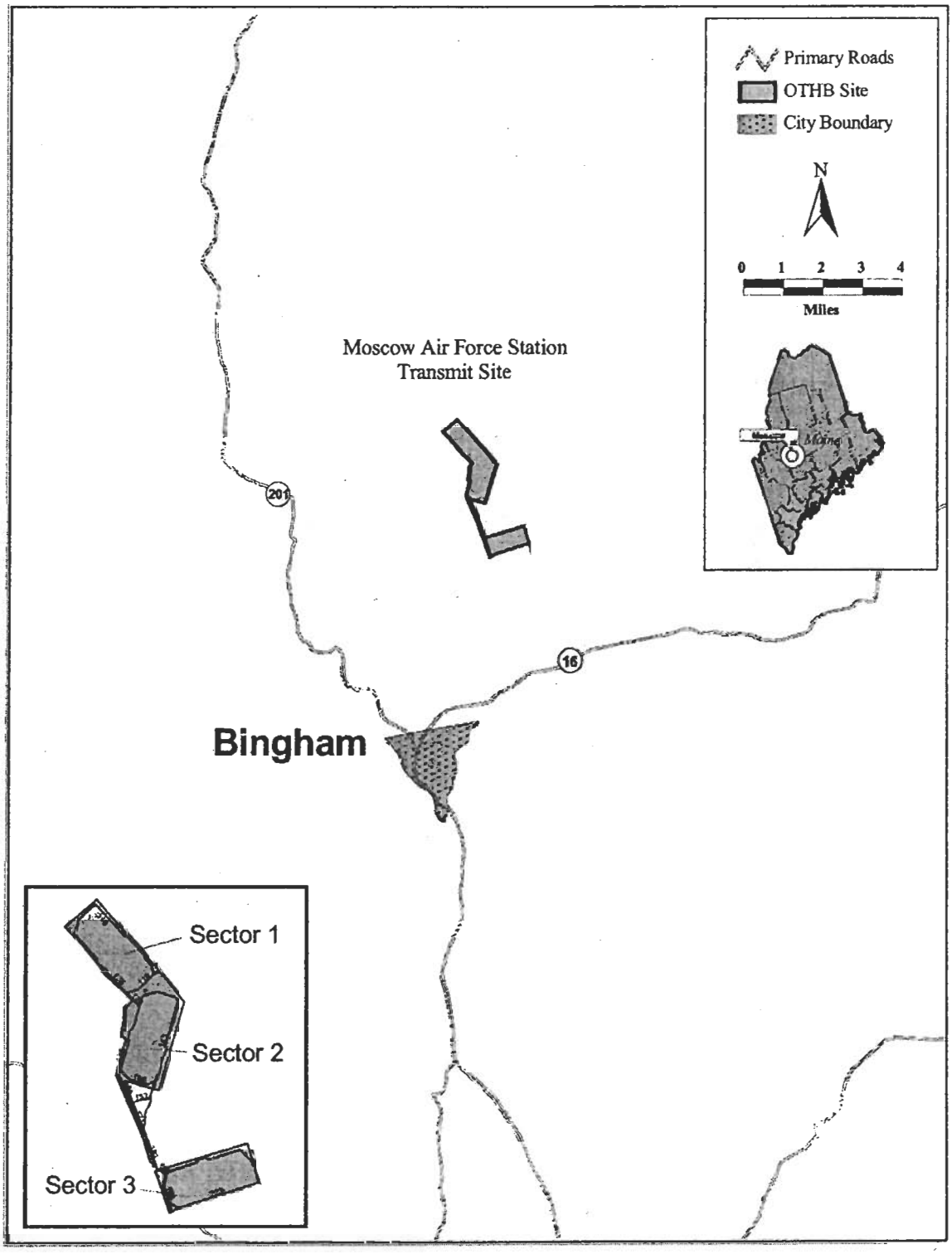


Figure 11. Receiver Site Layout, OTHB East

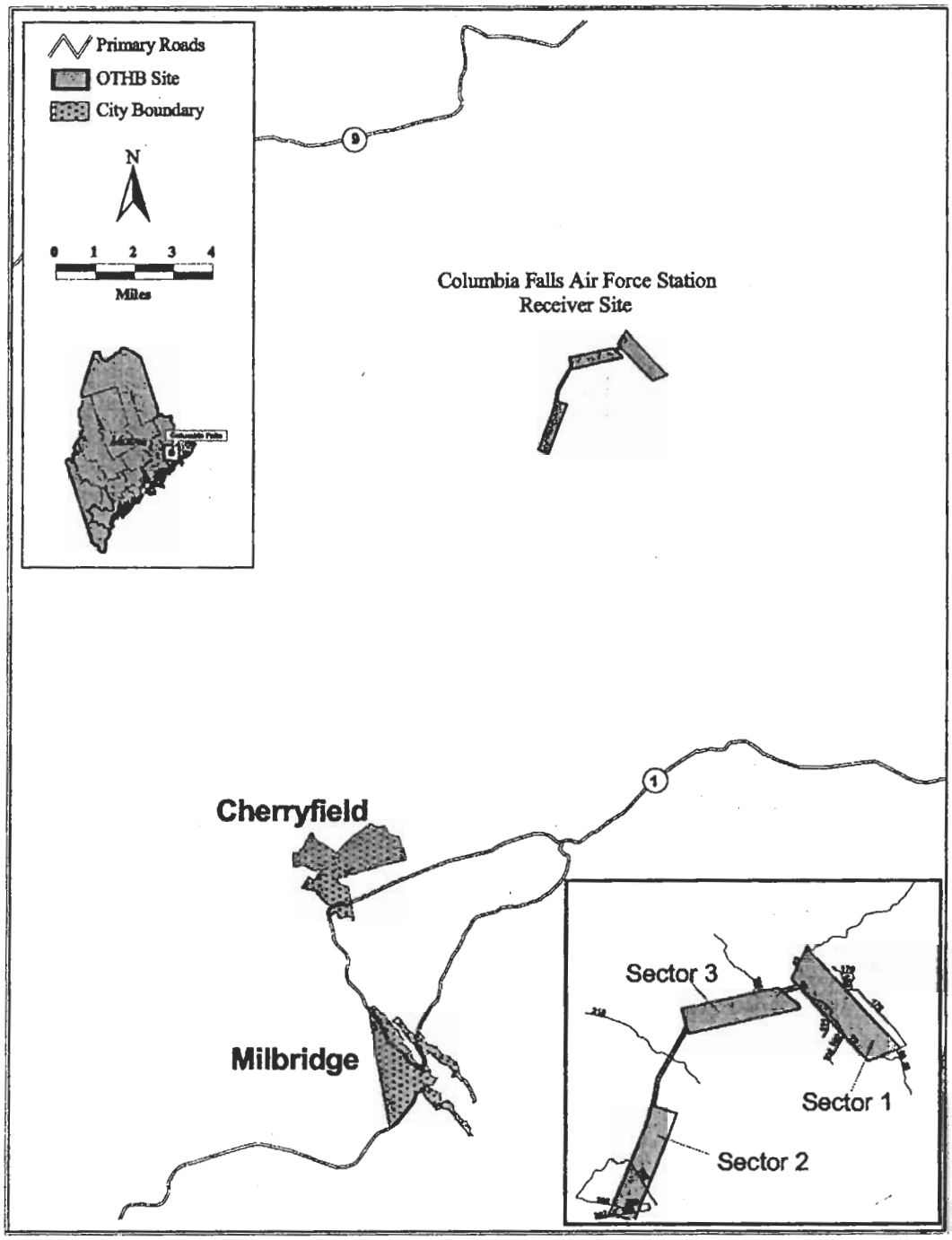


Figure 12. OTHB-East, transmitter array from the perimeter fence

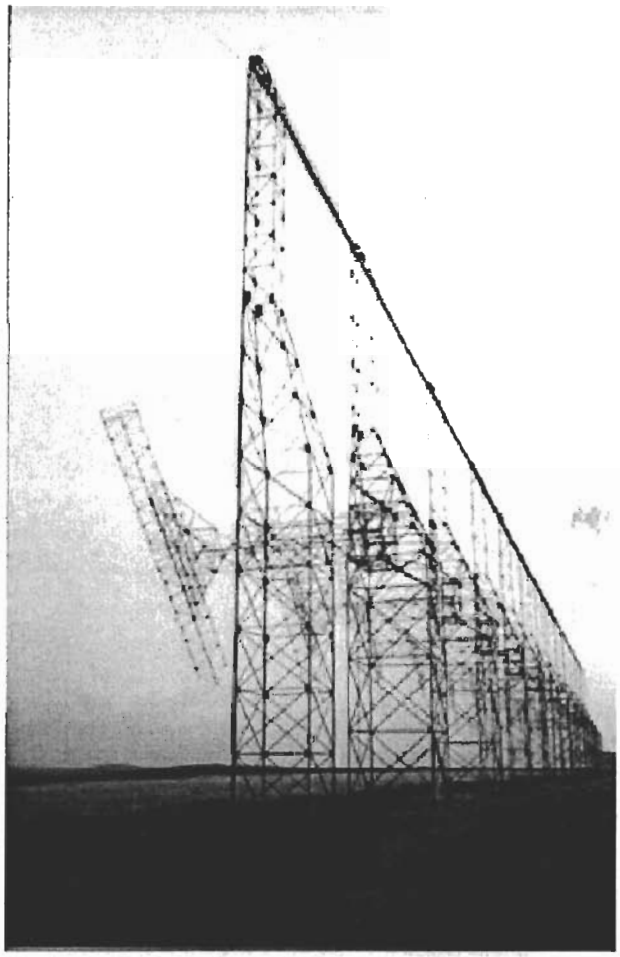


Figure 13. Receiver Array, OTHB East

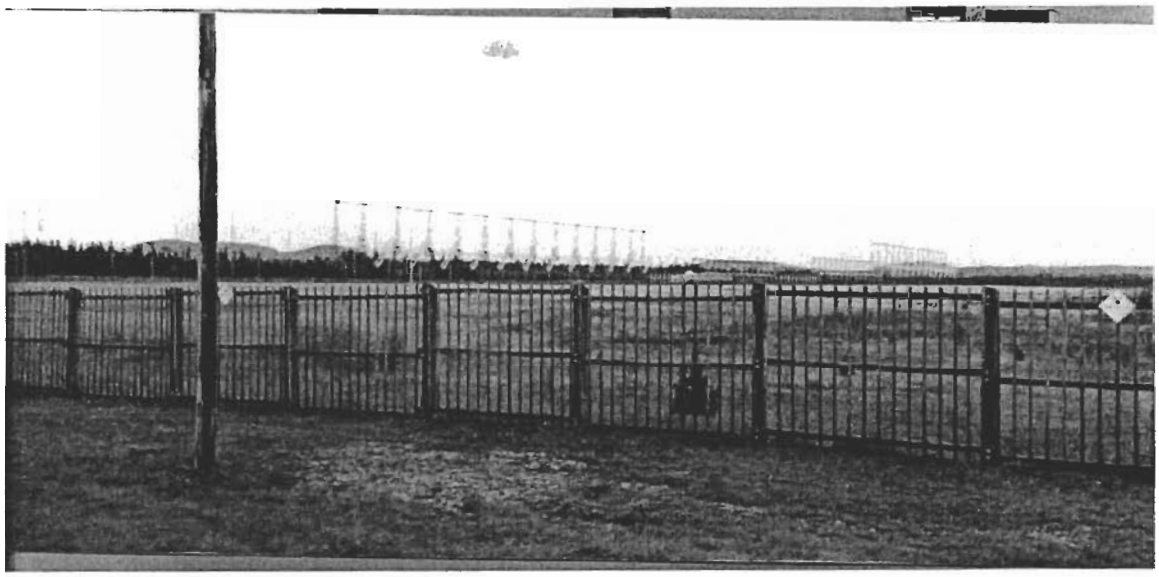


Figure 14. Receiver Array, OTHB East

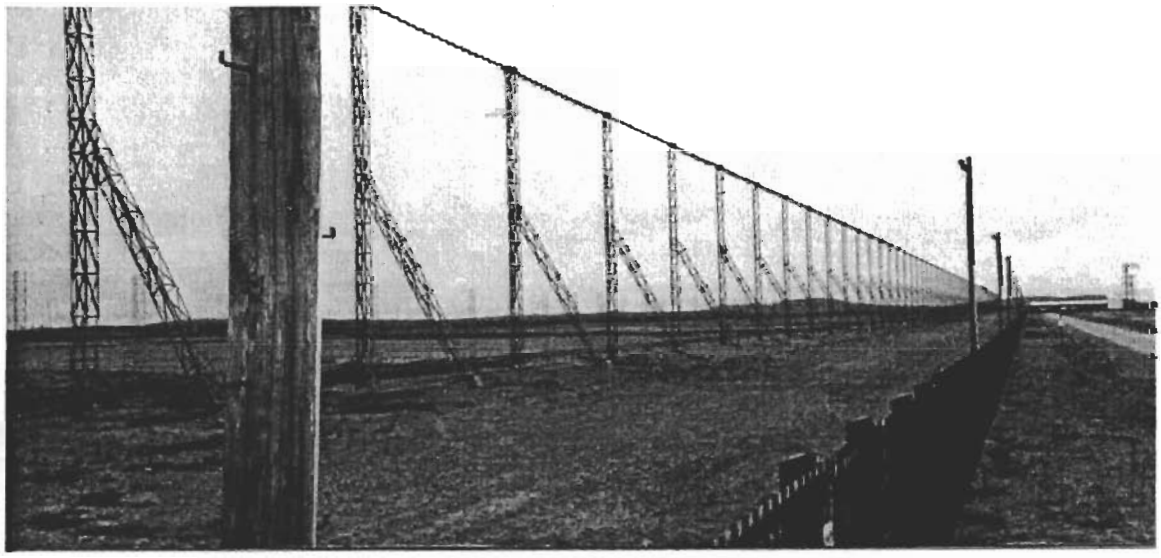
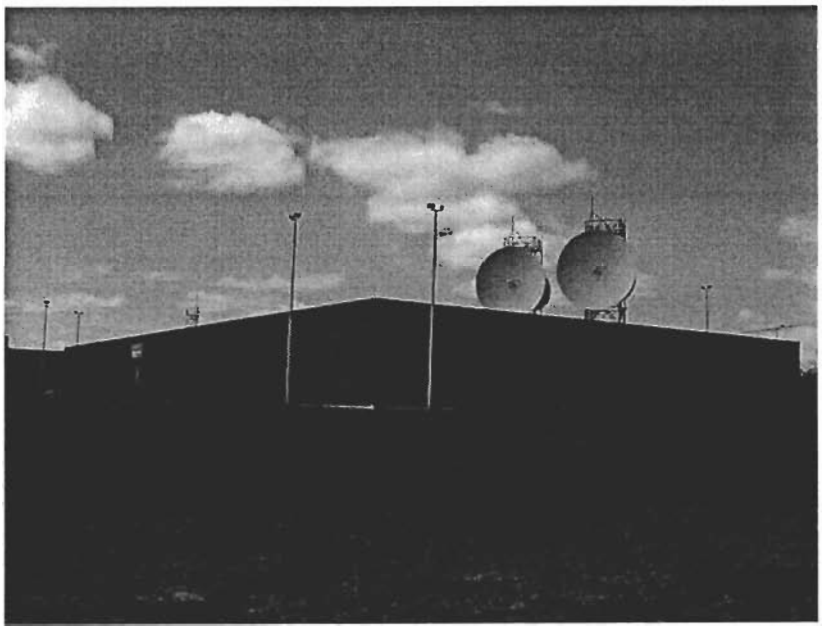


Figure 15. Former OTHB Operations Facility, Building 510, Bangor Air Guard Station, Maine



Correspondence from the State of Maine from Previous EA/EBS & Current EBS

- June 13, 2002 Letter from North American Aerospace Defense Command
- June 10, 2003 Letter from Department of the Air Force
- June 16, 2004 Letter from The State of Maine, Department of Environmental Protection
- July 7, 2004 Response Letter from the Air Force addressing June 16 Letter
- May 3, 2005 Letter from The State of Maine, Department of Environmental Protection
- June 24, 2005 Response Letter from the Air Force addressing May 3 Letter
- October 11, 2006 Letter from the State of Maine, Department of Environmental Protection regarding Preliminary Final
- October 30, 2006 Letter from the Department of the Air Force addressing October 11 Letter
- November 28, 2006 Letter from the Department of the Air Force addressing nitrogen cylinders present on-site
- December 7, 2006 Email from The State of Maine addressing the October 30 Letter
- January 23, 2007 Letter from the Department of the Air Force addressing December 7 email concerning VOCs/solvents
- February 9, 2007 Email from The State of Maine addressing the January 23 Letter giving the clearance from the state to finalize the EBS

NORTH AMERICAN AEROSPACE DEFENSE COMMAND

Major General Eric A. Findley
NORAD Director of Operations
250 S Peterson Blvd Ste 116
Peterson Air Force Base CO 80914-3240

JUN 13 2002

Major General Carrol H. Chandler
Director of Aerospace Operations
205 Dodd Blvd Ste 100
Langley Air Force Base VA 23665-2788

Dear ~~General~~ Howie Chandler

NORAD has determined that we have no operational requirement for the existing FPS-118 Over-the-Horizon Backscatter (OTH-B) radar system. The threat has evolved and the OTH-B has a limited surveillance tracking capability. Therefore the system is no longer required in the execution of NORAD's aerospace warning and control missions. Should ACC decide to dismantle the OTH-B Operations Center and associated radar equipment at Bangor, Maine and Mountain Home, Idaho, NORAD would endorse that decision.

My POC is Lt Col Kully Smith, DSN 692-6920.

Sincerely

ERIC A. FINDLEY
Major-General, CF

cc:
ACC/LG
ACC/DOY
ACC/PMS

FOR THE COMMON DEFENCE *POUR LA DEFENSE COMMUNE*

DEPARTMENT OF THE AIR FORCE
AIR COMBAT COMMAND PROGRAM MANAGEMENT SQUADRON
LANGLEY AIR FORCE BASE, VIRGINIA

MEMORANDUM FOR OO-ALC/LHE JUN 1 0 2003
ATTN: LT COL MISRA

FROM: ACC PMS/DR
11817 Canon Blvd, Suite 306
Newport News VA 23606-4516

SUBJECT: Disposition for Over-the-Horizon Backscatter (OTH-B) Spares

1. As you are aware, the Over-the-Horizon Backscatter radar system (AN/FPS-118) has ceased operations. NORAD determined that they have no operational requirement for the existing FPS-118 OTH-B radar system. Also, they advised that the threat has evolved and the OTH-B has a limited surveillance tracking capability and the system is no longer required in the execution of the NORAD aerospace warning and control missions.

2. Accordingly, we no longer have a requirement for these assets. We plan to dismantle the OTH-B Operations Center and associated radar equipment at Bangor, Maine and Mountain Home, Idaho. We urgently request disposition instructions for spares and associated equipment at the two OTH-B Operations Centers.

3. SMSgt Belue at DSN 574-9190 and SSgt Sanders at 574-9480 from my Logistics Staff will be available to work with you on this matter should you require additional information.

4. Your immediate attention to this matter is greatly appreciated.

Randall J. McFadden

RANDALL J. MCFADDEN
Director

cc:
ACC PMS/SU
ACC PMS/LG

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

DAWN R. GALLAGHER
COMMISSIONER

June 16, 2004

Ms. Christa Winnie
HQ HCC/CEVP
129 Andrews Street, Suite 102
Langley AFB, VA 23665-2769

Mr. Jim Holley
HQ HCC/CEVP
129 Andrews Street, Suite 102
Langley AFB, VA 23665-2769

RE: Final Environmental Assessment (EA)/Environmental Baseline Survey (EBS) for the Disposal of the Over-the-Horizon Backscatter (OTHB) East Coast Radar Sites

Dear Ms. Winnie and Mr. Holley:

The Maine Department of Environmental Protection (MEDEP) has received the Memorandum, dated 14 May 2004, from David Shifflet, Acting Chief of the Environmental Analysis Branch. Mr. Shifflett enclosed some additional information about the Over-the-Horizon Backscatter (OTHB) East Coast Radar Sites in Moscow and near Columbia Falls, Maine. Mr. Shifflett identified you as points of contact for facility operations and military munitions.

The properties are due to be transferred; most likely by the General Services Administration. MEDEP and the Air Force each have an interest in identification and mitigation of environmental hazards and potential environmental hazards at the properties. For example, should the nickel cadmium batteries or fuel from one of the storage tanks be inappropriately dumped onto the ground, MEDEP may need to respond and Air Force may be held accountable for the clean up costs. Both agencies should look at the transfer process as an opportunity to reduce the potential for future problems.

MEDEP has reviewed the letter, its attachments, the EBS and the September 1995 Archive Search Report (ASR). Our specific concerns are outlined below:

October 2003 Environmental Assessment and Baseline Survey

The OTHB-E Radar was built sometime between 1982 and the date of Air Force acceptance in 1990. Is it possible that the builder also operated the system in shakedown mode and perhaps produced an operations manual? MEDEP is interested in the level of chemical usage in the day to day facility operation. For example, were solvents or cleaners applied to the antenna to maintain electrical contacts?

NOAA used the OTHB-E Radar starting in 1992. Please identify when NOAA usage ceased. Also, please identify the duration of use for counter-narcotics surveillance.

The text implies that no hazardous waste manifests were ever filed. Please confirm. Contracts or operations manuals may provide some hint as to why the garages were equipped with hazardous waste collection points.

Please describe the process followed for cooling the transmitter with propylene glycol and please identify the equipment cooled with ethylene glycol. Given the size of the storage tanks shown in the photographs, more information about the use of coolants is needed.

The "two small areas of sector one of the transmitter site" should be described in more detail.

The "small dump site containing paint cans" at the receiver site should be regarded as a potential release of hazardous substances.

Section 3.4.11 discusses ordnance. Obviously this section must be modified to reflect that the receiver site was constructed on a former target bombing range.

Section 3.4.13 correctly states that PCBs can be found in electrical transformers, however other electrical components such as ballasts and switches (and sometimes paint) may contain PCBs or other hazardous substances. The extensive list of real property and equipment identifies quite a number of switches and load centers including model numbers. Please check the specifications for the components and verify that they do not contain PCB or other hazardous substances.

Please describe whether the antenna or support towers were painted and the condition of the paint. It is inexpensive and quick to use XRF to verify that paint does not contain lead.

Given the categories on Table 8.2-1, MEDEP concludes that petroleum has been released at 7 of the 9 sectors. Please describe each release and the actions taken to correct each release.

The "transmitter power substation" was not evaluated because it is not under the control of the Air Force. Please contact the local power company and arrange to inspect the area prior to the transfer.

"Pic1." shows a transformer "accessed only by the electric company". It is possible that future power requirements at the property will be significantly reduced. Please confirm ownership of the transformer and describe the arrangement with the power company.

"Pic3." and "Pic4." show empty drums. One has a clear "Hazardous Waste" label. Please check the records for an indication that hazardous waste manifests have been recorded.

"Pic5." shows 3 dozen nickel-cadmium batteries. Please describe procedures to maintain the batteries and the procedures followed for replacement and disposal.

Please clarify the differences between the transformer shown in "Pic1." (near Sector 1, building, transformer accessed only by the electric company) and the substantial transformers shown in "Pic8." (Sector 1, transformers).

"Pic10." shows substantial facilities for storage and distribution of coolant. The transmitter site supply/facilities/equipment sheet lists DI glycol pads but not tanks. Please identify the capacity of the coolant storage and distribution system and its status – has the coolant been drained? How was it disposed?

"Pic11." shows boxes of transformers. Please clarify further. Are the stored transformers spares? Are the stored transformers subject to the transfer? Was there a regular schedule for changing out transformers when the facility was operational?

"Pic4." Please identify the discharge point for the limestone drain in the battery room.

"Pic15." Please clarify whether the transformers are subject to the transfer and provide specifications. Even if the transformers are filled with non PCB oil, they may have only scrap value to a transferee, and MEDEP has an interest in the fate of the contents.

"Pic20." If the facility was constructed with provisions for handling hazardous waste, including the containment and labeled drums shown in this photograph, then the procedures and protocols for handling hazardous waste must have been included in operating instructions and records, and accumulated waste would have been manifested. Please check.

"Pic24." The computer equipment may contain recoverable material such as lead or precious metals. Is the computer equipment part of the transfer?

14 May 2004 Letter from Mr. Shifflett,

While MEDEP appreciates the schematics sent with the letter, the small size is not very helpful. Our comments on the lists of equipment are provided above.

"Atch1" Please clarify the meaning of "full operation" in the fifth bullet. How much activity was associated with less than full operation? Did the contractor conduct pilot or shakedown operations? How long did NOAA lease and operate the system? Was NOAA provided with Air Force operators or instructions?

"Atch2" Please see the comments above on the Final Environmental Assessment/Environmental Baseline Statement. Paragraph d contradicts the earlier report. Table 8.2-1 lists 7 sectors where petroleum has been released. The releases are not described in the text. Please describe each release and the actions taken to address it, along with any sampling and regulatory information. The EA/EBS includes photographs of tanks for coolants and fuels and a number of transformers but it does not certify that the fuels, coolants or oils have been removed.

1995 Archive Search Report

The ASR does not touch on the subject of munitions constituents and environmental contamination.

The ASR briefly mentions small arms training, but the photographs and schematics do not show a small arms firing range. MEDEP has encountered small arms ranges associated with high lead contamination in soils. Please confirm the presence of the small arms range and its location.

Section 4.1.3
Please identify the environmental contaminants and public safety hazards associated with each category of training considered for the range – rocketry, strafing, air to ground gunnery, demolition bombing, etc.

Section 4.2
Please note the attached clipping from the 6/13/1953 Bangor Daily News.

Please forward a copy of the letter from Col. Kennedy to the Adjutant General regarding ordnance storage facilities to be constructed at Bangor Maine.

Section 5.1
The section seems to confirm use as a rocket range. Please identify the types of fuel and other contaminants associated with the rockets.

Section 6.1
Please identify the munitions constituents associated with the high explosives used in the demolition area.

Please identify the munitions constituents associated with the debris found in the excavated dump site.

Appendix L
The site safety plan outlines specific hazards for the Army Corps agents that inspected the site, but MEDEP is unable to discern if similar warnings have been provided to the site owners and the workers tending and harvesting the blueberry barrens. Granted the inspection took place almost nine years ago and no incidents have been reported, but the

ASR does not actually certify that all potential hazards have been removed, and in the past nine years many formerly remote areas have been opened up by roads and trails. The Columbia Fall facility will be excessed through GSA and the future use cannot be predicted. The Air Force and Army Corps of Engineers should either certify that the former range does not pose a threat or initiate and continue to maintain periodic notice and public safety information to owners and users.

Thank you for sending the additional information. Feel free to contact me if you need any additional information.

Sincerely,

Denise Messier

Denise Messier
Bureau of Remediation and Waste Management

DEPARTMENT OF THE AIR FORCE
AIR COMBAT COMMAND PROGRAM MANAGEMENT SQUADRON
LANGLEY AIR FORCE BASE, VIRGINIA

7 July 2004

MEMORANDUM FOR: Maine Department of Environmental Protection
Attn: Ms. Denise Messier
17 State House Station
Augusta, ME 04333-0017

FROM: HQ ACC/PMS CE
11817 Canon Blvd, Suite 306
Newport News, VA 23606

SUBJECT: Final Environmental Assessment (EA)/Environmental Baseline Survey (EBS) for The Disposal of the Over-the-Horizon Backscatter (OTHB) East Coast Radar Sites

1. This letter responds to your letter of 16 Jun 04 and subsequent telephone conversations with Air Combat Command (ACC) staff regarding the proposed disposal of the OTHB radar system. This letter addresses your comments to the best of the Air Force's knowledge with the understanding that some records are not locatable, or were not mandated to be kept by state or federal regulations. Please note all disposal activities will be coordinated through the Defense Reutilization and Marketing Office (DRMO), and only real property will remain on site. This letter hereby represents our final correspondence on this subject.

2. October 2003 Environmental Assessment and Baseline Survey.

a. Solvents or cleaners were not applied to the antenna to maintain electrical contacts.
b. National Oceanic and Atmospheric Administration (NOAA) usage ceased in August of 1997 and counter-narcotics surveillance ended during the 1995-1996 timeframe.
c. Records indicate that Clean Harbors picked up hazardous waste from the receiver site and transmit site until 1997. OTHB is a Conditionally Exempt Generator. It produces no more than 100 kilograms (220 pounds or approximately 27 gallons) of hazardous waste including not more than 1 kg (about 2 pounds) of acutely hazardous waste in any calendar month. When minimal hazardous waste is produced it is temporarily stored at the OTHB initial accumulation point in accordance with applicable state and federal regulations.
d. Glycol was used to remove the heat from the deionized water that was used to cool the transmitters and was circulated out to the heat rejecters outside to cool and sent back inside to start the process over again.
e. Historically and presently, solid waste is hauled off-site for disposal; there are no active landfills on the sites. As indicated by the review of aerial photographs and the site walkover, two small areas on sector one of the transmitter site has been used for dumping of solid wastes. At the receive site during a recent site walkover, we could not find any evidence of

any paint cans or even any kind of waste area on the property. The only waste site was off site near sector one about 100 ft from the government boundary line.
f. Section 3.4.11 will be amended to reflect the former Deblois Range.
g. All electrical transformers and components such as ballasts will be disposed of through DRMO and PCB (if applicable) containing material will be disposed of in accordance with state and federal regulations.
h. The antenna and support towers are galvanized steel and have not been painted since installation.
i. Discussion of petroleum releases is addressed at 3b below.
j. Central Maine Power has been notified that the site will close in the 2005-2007 timeframe.
k. Picture 1. The spare transformer at sector one of the transmit site is owned by the Air Force.
l. Picture 3/Picture 4. Hazardous Waste Manifests could not be obtained. Any remaining hazardous materials/waste and empty drums will be disposed of in accordance with state and federal regulations.
m. Picture 5. Batteries are cleaned on a regular schedule and replaced as required; disposal will take place in accordance with state and federal regulations.
n. There are two substations at sector one with two transformers in each substation. One substation is for 12470 volts the other substation next to the sector one building has a transformer for 480 volts and one for 208 volts. Note there is a substation at each of the 3 sectors with 2 transformers each one for 408 volts and one for 208 volts
o. Picture 10. The large blue tank in this picture is the 75,000 gallon water storage tank and the large gray cabinets on legs are the heat rejecters. The glycol is used to heat the 75,000 gallon water tank during the winter months. The glycol will be drained in accordance with state and federal regulations after equipment has been removed.
p. Picture 11. The boxes identified are not all transformers. There are approximately 20 items listed as reactors or transformers that were drained and packed for storage purposes, the remaining boxes contain antenna and site spare parts.
q. Picture 14. The discharge point for the limestone drain in the battery room flows to the septic tank at sector 2&3. The discharge point for Sector one flows into an underground drain.
r. Picture 15. The transformers will be disposed of through DRMO and records will be maintained indicating the fate of their contents.
s. Picture 20. All former contractors and Air Force personnel have abided by state and federal guidelines to determine procedures and protocols for handling hazardous waste.
t. Picture 24. The computer equipment is part of the transfer and will be disposed of through DRMO; recoverable material will be removed.

DEPARTMENT OF THE AIR FORCE
AIR COMBAT COMMAND PROGRAM MANAGEMENT SQUADRON
LANGLEY AIR FORCE BASE, VIRGINIA

3. 14 May 2004 Letter from HQ ACC/CEVP.

a. The Air Force reduced operations between 1994 and 1996 to a minimum level of contractor personnel, approximately fifteen. Air Force active duty personnel were also transitioned at this time. NOAA personnel never operated the OTHB Radar; they used the existing contractor personnel for their operations.
b. Table 8.2-1 in the EA/EBS indeed addresses facilities in each of the six sectors (three sectors at each site), but this is not a roster of sites where petroleum has been released, but a listing of "Potential Environmental Concerns" where the only mention of diesel spilled is of one "small spill of diesel fuel, cleaned with calcium chloride." The report is incorrect and the spill was cleaned with absorbent material and disposed in accordance with state and federal regulations. There is also mention of non-specific "staining in 3 locations." The reader may have interpreted several statements that simply report the presence of diesel Above-Ground Storage Tanks (ASTs) as reports of diesel releases from those ASTs. Therefore no releases are described in the text.

4. 1995 Archive Search Report. Mr. Jim Holley, ACC/CEVRE, is the primary point of contact for matters associated with the former Deblois Range. He has taken action to enroll the portion of the Deblois Range that falls under Columbia Falls AFS in the ACC range inventory. He has subsequently acquired funding to review the original Corps of Engineers records search as well as complete a preliminary assessment identifying ordinance in the FY05 timeframe. ACC believes that your questions identified in this section of the 16 Jun 04 letter will be answered upon the completion of this assessment.

5. My point of contact on this matter is TSgt Patrick Smith at (757) 764-9185. For information on matters associated with the former Deblois Range please contact Mr. Jim Holley at (757) 764-9313.

John L. Heiser
JOHN L. HEISER
Chief, Civil Engineer Division

cc: HQ ACC/CEVR
HQ ACC/CEVP

May 3, 2005

Mr. Stephen Hinds
ACC PMS/SUI
11817 Cannon Blvd., Suite 306
Sun Trust bank Building
Newport News, VA 23606

Re: Over the Horizon Backscatter Radar Stations, Columbia Falls & Moscow, Maine
Environmental Baseline Survey

Dear Mr. Hinds:

The Maine Department of Environmental Protection appreciates the sites visits to the Over the Horizon Backscatter Radar-East (OTHB-E) receiver station in Columbia Falls on April 12, 2005, and the OTHB transmitter station in Moscow on April 13, 2005. The site visits were prompted by an Environmental Baseline Survey to lease or transfer the properties.

The Maine Department of Environmental Protection (MEDEP) has also has reviewed the final "Proposed Land Disposal: Over the Horizon Backscatter—East Radar System Sites, Environmental Assessment and Baseline Survey, Moscow & Columbia Falls, Maine", dated October 2003, prepared for the U.S. Air Force and the "Archives Search Report Findings, Deblois Air Force Range (Deblois Bombing Range) Deblois, Maine, Project No. DO1ME048301" dated September 1995, prepared by the U.S. Army Corps of Engineers. The Air Force also has submitted a response to comments (RTC) letters dated May 14, 2004 and July 7, 2004. Based on the review of these documents and response to comment letters and MEDEP has the following outstanding comments and issues. Some of the issues were discussed during the on site visits and were resolved but must be codified for the record.

General Comments:

1. It is MEDEP's understanding from the April 2005 meetings that the Final Environmental Baseline Survey, Moscow & Columbia Falls" dated October 2003 will be separated by site, revised and reissued by the Air Force. The following changes will be made to the revised EBS.
   Is this statement true? Recommend ACC/PMS officially confirm or deny this statement. Also it should be noted that in the response letter to MEDEP dated 14 May 2004 from ACC/CEVP in attachment 2 letter b it states, "You recommended that we treat the two sites (Columbia Falls and Moscow) separately to make the report easier to follow. At the outset of this project, we concluded that the two sites had more similarities than differences, and developed the format accordingly."

   - All reference to the transfer of the Operations Building in Bangor will be put in a background/history section or deleted.

   Ok easy fix if PMS does proceed with the update of the EBS or Phase II.

- All reference to the OTHB West will be a background/history section or deleted.

Ok easy fix if PMS does proceed with the update of the EBS or Phase II.

- An asbestos survey of both facilities will be performed and documented in section 3.4.12 for disclosure purposes.

The EBS suggests that there is a possibility that asbestos containing materials may exist on site (P. 3-8). It also states that the contractor fulfilled their obligation by completing interviews, record reviews, and a site visit satisfying the requirements set forth in AFI 32-7066. To do a full blown asbestos survey is outside the scope of a Phase I EBS and one was not recommended by the contractor in the conclusions of the EBS. Although MEDEP is recommending one be completed and that makes it ACC/PMS's decision to follow their recommendation or not.

- All groundwater wells must be tested for metals, VOCs, SVOCs, radon, gross alpha, nitrates, nitrites, pesticides (for pesticides known to be used on the site), and the results documented. The Air Force should provide a workplan and Quality Assurance Project Plan to MEDEP for review and approval prior sampling and analysis of the well water.

As there are no Recognized Environmental Conditions of AF Category 4 or above, except for local power company land that was not evaluated, the AF would be out of scope for a phase I EBS to test groundwater wells for metals, VOCs, SVOCs, radon, gross alpha nitrates, nitrates, and pesticides. Potential environmental concerns, including concerns for releases of hazardous substances and petroleum, are listed in Table 8.2-1 of the EA/EBS. Since the property is not currently operational, potential for operations-linked releases are negligible. Potential release situations would likely arise only incidental to removal of the material as part of the facility closure process. In addition no recorded releases of hazardous substances and/or petroleum have been identified.

- Figures of each sector for both facilities, showing the locations of wells, septic systems, associated buildings, water tanks, transformers, etc. will be included.

Ok easy fix if PMS does proceed with the update or Phase II.

- Any inaccuracies in the current EBS will be explained in a response to comment letter to the satisfaction of MEDEP, then inaccurate information will deleted from the text of the revised final EBS.

ACC/PMS and ACC/CEVP have identified one major piece of inaccurate information and that is the status of Deblois Range. All known information about this was disclosed to MEDEP in a response letter form ACC/CEVP dated 14 May 2004. If ACC/PMS does decide to update the Phase I or go forward with Phase II EBS work this information should be included in that document.

- During the site visits MEDEP had requested additional information on the maintenance materials, in particular paint supplies and cleaning supplies that were used at each site. However, MEDEP found this information (MSDS for January 2002) in Appendix F. It would be helpful to reference this information in the text of the EBSs so that it can be easily found.

To reference Appendix F in the text is a very easy fix if ACC/PMS does decide to update the Phase I EBS or pursue a Phase II EBS.

- MEDEP also found the names of the pesticides/herbicides, quantity and frequency of use used at the facility over the years; however more information is needed the potential impacts from pesticides/herbicides to environment including persistence and impacts to soil, groundwater, surface water, and wildlife.

Negative it was deemed in the EA/EBS that there was no significant impact to soil, groundwater, surface water, and wildlife or any other areas in the human and natural environment affected by pesticide and herbicide use.

Don Teig, ACC/CEO should be your POC on all issues relating to herbicide and pesticides.

- The EBS should note if there are floor drains, locations, and where they discharge.

This statement is TRUE.

- Section 3.4.13 (Polychlorinated Biphenyls): must determine if the ban on PCBs preceded the construction of these facilities and whether the transformers could have contained transformer oil with PCBs.

The EA/EBS states (P 3-8) that they are all labeled "no PCBs".

- Please discuss the status and disposal of the electrical equipment in the buildings.

It was concluded that since the document warranted a FONSI that the disposal of the electrical equipment in the buildings did not pose a significant impact to the human and natural environment.

- Since these are remote sites, directions to the sites should be provided in the document.

Not Required.

- If the Air Force wants to include the discussion of the "dumps" on adjacent property the information should be included in section 5.0 (Findings on Adjacent Properties).

This is a true statement.

- The additional information provided in the RTC letters (May 14, 2004 and July 7, 2004) should be incorporated into the revised EBS, as necessary.

This is a true statement, I believe the inaccurate information MEDEP referred to earlier in this letter is addressed in these letters from ACC/CEVP (14 May 2004) and ACC/PMS (7 July 2004).

- Please provide the dates of the closure reports for the removal of the Underground Storage Tanks.

Removal dates are included in Table 3.4-1 (P 3-5) of the EA/EBS.

Columbia Falls:

The Columbia Fall-OTHB Receiver Station has additional environmental issues due to part of Sector 2 being within the former Deblois Bombing Range which must be investigated. The following are outstanding issues specific to OTHB Receiver Station.

2. MEDEP and the Air Force must develop a work schedule and an execution plan for Columbia Falls, as described in the DSMOA Cooperative Agreement Manual.
   This is a true statement.

3. Obviously Section 3.4.11 (Ordnance) of the EBS for the Columbia Fall receiver station must be revised to include the portion of Deblois Bombing Range which is located in sector 2.

This information was supplied to MEDEP in a letter from ACC/CEVP dated 14 May 2004. If ACC/PMS does decide to update the EA/EBS or just EBS then this information should be included in the document as well as any new information.

4. The Air Force must check the records for the construction of the Columbia Falls facility to determine if EOD was found during the construction of Sector 2 and if so how was it handled.
   It clearly states in Attachment 1 of the letter from ACC/CEVP dated 14 May 2004 that investigators found no live or unexpended high-explosive ordnance, nor any reports of live ordnance at the site. Also MEDEP should clarify what they mean by "EOD", we use that acronym to mean Explosive Ordinance Disposal, I am assuming they want to replace this term in their question to live or unexpended high explosive ordnance.

5. Please describe how the site was prepared for construction of the receivers. MEDEP is primarily interested in Sector 2. There is an earthen berm along the westerly side of sector 2 that may have been created during the construction phase. It may be necessary for the Air Force to determine if there are EOD in the berm.
   It clearly states in Attachment 1 of the letter from ACC/CEVP dated 14 May 2004 that earthen embankments that had been constructed to support OTHB structures were considered uncontaminated of ordnance.

6. The Air Force must determine what type of bullets and other munitions would have been used on the strafing targets within Sector 2.
   Mr. Holley of CEVR may know the answer to this question.

7. Two names of people in the Columbia Falls area who might have information on the bombing range and/or the construction of the receiver station are Gary McLaughlin and Richard Bailey. These people should be interviewed.
   Ok easy fix if PMS does proceed with the update of the EBS or Phase II.

Moscow OTHB-E Transmitter Station:

Response to Comment Letter-outstanding issues:

7. Section 3.4.2, para 2. Please explain the use of the Above Ground Storage tank in Sector 1.
   Ok easy fix if PMS does proceed with the update of the EBS or Phase II.

8. Section 3.4.2, par 5: Please provide a brief explanation of the use of propylene glycol and ethylene glycol and the quantity, storage arrangements and ultimate disposal.
   MEDEP must mean par 4 but otherwise agree with statement, again easy fix if PMS does proceed with the update of the EBS or Phase II.

9. MEDEP observed the stain on the floor of the sector 3 building and has no further concerns, however please provide a brief description of the stain and the pitting for the EBS. It is doubtful that the stain was caused by water so the source of the stain should be listed as unknown.
   This is true unless the stain on the floor of the sector 3 building was considered *de minimus* by the contractor performing the EBS or PMS.

Editorial Changes to EBS:

10. Section 1.3.1.2, Bullet 6: The reference should be Maine Department of *Environmental Protection* UST Records not "Natural Resources".
    True.

11. Current figures 2.3-2 and 2.3-3 need to be revised to show roads, including road names (when possible), to the sites.
    Additional maps were supplied to MEDEP as an attachment to the letter from ACC/CEVP dated 14 May 2004, if the EBS were to be updated they would be included in the updated version.

12. Section 4.4, Alternative A. "An archaeological survey of the OTHB-E property identified three sites. The Air Force will consult with the Maine ..."

    It was noted by MEDEP that these sites have the potential archaeological significance as "Cold War Sites" and that Columbia Fall has the potential to be a prehistoric archeological site. It would be helpful if this information was in the body of the text rather than make the read root out the information in the appendices. Have sites been evaluated and what is the status of the sites in relationship to the potential lease or transfer?
    Not required, infact ACC/JAV prefers information to be referred to in documents by appendices.

Follow Ups to Response to Comment Letter (July 7, 2004)

13. RTC 2.c. Please discuss what hazardous waste was picked up by Clean Harbors until 1997 and what was done regarding hazardous waster after 1997. Also is MEDEP correct in assuming that neither site had an EPA ID number for generating hazardous waste?
    True.

Thank you for the opportunity to visit the sites and discuss our concerns with your staff. If you have any questions or comments please call me at (207) 287-7713 or email me at claudia.b.sait@maine.gov.

Respectfully,

Claudia Sait
Project Manager-Federal Facilities
Bureau of Remediation & Waste Management

Cf: File
Jim Holley
Dean Smith (mail only)
Jerry Hodgston-ACOE (email only)

DEPARTMENT OF THE AIR FORCE
AIR COMBAT COMMAND PROGRAM MANAGEMENT SQUADRON
LANGLEY AIR FORCE BASE, VIRGINIA

24 June 2005

MEMORANDUM FOR Maine Department of Environmental Protection
ATTN: MS. CLAUDIA SAIT
17 State House Station
Augusta ME 04333-0017

FROM: ACC PMS/CE
11817 Canon Blvd, Suite 306
Newport News VA 23606-4516

SUBJECT: Final Environmental Assessment (EA) Environmental Baseline Survey (EBS) for The Disposal of the Over-the-Horizon Backscatter (OTHB) East Coast Radar Sites (Your Memo, 3 May 2005)

The final disposition of the OTHB East Coast Radar Sites has yet to be decided. The U.S. Air Force is currently pursuing Enhanced Use Leasing (EUL) options under Title 10 U.S.C. 2667. Should one, or more, EUL options prove viable, the Government will initiate another EA/EBS. If alternative use of the sites is not viable, the U.S. Air Force will, once again, initiate the declaration of excess process and complete another EBS. Under either outcome, a new EBS will be completed and we will, at that time, take the recommendations presented in your 3 May 2005 memo under advisement. HQ ACC/CEVR, Langley AFB VA 23665-2791, will coordinate with your organization concerning Military Munitions Response Program issues related to that portion of Columbia Falls OTHB Receiver site (Sector 2) that occupies a portion of the former Deblois Air Force Range.

John L. Heiser
JOHN L. HEISER
Chief, Civil Engineer Division

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

DAVID P. LITTELL
COMMISSIONER

October 11, 2006

Ms. Elvie Hoag
ACC PMS/CE
11817 Canon Boulevard, Suite 306
Newport News, VA 23606-4516

re: Preliminary Final Environmental Baseline Survey (EBS) for Transfer of the Moscow, ME Transmitter Site to the General Services Administration, September 21, 2006.

Dear Ms. Hoag:

The Maine Department of Environmental Protection has reviewed the document referenced above. In general the Preliminary Final EBS addresses MEDEP's previous comments however there are still some deficiencies that must be addressed before we can approve the Final EBS. The Department's specific comments follow.

1. In a May 3, 2005 comment letter the MEDEP stated that, "All groundwater wells must be tested for metals, VOCs, SVOCs, radon, gross alpha, nitrates, nitrites, pesticides…and the results documented. ACC's response as stated in the Prelim. Final EBS was, "Water testing was conducted and the results are in App. G-3 & discussed on pg. 2-19 to 2-20…"

The discussion of groundwater in Section 2 relates only to arsenic and not to any other substances. Of the compounds listed in our May 3, 2005 letter the groundwater results presented in App. G provide results only for arsenic, copper, lead, iron, manganese nitrites and nitrates. There is no indication that the groundwater was sampled for VOCs, SVOCs, radon, gross alpha, pesticides, or metals such as zinc and chromium. These results must be submitted with the EBS.

2. MEDEP commented in our May 3, 2005 letter more information was needed regarding potential impacts from pesticides and herbicides to the environment. ACC responded that, "We've included water well lab results & UST removal report which includes soil testing in the appendix G-3."

As discussed above ACC has not provided results of groundwater analysis for pesticides. Also, the UST removal report provided only PID readings of soil potentially contaminated by petroleum. Was ACC referring to some other soil testing results?

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web site: www.maine.gov/dep

3. Response 29 in App. J states, "It was concluded that since the document warranted a FONSI that the disposal of the electrical equipment in the buildings did not pose a significant impact to the human & natural environment."

Presumably this response is referring to the Finding of No Significant Impact in the 2003 EA/EBS. This is backwards reasoning. The nature of the status and disposal of the electrical equipment can support (or not) a FONSI determination, not the other way around. Indeed, the MEDEP has not yet concurred with the final EBS and therefore cannot accept the 2003 FONSI determination. Please provide other reasoning why the disposal of the electrical equipment in the buildings did not pose a significant impact to human health and the environment.

4. We could not find a response to the second half of Comment 13 in our May 3, 2005 letter. That comment was, "…is MEDEP correct in assuming that neither site had an EPA ID number for generating hazardous waste?" Please respond to this comment.

Please feel free to contact me at (207) 287-8010 or iver.j.mcleod@maine.gov if you have any questions.

Sincerely,

Iver McLeod
Project Manager
Bureau of Remediation and Waste Management

pc: Ted Wolfe, MEDEP
Claudia Sait, MEDEP

DEPARTMENT OF THE AIR FORCE
AIR COMBAT COMMAND PROGRAM MANAGEMENT SQUADRON
LANGLEY AIR FORCE BASE, VIRGINIA

Oct 30, 2006

MEMORANDUM FOR: Maine Department of Environmental Protection
ATTN: Mr. Iver McLeod, Project Manager
Bureau of Remediation and Waste Management
17 State House Station
Augusta, ME 04333-0017

FROM: ACC PMS/CE
11817 Canon Blvd, Ste 306
Newport News VA 23606-4516

SUBJECT: Final Environmental Baseline Survey (EBS) for Transfer of the Moscow, ME Transmitter Site to the General Services Administration

1. We appreciate your review comments to the Preliminary Final EBS and would like to respond to your concerns, which are listed below, with our response following it:

MEDEP Comment 1: In a May 3, 2005 comment letter the MEDEP stated that, "All groundwater wells must be tested for metals, VOCs, SVOCs, radon, gross alpha, nitrates, nitrites, pesticides…and the results documented. ACC's response as stated in the Prelim. Final EBS was, "Water testing was conducted and the results are in App. G-3 & discussed on pg. 2-19 to 2-20…"

The discussion of groundwater in Section 2 relates only to arsenic and not to any other substances. Of the compounds listed in our May 3, 2005 letter the groundwater results presented in App. G provide results only for arsenic, copper, lead, iron, manganese nitrites and nitrates. There is no indication that the groundwater was sampled for VOCs, SVOCs, radon, gross alpha, pesticides, or metals such as zinc and chromium. These results must be submitted with the EBS.

Response to Comment 1: All three (3) Sector sites at Moscow were originally painted in 1979 and again repainted in 1994. This was interior painting only. The exteriors of all the buildings were never painted because they didn't require it. Lacquers and paint strippers were never used at any of the Sector sites. No office equipment and supplies (copiers, printers, correction fluids, carbonless copy paper, graphics and craft materials, such as glues and adhesives, markers, photographic solutions, etc.) have ever been stored at any of the sites. No varnishes or wax have been used at the sites. Cleaning products, however, have been used to clean the floors. Fuel tanks (75 gallon ASTs) are present outside each of the three sites. There has been no spillage of fuel to affect the groundwater or soils.

There has been no pesticide use at any of the three sector sites. Field mice are caught with mouse traps and there are no other significant pests that have warranted pest control of any kind.

An herbicide, RoundUp was aerially sprayed in August 2002. Monsanto is the manufacturer of RoundUp; information about this herbicide is available at: http://en.wikipedia.org/wiki/Roundup.

Because of the very minimal usage (cleaning substances, petroleum storage) of products that are considered VOCs and SVOCs, no pesticide use, and minimal herbicide use, there are no Recognized Environmental Conditions of Air Force Category 4 or above and testing the groundwater wells for metals, VOCs, SVOCs, radon, gross alpha, nitrates, and pesticides is not necessary. Since the property is not currently operational, potential for operations-linked releases are negligible. Potential release situations would likely arise only incidental to removal of the material as part of the facility closure process. In addition, no recorded releases of hazardous substances and/or petroleum have been identified.

MEDEP Comment 2: MEDEP commented in our May 3, 2005 letter more information was needed regarding potential impacts from pesticides and herbicides to the environment. ACC responded that, "We've included water well lab results & UST removal report which includes soil testing in the appendix G-3."

As discussed above ACC has not provided results of groundwater analysis for pesticides. Also, the UST removal report provided only PID readings of soil potentially contaminated by petroleum. Was ACC referring to some other soil testing results?

Response to Comment 2: Herbicide usage is discussed in Response to Comment 1 above. Pesticide usage was negligible, to none. On occasion a can of wasp spray may have been used. Mouse traps were used in lieu of poison. Because of the inconsequential use of pesticides, no groundwater analysis for pesticides has been performed.

Regarding the UST removal report, the soil testing was only performed at the three Sector sites where the USTs were being removed. No other sites were evaluated. ACC was not referring to some other soil testing results other than the report found in Appendix G-3 Tank Information.

MEDEP Comment 3: Response 29 in App. J states, "It was concluded that since the document warranted a FONSI that the disposal of the electrical equipment in the buildings did not pose a significant impact to the human & natural environment."

Presumably this response is referring to the Finding of No Significant Impact in the 2003 EA/EBS. This is backwards reasoning. The nature of the status and disposal of the electrical equipment can support (or not) a FONSI determination, not the other way around. Indeed, the MEDEP has not yet concurred with the final EBS and therefore cannot accept the 2003 FONSI determination. Please provide other reasoning why the disposal of the electrical equipment in the buildings did not pose a significant impact to human health and the environment.

Response to Comment 3: Your comment is correct, the sentence should have read, "The disposal of the electrical equipment in the buildings did not pose a significant impact to the human and natural environment and it was concluded that the document warranted a FONSI." In 2003, disposal of the electrical equipment was proposed; however it is now to remain at the facility. According to the caretaker at the Moscow transmitter site, all electrical equipment and

systems, as well as spare parts, will remain on-site as instructed by the Air Force. The equipment will be transferred with the property to the GSA.

MEDEP Comment 4: We could not find a response to the second half of Comment 13 in our May 3, 2005 letter. That comment was, "…is MEDEP correct in assuming that neither site had an EPA ID number for generating hazardous waste?" Please respond to this comment.

Response to Comment 4: The Moscow transmitter site is classified as a conditionally exempt small quantities generator of hazardous waste and is registered with the EPA accordingly due to this classification; however, the site has no EPA registration number. This classification indicates they do not produce more than 100 kilograms of hazardous waste per month, or 1 kilogram or less per month of acutely hazardous waste.

2. We hope that we have answered your concerns and would appreciate a reply. If you need further clarification or have any other questions, please do not hesitate to contact Ms. Elvie Hoag, ACC PMS/CEV, 757-764-9460. Thank you for your assistance.

John L. Heiser

JOHN L. HEISER
Chief, Civil Engineer Division

Cc:
Ms. Claudia Sait, MEDEP
Mr. Ted Wolfe, MEDEP

DEPARTMENT OF THE AIR FORCE
AIR COMBAT COMMAND PROGRAM MANAGEMENT SQUADRON
LANGLEY AIR FORCE BASE, VIRGINIA

Nov 28, 2006

MEMORANDUM FOR: Maine Department of Environmental Protection
ATTN: Mr. Iver McLeod, Project Manager
Bureau of Remediation and Waste Management
17 State House Station
Augusta, ME 04333-0017

FROM: ACC PMS/CE
11817 Canon Blvd, Ste 306
Newport News VA 23606-4516

SUBJECT: Final Environmental Baseline Survey (EBS) for Transfer of the Moscow, ME Transmitter Site to the General Services Administration

1. In preparing the final subject document, it came to our attention that we failed to mention in our Preliminary Final EBS that the transmitter site in Moscow contains five (5) nitrogen cylinders, each 300 cubic feet. These nitrogen cylinders are located at the Sector 1 Substation only. They are exchanged when they need to be refilled; Maine Oxygen brings out the cylinders for the exchange. Maine Oxygen has several offices, but the one in Waterville is used for the Moscow site. These nitrogen cylinders are not Air Force property; they are a leased asset, property of Maine Oxygen. They must be maintained and refilled until the property is transferred to the new owners so that the transformers do not deteriorate. To date, no leaks have occurred.

2. We will identify and elaborate on these nitrogen cylinders in our Final EBS. If you need further clarification or have any other questions, please do not hesitate to contact Ms. Elvie Hoag, Chief, Environmental Planning, at above address, or telephone 9757) 764-9460, or, by email at elvie.hoag@langley.af.mil.

3. Your immediate response would be appreciated. Thank you for your assistance in this matter.

John L. Heiser
JOHN L. HEISER
Chief, Civil Engineer Division

Cc:
Ms. Claudia Sait, MEDEP
Mr. Ted Wolfe, MEDEP

From: McLeod, Iver J [mailto:Iver.J.McLeod@maine.gov]
Sent: Thursday, December 07, 2006 3:41 PM
To: Hoag Elvie R Civ ACC PMS/CEV
Cc: Wolfe, Theodore E
Subject: RE: MaineDEPLetterOct30,2006.pdf

Hi - sorry for the delay in responding to your letter.

The only outstanding issue arises from some confusion on our part. We have commented previously on the lack of analytical results for VOCs and SVOCs in groundwater. Your Oct. 30, 2006 responses discussed the use of materials potentially containing VOCs/SVOCs.

Your responses regarding use of cleaners, herbicides, etc. are satisfactory. However, to my knowledge it's never been explicitly stated that the Air Force did not use VOCs to clean (or otherwise use) electrical components of the radar array. That's not a criticism - I think it's likely that we have never explicitly asked that question. It has been our experience at other former Air Force radar sites in Maine that TCE and/or other solvents were used by the Ari Force to clean electrical components used to operate the radar systems. In at least one case groundwater has become contaminated with TCE concentrations exceeding Federal and State drinking water standards.

Therefore, please respond to this question. If the Air Force does not know whether or not VOCs/SVOCs were used as discussed above, or if it turns out they were used, then additional groundwater monitoring will be necessary. If it is clear that they were not used at all then we can consider the EBS to be Final.

Please let me know if you have any questions about this.

Thanks,

Iver McLeod
Project Manager
Bureau of Remediation and Waste Management
Maine DEP
Augusta, ME 04333

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR COMBAT COMMAND
LANGLEY AIR FORCE BASE, VIRGINIA

23 January 2007

MEMORANDUM FOR: Maine Department of Environmental Protection
ATTN: Mr. Iver McLeod, Project Manager
Bureau of Remediation and Waste Management
17 State House Station
Augusta, ME 04333-0017

FROM: ACC PMS/CE
11817 Canon Blvd, Suite 306
Newport News VA 23606-4516

SUBJECT: Final Environmental Baseline Survey (EBS) for Transfer of the Moscow, ME Transmitter Site to the General Services Administration

1. This letter is in response to your email question of 7 Dec 06 regarding the use of VOCs for cleaning purposes or other uses. Attached please find a statement from our contractor who is currently preparing the final EBS. To summarize, the Air Force has not used solvents to clean any electrical components at the radar site in Moscow. However, there was a one-time use of solvents (paint thinner) to clean paint brushes; however, the paint thinner was properly disposed by Clean Harbors. The Air Force switched to using disposable brushes thereafter due to the disposal expense. Because of the virtual non-use of solvents at the Moscow ME radar site, we believe that no groundwater testing or monitoring is warranted.

3. We apologize for the time it took to respond to your 7 December email. We had to wait for people to come back from the holidays to interview them.

4. Your immediate response would be appreciated. Thank you for your assistance in this matter.

JOHN L. HEISER
Chief, Civil Engineer Division

Cc:
Ms. Claudia Said, MEDEP
Mr. Ted Wolfe, MEDEP

1 Encl
Statement Regarding the Use of Solvents

STATEMENT REGARDING THE USE OF SOLVENTS AT THE MOSCOW, MAINE OTH-B TRANSMITTER SITE

The information provided below was derived from interviews with the following two individuals:

1. Mr. Deane Smith, past Quality Assurance (QA) specialist at the Moscow site for 15 years, and currently the sole caretaker of the property.
2. Mr. and Mrs. Steve Treadwell, maintenance contractor for the Moscow, ME radar site for the past 20 years.

In Mr. Deane Smith's interview, the following statements were made when questioned regarding the use of solvents at the Moscow radar site:

- The OTH-B radar site is electronically controlled (versus mechanically controlled which would use industrial cleaners) and the equipment has no moving parts with the exception of the pneumatic parts, which move back and forth. There are spring-loaded valves.

- All the equipment is stationary and locked in place, electronically controlled and pneumatically operated. Cooling water is used for the transmitters, there is running air in and out of the transmitters, and deonized water is used.

- Because the equipment is electronically controlled, a washing station was never built for washing parts of any kind. There was nothing to wash.

- The only cleaning solvent ever used was paint thinner, which was kept in a 55-gallon drum (a maximum of 25 gallons were kept in the drum). The paint thinner was used to clean paint brushes that were used for painting on one or two occasions. Disposal of the cleaning solvents was performed by Clean Harbors. Because of the disposal expense with Clean Harbors, the maintenance contractor started using disposable paint brushes.

- Chemicals were never poured on the ground, in the gutter, or down the storm drain or anywhere else. Cleaning solvents were disposed properly by Clean Harbors.

- Mr. Treadwells' experience at the radar site extends to about 20 years at the site. His contract recently expired with the Air Force because of the proposed disposal status of the facility. The facility is now under Mr. Deane Smith's care.

- Under Contract F44650-02-C-0024, Mr. Treadwell was responsible for the proper care of all the radar equipment, the buildings, and the use of maintenance products. Mr. Treadwell followed Technical Orders (TO), which laid out the instructions for properly maintaining and operating all of the assets at the site. Mr. Treadwell received all the local work cards to manage the facility and kept records of all maintenance performed. There were also labor schedules kept. Attached is an example of a maintenance inspection and schedule. The work

orders are available for your review at your convenience; Mr. Deane Smith can accommodate a visit.

Mr. and Mrs. Steve Treadwell, the maintenance/caretaker contractor, provided the following information during a January 11, 2007 telephone interview with Ms. Amy Stubbs, EES, Inc. environmental scientist:

- Contractor was the caretaker of the Moscow radar site, which included inventory responsibilities
- To the best of her knowledge, no solvents were used for cleaning and other tasks
- No equipment required lubrication or cleaning with solvents
- The caretaker logs stayed on-site and they are in Deane Smith's care.

In addition to the above statement, Mr. Treadwell provided the following information via an email dated January 11, 2007:

- We did not use any solvents.
- We do not have records of disposal of the solvents we did not buy or use.

This statement was prepared by Gloria A. Hagge, Senior Environmental Scientist with Express Environmental Services, Inc. (EES) and reviewed by the U.S. Air Force, Air Combat Command. EES is the environmental contractor responsible for preparing the Environmental Baseline Survey (EBS) for the proposed disposal of the Moscow, ME radar site.

Gloria A. Hagge

January 23, 2007

Gloria A. Hagge
Senior Environmental Scientist
Environmental Express Services, Inc.

Date

Ms. Hoag/Mr. Heiser:

I have reviewed your response letter of January 23, 2007 regarding the subject site. Your responses to Maine DEP's 12/7/06 email regarding solvent use at the facility are satisfactory. We do not need to review the work orders mentioned in the letter.

Therefore, the MEDEP considers the Environmental Baseline Survey for Transfer of the Moscow, ME Transmitter Site to the General Services Administration to be finalized.

Thank you for your responses. If you have any questions regarding this site please do not hesitate to contact me.

Sincerely,

Iver McLeod
Project Manager
Bureau of Remediation and Waste Management
Maine DEP
Augusta, ME 04333

iver.j.mcleod@maine.gov
ph: (207) 287-8010
fx: (207) 287-7826

MAINE HISTORIC PRESERVATION COMMISSION
55 CAPITOL STREET
65 STATE HOUSE STATION
AUGUSTA, MAINE
04333

JOHN ELIAS BALDACCI
GOVERNOR

EARLE G. SHETTLEWORTH, JR.
DIRECTOR

January 4, 2007

Ms. Elvie Hoag
US Air Force
ACC PMS/CEV
11817 CANON BLVD RM 306
NEWPORT NEWS, VA 23602

RE: Columbia Falls OTHB-E Radar Station, Maine, archaeological survey

Dear Ms Hoag:

Dr. Arthur Spiess of my staff has reviewed the Phase II archaeological report for sites 77.7, 77.8 and 77.9 on this property, authored by Geraldine E. Baldwin, September 2006. We agree with the conclusions of the report that none of these sites is eligible for listing in the National Register.

I find that there will be no historic or archaeological properties affected by the proposed sale of the property.

Sincerely,

Earle G. Shettleworth, Jr.
State Historic Preservation Officer

PHONE: (207) 287-2132

FAX: (207) 287-2335

MAINE HISTORIC PRESERVATION COMMISSION
55 CAPITOL STREET
65 STATE HOUSE STATION
AUGUSTA, MAINE
04333

RECEIVED 25 July 05 @GMI

JOHN ELIAS BALDACCI
GOVERNOR

EARLE G. SHETTLEWORTH, JR.
DIRECTOR

July 22, 2005

Ms. Melissa M. Green
Geo-Marine Incorporated
550East 15th St.
Plano TX 75074-5708

RE: MHPC 0351-03, Moscow and Columbia Falls, OTHB-E Radar Stations, Phase I archaeological survey

Dear Ms. Green:

I have reviewed the Phase I archaeological survey report by Geraldine Baldwin, John Milner Associates, for these OTHB-E properties. We accept the survey report as written, and the results of the survey as negative for the Moscow property, and three prehistoric sites (77.7, 77.8, and 77.9) requiring Phase II survey on the Columbia Falls radar installation.

Sincerely,

Dr. Arthur Spiess
Senior Archaeologist

arthur.spiess@maine.gov

cc: Geraldine Baldwin, John Milner Assoc.

MAINE HISTORIC PRESERVATION COMMISSION
55 CAPITOL STREET
65 STATE HOUSE STATION
AUGUSTA, MAINE
04333

JOHN ELIAS BALDACCI
GOVERNOR

EARLE G. SHETTLEWORTH, JR.
DIRECTOR

December 13, 2006

Stephen F. Hinds, Program Manager
Over the Horizon Backscatter Radar Program
HQ ACC/PMS/SUO
11817 Canon Blvd., Suite 306
Newport News, VA 23606-4516

Project: MHPC #0350-03 and #0351-03; Over-the-Horizon Backscatter (OTHB) Radar System demolition and removal, proposed mitigation/Draft MOA
Towns: Moscow and Columbia Falls, ME

Dear Mr. Hinds:

In response to your recent request, I have reviewed the information received November 20, 2006 to continue consultation on the above referenced undertaking and draft MOA pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended.

With regard to part 1 of the Stipulation section of the draft MOA, we request that it be amended to stipulate that one original set of the HABS/HAER documentation including contact prints and negatives, as well as representative 35mm, 8X10" color prints and negatives, be provided for our files. All other parts of the draft MOA are acceptable as written. We look forward to reviewing the final report on the Phase II archaeological site evaluations at the Columbia Falls installation.

Please contact Mike Johnson of my staff if we can be of further assistance in this matter.

Sincerely,

Earle G. Shettleworth, Jr.
State Historic Preservation Officer

Appendix G-2
Interview Reports

EBS Questionnaire with Notes provided by Mr. Deane Smith

EBS QUESTIONNAIRE

Number	General Liability Concerns	YES	NO	N/A	UNK
A1	Have there been any federal or state enforcement actions against the facility?		✓		
A2	Are there any pending enforcement actions against the facility, its owner, or operator?		✓		
A3	Has the owner or operator entered into any consent decrees or administrative consent orders?		✓		
A4	If so, have these decrees or orders provided a full release from liability?			✓	
A5	Has the property or adjoining property been used for gas station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junk yard or landfill, or a waste treatment storage, disposal, processing, or recycling facility?		✓		
A6	Does seller's business involve the use, treatment, storage, or disposal of hazardous substances?	✓			
A7	Have there been any citizen suits filed against the facility, owner, or operator?		✓		
A8	Have there been any regulator warning letters or administrative orders against the facility, owner, or operator?		✓		
A9	Have there been any notices of violation, consent orders, or consent decrees sent to the owner or operator under the citizen suit provisions of any statute?		✓		
A10	Do any settlement agreements with the government or private parties leave the owner or operator open to subsequent suits on the same issues?		✓		
A11	Can the facility incur future liability through non-compliance with the above orders or decrees?			✓	
A12	Has the owner or operator received any Requests for Information, Notice and Demand letters or administrative inquires from any governmental entity with regard to its environmental practices?		✓		
A13	Has an "imminent hazard" ever been alleged to exist at the site?		✓		
A14	Has the owner or operator not maintained all records required by each environmental statute?		✓		
A15	Is the facility out of compliance with any environmental permits?		✓		
A16	Do past practices leave the owner or operator open to citizen suits or government enforcement actions?		✓		
A17	Has the facility undergone any environmental audits/inspections?		✓		
A18	Have audit/inspection deficiencies gone uncorrected?			✓	
A19	Have any claims been made under the companies' insurance policies?			✓	
A20	Is the company in violation of laws that require insurance policies to cover environmental contingencies?			✓	
A21	Is the property adjacent to or on an abandoned mining site?		✓		
A22	Is the property adjacent to railroad tracks or underground pipes?		✓		
A23	Is the property part of or adjacent to an oil or gas producing property?		✓		
A24	Are there any environmental liens or governmental notification relating to past or recurrent violations of environmental laws?		✓		

Number	Clean Air Act	YES	NO	N/A	UKN
B1	Does the facility emit air pollutants into the environment?		✓		
B2	Is the facility a type for which new standards of performance (NSPS) have been promulgated? See 40 C.F.R. Part 60 for a list of new source categories and applicable standards.		✓		
B3	Is the facility in violation or has the facility been in violation of the NSPS or the permit?		✓		
B4	Is the facility located in a nonattainment area?		✓		
B5	Will the facility be subject to maximum attainable control technology (MACT)?		✓		
B6	Is a capital expenditure required to meet the requirements of emissions reductions in the new Clean Air Act, i.e., is the facility required to reduce emissions because it is in a non-attainment area?		✓		
B7	Does the facility incinerate any wastes of any kind?		✓		

Number	Radon	YES	NO	N/A	UKN
C1	Were the results of an EPA short term radon test performed in the basement above 4pCi/l or 0.02 WL?		✓		
C2	Is there evidence that nearby structures have elevated indoor levels of radon or radon progeny?		✓		
C3	Have local water supplies been found to have elevated levels of radon or radium?		✓		
C4	Is the property located on or near sites that currently are or formerly were used for uranium, thorium or radium extraction or for phosphate processing?		✓		
C5	Were the structures constructed from salvaged material from oil wells or other structures characteristic of high radon levels?		✓		
	Note: A property may be acceptable for radon if guidelines in AR 200-1, Chapter 11 are met.				

Number	Clean Water Act	YES	NO	N/A	UKN
D1	Does the facility discharge pollutants into the waters of the state or onto land from which pollutants Could enter such waters?		✓		
D2	Even if the discharge was permitted by the state, is there any basis upon which EPA might challenge The variance or exemption as abdicating the state's responsibilities		✓		
D3	Are there or has there been any flooring, drains, or walls that are stained by substances other than water Or are emitting foul odors?		✓		
D4	Do the discharge monitoring reports (DMRs) indicate violations of the permit? Have DMR's gone unsubmitted?		✓		
D5	Are there any septic tanks, sumps from floor drains, or below-ground oil-water separators?	✓			
D6	Have any toxic or hazardous pollutants ever been spilled or otherwise released at the site?		✓		
D7	Is there cause to believe that any operation or equipment at the facility might be the cause of a future spill or release of a pollutant?		✓		
D8	Has the facility neglected to apply for necessary facility NPDES storm water discharge permits?		✓		
D9	Has there been any road oiling done on the facility?		✓		
D10	Are there any equipment cleaning stations?		✓		
D11	Are there sinkholes, abandoned manholes, abandoned sewer lines or other aquifer access points?		✓		
D12	Are there any oily sheens on the surface water or unusual odors?		✓		
D13	Can the facility's Clean Water Act permits be easily transferred?		✓		
D14	Are permits required to discharge into the WWTF?		✓		
D15	Will a new or modified permit be necessary for an expansion of operations?		✓		
D16	Are there any visual evidence of wells?	✓			
	Pressure tanks?	✓			
	Pipes that extend vertically into the ground?	✓			
	Above-ground pump heads?	✓			
	Small sheds or shelters (sometimes resembling dog houses)?	✓			
	Electrical transformers on poles for no other apparent use (especially in agricultural settings)?		✓		
	Concrete pads surrounding a pipe or opening?		✓		
	Depressions in the ground?		✓		
	Small lined or unlined pits?		✓		
	Simple holes in the ground?		✓		
D17	Are there any non-permitted storm water discharges?		✓		
D18	Does the adjacent property discharge waste water on to evaluated property?		✓		
D19	Does the evaluated property discharge waste water on or adjacent to the property?	✓			

Number	Comprehensive Environmental Response, Compensation and Liability Act	YES	NO	N/A	UKN
E1	Has the facility ever generated, transported, or disposed of a hazardous substance as defined by Section 9601(14) of CERCLA?	✓			
E2	Are any of the facility wastes disposed of in a manner which would create a release or a threat of release future enforcement or cost recovery actions?		✓		
E3	Has the operator/owner ever notified the National Response Center of a reportable quantity release of a hazardous substance into the environment?		✓		
E4	Is the owner/operator currently subject to any administrative orders under section 106 of CERCLA, and has it complied with all orders issued in the properly past?		✓		
E5	Has the owner/operator received any section 104(e) letters from EPA requesting information concerning material sent to sites listed on the National Priorities List?		✓		
E6	Has the company failed to develop a complete history of its past disposal practices, including production of all waste manifests, shipping records, disposal contracts, etc., to determine potential liability under CERCLA?		✓		
E7	Has the facility failed to comply with the Emergency Planning and Community Right to Know Act?		✓		
E8	Has the company received any notice from adjoining landowners, other potentially responsible parties, or waste disposal facilities that it is responsible under section 107 for cleanup costs or contribution?		✓		

Number	Resource Conservation and Recovery Act	YES	NO	N/A	UKN
F1	Does the facility generate, treat, store, transport, or dispose of hazardous waste?	✓			
F2	Does the facility accumulate hazardous waste for periods in excess of 90 days?		✓		
F3	Does the facility hold a RCRA permit or EPA Waste Generator Number?	✓			
F4	Is the facility out of compliance with applicable RCRA regulations?		✓		
F5	Has there been any hazardous substances or petroleum products, unidentified waste materials, tires, automotive or industrial batteries or any other waste materials been dumped above grade, buried and/or burned on the property?		✓		
F6	Has fill material been brought onto the property that originated from a contaminated site?		✓		
F7	Has there been any pesticides, paints or other chemicals in individual containers stored on or used at the property or facility?	✓			
F8	Has an imminent and substantial endangerment ever been alleged to be present at the site?		✓		
F9	Has an audit been conducted at this facility to determine RCRA compliance?		✓		
F10	Has an inventory been taken to determine the amount and location of underground storage tanks at the facility?		✓		
F11	Are there any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground?	✓			
F12	Do existing tanks meet all requirements, i.e., financial assurance, leak detection, spill protection, overflow?			✓	
F13	Are there any petroleum storage and/or delivery facilities (including gas stations) or chemical manufacturing plants located on adjacent properties?		✓		
F14	Are there any active underground or above ground tank facilities on-site for such activities as motor fuel, waste oil or fuel oil storage, hazardous waste or chemical storage in any size?	✓			
F15	Have any of the tanks that are more than 10 years old NOT been successfully tested for leaks?			✓	
F16	Are there any deactivated USTs on the property?		✓		
F17	Are there any hydraulic lift sumps for equipment?		✓		
F18	Are there any lead screening tests that indicate evidence of lead-based paint?		✓		
F19	Was the building constructed prior to 1979?		✓		
F20	Is the paint peeling or chipping?		✓		

Number	Toxic Substances Control Act	YES	NO	N/A	UKN
	Note: Common synonyms/names for PCBs include chlorodiphenyls, Aroclor, Askarel, Pyranol and Inerteen.		✓		
G1	Did the facility manufacture, process or distribute in commerce any chemical substances regulated by TSCA?		✓		
G2	Have adverse consequences been alleged to have been caused by exposure to chemical substances produced by the facility?		✓		
G3	Does the company have PCBs on site?		✓		
G4	Is there a need for a comprehensive PCB survey?		✓		
G5	Has the facility failed to comply with all asbestos reporting requirements?		✓		
G6	Are there any florescent light ballasts containing PCBs in the building?		✓		
G7	Is there any visible or documented evidence of soil or groundwater contamination from PCBs on the property?		✓		
G8	Is there evidence of soil discoloration around present or former equipment sites, utility poles, etc.?		✓		
G9	Are any of the lights damaged or leaking?		✓		
G10	Are any of the capacitors or transformers inside residential buildings?	✓			
G11	Are any of the transformers or capacitors not clearly marked, well maintained, or secure?		✓		
G12	Have PCB concentrations of 50 ppm or greater been found in contaminated soils or groundwater?		✓		
G13	Is there any evidence of hydraulic fluid leaks on lifts installed prior to 1980?		✓		
	Note: Additional PCB containing materials: carbonless copy paper, brake linings, printers ink, synthetic rubber, natural gas (as a contaminant), microscopy mounting media, fabric coatings, and cutting oils.				

Number	The Safe Drinking Water Act	YES	NO	N/A	UKN
H1	Has there been a discharge of any substance or material at the facility which might find its way into a public water system?		✓		
H2	Is the property served by a private/non-public water system that has been found to have contaminants in quantities that exceed drinking water guidelines or has it been designated as contaminated?	✓			
H3	Does the drinking water at the facility contain lead at levels above 10 ppb?		✓		

Number	Asbestos Removal and Inspection	YES	NO	N/A	UKN
I1	Was the building constructed prior to 1980?		✓		
I2	Has the building been inspected by a certified asbestos removal team since 1980 for the presence of ACM?			✓	
I3	Has all friable asbestos been removed or contained so that it does not create the potential for human exposure?			✓	
I4	Does the site survey reveal any visible evidence of possible ACM? (boiler insulation, floor tiles, building siding, shingles, roofing felt, wall and ceiling insulation, acoustical ceiling tiles, window putty, fuse boxes, heat reflectors, air duct lining)			✓	
I5	Is there any documented evidence of asbestos? (tests, surveys, management plan, etc.)			✓	

Number	Waste Disposal Facilities	YES	NO	N/A	UKN
J1	Has there been or is there any pits, ponds, or lagoons associated with waste treatment or disposal?		✓		
J2	Is there any evidence of acid pits located on or adjacent to the site?		✓		
J3	Is it likely the property was used for illegal or uncontrolled dumping?		✓		
J4	Are there any obvious high risk neighbors in adjacent properties engaged in producing storing or transporting hazardous wastes, chemicals, or substances?		✓		
J5	Was the site ever used for research, industry, or military purposes?	✓			
J5	Has any of the site space ever been leased to commercial tenants who are likely to have used, transported, or disposed of toxic chemicals? (e.g. dry cleaner, print shop, service stations, etc.).		✓		

Number	Additional Hazards	YES	NO	N/A	UKN
K1	Do the tenant areas contain Urea Formaldehyde Foam Insulation (UFFI) that was installed less than a year ago?		✓		
K2	Is there any identifiable UFFI behind exterior-wall switch and outlet cover plates?				
K3	Are there any elevated formaldehyde concentrations?		✓		
K4	Did interviews indicate the presence of UFFI?		✓		
K5	Are there any citizen complaints or local law enforcement responses to unexploded munitions (UXO)?		✓		
K6	Has the property ever been suspected to contain or been used for military chemical/biological testing?		✓		
K7	Has the Army Technical Escort Unit or Army Corps of Engineers responded to UXO or chemical test kits incidents?		✓		
K8	Do any of the building structures have cannec (made from sugar cane waste) building materials?		✓		
K9	Are there any small arms test ranges that have been used to perform function checks on serviced weapons?		✓		
K10	Are there any ranges, impact areas, berms, maneuver areas, training areas, OB/OD areas present on the facility?		✓		
K11	Is there evidence of any "red dust" (arsenic) from cannec materials?		✓		
K12	Is there documented evidence that Electromagnetic Radiation (EMF) is present on the property?	✓			

Number	Natural and Cultural Resources	YES	NO	N/A	UKN
L1	Does the site have any known or potential federal or state threatened & endangered species?		✓		
L2	Has an Endangered Species Survey been completed for the area?		✓		
L3	Have there been any Biological, Historical, Cultural, Soil, or Aquatic surveys of the site?	✓			
L4	Does the site have any erosion problems, I.e. bare areas, gullies, runoff during major storm events?		✓		
L5	Does the site have an Integrated Natural Resources Management Plan (IMRMP)?		✓		
L6	Have planning level natural resources surveys been conducted on the site (including soils, flora, fauna, wetlands)?		✓		
L7	Does the site currently have commercial natural resource activities (timber, agricultural, grazing outleases)?		✓		
L8	Do NEPA documents exist that address/suthorize natural resource management activities?	✓			
L9	Has a noxious weed survey been completed for the area?		✓		
L10	Are there any buildings or structures older than 50 years old on the property?		✓		
L11	Are there any archeological sites on the property?		✓		
L12	Is there a Cultural Resources Management Plan inplace for the site?		✓		
L13	Are there any known sites of importance to Native American tribes?		✓		
L14	Is there a memorandum of agreement or programmatic agreement addressing cultural resources in place?		✓		
L15	Have invasive, non-native plant species been identivfied on the property?		✓		
L16	Has there been a wetland survey for the site?		✓		
L17	Are there any planned projects to create wetlands on this site?		✓		
L18	Are there any planned uses for this site that may impact existing wetlands?		✓		
L19	Are there any completed or in progress Environmental Assessments and/or Environmental Impact Statements?	✓			
L20	Was the proposed real estate transaction found to have "FNSI" or a "ROD"?	✓			
L21	Has a Pest Management Plan been completed for the site?		✓		
L22	Does the site have any major pest problems (insects, invasive plants, animals, pathogens, rodents, et cetera)?	✓			

	General Environmental Search	YES	NO	N/A	UKN
	Do any of the following Federal government record systems list the property or any property within the circumference of the area noted below?				
GES1	National Priorities List - within 1.0 mile (1.6Km)?		✓		
GES2	CERCLIS List - within 0.5 mile (0.8 Km)?		✓		
GES3	RCRA TSD Facilities - within 1.0 mile (1.6 Km)?		✓		
Do any of the following state record systems list the property or any property within the circumference of of the area noted below:					
List maintained by state environmental agency of hazardous waste sites identified for investigation or remediation that is the equivalent to NPL - within 0.5 mile (1.6 Km)?			✓		
List maintained by state environmental agency of sites identified for investigation or remediation that is the state equivalent to CERCLIS - within 0.5 mile (0.8 Km)?			✓		
Leaking Underground Storage Tank (LUST) List - within 0.5 mile (0.8 Km)?			✓		
Solid Waste/Landfill Facilities - within 0.5 mile (0.8 Km)?			✓		
Based on fire insurance maps or consultation with the local fire department , are there any buildings or other improvements on the property or adjoining property identified as having been used for an industrial use or uses likely to lead to contamination of the property?			✓		

The preparer of the transaction screen questionnaire must complete and sign the following statement.

This questionnaire was completed by:

Name: Deane Smith

Title: Civ. ACC PMS/OL

Firm: U.S. Air Force, Air Combat Command

Address:

Phone number: (207) 990-7552

Date Interviewed: June 6, 2006

If the preparer is different than the user, complete the following:

Name of user:

User's address:

User's phone number:

Preparer's relationship to site:

Preparer's relationship to user:

Copies of the completed questionnaire have been filed at: Included in the 2006 EBS for the Moscow Transmitter Site

Copies of the completed questionnaire have been mailed or delivered to: HQ ACC, Langley AFB, VA

Preparer represents that to the best of the preparer's knowledge the above statements and facts are true and correct and to the best of the preparer's actual knowledge; no material facts have been suppressed or misstated.

Signature: Deane A. Smith

Date: June 6, 2006

Number	NOTES TO EBS QUESTIONNAIRE
A6	Use only cleaning products and some paint & paint related products
A13	TX staging area 1 – near helicopter pad, no hazardous material found, did best to clean up
A22	Has culverts, drainage pipes
B1	Emissions only from diesel gas & electric heat
B5	There are 20-25 pulp mills in surrounding towns, not real close though.
D5	There is a one separator at Sector 2&3 2 Total
D6	No spills. Found low percentage of arsenic in water in Sector 1 resulting from leaching from fence treated with arsenic. (The arsenic at Sector 1 has not been determined if it came from the treated fence)
D9	Calcium chloride used on roads
D16	3 water wells present, 2 small shelters
D19	Runoff onto Plum Creek Timber Company
F1	6 quarts oil for tractor; 250 gal AST for diesel fuel (not full); and only small amounts of paint related products
F3	Small quantity generator
F7	Paint stored (no more than 5 gallons); no pesticides stored
F11	Copper pipes (room 117)
F14	75,000 water tank is empty
F16	All USTs have been removed
F19	Started 1979-1980's
F20	No peeling or lead paint; faded on outside. Inside painted 1995-96
G10	Small transformers
G11	Fence not locked, not securing anyone or anything out from transformers
H2	Arsenic (approximately 53 ppm)
I1	Built in 1979-1980
I2-I5	Not Applicable
J5	Military purposes
K3	Fiberglass insulation
K12	There are radio-high frequency radiation hazard signs at facilities
L1	Only sightings of osprey and peregrine falcons; some transient bald eagles.
L3	An archaeological survey was conducted at the site, no archaeological sites were discovered. No traditional cultural resources are known to exist at the site. The Maine Historic Preservation Commission (letter dated July 22, 2005) concurred with the findings of the survey report.
L8	An EBS and EA completed October 2003 were prepared. There are no required natural resources management activities.
L11	See L3 above.
L16	No, some minor saturated lands where ditches have been constructed
L19	Oct. 2003 EBS/EA prepared by GMI
L20	FONSI
L22	Mice are present, use snap traps to catch them. Herbicide aerial treatment (Roundup) was used to kill vegetation growing over transmitter equipment towers.

Appendix G-3
Property Investigations

Underground Storage Tank Removal Information

J. B. PLUNKETT
associates, inc.

MAINE UST REMOVAL SITE ASSESSMENT
OVER THE HORIZON RADAR STATION
CHAMBERLINE HILL ROAD
MOSCOW, MAINE
JOB#: 94154-1

OWNER:	U.S. Air Combat Command A.N.G. Base Building 510 - Bangor, ME
OPERATOR:	Martin Marietta Services Group
FACILITY NAME:	Moscow Air Force Station (Over the Horizon Radar Station)
FACILITY ADDRESS:	Chamberline Hill Road - Moscow, ME
TANK REGISTRATION #s:	15214001 and 13083001
DATE OF SITE ASSESSMENT:	November 1, 1994
RELEASE:	No
MAXIMUM HEADSPACE PID :	1.0 ppm (Sector 3), 46.1 ppm (Sector 2)
FREE PRODUCT OBSERVED:	No
DECISION TREE CLASSIFICATION:	Stringent
REMEDIATION PERFORMED:	N/A
CLEANUP GOALS ACHIEVED:	N/A
TANK REMOVAL CONTRACTOR:	Savage Oil Co. and Earth Movers, Inc.
TANK INSTALLER:	Larry Savage

SUBMITTED TO:
Larry Savage
Savage Oil Company
275 Madison Avenue
Skowhegan, ME 04976

SUBMITTED BY:
J.B. Plunkett Associates, Inc.
119 Commercial Street
Bath, ME 04530

November 30, 1994

J. B. PLUNKETT
associates, inc.

November 30, 1994

Mr. Larry Savage
Savage Oil Company
275 Madison Avenue
Skowhegan, ME 04976

Subject: Maine UST Removal Site Assessment
Over the Horizon Radar Station - Chamberline Hill Road
Moscow, Maine
Job#: 94154-1

Dear Mr. Savage:

J.B. Plunkett Associates, Inc. (JBP) conducted an underground storage tank (UST) site assessment at the Over the Horizon Radar Station in Moscow, Maine on November 1, 1994. This report has been prepared to fulfill the requirements of a UST removal as required by the Maine Department of Environmental Protection (MDEP).

Objective

The objective of the site assessment is to determine if a discharge(s) of petroleum hydrocarbons (fuels, oils, gasoline) has occurred that requires notification of the MDEP Commissioner and/or corrective action by the owner, operator, or other responsible party as discussed in MDEP Regulations Chapter 691.

This report, which presents the findings of the site assessment, is designed to comply with Chapter 691. Specifically, this report includes discussions of the following: confirmed or threatened contamination to ground water in the surficial and/or bedrock aquifers; a limited description of hydrogeology; presence of petroleum hydrocarbon contamination in the on-site soils; and discussion regarding site history and UST use.

Site Description

The Moscow Air Force Station (Over the Horizon Radar Station) property is located on Chamberline Hill Road in Moscow, Maine (Figure 1). The Town of Moscow identifies the facility on Property Map R4, Lot 5 (1). The radar station has been used as a U.S. Government radar transmission station.

A 3,000-gallon diesel UST was located in the southeast portion of the property (Figure 2). An additional 3,000-gallon diesel UST was located in the central portion of the property (Figure 2).

innovative environmental engineering
119 Commercial Street, Bath, ME 04530-2505 207 443-8300
800 649-9833 FAX 207 443-8309

7 McKay Avenue, Winchester, MA 01890-1600 617 756-0123
800 886-1912 FAX 617 756-0122

The MDEP master list of registered USTs lists 3 USTs located at the facility (Table 1) (2).

TABLE 1
Over the Horizon Radar Station
Chamberline Hill Road
Moscow, Maine
Registered USTs

MDEP Registration#	Sector#	Date Installed	Product Stored	Tank Size (gallons)	Tank Status	Date Removed
12556001	1	1985	Diesel	3,000	Removed	2/11/94
15214001	2	1985	Diesel	3,000	Removed	11/1/94
13083001	3	1985	Diesel	3,000	Removed	10/31/94

JBP reviewed the MDEP Hydrocarbon Spill Decision Tree prior to the UST removal. The Decision Tree was established in an attempt to standardize the decision making process regarding cleanup standards for petroleum-contaminated sites. According to the Decision Tree, the cleanup goals at this site would be stringent due to; 1) the release is not into 10 feet of silt or clay, 2) the area 2,000 feet downgradient or upgradient is not supplied by public water, and 3) the site does not fit the definition of a non-attainment zone. The property does not overlay a mapped sand and gravel deposit (Open File #81-70).

Stringent cleanup goals require the removal of all free phase petroleum and the removal of remediation of soils containing greater than 10 parts per million (ppm) total fuel oil or kerosene, or 5 ppm total gasoline as determined by MDEP laboratory methods or equivalent MDEP approved field techniques. Remediate ground water containing greater than 50 µg/l total hydrocarbons, 50 µg/l MTBE, and 5 µg/l benzene by MDEP or EPA approved methods. A copy of the Decision Tree is included in Appendix I.

Methods and Procedures

A JBP representative was on site November 1, 1994 for the removal of 2 USTs at the Over the Horizon Radar Station, Sector 3 and Sector 2 in accordance with Chapter 691. The tank removal was performed by Earth Movers, Inc. of Canaan, Maine. Utility clearances and appropriate permits were coordinated by Savage Oil Company.

Visual and olfactory inspection and other facility components were made prior to, during and after the tank removal. A Photovac MicroTip photoionization detector (PID) was calibrated on site with 97.5 ppm isobutylene gas standard

prior to conducting the site assessment. The PID was used throughout the UST assessment to analyze and monitor for volatile organic compounds (VOCs) in the soil, water, and air.

The PID provides direct field readings of VOCs relative to a gas standard. As required by Chapter 691 (Appendix Q), all results in this report have been corrected to benzene. This correction was accomplished by dividing the field reading with the benzene relative response factor (1.78), providing a direct conversion to benzene.

Soil samples from areas of the tank removals were collected in one-quart polyethylene bags. The soil samples were allowed to equilibrate for 15 to 90 minutes. Following the equilibration phase, samples were analyzed for VOCs using the jar/poly-bag headspace techniques outlined in Chapter 691, Appendix Q.

Findings

A 20 foot by 22 foot excavation with a total depth of approximately 9 feet below ground surface was dug by Earth Movers, Inc. in the southeast portion of the property, the northwest portion of Sector 3 (Figure 2). A 20 by 25 foot excavation with a total depth of approximately 9 feet below the ground surface was dug by Earth Movers, Inc. in the central portion of the property, the west portion of Sector 2 (Figure 3). The USTs were removed from the excavations. The USTs were pumped of approximately 3,000 gallons each of diesel by Savage Oil Company prior to the UST removals.

The soil within both of the excavations consisted of a fine brown gravel fill. The ground water was observed in both excavations at approximately 4 feet below ground surface. The bedrock was not observed in either excavation.

Six soil samples, S1 to S6, were collected from the soils that were stockpiled during the excavation of the UST in Sector 3 on October 31, 1994. PID readings of headspace vapor revealed low concentrations in all of the soil samples collected from the excavation, the highest concentration was 1.0 ppm (Table 2). JBP did not observe any visual or olfactory contamination. The MDEP action level for diesel is 100 ppm.

The backhoe punctured the UST located at Sector 3 during the excavation of the soils around the UST. This incident occurred before JBP arrived on site. Savage Oil Company telephoned JBP to advise JBP of the situation on October 31, 1994. Savage Oil Company and JBP agreed to remove the UST in an attempt to prevent contamination. Due to the weak spot in the UST, the UST shattered during removal. Mr. Larry Savage reported no release associated with the shattered UST. JBP found no evidence of a release at Sector 3 when on site November 1, 1994 using VOC levels, and visual and olfactory observations.

Three soil samples, S1 to S3 were collected from beside and below the UST during and after the excavation of the UST at Sector 2. PID readings of headspace vapor revealed levels below the MDEP action level. The highest concentration was 46.1 ppm and was collected from below the UST.

Visual inspection of the UST (located at Sector 2) was made after removal from the excavation. No holes were observed in the UST by JBP.

The excavations were backfilled after the USTs were removed. Additional soil was brought on site to compensate for the space of the removed USTs.

Summary & Conclusions

One 3,000-gallon diesel UST was removed from the subsurface on October 31, 1994, from the Over the Horizon Radar Station, Sector 3 in Moscow, Maine. An additional 3,000-gallon diesel UST was removed from the subsurface on November 1, 1994 from Sector 2. The USTs were pumped of approximately 3,000 gallons each of diesel by Savage Oil Company. The site was determined to be a Stringent cleanup status by the JBP representative based on the facts that 1) there is not at least 10 feet of silt or clay, 2) the area is not supplied by public water, and 3) the area does not fit the definition of a non-attainment zone.

Based on visual and olfactory observations as well as VOC levels, JBP concluded that a release did not occur at either Sector 3 or Sector 2.

Recommendations

Based on the cumulative findings of this assessment, JBP does not recommend further investigation work associated with the removed 3,000-gallon USTs.

Limitations

This assessment does not address the site as a whole and cannot, on its own, represent a characterization of the environmental liabilities associated with the subject property. The conclusions provided by JBP are based solely on the scope of work conducted, the sources of information referenced in this report, and the site conditions observed at the time of JBP field work, and may not represent past or future conditions.

1. This report has been prepared for the exclusive use of Larry Savage in connection with Over the Horizon Radar Station located on Chamberline Hill Road in Moscow, Maine.

2. The accuracy and completeness of the information available at the sources reviewed and referenced as part of this scope of work (i.e., State and Municipal Officials, State and Municipal Agency Files, interviews with persons knowledgeable about the subject site, etc.) are not verified by JBP.

3. The subsurface environmental conditions at the site may vary significantly outside the immediate vicinity of any borings, test pits, or other characterization activities conducted by JBP. Therefore, the conclusions and recommendations would require modification should additional information be made available or additional subsurface investigation be undertaken at the site.

4. The scope of services performed were in accordance with our proposed work scope and the associated budgetary conditions. Additional services could be performed outside the scope of work and at additional expense that would further define the environmental quality of the site.

5. The work conducted by JBP is subject to our Schedule of Conditions and has been performed according to generally accepted industry practices in use at the time the investigation was conducted. No other warranty is expressed or implied. The contents of this report may not be copied, provided, or otherwise communicated to parties not involved with the subject property without prior written consent from JBP.

6. Interpretations of these data (whether chemical, geological, biological or engineering related) represent one possible interpretation - other interpretations are possible.

References

(1) J. B. Plunkett Associates, Inc. review of records on file at the Moscow Town Office.

(2) J. B. Plunkett Associates, Inc. review of Maine Department of Environmental Protection Master Listing of all Underground Storage Tanks, January 24, 1994.

(3) J. B. Plunkett Associates, Inc. Telephone communication with Larry Savage on October 31, 1994.

(4) J. B. Plunkett Associates, Inc. Personal communication with Larry Savage on November 1, 1994.

J. B. PLUNKETT
associates, inc.

If J.B. Plunkett Associates, Inc. can be of further assistance, please don't hesitate to call.

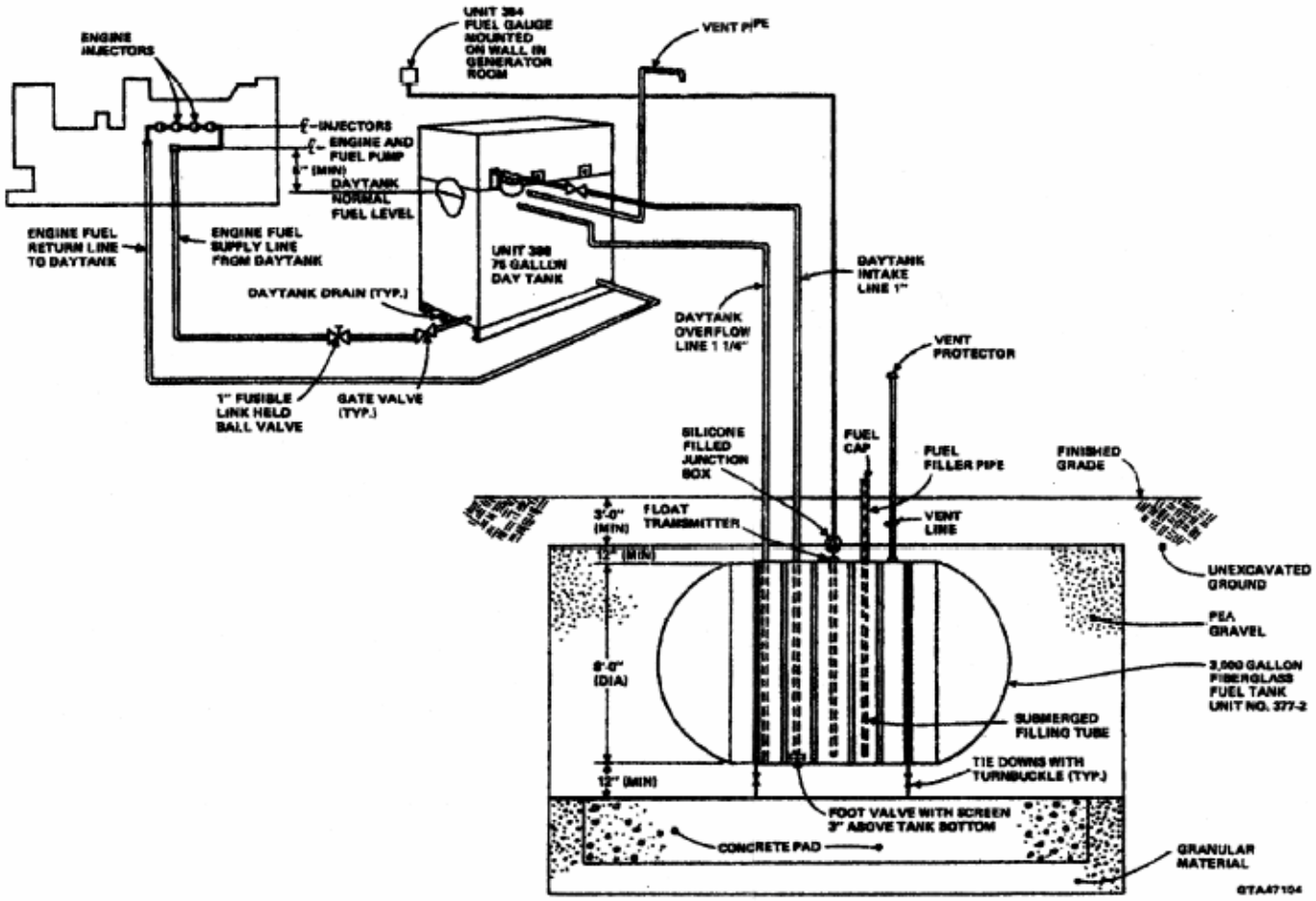
Yours truly,
J.B. Plunkett Associates, Inc.

Jennifer Bauman for
Krista L. Dobbins
Environmental Geologist

Lawrence J. Fitzgerald, C.G.
Senior Hydrogeologist

LICENSE
#218
GEOLOGIST
LAWRENCE J. FITZGERALD

KLD/LJF/pcb
Enc.



FO-25. Fuel Oil Supply System - Schematic

Date of Certificate:

August 24, 2006

STATE OF MAINE

DEPARTMENT OF ENVIRONMENTAL PROTECTION

FACILITY REGISTRATION CERTIFICATE FOR

Underground Storage Tank

Please display this certificate in a visible location at the registered facility.

Facility:

SECTOR 1 TRANSMIT SITE
CHAMBERLAIN HILL RD
MOSCOW

Facility Registration Number: 12556

Date of Registration: December 06, 1990

Facility Phone: 207-672-4109

Operator:

SPALDING, KEN
PO BOX 626
BINGHAM
ME 04920

207-990-7568

Sensitive Area Status:

Near Private Water

Facility Use:

Federal Facility

Owner:

USAF AIR COMBAT COMMAND ACC
ANG BASE BLDG 510
BANGOR
ME 04401

207-990-7606

USTs ONLY

Number of Active Tanks:

If the information on this form is accurate and complete, please retain for your records.

The Maine Department of Environmental Protection must be notified of any errors or changes in the information on this form. To accomplish this, please draw a line through the incorrect or outdated information, insert the correct information, and return this form to:

Department of Environmental ProtectionBureau of Remediation and Waste Management
State House Station # 17 Augusta, ME 04333

Attn: Underground Tanks Program

If you have any questions concerning this process, please call (207)287-2651 and ask for the administrator of the Underground Storage Tanks program.

INDIVIDUAL TANK DATA FOR SITE NUMBER: 12556

Tank	Tank Type	Tank Size	Tank Monitoring	Date Tank Installed	Tank Status	Tank Status Date
1	F/glass single-walled	**2000**	Unknown	01/01/1985	Removed	02/01/1994

Chamber	Chamber Size	Product Stored	Pipe Monitoring	Piping Type	Overfill Protection
1	2000	Diesel	Unknown	Copper	Unknown

J. B. PLUNKETT associates, inc.

MAINE UST REMOVAL SITE ASSESSMENT
US GOVERNMENT RADAR TRANSMISSION SITE
CHAMBERLINE HILL ROAD
MOSCOW, ME
JOB#: 94021-1

OWNER:	U.S. Air Combat Command A.N.G. Base Building 510 - Bangor, ME
OPERATOR:	Martin Marietta Services Group
FACILITY NAME:	Moscow Air Force Station
FACILITY ADDRESS:	Chamberline Hill Road - Moscow, ME
TANK REGISTRATION#:	12556001
DATE OF SITE ASSESSMENT:	2/11/94
DISCHARGE:	NO
MDEP DECISION TREE CLASSIFICATION:	Stringent Cleanup
TANK REMOVAL CONTRACTOR:	Savage Oil Company

SUBMITTED TO:
Mr. Larry Savage
Savage Oil Company
275 Madison Avenue
Skowhegan, ME 04976
207-474-3412

SUBMITTED BY:
J.B. Plunkett Associates, Inc.
7 Lincoln Street
Brunswick, ME 04011
March 21, 1994

J. B. PLUNKETT
associates, inc.

March 21, 1994

Mr. Larry Savage
Savage Oil Company
275 Madison Avenue
Skowhegan, ME 04976
207-474-3412

SUBJECT: Maine UST Site Assessment
US Government Radar Transmission Site - Chamberline Hill Road - Moscow, ME
JOB#: 94021-1

Dear Mr. Savage:

During the course of a tank removal conducted by Savage Oil Company of Skowhegan, Maine on February 11, 1994, J.B. Plunkett Associates, Inc. (JBP) conducted a limited site assessment as required by Maine Department of Environmental Protection (MDEP) Underground Storage Tank Regulations. The following report has been prepared to fulfill the requirements of a tank removal site assessment as required by the MDEP.

Objective

The objective of an underground storage tank (UST) site assessment at the time of facility closure or abandonment is to determine if discharge(s) of petroleum hydrocarbons (fuels, oils, gasoline) have occurred which require notification of the MDEP Commissioner and/or corrective action by the owner, operator or other responsible party as discussed in Chapter 691. This Chapter (authorized under 38 M.R.S.A., Section 561 et. seq.) titled Regulations for Registration, Installation, Operation and Closure of Underground Oil Storage Facilities became effective on September 16, 1991.

This report, which presents the findings of our site assessment, is designed to comply with Chapter 691. Specifically, this report includes discussions of the following: confirmed or threatened contamination to ground water in the surficial and/or bedrock aquifers; a limited description of hydrogeology; the presence of petroleum hydrocarbon contamination of the on-site soils; and, a discussion about site history and UST use.

Site Description

A 2,000-gallon diesel underground storage tank (UST) was removed from the subsurfac at the US Government Radar Transmission Station on Chamberline Hill Road in Moscow Maine (Figure 1). The radar station is an approximate 2 plus square mile facility

innovative environmental engineering
7 Lincoln Street, Brunswick, ME 04011 207 725-9833
800 649-9833 (ME) FAX 207 725-1405

38 Church Street, Suite 7, Winchester, MA 01890 617 756-0123 FAX 617 756-0122

including three separate radar dish sites (Site 1 through Site 3). The location of the removed tank was from the most northerly facility which straddles the Moscow-Caratunk town lines (Site 1). The Town of Moscow identifies the radar facility within the property lots; Map R-4-Lot 5 and Map R-1-Lot 105. The Town of Caratunk identifies the radar facility on Town Map M-2-Lot 3. The location of the UST removal is reportedly located within the Caratunk town limits (1).

A more detailed Figure 2 map shows the location of the removed UST and surrounding site features. A private drinking well which reported supplies water for all functions associated with the Sector 1 radar station was identified approximately 90 feet east of the location of the tank removal (Figure 2). Due to the results of the UST assessment additional information regarding this well was not collected by JBP.

According to Mr. William Rayfield, facility superintendent and employee at the radar facility since 1986, the 2,000-gallon diesel UST (the subject of this report) was installed at the site in 1985 (1). The diesel UST was installed and has functioned as a fuel supply for a backup emergency generator (1). According to Mr. Rayfield, the tank was filled with fuel after installation in 1985 and has not needed to be refilled since (1). The emergency generator has been periodically tested (once a month) since 1985. According to Mr. Rayfield the UST was stick tested every six months since installation to keep track of product inventory (1). During the routine check in January of 1994 8.5 inches of water was identified in the tank. Two days later the tank was tested a second time and 18 inches of water was recorded (1). At this time the Maine Department of Environmental Protection (MDEP) was notified of the situation and Martin Marietta (operator) applied for a waiver from the "30-day Notice of Intent to Abandon a UST". Because water was entering the UST and there was a potential for a release of fuel to occur if the situation was not addressed immediately, the tank's contents were pumped to an above ground storage tank for temporary storage. The MDEP granted a waiver of the 30-day notice and Savage Oil Company of Skowhegan, Maine was contracted to remove the UST. J.B. Plunkett Associates, Inc. was contracted through Savage Oil Company to perform the necessary UST removal site assessment.

A JBP representative reviewed the MDEP registration information for the site to determine if information gathered during the field work corresponded with MDEP registration records. Table 1 below lists the registration information available through the MDEP as of January 20, 1994.

Savage Oil Company Registered USTs - MDEP Registration #12556001					
Tank#	Tank Construction	Product Stored	Tank Size (gallons)	Date Installed	Tank Status
1	single wall fiberglass with copper tubing	diesel fuel	3,000	1/1985	removed 2/11/94

Excluding the tank volume which was permitted as a 3,000-gallon tank but identified a 2,000-gallon UST in the field by Savage Oil Company, all other registration information appears to concur with field findings. The MDEP listing identifies the within a sensitive geological setting. This appears to relate to close proximity of the drinking well on-site (within 300 feet) and not due to superposition over a mapped and gravel aquifer (Figure 1).

J.B. Plunkett Associates, Inc. reviewed the MDEP Hydrocarbon Spill Decision Tree be going out into the field. This decision tree was established in an attempt to standard the decision making process regarding clean-up standards for petroleum contamina sites. Based on the MDEP decision tree, JBP concluded that the site would most likely targeted for stringent clean-up goals; the property does not overlay a sand and grav deposit (Open File #81-70).

Methods and Procedures

A J.B. Plunkett Associates, Inc. representative was on-site February 11, 1994 for the removal of one underground storage tank from the U.S. Radar Transmission Site 1 in accordance with Chapter 691. The tank removals were performed by Savage Oil Company of Skowhegan, Maine. Utility clearances and appropriate permits were coordinated by Savage Oil Company.

A JBP representative was on-site for the entire tank removal operation. Visual and olfactory inspection of the tanks, associated piping and other facility components we made prior to, during and after the tank removal. A Photovac MicroTip II photoionization detector (PID) was calibrated on-site with 100 parts per million isobutylene gas standard prior to conducting the assessment. The PID was used throughout the UST assessment to analyze and monitor for elevated concentrations of volatile organic contaminants (VOCs) in the soil, water and air.

The PID provides direct field readings of VOCs relative to a gas standard. As required b Chapter 691 (Appendix Q), all results in this report have been corrected to benzene. This correction was accomplished by dividing the field reading with the benzene relative response factor (1.78), providing a direct conversion to benzene.

Soil samples from all areas of the tank removal were collected in one-quart polyethylene bags. The soil samples were allowed to equilibrate for 15-90 minutes. Following the equilibration phase, samples were analyzed for volatile organic compounds using the jar/poly-bag headspace techniques outlined in Chapter 691, Appendix Q.

Findings

A 15 foot by 18 foot excavation with a total depth of 11 feet was performed at the northwest corner of the Sector 1 US Radar facility in order to remove one 2,000-gallon diesel UST. Savage Oil Company of Skowhegan was the tank

removal contractor and Larry Savage of Savage Oil Company was the certified tank installer on-site to supervise the removal work. Clean Harbors of South Portland, Maine was on-site to pump the remaining approximate 400 gallons of petroleum/water mix and clean the UST following the removal from the subsurface.

JBP arrived on-site to observe the removal of the UST. Six soil samples were collected by JBP during the removal process; from the top, sides and bottom of the tank. Due to an identified crack or loose fitting connecting the fill pipe to the UST (reason for water entering the tank) JBP was particularly interested in confirming or denying contamination at the top and sides of the UST surrounding the fill pipe connection. Table 2 below shows results of soil samples collected during the removal work.

Table 2

Soil Sample ID#	Description	Field Results (ppm)	Results Relative to Benzene
S-1	collected from stockpiled soil - moist at water table north of fill pipe (6' deep/60°F when tested)*	7.8/5.0/7.0	3.7
S-2	direct from backhoe north side of UST above water table (5' deep/60°F when tested)*	6.2/6.9/6.5	3.6
S-3	southeast side of UST 8' deep at/near water table (60°F when tested)*	10.7/9.1/10.1	5.6
S-4	east side of UST below feed lines (1/2" copper lines) connecting to UST (8' deep/60°F when tested)*	8.9/8.5/8.9	5.2
S-5	center of UST location - following removal (~10' deep/60°F when tested)*	9.7/9.7/8.7	5.3
S-6	west end of former UST location at water table (60°F when tested)*	10.5/9.1/9.5	5.4

*All soil samples collected consisted of mostly 1/4" gray peastone with varying amounts of brown fine sand and silt.

Based on the soil sample results from S-1 through S-6 a petroleum release was not detected using Chapter 691, Appendix Q protocol.

The geology within the excavation, observed from the excavation walls, consisted (marine gray clay from 0 to 3 feet below grade. Quarter-inch size peastone was ob below three feet surrounding the UST and below the tank. The maximum depth excavated was approximately eleven feet. Increasing amounts of brown fine sand silt was mixed with the peastone at and below the water table. The peastone most represents a fill material installed as tank bedding during the initial installation o tank. The water table was initially identified at approximately 7-8 feet but followi the UST removal the water table was measured to be 9' below the surface.

According to Mr. Savage of Savage Oil, the feed lines to the UST (~1/2 inch copper were bled to the UST and abandoned in-place. Mr. Darryl E. Luce of the Bangor br of the MDEP Response Services reportedly gave approval for the abandonment of feed lines in-place (Figure 2). It should be noted that due to the time of year, approximately three to four feet of frost was evident in the excavation which woul turn create a difficult situation to trench and remove the feed lines to the building

Summary & Conclusions

Visual, olfactory, field screening and poly-bag headspace results did not identify a significant release of petroleum from the 2,000-gallon diesel underground storage tank at the Sector 1 site of the U.S. Radar facility in Moscow, Maine. The site was identified as a sensitive geological area due to the location of a drinking well within 300 feet of the former tank location. Poly-bag headspace results from soil collected within the tank excavation was below the MDEP notification level for diesel fuel (50 parts per million) and results relative to benzene were below stringent cleanup goals for soil contaminated with diesel fuel.

The removed UST was pumped and cleaned on-site by Clean Harbors of Maine. Feed lines connecting from the UST to the radar facility were reportedly bled to the tank and abandoned in-place. Mr. Darryl E. Luce of the Bangor branch of the MDEP authorized the abandonment of feed lines.

Recommendations

Based on the cumulative findings of this report, JBP does not recommend further work associated with the UST and facility components removed or abandoned on February 11, 1994.

Limitations

This assessment does not address the site as a whole and cannot, on its own, represent a characterization of the environmental liabilities associated with the subject property. The conclusions provided by JBP are based solely on the

scope of work conducted, the sources of information referenced in this report, and the site conditions observed at the time of JBP field work, and may not represent past or future conditions.

1. This report has been prepared for the exclusive use of Savage Oil Company in connection with the U.S. Government Radar Transmission Site located on Chamberline Hill Road in Moscow, Maine.

2. The accuracy and completeness of the information available at the sources reviewed and referenced as part of this scope of work (i.e. State and Municipal Officials, State and Municipal Agency Files, interviews with persons knowledgeable about the subject site, etc.) is not verified by JBP.

3. The subsurface environmental conditions at the site may vary significantly outside the immediate vicinity of any borings, test pits or other characterization activities conducted by JBP. Therefore, the conclusions and recommendations would require modification should additional information be made available or additional subsurface investigation be undertaken at the site.

4. The scope of services performed were in accordance with our proposed work scope and the associated budgetary conditions. Additional services could be performed outside the scope of work and at additional expense that would further define the environmental quality of the site.

5. The work conducted by JBP is subject to our Schedule of Conditions and has been performed according to generally accepted industry practices in use at the time the investigation was conducted. No other warranty is expressed or implied. The contents of this report may not be copied, provided, or otherwise communicated to parties not involved with the subject property without prior written consent from JBP.

6. Interpretations of these data (whether chemical, geological, biological or engineering related) represent one possible interpretation - other interpretations are possible.

Important Notice

The Ground Water Oil Cleanup Fund was established by the MDEP to provide financial coverage for environmental cleanup and restoration related to the discharge from an underground storage tank (UST).

To be considered eligible for coverage (up to $1,000,000), written application to the MDEP must be made within 90 days of discovery of the discharge or release. For a discussion of other requirements, contact the MDEP representative assigned to the subject facility.

References

1. J.B. Plunkett Associates, Inc. personal and telephone conversations with Mr. William Rayfield, facility manager of Section 1 Site 1 Moscow Radar Station. February 11 and March 7, 1994.

JBP is available to assist in the preparation of the fund application documents. If J.B Plunkett Associates, Inc. can be of further assistance, please don't hesitate to call.

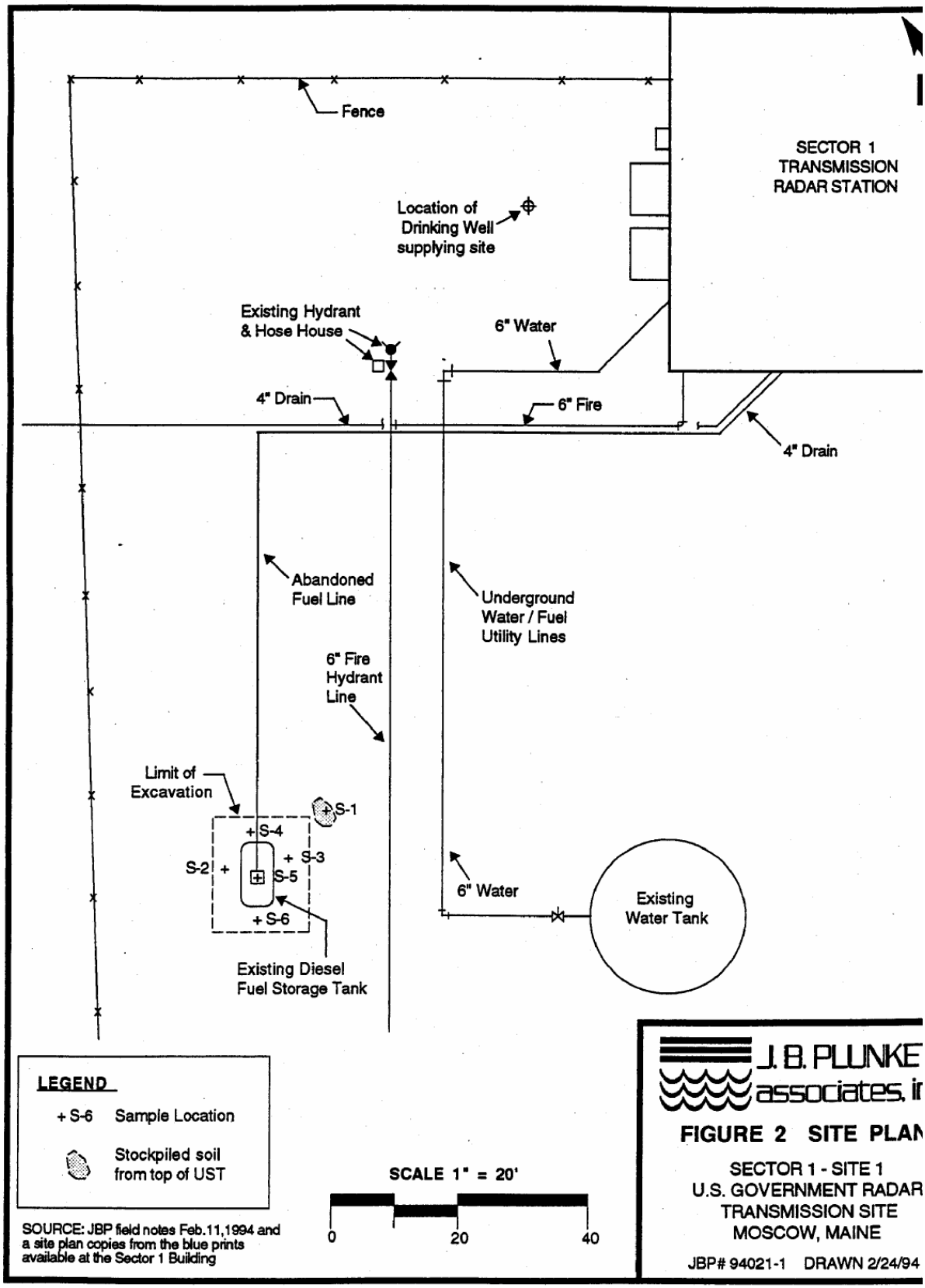
Yours truly,
J.B. Plunkett Associates, Inc.

George Giese
Environmental Geologist

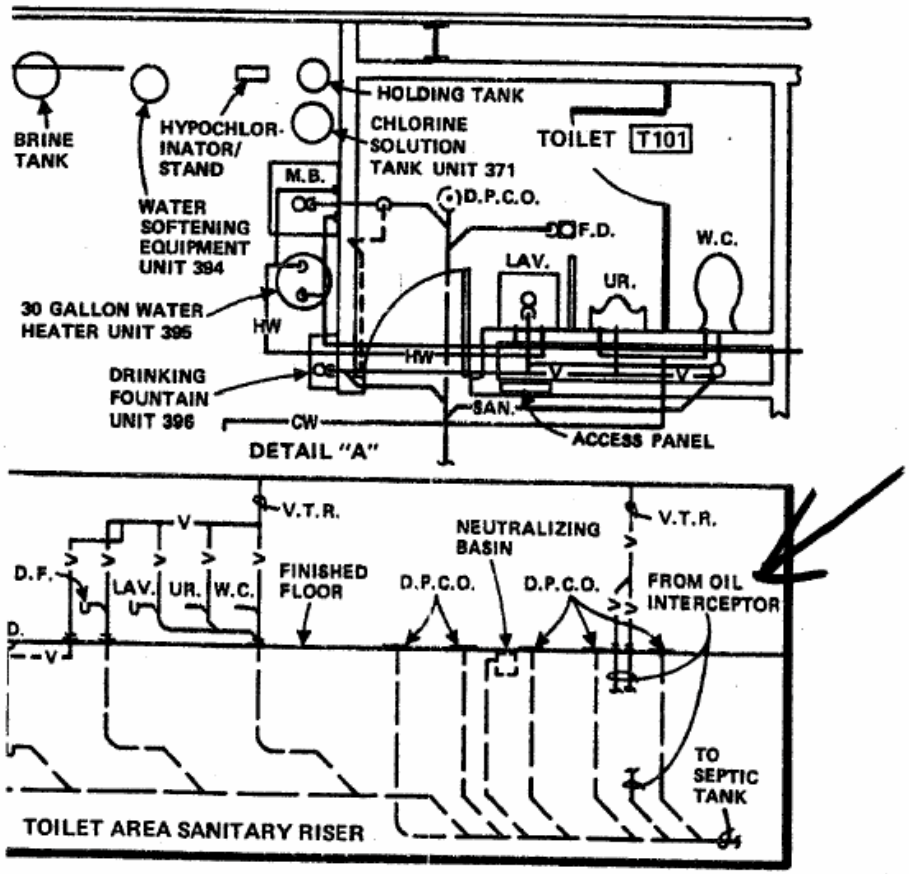
Lawrence Fitzgerald, C.G.
Senior Hydrogeologist

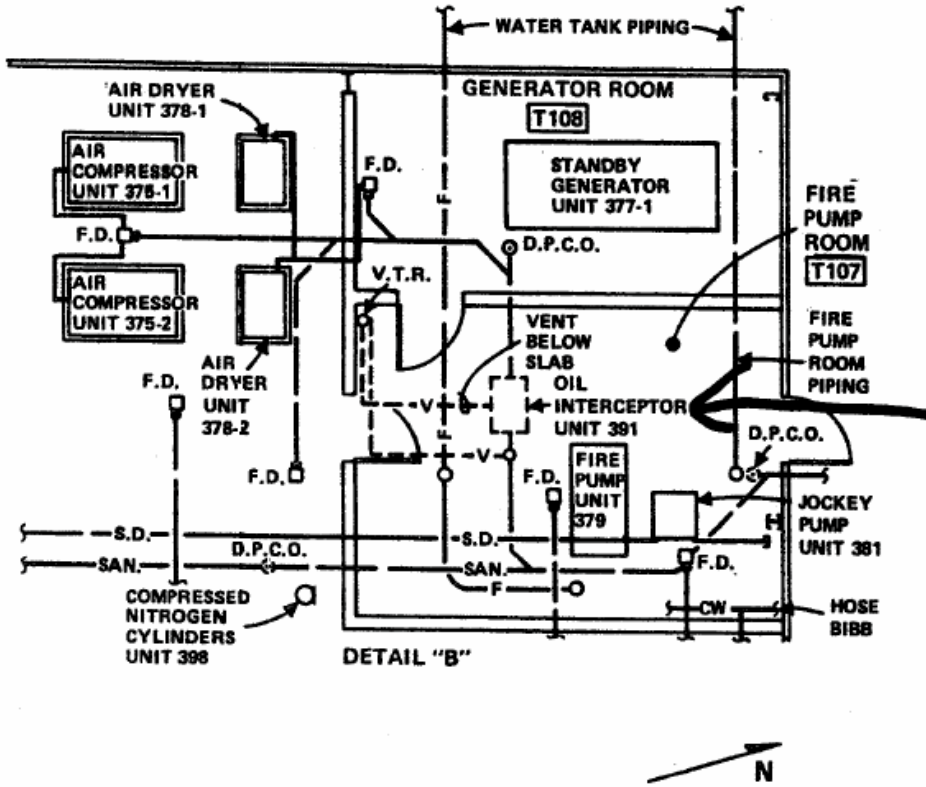
GG/LF/pcb
Enc.

STATE OF MAINE
CERTIFIED
LICENSE
#01
LAWRENCE


Fence
SECTOR 1
TRANSMISSION
RADAR STATION
Location of
Drinking Well
supplying site
Existing Hydrant
& Hose House
6" Water
4" Drain
6" Fire
4" Drain
Abandoned
Fuel Line
Underground
Water / Fuel
Utility Lines
6" Fire
Hydrant
Line
Limit of
Excavation
S-1
S-4
S-2
S-3
S-5
S-6
Existing Diesel
Fuel Storage Tank
6" Water
Existing
Water Tank
LEGEND
+ S-6 Sample Location
Stockpiled soil
from top of UST
SCALE 1" = 20'
0
20
40
SOURCE: JBP field notes Feb.11,1994 and
a site plan copies from the blue prints
available at the Sector 1 Building
J. B. PLUNKE
associates, i
FIGURE 2 SITE PLA
SECTOR 1 - SITE 1
U.S. GOVERNMENT RADAR
TRANSMISSION SITE
MOSCOW, MAINE
JBP# 94021-1 DRAWN 2/24/94

Oil/Water Separator Drawing


BRINE TANK
HYPOCHLORINATOR/ STAND
WATER SOFTENING EQUIPMENT UNIT 394
30 GALLON WATER HEATER UNIT 395
DRINKING FOUNTAIN UNIT 396
HOLDING TANK
CHLORINE SOLUTION TANK UNIT 371
TOILET T101
M.B.
D.P.C.O.
F.D.
LAV.
UR.
W.C.
HW
CW
SAN.
ACCESS PANEL
DETAIL "A"
V.T.R.
NEUTRALIZING BASIN
D.F.
LAV.
UR.
W.C.
FINISHED FLOOR
D.P.C.O.
FROM OIL INTERCEPTOR
TO SEPTIC TANK
TOILET AREA SANITARY RISER


WATER TANK PIPING
AIR DRYER UNIT 378-1
AIR COMPRESSOR UNIT 375-1
AIR COMPRESSOR UNIT 375-2
AIR DRYER UNIT 378-2
GENERATOR ROOM T108
STANDBY GENERATOR UNIT 377-1
F.D.
D.P.C.O.
V.T.R.
VENT BELOW SLAB
OIL INTERCEPTOR UNIT 391
FIRE PUMP ROOM T107
FIRE PUMP ROOM PIPING
FIRE PUMP UNIT 379
JOCKEY PUMP UNIT 381
S.D.
SAN.
CW
HOSE BIBB
COMPRESSED NITROGEN CYLINDERS UNIT 398
DETAIL "B"
N

Water Well Test Results