

INSTALLATION RESTORATION PROGRAM

FINAL INSTALLATION RESTORATION PROGRAM DECISION DOCUMENT - SITE 15

ALPENA COMBAT READINESS TRAINING CENTER
MICHIGAN AIR NATIONAL GUARD
ALPENA COUNTY REGIONAL AIRPORT
ALPENA, MICHIGAN

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HAZARDOUS WASTE REMEDIAL ACTIONS PROGRAM
Environmental Restoration and Waste Management Programs
Oak Ridge, Tennessee 37831-7606
managed by LOCKHEED MARTIN ENERGY SYSTEMS, INC.
for the U.S. DEPARTMENT OF ENERGY under contract DE-AC05-84OR21400

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FINAL

INSTALLATION RESTORATION PROGRAM
DECISION DOCUMENT - SITE 15

ALPENA COMBAT READINESS TRAINING CENTER
MICHIGAN AIR NATIONAL GUARD
ALPENA COUNTY REGIONAL AIRPORT
ALPENA, MICHIGAN

Submitted to:

AIR NATIONAL GUARD READINESS CENTER
ANDREWS AFB, MARYLAND

Submitted by:

HAZARDOUS WASTE REMEDIAL ACTIONS PROGRAM
LOCKHEED MARTIN ENERGY SYSTEMS, INC.
Oak Ridge, Tennessee 37831

for the:

U.S. DEPARTMENT OF ENERGY

Prepared by:

EARTH TECH, Inc.
Oak Ridge, Tennessee 37830

May 1996

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Technical Document to Support No Further Action

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LIST OF ACRONYMS

bgs	below ground surface
cm/sec	centimeters per second
CRTC	Combat Readiness Training Center
CERCLA	Comprehensive Environmental Response Compensation, and Liability Act
DD	Decision Document
ft ² /day	square feet per day
HMTC	Hazardous Materials Technical Center
IRP	Installation Restoration Program
m ² /day	square meters per day
MDNR	Michigan Department of Natural Resources
NOAA	National Oceanic and Atmospheric Administration
PA	Preliminary Assessment

1.0 INTRODUCTION

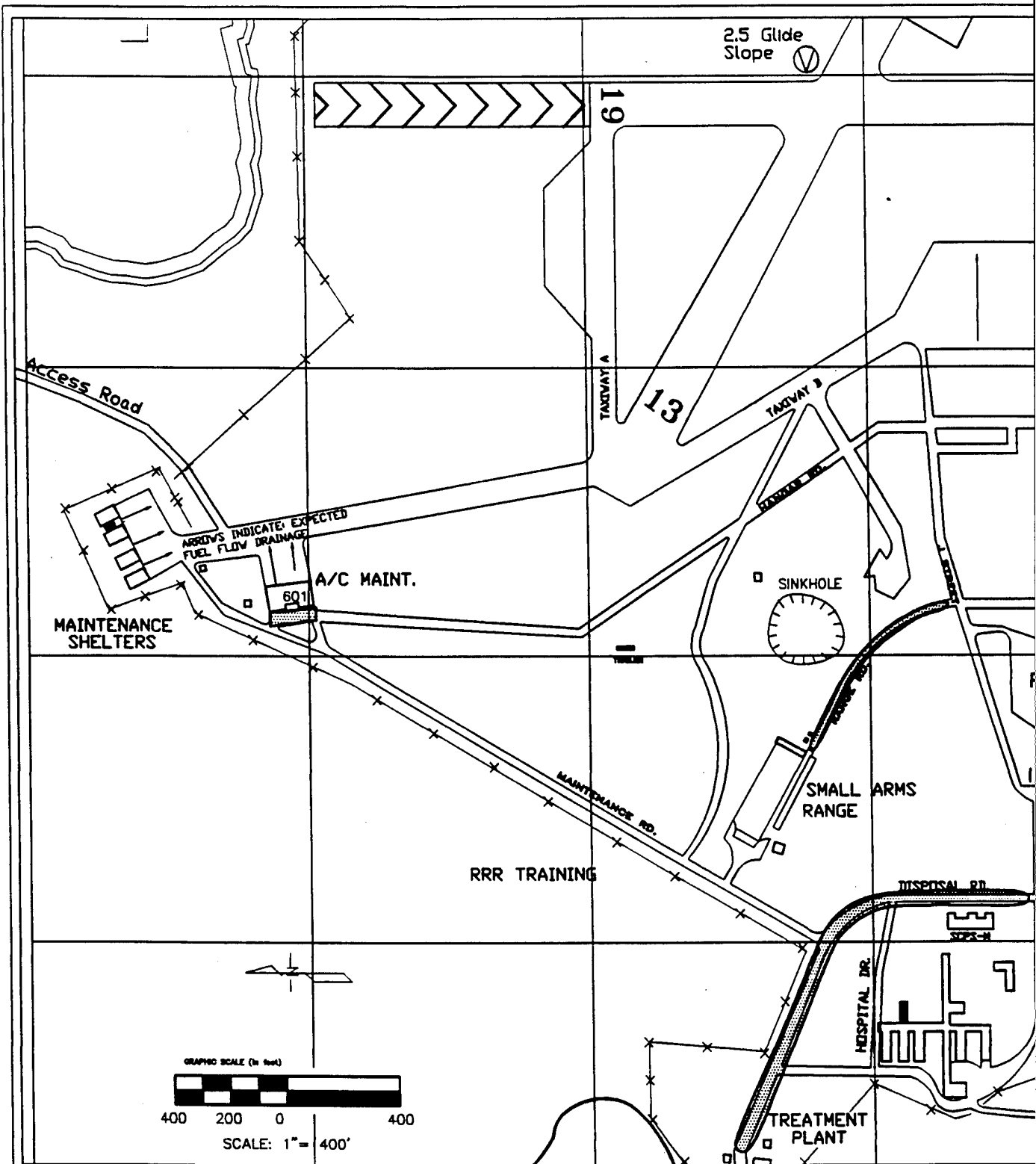
This Decision Document (DD) supports the no further action alternative for Site 15 - Oiled Roads at the Alpena Combat Readiness Training Center (CRTC) in Alpena, Michigan. The purpose of the DD is to summarize the existing data for the site and to describe the Air National Guard's rationale for selecting the no further action alternative. The objectives of the DD for Site 15 are:

- To briefly describe the location, history, and environmental setting of the Alpena CRTC, Site 15;
- To describe the current status of the site based on the Hazardous Materials Technical Center's (HMTTC) 1985 site visit and EARTH TECH personnel observations of the roads during Site Investigation/Remedial Investigation field activities conducted in 1993; and
- To assess the risk to human health and the environment.

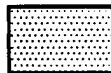
Data resulting from the Phase I Record Search and site visit, which culminated in the Preliminary Assessment (PA) Report by the HMTTC (1985), and observations of road conditions and roadside vegetation during SI/RI field activities by The Earth Technology Corporation (EARTH TECH) personnel were used to derive and support the no action alternative for Site 15.

1.1 SITE LOCATION AND DESCRIPTION

Site 15 is comprised of previously or currently unpaved (i.e, dirt) roads on base property that may have been sprayed with oil to control dust (See Figure 1-1). A majority of the main roads have been paved for over 30 years. According to base personnel, primary roads previously sprayed with oil as a dust control measure include River Club Road, Disposal Road, and Range



PREVIOUSLY OILED AREAS



BUILDING WITH NUMBER



2.5 Glide Slope

Runway 9000' x 150'

Apron 350' X 2800'

ARROWS INDICATE EXPECTED FUEL FLOW DRAINAGE

19

13

TAXIWAY A

TAXIWAY B

TAXIWAY C

FIRE STATION

HERCULES AVE / THIRD AVE

CONTROL TOWER

ORI/ORE STORAGE

402

301

302

SINKHOLE

BASE CLING

FRANCE RD.

SMALL ARMS RANGE

POL

FALCON AVE / FIRST AVE

WATER PLANT

PIECE SHELTER

PW1

40

52

CE STORAGE

PW2

SOFTBALL DIAMONDS

BASKETBALL COURTS

PW3

DISPOSAL PIT

HOSPITAL DR.

HOSPITAL DR.

RIVER CLUB RD.

TREATMENT PLANT

River Club

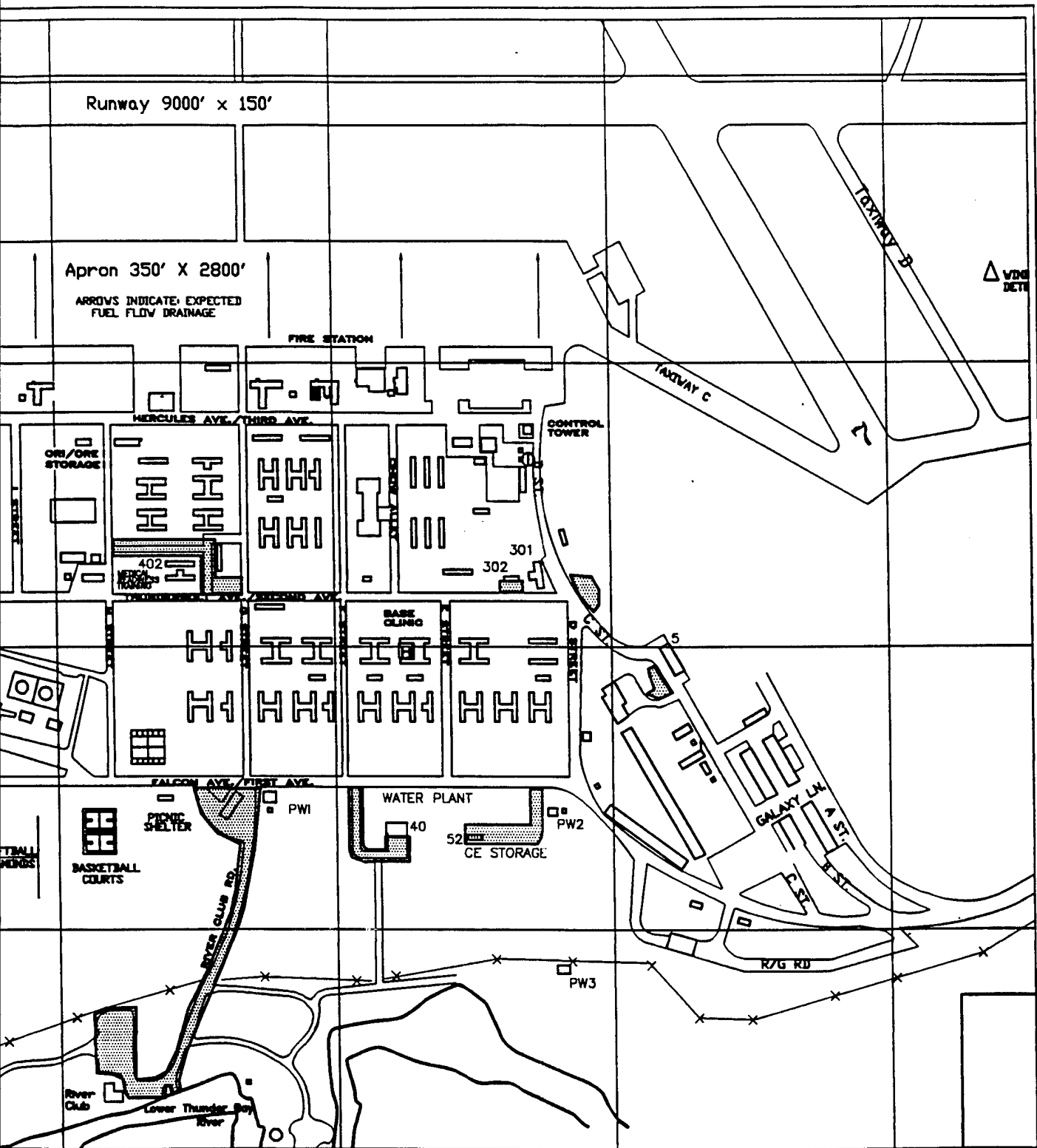
Lower Thunder Bay River

EARTH 

IRP

8/95

2



EARTH  TECH

INSTALLATION RESTORATION PROGRAM
ALPENA CRTC
ALPENA, MICHIGAN

IRP SITE 15 - OILED ROADS
LOCATION MAP

8/95

FIGURE 1-1

3

Road. Additionally, parking lots and access roads adjacent to the following buildings were once oiled: 40, 601, 5, 402, 301, 302, and 52. According to base personnel the use of oil as a dust control measure ceased in 1983.

Adjacent Land Uses

The Alpena CRTC is surrounded by land used primarily for farming, forestry, and tourism. The Phelps Collins Airport is immediately adjacent to the base, as they share use of approximately 1,755 acres. The land adjacent to these dirt roads is primarily undeveloped grass-covered and forested areas. Portions of the roads are close to the shore of Lake Winyah. The lake is used for recreational activities.

Nearby Population

The Alpena CRTC is located in a rural area with both low population density and growth rates. The nearest residence to this site is located over two miles from the CRTC. Approximately 75 full-time employees are located on-base. There is no permanent housing. During the months of April through September, training sessions are held. These sessions last for two weeks during which time personnel are housed on- base.

The base is surrounded by forest, wetlands, and rivers. A considerable number of wildlife species are observed on-base. The U.S. Fish and Wildlife Service and the Michigan Department of Natural Resources (MDNR) (currently the Michigan Department of Environmental Quality) have reported that no threatened or endangered species reside within the boundaries of the CRTC (MDNR, 1994) (U.S. Fish and Wildlife Service, 1994). Wetlands are located adjacent to portions of the dirt road which runs near Lake Winyah.

Surface Water and Groundwater Resources

The Alpena CRTC is located within the Northwestern Lake Huron Water-Resources Subregion (Miller and Twenter, 1986). The southern shore of Lake Winyah, formed by a hydroelectric dam on the Thunder Bay River, borders the CRTC on the north. The south branch of the

Thunder Bay River borders the base on the west. From Lake Winyah, the Thunder Bay River flows southeast toward Lake Besser and on to Lake Huron. The water ways in the vicinity of the facility are primarily used for recreational purposes and as a water source. The city of Alpena gets its water supply from Lake Huron. Alpena Township and the CRTC purchase water from the city of Alpena. The water supply intake is located approximately 1.5 miles southwest of the mouth of the Thunder Bay River, approximately 11 miles downstream from the facility.

The hydrogeologic units of interest on the facility are the lacustrine sand (shallow aquifer), the Traverse Group Limestone, and the grey clay aquitard which locally occurs between the two aquifers. Hydrologically, the base is located in the recharge area of the shallow aquifer. The water table in the surficial aquifer is variable over the base, ranging from approximately 5 feet below ground surface (bgs) to approximately 25 to 30 feet bgs. Groundwater beneath the base flows northwest, suggesting a component of groundwater flows toward the Thunder Bay River.

1.2 SITE HISTORY AND ENFORCEMENT ACTIVITIES

History

Very little information is available on the activity of spraying the roads of the CRTC with oil. It was identified as a suspected method of waste engine oil disposal. Waste engine oils, used as road oil, were identified as being generated at the Aircraft Maintenance Shop, Aerospace Ground Equipment, Motor Pool, and Roads and Ground Shop. This practice may have occurred from the 1950s to 1983.

Site 15 was identified in the PA conducted by HMTA (1985). PA activities included a detailed review of pertinent installation records and on-site visits which included interviews with past and present employees. Because Site 15 was a non-point source and was considered to pose little or no environmental threat, the PA eliminated the site from the Hazard Assessment Rating Method and recommended no further action.

Regulatory Agency/Public Involvement

The PA dated July 1985 recommended no further action for Site 15 because the site was considered to pose little or no environmental threat. No further activities have occurred relative to determining the status of Site 15.

1.3 COMMUNITY PARTICIPATION

There has been no community involvement in the IRP investigation conducted at Site 15 (Oiled Roads) at the CRTC, Alpena, Michigan.

2.0 CURRENT SITE STATUS

There is no physical indication of past spraying activities on the dirt roads which comprise Site 15. The vegetation alongside the dirt roads appeared, from casual observation, to be healthy. No stained soil was observed within or adjacent to the roadway. The following summary of site characteristics includes a description of the environmental setting. No sampling has been performed.

2.1 PHYSIOGRAPHY AND CLIMATOLOGY

The Alpena CRTC is located in an area created by glacial activity, sinkhole (karst) development, and human activities. Glacial activity has resulted in the deposition of lake deposits consisting of sand and clay on a relatively flat surface. A large sinkhole, located northeast of Range Road, is a significant feature affecting the hydrology of the base (Figure 1-1). The general land surface elevations on base vary between a low of 672 ft above mean sea level to a high of 688 feet above mean sea level.

The climate is characterized as semi-maritime and is affected by the proximity of Lake Huron to the east, which modifies most weather extremes. Summers are warm and sunny while winters are cloudy and snow is common. The precipitation in the area is evenly distributed throughout the year. The mean annual precipitation for the 29-year period beginning in 1957 is 29.15 in. [National Office of Atmospheric Administration (NOAA), 1987]. The estimated mean annual lake evaporation rate for the area is 26 inches (NOAA, 1983). Net precipitation for the area is estimated at 3 in. for the time period of 1957 to 1986. The 1-year 24-hour rainfall event for the area is estimated to be 1.75 inches (NOAA, 1963).

2.2 GEOLOGY AND SOIL

The Alpena CRTC is located in the outcrop area of the lacustrine sand of northeast Michigan. The lacustrine sand is composed of quartz sand, pebbles, cobbles of limestone and rock fragments, and some lenses of reddish-brown clay. This unit varies in thickness from approximately 20 feet thick at the north end of the base near Lake Winyah, to approximately 60 feet thick at the southern end of the base. Lacustrine sand is underlain by the Devonian aged Traverse Group Limestone, which is described as a grey fossiliferous limestone, containing some chert (Black, 1983). In some locations this lacustrine sand directly overlies the limestone aquifer and in other locations is separated from the limestone aquifer by a grey clay aquitard.

No soil sampling was conducted because there is no specific potential contamination location. Visual observation detected no signs of stressed vegetation or stained soil.

2.3 HYDROGEOLOGY

Beneath the Alpena CRTC, groundwater occurs in both the lacustrine sand and limestone aquifers. A feature unique to the installation is the development of a large sinkhole in the north-central portion of the CRTC. Groundwater flow in the lacustrine aquifer generally moves towards the sinkhole, although in areas adjacent to the Thunder Bay River, groundwater flows toward the Thunder Bay River. Groundwater flow direction within the limestone aquifer is unknown. Hydraulic characteristics vary greatly across the base. The hydraulic conductivity in the Site 15 area varies from 7.91×10^{-3} to 9.42×10^{-2} cm/sec. The transmissivity varies from an average low of 11 m²/day (118 ft²/day) to an average high of 579 m²/day (6,237 ft²/day).

No groundwater screening or sampling was conducted because the potential contamination source is a non-point source. Site conditions gave no indications where potential contaminants may be located.

2.4 SURFACE WATER

Few man-made surface drainage ditches or storm drains are located on-base because the majority of the soils have fair to very rapid infiltration rates. One storm drain is located within the motor pool area. A prominent ditch west of the motor pool area drains surface water runoff toward the Thunder Bay River.

Because no surface water bodies are included as part of Site 15, surface water and sediment sampling was not conducted.

2.6 AIR

No air monitoring has been conducted at Site 15 because no area of potential contamination was discovered.

2.7 RECEPTORS

Because a potential contamination source has not been identified, it was not necessary to identify potential receptors.

3.0 RISK ASSESSMENT

No sampling was conducted because no potential contamination point sources were identified. Also, there is little evidence that human health or the environment are at risk by Site 15 conditions. Therefore, no risk assessment has been conducted.

4.0 SELECTED ACTION: NO FURTHER ACTION

The risk to human health and the environment from the oiled dirt roads located at the CRTC, Site 15, is low. The no further action alternative is proposed because the contaminant source is a non-point source, the spraying activities occurred over 12 years ago, and no visual evidence is present to suggest environmental degradation has occurred. No evidence exists to suggest the groundwater, surface water, soil, or air are sufficiently contaminated to pose a threat to human health or the environment. Historical information and current site conditions indicate that no further action is warranted at Site 15.

5.0 DECISION

TECHNICAL DOCUMENT TO SUPPORT NO FURTHER ACTION DECLARATION

SITE NAME AND LOCATION

Installation Restoration Program Site
Site 15 - Oiled Roads
Alpena Combat Readiness Training Center (CRTC), Alpena, Michigan

STATEMENT OF BASIS


This decision is based on the results of the Installation Restoration Program (IRP) Phase I Records Search and Site Visit conducted at the Alpena CRTC (Hazardous Materials Technical Center, July 1985).

DESCRIPTION OF THE SELECTED REMEDY

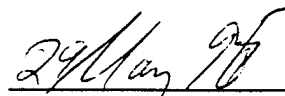
Based on the current conditions at IRP Site 15, it has been determined that no significant risk or threat to public health or the environment exists. Therefore, no further action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, is required.

DECLARATION


This Decision Document represents the selected action for this site developed in accordance with CERCLA, as amended by the Superfund Amendments and Reauthorization Act of 1986, and the National Contingency Plan. It also satisfies the requirements of the National Environmental Policy Act that apply to CERCLA response actions. It has been determined that the selected remedy of no further action is protective of human health and the environment, attains federal and state requirements that are applicable or relevant and appropriate, and is cost effective. The statutory preference for further treatment is not satisfied because no contamination has been found at the site, and the site thus poses no significant threat to human health of the environment, and treatment is, thus, not necessary.



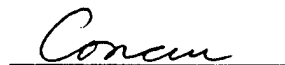
Chief, Environmental Division



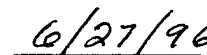
Date



State Regulatory Agency Representative
MDEQ - ERD



Concur/Nonconcur



Date

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