KH5130:D0118

PROGRESS REPORT FOR THE CONFIRMATION OF FIRE TRAINING PITS AT FORT RICHARDSON, FORT WAINWRIGHT, AND FORT GREELY, ALASKA

Contract No.: DACA85-88-D-0014

Delivery Order No. 14

(Modification No. 1)

Date: February 12, 1992

Submitted To:

U.S. Army Corps of Engineers, Alaska District
Mr. David Villiams, P.E., Project Manager
Engineering Project Management
U.S. Army Engineer District
Pouch 898
Anchorage, Alaska 99506



ecology and environment, inc.

1057 WEST FIREWEED LANE, ANCHORAGE, ALASKA 99503, TEL. (907) 257-5000 International Specialists in the Environment

TABLE OF CONTENTS

Section			Page
1	INTR	ODUCTION	1-1
2	FIEL	D INVESTIGATION	2-1
	2.1	LOCATION OF THE FTPs	2-1
		2.1.1 Location of Fort Richardson FTPs	2-1
		2.1.2 Location of Fort Wainwright FTPs	2-1
		2.1.3 Location of Fort Greely FTPs	2-4
	2.2	DESCRIPTION OF THE FTPs	2-4
		2.2.1 Description of RFTP-2	2-4
		2.2.2 Description of the WFTPs	2-4
		2.2.3 Description of the GFTPs	2-7
	2.3	SAMPLING PROGRAM	2-10
3	ANAL	YTICAL PROGRAM	3–1
	3.1	LABORATORY IDENTIFICATION	3-1
	3.2	ANALYTICAL PARAMETERS	3-2
4	PREL.	IMINARY HAZARD ASSESSMENTS	, ,
•	4.1	SOURCE AND RELEASE CHARACTERIZATION	4–1
	4.2	FORT RICHARDSON HAZARD ASSESSMENT	4-3 4-5
	7.0	4.2.1 Contaminants Detected	4-5 4-5
		The second secon	_
		and appared conductions therefore	4-7
			4-7
			4-7
		4.2.2.3 Site Geology	4-7

Table of Contents (Cont.)

<u>Section</u>				<u>Page</u>
			4.2.2.4 Hydrology	4-8
			4.2.2.5 Potentially Exposed Populations .	4-8
		4.2.3	Fate and Transport of Contaminants	4-9
			4.2.3.1 Diesel Range Hydrocarbons	4-9
			4.2.3.2 Lead	4-9
		4.2.4	Transport and Exposure Pathways	4-10
		4.2.5	Potential Receptors	4-10
	4.3	FORT W	AINWRIGHT HAZARD ASSESSMENT	4-11
		4.3.1	Contaminants Detected	4-11
		4.3.2	Site-Specific Conditions	4-11
			4.3.2.1 Geographical Setting	4-11
			4.3.2.2 Climate	4-12
			4.3.2.3 Site Geology	4-12
			4.3.2.4 Hydrology	4-13
			4.3.2.5 Potentially Exposed Populations .	4-13
		4.3.3	Fate and Transport of Contaminants	4-14
		4.3.4	Transport and Exposure Pathways	4-14
		4.3.5	Potential Receptors	4-15
	4.4	FORT G	REELY HAZARD ASSESSMENT	4–16
		4.4.1	Contaminants Detected	4-16
		4.4.2	Site-Specific Conditions	4-16
			4.4.2.1 Geographical Setting	4-16
			4.4.2.2 Climate	4-17
			4.4.2.3 'Site Geology	4-17
			4.4.2.4 Hydrology	4-17
			4.4.2.5 Potentially Exposed Populations .	4–18
		4.4.3	Fate and Transport of Contaminants	4-18
			4.4.3.1 Diesel Range Hydrocarbons	4-19
			4.4.3.2 Pesticides	4-19
		4.4.4	Transport and Exposure Pathways	4-20
		4 4 5	Potential Popentone	. gi

Table of Contents (Cont.)

Section		Page
5	PROPOSED FUTURE WORK	5–1
	5.1 FORT RICHARDSON	5-1
	5.2 FORT WAINWRIGHT	5-2
	5.3 FORT GREELY	5-2
	5.4 POSSIBLE REMEDIAL MEASURES	5-3
6	REFERENCES	6–1
Appendix		Page
Α	EPA Forms 2070-12	A-1
В	EPA Forms 2070-13	B-1
С	Borehole Logs	C-1
D	Analytical Data	ת ז

LIST OF ILLUSTRATIONS

Figure		Page
1-1	Fire Training Pits Site Location Map	1-2
2-1	Fort Richardson Site Location Map	2-2
2-2	Fort Wainwright Site Location Map	2-3
2-3	Fort Greely Site Location Map	2-5
2-4	Fort Richardson Site Features Map	2-6
2–5	Fort Wainwright Site Features Map	2-8
2-6	Fort Greely Site Features Map	2-9
2-7	Fort Richardson Sample Location Map	2-13
2-8	Fort Wainwright Sample Location Map	2-14
2-9	Fort Greely Sample Location Map	2-15

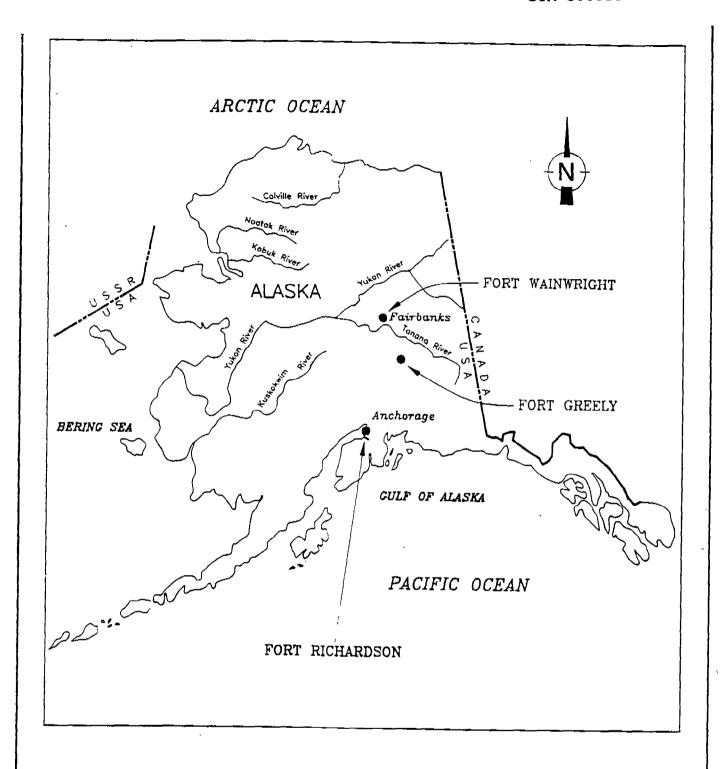
LIST OF TABLES

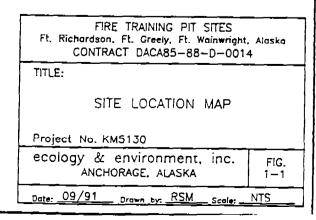
<u>Table</u>		Page
4-1	List of TCLP Concentrations	4-2
4–2	List of BDAT Concentrations	4-4
4–3	List of TEFs of Dioxin Isomers	4–6

1. INTRODUCTION

The 6th Infantry Division (Light), Directorate of Engineering and Housing (DEH), tasked the United States Army Corps of Engineers (USACE), Alaska District to investigate two fire training pits (FTPs) at Fort Richardson, one FTP at Fort Wainwright, and one FTP at Fort Greely, Alaska (Figure 1-1). This project was authorized for funding under the Installation Restoration Program (IRP) of the Department of Defense (DOD). The IRP is the basis for response actions under the provisions of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, clarified by Executive Order 12316 for DOD facilities. The IRP is designed to identify, evaluate, and clean-up hazardous contamination and groundwater pollution at active DOD-operated installations. In 1989, the USACE assigned the project to Ecology and Environment, Inc. (E & E) for implementation under the terms of the Indefinite Architect-Engineer Services Contract: Contract DACA85-88-D-0014, Delivery Order No. 014.

In the process of developing work plans for the site investigation at the confirmed FTPs, E & E discovered additional FTPs on aerial photographs at both Fort Wainwright and Fort Greely. Their locations could not be confirmed during a site visit due to vegetation and snow cover. As a result, the USACE halted the development of the work plans and issued a modification to conduct a preliminary site investigation of these unconfirmed FTPs. E & E first developed a work plan and subsequently performed the fieldwork necessary to confirm these FTPs. The present progress report is presented to summarize the results of the





Source: Ecology & Environment, Inc. 1990

preliminary site investigation of the FTPs. The results confirm the presence of an additional FTP at Fort Wainwright and two additional FTPs at Fort Greely. The objectives of the present report are to:

- o present sampling locations, borehole logs, and analytical results of the sampling investigation;
- o assess the hazards due to the FTPs; and
- o outline future work needed at the FTPs.

United States Environmental Protection Agency (EPA) forms 2070-12 and 2070-13 were prepared for each Fort and are presented in Appendices A and B, respectively. A final report will present the results of the entire investigation.

Although the preliminary investigation was conducted primarily to investigate the unconfirmed FTPs, it also included limited sampling at the previously confirmed FTPs. The FTP located on the Fort Richardson Landfill was eliminated from this project because it is being addressed in a separate IRP project specific to the landfill. Fort Wainwright was placed on the National Priorities List (NPL) in March 1990. Its inclusion on the NPL requires that the Fort Wainwright FTPs be deleted from this contract delivery order and require further investigation under an Inter-Agency Agreement. Hence, future investigations of the FTPs will not include the Fort Wainwright FTPs.

The investigation was directed by the USACE Engineering Project Management with analytical work performed by Southwest Laboratories, Broken Arrow, Oklahoma (SWOK) and by Columbia Analytical Services, Inc. (CAS) Kelso, Washington, under the supervision of the North Pacific Division's Quality Assurance Laboratory at Troutdale, Oregon. E & E monitored the fieldwork and obtained the analytical results from the USACE.

2. FIELD INVESTIGATION

This section describes the locations and present conditions of the FTPs and the sampling program conducted in 1991.

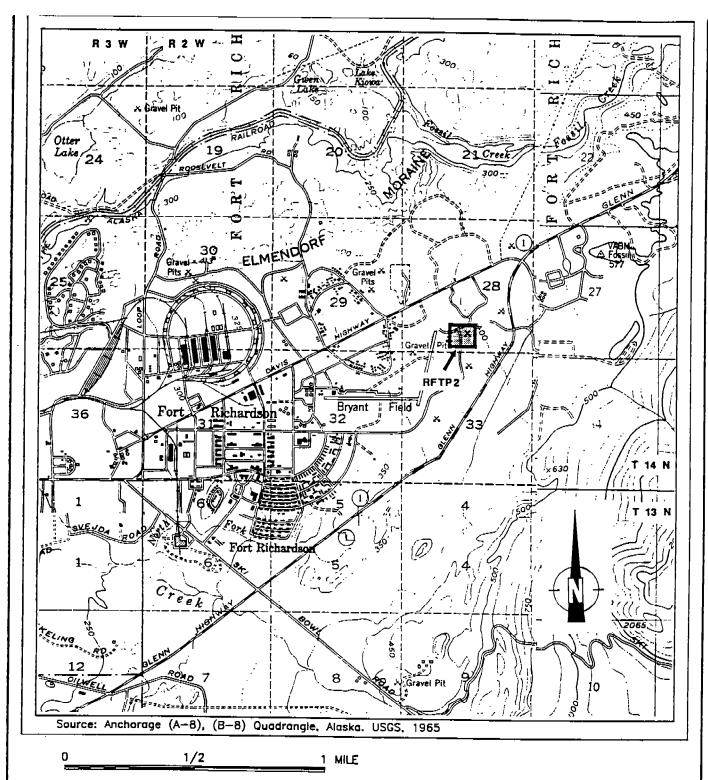
2.1 LOCATION OF THE FTPs

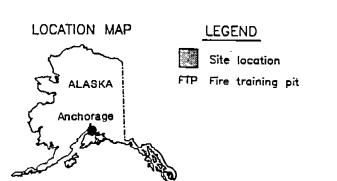
2.1.1 Location of Fort Richardson FTPs

Fort Richardson is bounded by the Municipality of Anchorage and Elmendorf Air Force Base (EAFB) to the west; Eagle Bay and Knik Arm to the north; and the Chugach Mountains and Chugach State Park along the southern and eastern boundaries. The Glenn Highway bisects Fort Richardson. The Fort Richardson fire training pit (RFTP-2) is located in the southwest 1/4 of Section 28, Township 14 North, Range 2 West of the Seward Meridian at an elevation of approximately 328 feet above mean sea level (MSL) within the installation boundaries of Fort Richardson (Figure 2-1).

2.1.2 Location of Forth Wainwright FTPs

Fort Wainwright is located on the eastern boundary of the City of Fairbanks, Alaska. The Chena River bisects the installation approximately 2 miles to the north of the main part of the Fort, and the Tanana River is located approximately 3 miles to the south of the main part of the Fort. The Fort Wainwright FTPs (WFTPs) are located in the northwest 1/4 of Section 17, Township 1 South of the Fairbanks Base Line and Range 1 East of the Fairbanks Meridian (Figure 2-2).





FIRE TRAINING PIT SITES
Fort Richardson, Anchorage, Alaska
CONTRACT DACA85-88-D-0014

TITLE:

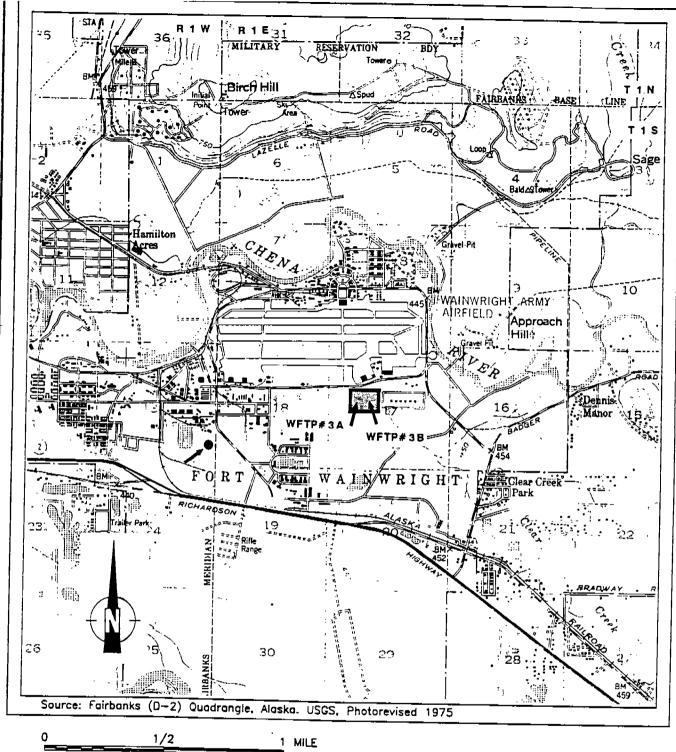
SITE LOCATION MAP Delivery Order No. 14

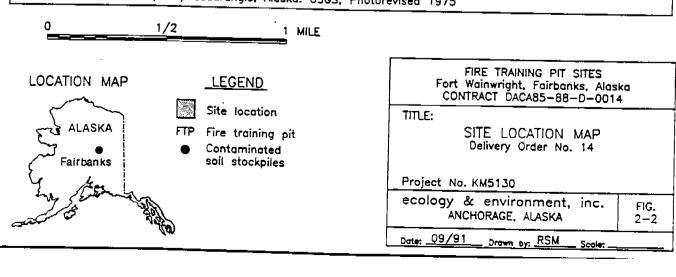
Project No. KM5130

ecology & environment, inc.
ANCHORAGE, ALASKA

Date: 09/91 Drawn by: RSM Scale:

FIG. 2–1





2.1.3 Location of Fort Greely FTPs

Fort Greely is located approximately 1 mile south of Delta Junction on the Richardson highway. The northern section of Fort Greely is situated at the convergence of the Delta River and Jarvis Creek.

The Delta River, Jarvis Creek, and the Richardson Highway bisect the installation in a north/south direction. The Fort Greely FTPs (GFTPs) are located in the northern section of the Fort, in the southwest 1/4 of Section 1, Township 11 South of the Fairbanks Base Line and Range 10 East of the Fairbanks Meridian (Figure 2-3).

2.2 DESCRIPTION OF THE FTPS

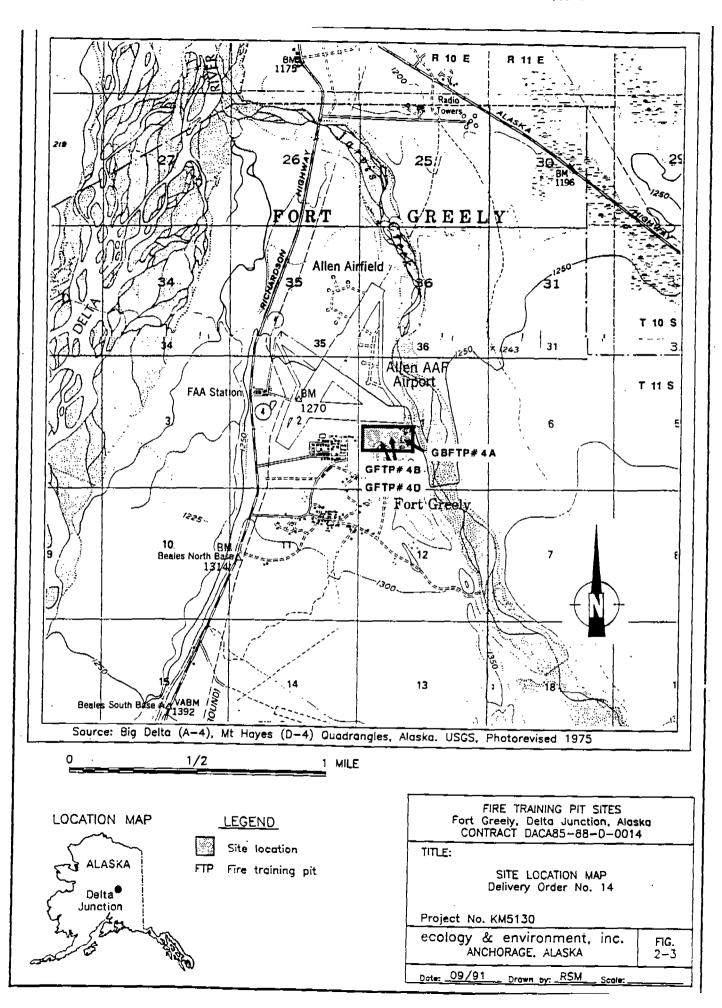
2.2.1 Description of RFTP-2

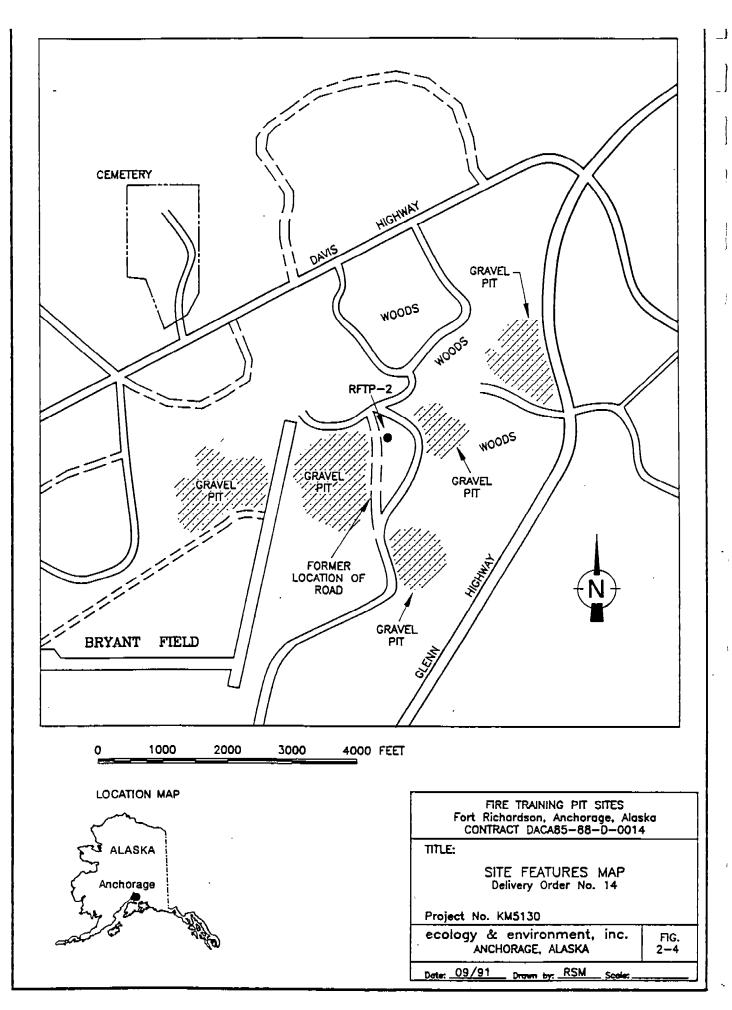
There is only one FTP at Fort Richardson (RFTP-2) that was included in the preliminary field investigation. RFTP-2 was identified on aerial photographs taken in 1977. RFTP-2 is situated among gravel pits east of Bryant Airfield, south of the Davis Highway and west of the Glenn Highway. RFTP-2 consists of a circular area, 50 feet in diameter, of soil that is stained gray, black, and white (Figure 2-4). The soil is very hard and dry, and a strong fuel odor emanates from it. E & E inspected the area surrounding the FTP to determine the total acreage, including drum storage and debris locations, that have been affected by fire training activities. Surface soil surrounding RFTP-2 has been cleared away, most likely due to gravel pit activities; therefore, the exact acreage affected by RFTP-2 is unknown.

During the May site reconnaissance, E & E observed a charred drum, cable, metal cans, and wood in RFTP-2. At the time of the investigation in June, the road bordering the west side of RFTP-2 had been removed, and the stained surface soils of RFTP-2 had been removed and deposited beside the new road.

2.2.2 Description of the WFTPs

There are two FTPs at Fort Wainwright, WFTP-3A and WFTP-3B. The WFTPs are situated along a curved, dirt access road that stretches for 0.5 miles from Montgomery Road (southeast of the airfield and several





hangars) to a berm surrounding the ammunition storage area. WFTP-3A consists of a large, square grassy area surrounded by trees (Figure 2-5). A gate at the northeastern corner of WFTP-3A restricts vehicular entrance. A large circular area of black-stained soil, approximately 50 feet in diameter, is located in the southern portion of WFTP-3A. A very strong petroleum odor was detected within 20 feet of the stained soil.

Along the western boundary of WFTP-3A is a row of charred junk cars, trucks, and a bus. Aerial photographs indicated that in the past (1987) tanker trucks and drums were present on site.

WFTP-3B consists of a 7.5-acre area that is 1 to 3 feet lower than the surrounding forest. The southern third of the WFTP-3B is vegetated with saplings and grass. The northern two-thirds of the FTP is covered with gravel and recently trimmed grass. Cobbles of Birch Creek Schist were protruding from the ground, indicating that the WFTP-3B contains fill. In the southwestern quarter of the FTP was a depression approximately 18 inches deep with a diameter of 3 to 5 feet. The depression was vegetated with grass. In the center of the FTP is a circular-shaped area, 5 feet in diameter, that is filled with gravel and small pieces of concrete. According to a 1983 aerial photograph, this central feature was a pit approximately 10 feet in diameter.

2.2.3 Description of the Fort Greely FTPs

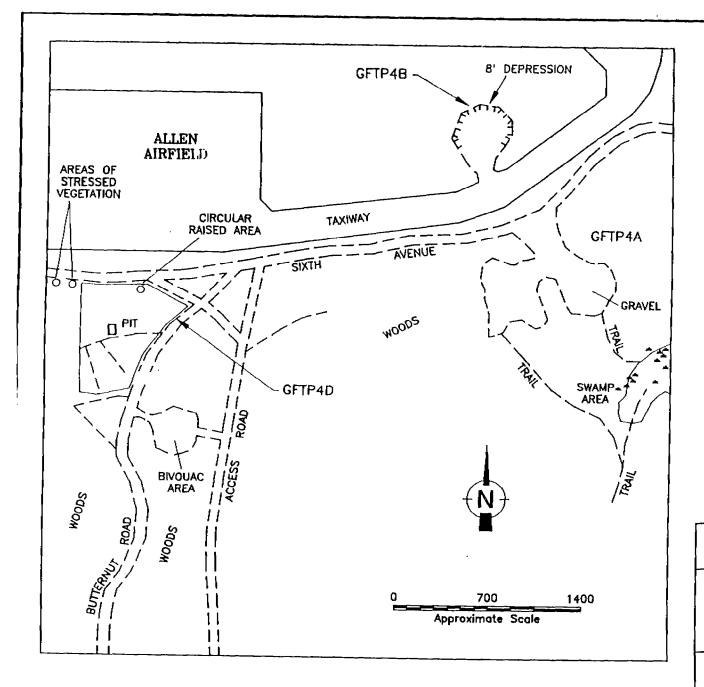
There are three GFTPs at Fort Greely: GFTP-4A, GFTP-4B, and GFTP-4D. GFTP-4A is situated alongside Sixth Avenue in Fort Greely, adjacent to the Fort Greely airfield. It consists of approximately 4.5 acres of bare ground covered with gravel and encircled by trees (Figure 2-6). According to aerial photographs, the center of this area included a rectangular pit, and drums were stored on the western edge of the FTP. These features are no longer present.

GFTP-4B is located north of GFTP-4A and is situated within the confines of the airfield boundaries, north of a taxiway. It is an approximate 10-foot depression and is well-vegetated with grass and alfalfa. A small, vegetated access road on the south side to the depression provides entrance to the GFTP from the taxiway. According to

Project No. KM5130 ecology & environment, inc. ANCHORAGE, ALASKA Date: 09/91 Drewn by: RSM POND 8 WOODS MONTGOMERY рцсн 600' Approximate Scale 2 Ĭ Į

; 1 1

1



LEGEND

Access road

- - Overgrown access road

FIRE TRAINING PIT SITES
Fort Greely, Delta Junction, Alaska
CONTRACT DACA85-88-D-0014

TITLE:

SITE FEATURES MAP
Delivery Order No. 14

Project No. KM5130

ecology & environment, inc.
ANCHORAGE, ALASKA

Date: 09/91 Drawn by: RSM Scale:

1968 and 1969 aerial photographs, a rectangular pit was present in the center of the depression, and drums were stored on the southwest side of the pit.

The location of GFTP-4D is west of Butternut Road, west of GFTP-4A and GFTP-4B. GFTP-4D consists of several distinct parts. The general GFTP-4D area includes a grassy field, an area lacking vegetation but containing concrete fill, and a portion is located in a forest. The features include a raised circular area approximately 6 inches high and 5 feet in diameter and a pit which is approximately 20 feet by 30 feet and 6 feet deep. The pit is filled with grass and small trees. The sides of the pit are almost vertical, and the bottom of the pit is very moist, although standing water was not observed. All these features are clearly visible on historic aerial photographs and are recognizable in the field.

2.3 SAMPLING PROGRAM

On May 20, 1991, the E & E field team conducted a site reconnaissance of the Fort Richardson FTP (RFTP-2). On June 11, 1991, the E & E field team began the field investigation program at Fort Wainwright as outlined in the 1991 work plan. The E & E field team implemented the investigation in conjunction with the USACE drilling crew. Boreholes were drilled on June 16 and 17, 1991 at Fort Wainwright WFTP-3A and WFTP-3B.

On June 24, 1991 E & E field team drilled boreholes in RFTP-2 at Fort Richardson. On July 17, 1991 the team continued the field investigation at Fort Greely. Boreholes for Fort Greely FTPs GFTP-4A, GFTP-4B, and GFTP-4D, were completed on July 21, 1991.

Aerial photographs of GFTP-4C and WFTP-3C did not reveal any clear evidence of FTP activity but were flagged potential future FTP locations based on certain features such as of vegetation and terrain characteristics. Field reconnaissance at Fort Wainwright and Fort Greely and screening of the soil with a photoionization detector (PID) did not

result in any corroborating evidence of FTPs existing at these locations. Therefore, according to a provision in the work plan, WFTP-3C and GFTP-4C were not included in the field investigation.

GFTP-4C was according to army personnel, used as a bivouac for the winter training of soldiers. There are numerous similar areas that were cleared of vegetation in the general area which are also used for winter bivouac. GFTP-4C was not ever used as a fire training pit to anyone's knowledge.

The primary concern of the sampling program was that contaminated areas of the suspected FTPs were identified and characterized in sufficient detail to guide decisions as to the direction for further investigation. The sampling plan was prepared based on past sampling activities, U.S. Department of Transportation (DOT) regulations (49 CFR 1972), and EPA Hazardous and Toxic Waste regulations (40 CFR 261-264). The sampling plan was designed to meet the following objectives:

- Characterization of wastes potentially present at each suspected FTP;
- Determination of the vertical extent of soil contamination at each suspected FTP;
- o Filling the data gaps at "confirmed" FTPs by collecting samples from one soil boring at the center of each confirmed FTP; and
- o Evaluation of waste quantities, current use, and distance to groundwater and surface water users.

The 1991 sampling program included the following activities.

- o Borehole drilling;
- o Subsurface soil sampling; and
- o Surface soil sampling.

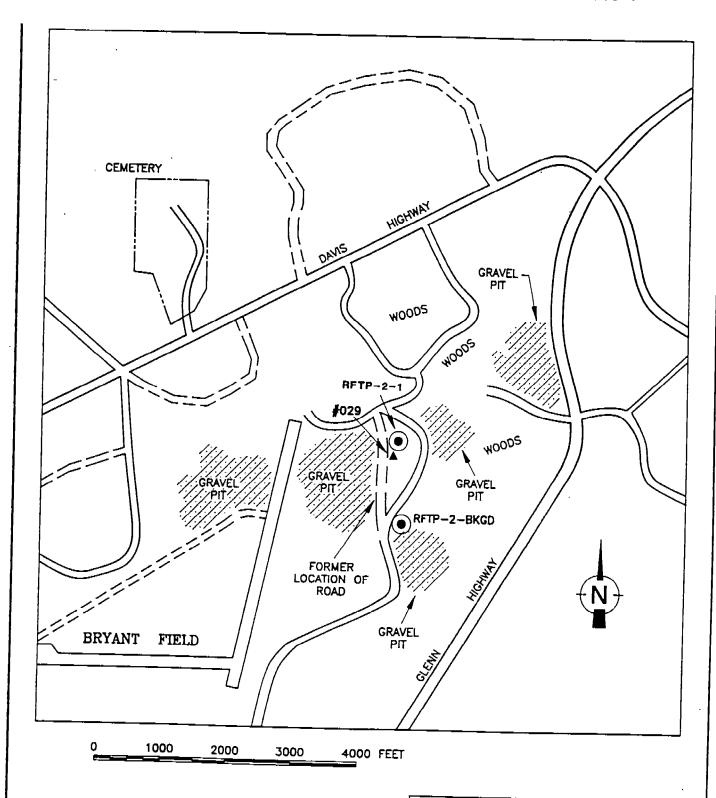
Sampling locations were chosen on the basis of aerial photograph interpretation and a detailed site reconnaissance. Surface soil samples were collected to determine if topsoil is contaminated. One surface soil sample (#29) was collected at RFTP-2 as a composite sample from

gray, black, and white stained soil (Figure 2-7). The composite sample was comprised of 7 aliquots of stained soil located throughout the FTP. One surface soil sample (#21) was collected from the black soil in WFTP-3A as a grab sample (Figure 2-8). Since stained soil was not observed at Fort Greely, surface samples were not collected.

Drilling was accomplished using an Acker Soil Max at Fort Richardson and a Mobile B-50 at Fort Wainwright and Fort Greely. The split-spoon sampler was advanced during hollow-stem auguring by conventional methods. Blow counts were recorded at each 6-inch interval of penetration of the split-spoon. Samples were collected with a split-spoon approximately every 3 to 5 feet for logging purposes. Selected samples were packaged and shipped for chemical analysis.

Two boreholes were drilled at Fort Richardson (Figure 2-7), seven at Fort Wainwright (Figure 2-8), and nine at Fort Greely (Figure 2-9). All boreholes were completed with a drill rig except for GFTP-4D-4 and WFTP-BKG, which were excavated with a hand auger.

In accordance with the work-plan, background samples were collected at 5 feet below ground surface (bgs) at each Fort in a location upgradient from the FTPs. One background sample each was collected at 5 feet bgs at Fort Richardson (#28) and Fort Wainwright (#90). Two background samples were collected at 5 feet and 10 feet bgs at Fort Greely (#85 and #82, respectively) because the PID detected organic vapors in the shallow sample. The logs of the boreholes are presented in Appendix C. The logs include lithologic descriptions, sample depths, water table depth, and total depth drilled.



LEGEND

Borehole Sample Location

▲ Surface soil sample (composite)

FIRE TRAINING PIT SITES Fort Richardson, Anchorage, Alas CONTRACT DACA85-88-D-0014	ska 4
TITLE:	
SAMPLE LOCATION MAP Delivery Order No. 14 Project No. KM5130	
ecology & environment, inc. ANCHORAGE, ALASKA	FIG. 2-7
Date: 09/91 Drawn by: RSM Scale:	

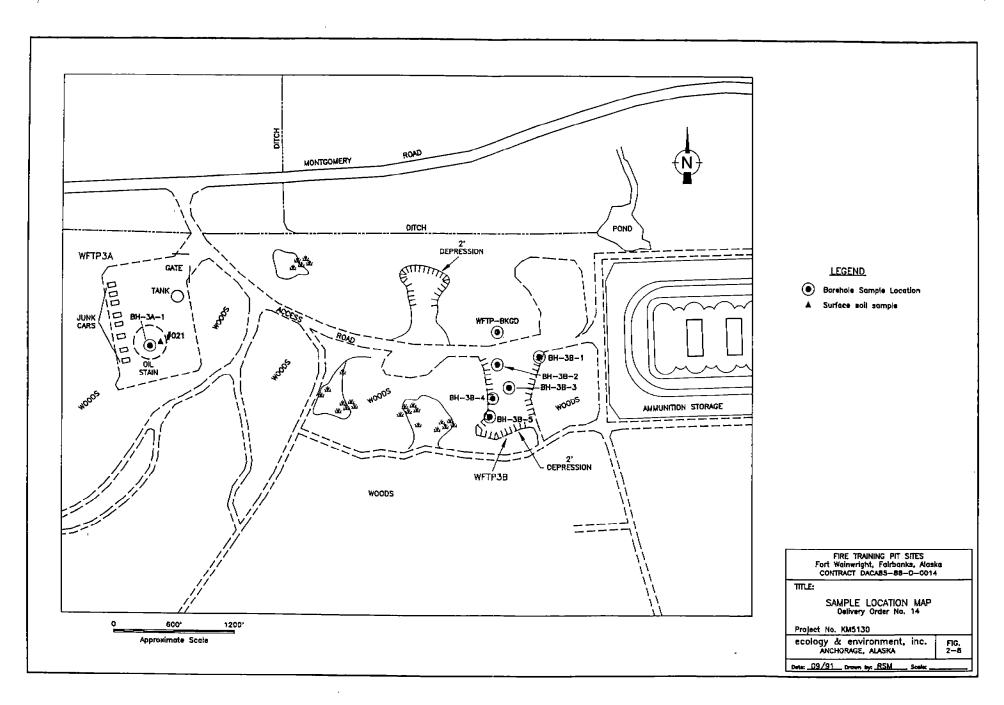
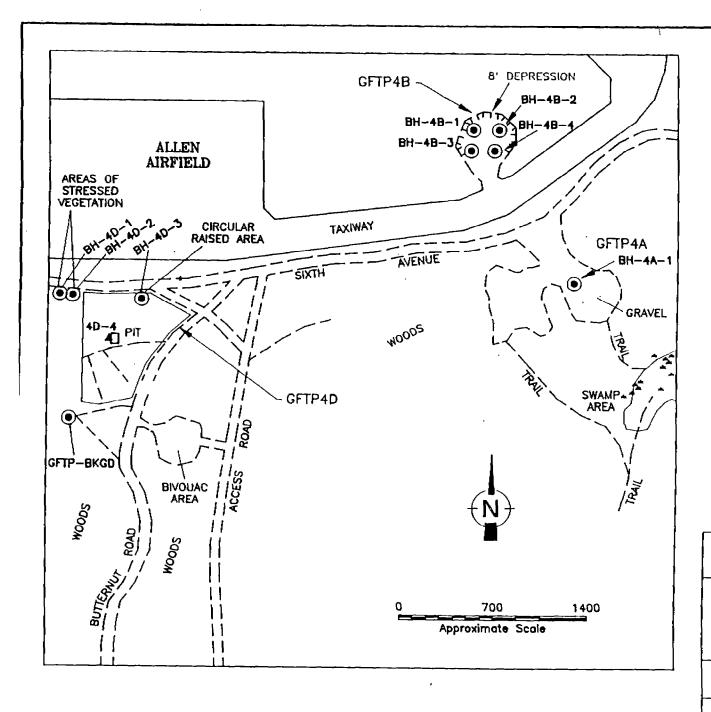


FIG.

2-9



LEGEND

□□□ Access road

--- Overgrown access road

Borehole Sample Location

▲ Surface soil sample

FIRE TRAINING PIT SITES Fort Greely, Delta Junction, Alaska CONTRACT DACAB5-88-D-0014

TITLE:

SAMPLE LOCATION MAP Delivery Order No. 14

Project No. KM5130

ecology & environment, inc.
ANCHORAGE, ALASKA

Date: 09/91 Drawn by: RSM Scole:

3. ANALYTICAL PROGRAM

Surface and subsurface samples were collected from the FTPs at each of the three Forts. Four subsurface samples, one surface sample and one background subsurface sample were collected at Fort Richardson. Ten subsurface samples, one surface sample, and one background subsurface sample were collected at Fort Wainwright. Seventeen subsurface samples and two background subsurface samples were collected at Fort Greely. Additionally, quality assurance/quality control (QA/QC) samples, including duplicate and triplicate soil samples, trip blank samples, and rinsate samples, were collected. Results of the sampling program are presented in Appendix D. The quality of the data was checked by the North Pacific Division's Quality Assurance Laboratory at Troutdale, Oregon (NPDL 1991).

3.1 LABORATORY IDENTIFICATION

Each sample was sealed and labeled immediately after collection. A 13-digit alphanumeric code was assigned to each sample as an identification number to track samples collected at the site. The sample code is broken down as follows:

Group	Digits	Time	Code Examples
(1)	1-2	Calendar Year	90, 91
(2)	3-4	Week (1-52)	01, 52
(3)	5–8	IRP identification code	RFTP (Fort Richardson Fire Training Pit)
(4)	9-11	Sample number	001,010,100
(5)	12-13	Sample type	Symbol
` '		Soil	SL
•		Water	WA
		Hexane	MI .

Example: 91 26 RFTP 029 SL - 1991, Week 26, Fort Richardson Fire Training Pits, Sample No. 029, Soil.

The sample label also provided the analysis required and the preservation.

3.2 ANALYTICAL PARAMETERS

Analytical requirements for the investigation were established to provide data necessary for determining the handling and disposal requirements for the site wastes. The parameters were chosen based on the following rationale:

- o Fire training activities could have burned the following fuel types: diesel fuel, JP-4 waste oils, brake fluids, transformer oils, and solvents; hence, samples were analyzed for volatile organic compounds (VOCs), base/neutral/acid extractables (BNAs), pesticides and polychlorinated biphenyls (PCBs), and metals.
- o Waste oil regulations address metals and total petroleum hydrocarbons (TPH); hence, samples were also analyzed for TPH; and
- o FTPs may contain PCB-contaminated transformer oils with the possibility of dioxin contamination from incomplete combustion of PCB materials; hence, at least one sample per FTP was analyzed for dioxin.

4. PRELIMINARY HAZARD ASSESSMENT

This section describes the potential hazards presented by the principal contaminants found at the FTPs. Relevant information is presented on physical, chemical and toxicological properties; likely release; fate and transport mechanisms; potential exposure pathways; and potential receptors. The information presented in this section constitutes a preliminary hazard evaluation and is not intended as a quantitative baseline risk assessment. Its purpose is to determine whether or not contaminants from the FTPs could pose potential risks to human or environmental receptors and to identify data needs for future investigations.

Based on the analyses performed to date, the soils are generally contaminated with petroleum hydrocarbons, along with pesticides in selected soils. Some of the areas exhibit contamination with a characteristic waste contaminant, lead. The presence of contaminants in site soils was established by analytical data generated during the field investigation. In order to focus on significant contaminants, the data were compared to existing criteria for hazardous waste. Soil was assumed to be contaminated if concentrations of compounds exceeded 20 times Resource Conservation and Recovery Act (RCRA) Toxicity Characteristic Leaching Procedure (TCLP) action level concentrations. The TCLP is designed to determine the mobility of organic and inorganic compounds in soils and other media (40 CFR 261.24). A list of TCLP action level concentrations of concern to this site is presented in Table 4-1. A

TABLE 4-1

RCRA TCLP Action Levels

Contaminant	Type	TCLP mg/l
Arsenic	D004	5
Barium	D005	100
Cadmium	D006	1
Chromium	D007	5
Lead	D008	5
Mercury	D009	0.2
Selenium	D010	1
Silver	D011	5
Trichloroethane	F039	0.5
Tetrachloroethene	F039	0.7
2,3,7,8-TCDD	F039	0.001

RCRA = Resource Conservation and Recovery Act

TCLP = Toxicity Leaching Procedure

Source: 40 CFR 261.24

D-type waste is a characteristic waste, and an F-type waste is a multisource leachate waste. A U-type waste is from discarded commercial chemical products, off-specification species, container residues, and spill residues.

If a compound was not found in the TCLP list, its concentration was compared to a maximum concentration listed under Land Disposal Restrictions (LDRs), which are required under Hazardous and Solid Waste Amendments (HSWA) of RCRA. If a contaminant exceeds a maximum concentration, then it must be remediated by the Best Demonstrated Available Technology (BDAT) (40 CFR 268.43) prior to disposal. A list of BDAT concentrations of concern for this site for nonwastewater is presented in Table 4-2. Soil that contains compounds at concentrations greater than those associated with BDAT are considered contaminated.

A compound that is not found in the TCLP or BDAT List is compared to the background sample. If its concentration is greater than 3 to 5 times the background concentration or greater than 3 to 5 times the detection limit of the background sample, then the soil is assumed to be contaminated.

Concentrations of petroleum contaminants were also compared to Alaska Department of Environmental Conservation (ADEC) clean up levels established using the clean up matrix for soils in 18AAC78.

4.1 SOURCE AND RELEASE CHARACTERIZATION

The pits were locations of test fires used for the training of fire department and rescue crews. Fluids were stored at the site until they were burned for training purposes, and the exact nature of all substances that were placed in the FTPs has not been documented. The pits were soaked with water, filled with fuels, brake fluid, and solvents, and ignited. Fuels included diesel, JP-4, and waste oil. Solvents may have been included as contaminants in the waste oil.

It is estimated that 1,500 to 2,300 gallons of waste fuel were burned per year at each pit (USACE 1989). The FTPs were never lined. Currently the surfaces of the FTPs are flush with the ground surface, and they do not contain surface water diversion systems.

TABLE 4-2
BDAT Concentrations

Contaminant	BDAT mg/kg
Acetone	160
Methylene Chloride	33
Toluene	8
Xylenes	28

BDAT = Best Developed Available Technology

Source: 40 CFR 268.43

4.2 FORT RICHARDSON HAZARD ASSESSMENT

4.2.1 Contaminants Detected

RFTP-2 contains lead (543 mg/kg) at a concentration that exceeds 20 times the TCLP concentration of lead. The FTP also contains diesel range hydrocarbons at concentrations (10,000 to 20,000 mg/kg) above ADEC maximum matrix clean up levels.

RFTP-2 also contains numerous compounds at concentrations above background but below any regulatory limit. The surface soil sample, collected from stained soil throughout the FTP, contained tetrachloroethene (PCE) (485 μ g/kg), toluene (462 μ g/kg), xylenes (1,116 μ g/kg), bis(2-ethylhexyl)phthalate (4,100 μ g/kg), copper (146 μ g/kg), zinc (1,740 μ g/kg), and dioxins. RFTP-2 subsurface samples collected from 4.5 to 21 feet bgs contained acetone (283 μ g/kg), trichloroethane (TCA) (46 μ g/kg), toluene (56 μ g/kg), and xylenes (42 μ g/kg).

Various dioxin isomers were detected in surface soil, including OCDD and HpCDD. The most toxic isomer, TCDD, was not detected. The concentration of each isomer is compared to the most toxic isomer, TCDD, using EPA toxicity equivalence factors (TEF) (EPA 1990). The TEF is an interim science measure used by EPA to help characterize multiple PCDD and PCDF isomers (USEPA 1989). A conservative approach was employed in evaluating the data when the specific isomers were not identified; in those cases, the TEF of the most toxic isomer was used. See Table 4-3 for a listing of TEFs. The concentration of TCDD in the soil was calculated to be 0.020 $\mu g/kg$. The concentration was calculated by multiplying each dioxin isomer concentration by its TEF as follows:

[1.803 μ g/kg Total HpCDD X 0.01 TEF] + [1.560 μ g/kg 0CDD X 0.001 TEF] = 0.02 μ g/kg TEF TCDD

This concentration of dioxin is two orders of magnitude below the TCLP limit. The duplicate and triplicate samples #039 and #040 contained slightly higher concentrations of dioxin than the original sample. These equivalent samples reflect the nonhomogeneity of dioxin in soil.

TABLE 4-3

Toxicity Equivalent Factors (TEF)
for PCDDs and PCDFs

Compound	TEF	
 2,3,7,8-TCDD	1	
2,3,7,8-PeCDDs	0.5	
2,3,7,8-HxCDDs	0.1	
2,3,7,8-HpCDDs	0.01	
OCDD	0.001	
2,3,7,8-TCDFs	0.1	
2,3,7,8-PeCDFs	0.05	
2,3,4,7,8-PeCDFs	0.5	
2,3,7,8-HxCDFs	0.1	
2,3,7,8-HpCDFs	0.01	
OCDF	0.001	

PCDD = Polychlorinated dibenzo-p-dioxin
PCDF = Polychlorinated dibenzofurans
TCDD = Tetrachlorodibenzo-p-dioxin
PeCDD = Pentachlorodibenzo-p-dioxin
HxCDD = Hexachlorodibenzo-p-dioxin
HpCDD = Heptachlorodibenzo-p-dioxin
OCDD = Octachlorodibenzo-p-dioxin
TCDF = Tetrachlorodibenzofurans
PeCDF = Pentachlorodibenzofurans
HxCDF = Hexachlorodibenzofurons
HpCDF = Heptachlorodibenzofurons
OCDF = Octachlorodibenzofurons

Source: EPA 1989

4.2.2 Site-Specific Conditions

4.2.2.1 Geographical Setting

Fort Richardson is located primarily within the Cook Inlet-Susitna Lowland Section of the Coastal Trough physiographic province of Alaska. The Cook Inlet-Susitna Lowlands are characterized by glacial features resulting from a series of five glacial periods in recent geologic history. The province contains glaciated areas of ground moraines, drumlin fields, eskers, and outwash plains. Most of Fort Richardson lies less than 500 feet above sea level and has a local relief of 50 to 250 feet. Rolling upland areas near the bordering mountain ranges rise to about 3,300 feet in altitude. The northern section where the RFTP is located features flat to gently rolling, wooded terrain, including ponds and numerous streams within 2 to 4 miles of the site (WCC 1990b).

4.2.2.2 Climate

Fort Richardson is located in a climatic transition zone between the maritime climate of the coast and the continental climate of interior Alaska. The mean monthly temperature ranges from a low of 11.8° Fahrenheit (F) in January to 57.9°F in July. The mean annual total precipitation is 14.7 inches, with almost half of the precipitation occurring in July, August, and September. The total precipitation includes a mean annual snowfall of 70 inches. The driest period occurs between January and May (ES&E 1983a).

Prevailing airflow originates from the south. However, from April to September, northerly winds blow at lower elevations. Mean wind speeds range from 5.8 to 8.3 miles per hour (ES&E 1983a).

4.2.2.3 Site Geology

The FTP sits on a large outwash plain formed along the margin of the Elmendorf Moraine by glacial meltwater. The outwash plain alluvium consists of gravel in the eastern portion of the installation and grades into sand to the west. Underlying the FTP is a thick, coarse-grained, surficial deposit of gravel and sand, generally well-bedded and well-sorted. It has very little clay or silt, only 10% by volume (AEHA 1983). Drilling logs (FRA-1, FRA-2, FRA-3) from the Fort Richardson Landfill and located 1.5 miles northwest of RFTP-2 show that surficial deposits are more than 160 feet thick.

4.2.2.4 Hydrology

Fort Richardson is believed to overlie a major portion of the recharge area for the confined aquifer that serves Anchorage. Ground-water recharge originates in the Chugach Mountains and probably involves the entire glacial outwash underlying RFTP-2 and major portions of Fort Richardson south of the Elmendorf Moraine. Ship Creek replenishes the aquifer for Anchorage but it also obtains its water supplies from the Chugach Mountains (Cederstrom 1964).

Several aquifers probably exist below or near RFTP-2. Well logs from the Fort Richardson fish hatchery, about 1.5 miles south of RFTP-2, and from the Fort Richardson Landfill, 1 mile west of RFTP-2 indicate the depth to groundwater to be 140 feet deep, although perched aquifers are found at 38 feet bgs. Groundwater flow was inferred to flow west-northwest at that site.

The main drainages of the installation are Eagle River located more than 3 miles to the north, Fossil Creek located 1.3 miles to the north, and Ship Creek located 2 miles to the south of RFTP-2. Eagle River is fed by turbid glacial water, and Ship Creek is sustained by snowmelt and runoff. Another water body, Otter Lake, is located 4.5 miles northwest of RFTP-2 (WCC 1990b). RFTP-2 is not located near any major tributaries of Eagle River or Ship Creek.

4.2.2.5 Potentially Exposed Populations

The area surrounding RFTP-2 contains gravel pits and forests.

There are no access restrictions in the area of the site. East of RFTP-2 is the Glenn Highway and west of RFTP-2 is the Bryant Airfield. North and south of RFTP-2 are gravel pits. The closest residential

area, the main cantonment area for Fort Richardson, is approximately 1 mile to the southwest of the FTP. There are no buildings within at least a 0.25-mile radius of the site.

The Fort Richardson area has a diverse wildlife population. Wildlife found at the Fort include moose, bear, Dall sheep, swans, and waterfowl. No threatened or endangered species are known to reside on the Fort Richardson installation (ES&E 1983a).

4.2.3 Fate and Transport Contaminants

Physical and chemical properties of chemicals are important determinants of the fate and transport processes that directly affect the exposure potential for human and environmental receptors. This section describes some of the more important properties and probable fate and transport of the chemicals of potential concern found at the site.

4.2.3.1 Diesel Range Hydrocarbons

These high molecular weight constituents are likely to adsorb to soils, particular by those with a high organic content. The water solubility of diesel and oil is minimal, thus migration via water is limited to surface dispersion.

4.2.3.2 Lead

Lead is a naturally occurring metal used in the manufacture of batteries, ammunition, and various metal products (e.g., sheet lead, solder, and pipes), and it is contained in many industrial chemicals, including fuel additives. Soil lead content normally ranges from 10 to 30 mg/kg in soils (USEPA 1986b).

Sorption processes exert dominant effects on the distribution of lead in terrestrial and aquatic environments. The dominant sorption mechanisms are dependent on geologic setting, pH, oxidation-reduction potential, availability of ligands, and chemical composition of the soil. Adsorption of inorganic and organic materials, hydrous iron, and manganese oxides controls the mobility of lead in soils. Over most of

the pH range, lead carbonate and lead sulfate control solubility, and their solubilities are low. Lead also strongly bonds with organic materials present in soil.

Lead in soils is not easily taken up by plants, so the availability of lead to terrestrial organisms by this route appears to be limited. Bioaccumulation of lead has been demonstrated for a variety of organisms, with bioconcentration factors typically ranging from 42 to 1,700 (USEPA 1986a.) Due to the affinity of lead to the soil matrix, it is expected that lead will be immobilized in the surface soils.

4.2.4 Transport and Exposure Pathways

The highest levels of contamination were found in the surface soil. Because access to RFTP-2 is unrestricted, exposures to surface soil contaminants can potentially occur by dermal contact and incidental ingestion of surface soils. Lead may also become airborne by wind erosion, but this is probably limited by the hardness of the soil in RFTP-2.

Contaminants cannot migrate in surface water to Fossil Creek, 1.3 miles north of the site, as there is no viable overland route. Because of the high permeability and low organic content of the soil, soluble contaminants leached by infiltrating rainwater will tend to migrate downward. Given the considerable depth of groundwater, about 140 feet bgs, and small amounts of precipitation, about 15 inches annually, it seems unlikely that a significant concentration of site contaminants has reached groundwater.

4.2.5 Potential Receptors

Based on the location of contaminants in surface soil and the limited migration of contaminants from the site, potential exposures to site contaminants are likely to occur at or near the site by the following pathways:

- o Direct dermal contact with contaminated soil;
- o Incidental ingestion of contaminated soil; and
- o Inhalation of airborne contaminants, mainly vapors of VOCs.

Access to the RFTP site is unrestricted. Potential receptors would include any wildlife or people, perhaps hunters or army personnel, passing through the site. The setting of the site suggests that human exposures will be infrequent.

4.3 FORT WAINWRIGHT HAZARD ASSESSMENT

4.3.1 Contaminants Detected

WFTP-3A surface soil contains diesel range hydrocarbons at concentrations (21,460 mg/kg) that exceed the ADEC regulatory matrix concentrations. WFTP-3B also contained diesel range hydrocarbons from 2.5 feet bgs to 8.5 feet bgs at concentrations (1,370 to 1,707 mg/kg) that exceed the ADEC regulatory matrix concentration. The presence of the diesel confirms that the WFTP-3B area was formerly used as an FTP.

WFTP-3A and WFTP-3B also contained compounds above background concentrations, but not above federal or state regulatory limits. Contaminants detected in the surface soil of WFTP-3A included benzene (421 μ g/kg), toluene (1,611 μ g/kg), xylenes(2,205 μ g/kg), lead (99.3 mg/kg), and zinc (216 mg/kg). Analysis of subsurface soil from WFTP-3A did not reveal any contamination. Subsurface samples from WFTP-3B contained xylenes (1,167 μ g/kg), and 2-methylnaphthalene (1,470 μ g/kg) from 2.5 feet to 4.0 feet bgs.

4.3.2 Site-Specific Conditions

4.3.2.1 Geographical Setting

Fort Wainwright is located in two physiographic provinces: the Tanana-Kuskokwim Lowlands and the Yukon-Tanana Uplands of central Alaska. WFTP-3A and WFTP-3B are located in the Tanana-Kuskokwim Lowlands. The Fort is located on nearly level ground within the meander belt of the Chena River. The typical elevation is 450 feet above MSL with local relief of only 15 feet. The bedrock hills of the Birch Creek Schist, rising from 550 feet to an elevation of 1,097 feet, are located at the northern boundary of the base (WCC 1990c; USGS 1966).

4.3.2.2 Climate

Fort Wainwright is located in a continental subarctic climatic zone characterized by great diurnal and annual temperature variations, low precipitation, low humidity, short moderate summers, long cold winters, great seasonal contrasts in light duration, and low incidence of cloud cover (Leslie 1989).

The monthly mean temperatures range from -11.9°F in January to 60.7°F in July. The mean total precipitation is 11.2 inches, with 6.6 inches of the precipitation occurring as rain during the summer (June through September). The mean total precipitation includes 69.7 inches of snow (Leslie 1989).

Prevailing airflow in the area is from the north in all months except June and July when the wind originates from the southwest. Mean wind speeds range from 3.1 to 7.6 miles per hour (Leslie 1989).

4.3.2.3 Site Geology

Fort Wainwright is located on a buried river valley. The installation is underlain by several hundred feet of Quaternary glacial sediment. The top layers consist of a 6- to 20-foot surficial layer of silty micaceous loess and fine-grained sand derived from the outwash plain of the Tanana River. Drilling logs indicate that unconsolidated silt, sand, and gravel outwash deposits typically underlie this surficial layer.

The Tanana River valley is filled with floodplain alluvial deposits consisting of unconsolidated silt, sand, and river gravel. Locally, the ground is discontinually frozen (permafrost) and ice content of the soil can range from low to very high. In the immediate vicinity of the WFTPs, permafrost is not known to exist. The gravels consist mostly of quartz and gneiss, and have been mined extensively for gold further to the east.

Bedrock underlying the area is primarily Precambrian Birch Creek Schist with a few occurrences of Paleozoic and Mesozoic intrusives. Generally, the depth to bedrock in the valley is less than 300 feet, but buried valleys do exist and can reach over 700 feet bgs (WCC 1990c; ES&E 1983b).

4.3.2.4 Hydrology

Fort Wainwright lies within the Tanana River and Chena River drainage basins. All surface water runoff from the installation eventually drains into the Tanana River. The Tanana River is a silt-laden, highly braided glacial stream with a channel that meanders across an alluvial floodplain (WCC 1990c). The WFTPs are located less than 1 mile south of the Chena River and more than 3 miles north of the Tanana River (USGS 1966).

The aquifer underlying Fort Wainwright is composed of unconsolidated sands and gravels 300 to 700 feet thick that lie in a buried river valley. The aquifer appears to be a single, unconfined, completely saturated (except the vadose zone), high-yielding aquifer containing discontinuous permafrost (USACE 1989). The water table at the installation occurs at depths of 7 to 10 feet (WCC 1990c). Regionally, groundwater flows westward in the same direction as the Tanana and Chena Rivers. South of the Chena River, groundwater flows west-northwest. North of the Chena River, groundwater flows west-southwest. Groundwater is recharged through infiltration of precipitation and seasonally through infiltration of the Tanana River.

4.3.2.5 Potentially Exposed Populations

Fort Wainwright occupies 915,000 acres of land with 15,000 acres in the main cantonment area at the eastern edge of the City of Fairbanks, in the Tanana River Basin of interior Alaska. The City of Fairbanks has a population of 28,854. Approximately 15,000 people live and work at Fort Wainwright (WCC 1990c).

The area in the immediate vicinity of the WFTPs is wooded and is intersected by military roads that are traveled frequently. The closest buildings, approximately 600 feet north of the WFTPs, are a hangar and a Corps of Engineers building. Further north are taxiways for the Fort Wainwright airport. A forested area and a parking area for recreational vehicles are located to the west of the WFTPs. East of the WFTPs is an ammunition storage area. The area south of the WFTPs is also wooded.

The site is not fenced except for a locked gate at WFTP-3A to restrict vehicular traffic. Due to the sensitive nature of the ammunition storage area, the area is patrolled by Military Police.

The nearest residential area, a barracks, is located about 2,000 feet southwest of the site. Another post housing area is located about 0.8 miles north of the site. The closest off-post residential area is about 1 mile southeast.

Groundwater is used as a water supply source by the City of Fairbanks and Fort Wainwright. The Fort drinking-water wells are located about 1.25 miles southwest of the FTPs. Fairbanks wells are located over 4 miles west of the site on the south bank of the Chena River.

Woodland wildlife species are found in the Fort Wainwright area. The base lies within a moose herd wintering range and a major migration route to moose calving grounds.

4.3.3 Fate and Transport of Contaminants

Physical and chemical properties of chemicals are important determinants of the fate and transport processes that directly affect the exposure potential for human and environmental receptors. This section describes some of the more important properties and probable fate and transport of the diesel range hydrocarbons found at the site. These high molecular weight constituents are likely to adsorb to soils, particularly those with a high organic content. The water solubility of diesel and oil is minimal, thus migration via water is limited to surface dispersion.

4.3.4 Transport and Exposure Pathways

Because access to the WFTPs is unrestricted, exposures to surface soil contaminants can potentially occur by dermal contact and incidental ingestion of surface soils. In addition, contaminants will tend to volatilize to ambient air, potentially exposing receptors, at or downwind of the source area, to site contaminants by the inhalation pathway.

Nonvolatile contaminants may also become airborne by wind erosion of the soil, but this will be limited because most of the soil surface is vegetated or covered with gravel, and the area is surrounded by trees.

The surface soils at the WFTPs consist of sandy silt to silty sand. The silty content of the soil may moderately retard contaminant migration. Overland runoff flows north and northwest to a drainage ditch adjacent to Montgomery Road. The drainage ditch flows toward the Chena River about 0.4 mile away, potentially allowing migration of metals from the site to the river. VOCs and other soluble contaminants leached by infiltrating rainwater will tend to migrate downward toward groundwater. The water table in the area is less than 10 bgs. The groundwater that flows west-northwest could potentially carry contaminants from the site to the Chena River, about 0.75 miles away in that direction. Because of the distance from the site to the river and dilution upon reaching the river, it is unlikely that significant contaminants will reach the Chena River via surface water or groundwater migration.

Groundwater is used as a water supply source by the Municipality of Fairbanks. However, the distance to the drinking-water wells is considerable, and they are not likely to be affected by migration of site contaminants in groundwater. Fort Wainwright drinking water wells are located approximately 1.25 miles southwest of the site. Groundwater flows to the northwest. Therefore, there is very little potential for contaminants to migrate against the flow of groundwater to the drinking water wells.

4.3.5 Potential Receptors

Potential exposures to site contaminants are most likely to occur at or near the fire training pits by the following pathways:

- o Direct dermal contact with the contaminated soil;
- o Incidental ingestion of contaminated soil; and
- o Inhalation of airborne contaminants.

Access to the site is unrestricted. Potential receptors would include any wildlife or human receptors passing through the area. The location of the site, amid operational areas of the Fort, suggests that the likeliest receptors are army personnel working in the area.

4.4 FORT GREELY HAZARD ASSESSMENT

4.4.1 Contaminants Detected

Diesel range hydrocarbons were detected at GFTP-4B and GFTP-4D at concentrations near or above regulatory limits. Diesel range hydrocarbons were detected at concentrations exceeding ADEC regulations at GFTP-4B and GFTP-4D. GFTP-4B contained diesel range hydrocarbons from 4.5 feet bgs to 11 feet bgs with a maximum concentration of 2,450 mg/kg. GFTP-4D contained diesel range hydrocarbons from 4.5 feet to 6 feet bgs at a maximum concentration of 1,040 mg/kg. GFTP-4B contained DDD (81,000 μ g/kg), DDT (150,000 μ g/kg), and DDE (2,900 μ g/kg); GFTP-4D contained DDD (330.0 μ g/kg), DDT (1,200.0 μ g/kg), and DDE (55.2 μ g/kg). These were found in samples collected from 4.5 feet to 11 feet bgs at concentrations substantially above background concentrations.

GFTP-4B and GFTP-4D also contained TCA (13 $\mu g/kg$ and 15 $\mu g/kg$, respectively) and PCE (177 $\mu g/kg$ and 182 $\mu g/kg$, respectively) from 1 foot to 6.5 feet bgs at concentrations below regulatory limits but above background concentrations. GFTP-4A contained dioxin from 4.5 feet to 6 feet bgs at a concentration of 0.32 $\mu g/kg$ TEF relative to 2,3,7,8-TCDD. This is only one-third of the regulatory concentration limit. Dioxins were detected in the samples analyzed at CAS laboratory more frequently then in equivalent duplicate samples analyzed at the SWOK laboratory. Additionally, rinsate sample contained dioxin. These peculiarities lead to questioning the validity of the dioxin data.

4.4.2 Site-Specific Conditions

4.4.2.1 Geographic Setting

Fort Greely is located in the Tanana-Kuskokwim lowlands, which are characterized by bottomland forests and wetlands, and braided glacial meltwater streams flowing north towards the Tanana River (ES&E 1983c).

The Fort is located adjacent to the meander belt of the Delta River. The typical elevation is 1,200 feet above MSL. Fort Greely is located south of Delta Junction near the convergence of the Delta River and Jarvis Creek. Delta Junction lies on the eastern edge of the bottomland spruce-popular forest and just west of the lowland spruce-hardwood forest ecosystem (JFS 1973).

4.4.2.2 Climate

Fort Greely has a continental climate, giving it warm summers and cold winters. The temperature ranges from 85°F to -65°F. The average temperature in the summer is 49.1°F and in the winter 5.8°F. High winds can make the winter particularly severe. Precipitation is light, averaging 11.51 inches including 41.3 inches of snow (Leslie 1989).

Throughout the winter, the prevailing wind direction is from the southeast at approximately 9.1 miles per hour. However, during June and July the wind is directed from the southwest at approximately 7.2 miles per hour (NOAA n.d.).

4.4.2.3 Site Geology

The study area at Fort Greely is underlain by Quaternary deposits resulting from Pleistocene glaciation. Bedrock occurs at depths greater than 400 feet bgs. Soils beneath the GFTPs consist mainly of stratified, well-drained, sandy silty soils with wet, silty, sandy permafrost soils in depressions (ES&E 1983c). The Delta River is located 1 mile west of the GFTPs, and Jarvis Creek is located 2,000 feet east of the GFTPs.

4.4.2.4 Hydrology

Maximum stream discharge occurs in late summer, when snow and melting ice reaches its maximum and is augmented by rainfall (ES&E 1983c). Surface water flows to the north.

The water table at the installation occurs between 174 feet and 200 feet bgs (ES&E 1983c). Water bearing strata at Fort Greely consist of both confined and unconfined aquifers, the unconfined aquifer being the

┙

major source of water supply to the installation. Groundwater reservoirs are replenished by percolation from the glacier-fed streams. Direct infiltration of precipitation contributes minimally to the aquifer supply.

4.4.2.5 Potentially Exposed Populations

The area in the immediate vicinity of the GFTPs is a combination of open fields and forests. The cantonment area is 0.5 miles southwest of the GFTPs. The closest buildings are those of the Fort Greely airport, located 1,000 feet west of the GFTPs. GFTP-4B is used as a freight storage area for extra freight or for hazardous freight that is carried by planes. The area surrounding GFTP-4D is regularly used by military troops as a bivouac area. The site is totally unrestricted to human or animal traffic. The E & E field team observed equestrians riding through the site.

The Delta caribou heard regularly winters in the Fort Greely area (ADFG 1985). Moose are abundant and brown bear are also found in the area of the Fort (ADFG 1985). Bison, introduced to the area in the 1920s, have fall and winter ranges in the Fort area.

Ducks and geese migrate along the Delta and Tanana Rivers (ADFG 1985). Sandhill cranes migrate through the Fort area from late April to mid-May and again in September. Thousands of migrating waterfowl are observed in the area each year (ADFG 1985). Lake trout and Arctic grayling are found in the Delta River (ADFG 1990).

4.4.3 Fate and Transport of Contaminants

Physical and chemical properties of chemicals are important determinants of the fate and transport processes that directly affect the exposure potential for human and environmental receptors. This section describes some of the more important properties and probable fate and transport of the chemicals of potential concern found at the site.

4.4.3.1 Diesel Range Hydrocarbons

These high molecular weight constituents are likely to adsorb to soils, particularly those with a high organic content. The water solubility of diesel and oil is minimal, thus migration via water is limited to surface dispersion.

4.4.3.2 Pesticides

DDT [p,p'-DDT or 2,2-bis-(p-chlorophenyl)-1,1,1-trichloroethane] is a pesticide extensively used throughout the world for insect control. DDT insecticidal properties were first recognized in 1939. It was used extensively for insect control during World War II and has been in world-wide agricultural use since then. In 1972 the EPA banned all uses of DDT in the United States primarily because of accumulation of residues in the environment and concern about its possible carcinogenicity (ATSDR 1989).

Technical-grade DDT typically contains 80% to 90% p,p'-DDT. Other components include DDE [p,p'-DDE or 2,2-bis(p-chlorophenyl)-1,1-dichloroethylene], and DDD [p,p'-DDD, or TDE or 2,2(p-chlorophenyl)-1,1-dichloroethane]. Together, these compounds are known as DDT-T.

DDT-T is a man-made chemical and does not occur naturally in the environment. However, it is presently widely distributed in the environment as a result of its extensive past use as a pesticide and its high stability and persistence. DDT-T also tends to accumulate in the food chain. One of its most significant environmental effects is that elevated levels cause thinning of the shells of birds' eggs. This has had a devastating effect on the reproductive success of many birds of prey, particularly eagles.

The low water solubility and high organic carbon and octanol-water partition coefficients of DDT-T indicate that it is strongly bound to soil and organic material. It is not readily mobile as a free compound in soils and, consequently, does not migrate readily in the subsurface unless a co-solvent, such as oil or organic solvents, is present to transport it. Volatilization of DDT and DDE is known to account for considerable losses of these compounds from surface soils and water.

The major removal processes for DDT-T residues in the atmosphere are photochemical degradation, and dry and set deposition, with the latter processes accounting for the bulk of the removal (ATSDR 1989).

In the atmosphere DDT-T is subject to direct photo-oxidation and reaction with photochemically produced hydroxyl radicals. Because of the above process, DDT has an estimated half-life in the atmosphere of 2 days (Coulston 1985). In surface water DDT is photodegradable by wavelengths of light present in the troposphere. DDT-T is not known to hydrolyze, and biodegradation in surface water is considered a minor method of transformation (Johnsen 1976). On soil surfaces DDT-T is known to undergo photo-oxidation (Lichtenstein and Schlaz 1959). It also undergoes both aerobic and anaerobic biodegradation in soils. Aerobic degradation converts DDT to DDE, and anaerobic degradation converts it to DDD; the anaerobic process is more rapid (HSDB 1988). Both metabolites are resistant to further degradation; thus, the ratios of DDD and DDE to DDT in the environment are likely to increase. The half-life to DDT in soil has been estimated to range from 2 to greater than 15 years (Lichtenstein and Schlaz 1959; Stewart and Chisholm 1971).

4.4.4 Transport and Exposure Pathways

Contaminants found in subsurface soils in GFTP-4B and GFTP-4D include pesticides and diesel range hydrocarbons. Because access to the site is unrestricted, exposures to site contaminants can potentially occur by dermal contact and incidental ingestion of surface soils. Contaminants could also potentially become airborne by wind erosion of surface soil, but this is limited by vegetation or gravel over most of the ground surface in the fire pits.

Surface soil contaminants could potentially migrate with surface runoff to Jarvis Creek, 2,000 feet east of the site. Because of the distance to the creek and dilution effects, the concentrations of contaminants reaching Jarvis Creek will probably be extremely small. However, pesticides are persistent in the environment and tend to bioaccumulate and, if they reached the Creek, could concentrate in fish.

The soils underlying the GFTPs consist of gravelly sand and sandy gravel, and offer little retardation of contaminant migration. Contaminants leached by infiltrating rainwater will tend to migrate downward through the permeable soil toward groundwater. However, given the considerable depth to groundwater, approximately 175 feet bgs, and the light precipitation, 11.5 inches annually, it seems unlikely that significant concentrations of site contaminants have reached groundwater.

4.4.5 Potential Receptors

Potential exposures to site contaminants are likely to occur at or near the fire training pits by the following pathways:

- o Direct dermal contact with contaminated soil;
- o Incidental ingestion of contaminated soil; and
- o Inhalation of airborne contaminants.

Access to the site is unrestricted. Potential receptors would include any wildlife or human receptors passing through the area. The likeliest human receptors are army personnel who regularly use the area for military exercises.

If pesticides from the site migrated to Jarvis Creek, they could bioconcentrate in fish, potentially exposing waterfowl and other receptors who consume fish from the Creek to significant levels.

5. PROPOSED FUTURE WORK

Based on the results of the current field investigation, a general sampling plan for future work is outlined below. Review of the 1991 analytical results indicates that WFTP-3B, GFTP-4B, and GFTP-4D contain contaminated soil and are therefore confirmed FTPs. RFTP-2, WFTP-3A, and GFTP-4A are known FTPs.

The FTPs are best described as waste piles, as defined in the federal regulations. According to 40 CFR 265.258, waste piles are closed by removing contaminated soil or by adding a cover to the FTP area. The proposed sampling plan will provide sufficient information to determine the extent of contamination and the volume of contaminated soil at each FTP. Additionally, if groundwater quality is potentially threatened, the sampling plan will also determine the existence of groundwater contamination and the attribution of the contamination of FTPs, while determining specific groundwater flow directions at the site.

5.1 FORT RICHARDSON

The collection of surface and subsurface samples is recommended to determine the vertical and lateral extent of lead and diesel contamination. The contaminated soil can then either be remediated on site or be removed for remediation.

At RFTP-2 the water table is approximately 140 bgs, and the contaminants were detected at only moderate concentrations in the soil. The potential for groundwater contamination is low; however, lead is present at a significant concentration. Soil should be analyzed for total lead

as well as lead according to the TCLP in samples collected during the future subsurface sampling investigation at RFTP-2. If the concentration of lead exceeds the TCLP limit, groundwater monitoring wells may have to be installed.

5.2 FORT WAINWRIGHT

Since Fort Wainwright has been placed on the NPL, the Fort Wainwright FTPs will not be further investigated under this delivery order, but will be investigated in accordance with the Inter-Agency Agreement. Surface and subsurface soil samples should be collected at WFTP-3A and WFTP-3B to determine the lateral and vertical extent of diesel contamination. The soil can be remediated on site or it can be removed from the site.

Although contaminants were detected at only moderate concentrations, they may be present in the groundwater because the water table is very shallow. Drinking water wells are approximately 1.2 miles from the site. Although there currently are monitoring wells surrounding the site, E & E recommends installing a well at the site to determine if diesel contaminants have migrated to the groundwater.

5.3 FORT GREELY

At the Fort Greely FTPs, surface and subsurface soil samples should be collected to a minimum depth of 25 feet in a grid pattern around GFTP-4A. The depth of 25 feet was chosen in order to sample soil from beneath the pits. Subsurface and surface samples should also be collected from GFTP-4B and GFTP-4D to determine the vertical and lateral extent of contamination. The soil should be removed from GFTP-4B and GFTP-4D for remediation of DDD, DDE, and DDT to meet a cleanup standard that will be determined in the future.

5.4 POSSTBLE REMEDIAL MEASURES

Soil contaminated with petroleum hydrocarbons can be remediated by a number of methods including bioremediation, <u>in situ</u> vacuum extraction, land farming, composting, soil pile aeration, low temperature volatilization, and other methods.

The presence of a RCRA characteristic or listed waste (lead) will severely limit the overall effectiveness of some of the above methods. The potential presence of a dioxin will require either very expensive on-site incineration or dechlorination, or excavation, transportation, and very expensive storage at a TSD facility in Texas. (At present, the Texas facility is the only facility permitted to store dioxin from off-site.)

The presence of metals in the soil, even if the soil is not a characteristic waste, can prove toxic to bioremediation microbes. This can be most readily determined by a bench scale test. If the soil is a characteristic waste, treatment would be necessary prior to land disposal either in situ or ex situ.

The presence of DDT, which is soon to be included in the landban, requires thermal destruction or other treatment.

Although in every case further sampling will be required, the type and extent of sampling will depend to some extent upon the remedial measures proposed. Groundwater may have to be monitored at each Fort, depending upon water table depth and concentration of contaminants, as described above. However, prior to developing detailed sampling plans, the general direction of the remediation must be determined for each of the three Forts.

6. REFERENCES

- 18 AAC 78, June 1991, Guidance for Storage, Remediation, and Disposal of Petroleum Contaminated Soils, in Guidance Manual for Underground Storage Tank Regulations.
- 40 Code of Federal Regulations (CFR), Parts 260-299.
- 49 CFR, Department of Transportation, Parts 0-100.
- Alaska Department of Fish and Game (ADFG), 1985, Alaska Habitat Management Guides, Volume I: Fish and Wildlife Histories, Habitat Requirements, Distribution, and Abundance, map atlases for Southwest Alaska, Division of Habitat, Juneau, Alaska.
- , 1990, Fishery Data Series No. 90-44, Harvest and Participation in Alaska Sport Fisheries During 1989, Division of Sport Fish, Anchorage, Alaska.
- Agency for Toxic Substances and Disease Registry (ATSDR), December 1989, Toxicological Profile for DDT, DDE, and DDD.
- Cederstrom, D.J., F.W. Trainer, and R.M. Waller, 1964, Geology and Ground Water Resources of the Anchorage Area, Alaska, USGS Water-Supply Paper 1773, p 108, 4 plates.
- Coulston, F., 1985, Reconsideration of the Dilemma of DDT for the Establishment of an Acceptable Daily Intake, Regul Toxical Pharmocol, 5:332-383.
- Environmental Science and Engineering, Inc. (ES&E), 1983a, Installation Assessment of the Headquarters 172nd Infantry Brigade (Alaska) Fort Richardson, Alaska, Report #328A.
- ______, 1983b, Installation Assessment of the Headquarters 172nd Infantry Brigade (Alaska) Fort Wainwright, Alaska, Report #328B.
- , 1983c, Installation Assessment of the Headquarters 172nd Infantry Brigade (Alaska) Fort Greely, Alaska, Report #328C.
- Hazardous Substance Database Databank (HSDB), 1988, Hazardous Substance Database Databank #200 (DDT), 1625 (DDE), 285 (DDD).

References (Cont.)

- Johnsen, R., 1976, DDT Metabolism in Microbial Systems, Res Rev, 61:1-28.
- Joint Federal-State Land Use Planning Commission for Alaska (JFS), 1973. Major Ecosystems of Alaska.
- Leslie, L., 1989, Alaska Climate Summaries, 2nd ed., Alaska Climate Center Technical Note Number 5, A Compilation of Long-term Means and Extremes at 478 Alaskan Stations, Arctic Environmental Information and Data Center, University of Alaska, Anchorage.
- Lichtenstein, E., and K. Schlaz, 1959, Persistence of Some Chlorinated Hydrocarbon Insecticides as Influenced by Soil Types, Rate of Application and Temperature, <u>J Econ Entomol</u>, 52:124-131.
- National Oceanic and Atmospheric Administration (NOAA), n.d., Local Climatological Data, National Climatological Data Center, Asheville, North Carolina.
- North Pacific Division Laboratory (NPDL), 1991, Quality Assurance Laboratory, Quality Assurance of Analytical Data for Fire Training Pits at Fort Richardson, Fort Wainwright, and Fort Greely.
- Stewart, D., and D. Chisholm, 1971, Long-Term Persistence of BHC, DDT and Chlordane in a Sandy Loam Soil, Can J Soil Sci, 51:379-383.
- United States Army Corps of Engineers (USACE), 1989, Directorate of Engineering and Housing, Analytical/Environmental Assessment for Future Development Plans, Fort Wainwright, Alaska.
- ______, 1990, Aerial Photographs for Fort Wainwright: M84-42 (1961); 47, 48 (1968); 7-20, 21 (1972); 4-27, 28, 29, 30; 5-30, 31 (1974); 6-27, 28, 29 (1977); 6-25, 26, 27 (1983); 3-8 (1982), and Aerial Photographs for Fort Greely: M95-49, 50 (1961); 2-16, 17 (1968); 6-17, 18, 19 (1969); 3-9, 10 (1975); 014 (1976); 7-16, 17 (1983).
- United States Army Environmental Hygiene Agency (AEHA), October 1983, Solid Waste Consultation No. 38-26-0354-84, Evaluation of Solid Waste Disposal Practices, Fort Richardson and Wainwright, Alaska.
- United States Environmental Protection Agency (USEPA), 1986a, Air Quality Criteria for Lead, Volume IV, Environmental Criteria and Assessment Office, Washington, D.C.
- ______, 1986b, Superfund Public Health Evaluation Manual, Office of Emergency Response and Remediation, Washington, D.C.

References (Cont.)

- United States Environmental Protection Agency (USEPA), March 1989, Interim Procedures for Estimating Risk Associated with Exposure to Mixtures of Chlorinated Dibenzo-p-Dioxins and Dibenzofurans (CDDs and CDFs) and 1989 Update, EPA/625/3-89/016.
- ______, March 1990, Risk Assessment Forum Report on Revised Toxicity
 Equivalent Factors, Memorandum from Henry Habicht II to Regional
 Administrators.
- United State Geological Survey (USGS), 1966, Topographic Map (1:24000), Fairbanks, D-2 SE, Alaska.
- Woodward-Clyde Consultants (WCC), 1990a, Installation Restoration Program, Stage 1, Site 4, Fire Training Pits, Final Report.
- ______, 1990b, Installation Restoration Program, Stage 1, Site 2, Roosevelt Road Transmitter Site, Final Report.
- _____, 1990c, Installation Restoration Program, Stage 1, Site 3, Fort Wainwright Landfill, Final Report.

APPENDIX A
EPA FORMS 2070-12

&EPA	PART 3 - DESCRI	PRELIMINA	ZARDOUS W/ ARY ASSESSM ARDOUS COND	JENT	INCIDENT	٠,	I. IDENTIFICA	
HAZANDOUS COND	INDIES AND RECIDES					J		
LIXI DAMAGE 1011			nz i X chiar nyr	11 (11) ATT 6/2	1/91		tfrittitiat	U MH can
	does not gro	w on the	FTP, but de	oes grow	sparino	jly a	around the	
I DOK, DALINGE TO F			חסון ומווים ווכח				. jamitmot Ki	
A potential around the	exists for FTP.	fauna to	consume co	ntaminate	ed Mor	n or	soil that	is growin
	ROLLOL FOOD WINES					î	JAIHI HO'.	ET AFFECTED
ייין און און און אין אין נייי און און און און אין אין אין אין אין אין אין אין אין אי	CONTABILITIES OF WA	SIES	02 I Fotos r	IVI II III AIF		•	1 1 POT POLICE	
Petroleum FIP.	was poured t	nto a nit	that was	ve precuedo un linedio	uring	the (operation	of the
OFFICE OFFICE OF THE STATE OF T	नामानसम्बद्धः १२ छात्र व सारक्षः कारकाक्षेत्रसम्बद्धः र		12 L OHG	fish to posit		1	TERMITHIAL	TTATITEST
Horie know	n							
	tentent of With S						(tratima)	TARTECT!
llone know	n ·							
	BINGITE TYPICHTERS			TIVITI		1	HIROTHA	1 t Allfri
Hone knov	ın	-					,	
est th desperate his co	4 VIIS CHILL LIKIM	u, fromunal, o	I ALLECT II HAZAD	193			: <u>-</u> . ,	
flone kno	vin			·				
III TOTAL FORM	Allon Potentiall						· · · · · · · · · · · · · · · · · · ·	
	÷							-
to the same and	HIF ORMATION MA						~	
E & E , 19	HILDHAMION MAN	reide intereses, e. p.,	4130 Mr 2, \$200pin 20,1/2 to	· · · · · · · · · · · · · · · · · · ·				

8	E	P/	4
HAZ!			

	IFICATION
OI STATE	०७ ह्यांह स्वाध्वत व

>EPA	PART 3 - DESCRIPTI	ON OF HAZARD	' ASSESSMENT DOUS CONDITIONS AND	INCIDENTS	OI STATE OF SHE N	Mint H
t · A CHEMPHRIVAL	HOUS AND MICHENTS	707	tionica live comments	···· i	fitratina i	i Atticati
			an 3 mHes from groundwater con			
i i ca ju vikali cil i [j B	HINNER WELLERIN		21 COUNTING GOAR A HARRANG OF WEIGHOR	;-··	T T T T T T T T T T T T T T T T T T T	dellia
Surface wa	ter contaminat	ion is not	predicted.			
H C COMPUNITO	MINISTER AND THE CITED 1	6,040	THE THE PROPERTY OF THE STATE O	1	Kranna	T' ALLEGED
Stained so		alongside :	a nearby road.			
THE PROPERTY OF THE PROPERTY O	orrecept + verrecett		OF TRUBUNATION OF THE BOARD OF		O CONTROL	ti Attivity
llone know	n					
		r persons (gattomanytoman at marginal discipant traveling on the	road to	Krairina come into con	tact will
DEM PROPERTY	MANUFACTURE O.2	acres	OS IN CHEETING THE SCHILLE	.6/24/91 i	Recognition	L'AUTER
The acrea	Training Pit v	as only 0.	2 acres. The ex not be estimate			
ortio hunga nico in apear Drinking	wan incomamiano mater wells a	re greater	ostronsenviolovie ostronsenviolovie than 3 miles fro	m the sit	i i i i i i i i i i i i i i i i i i i	f i Atticuti
	CHEST OF THE BUILD IN THE		में क्षां मुख्य मुख्य में मुख्य एक्षा मुख्य मुख्य कर्मा करता करता		j iraitimaj	LIMITER
The ste	is inactive.					
	HOLLEN COMMENDATE	16,040	ייט און אויט אייט פרויעי פון אוד.			

er abendernen toft mit

	TENTIAL HAZA PRELIMINARY 1 - SITE INFORMA	/ ASSES	SMENT	_		FICATION 02 SITE NUMBER
II. SITE NAME AND LOCATION						
OI SITE NAME (Leg of common or descriptive name of see)		02 STREE	T. ROUTE NO . O	A SPECIFIC LOCATION	DENTIFIER	
Ft. Wainwright FTPs		0ff	Montgome	ry		_
Fort Wainwright		AK	99703	North Star		1gh N/A
10 DIRECTIONS TO SITE (Several	35" 56"				· · · ·	<u></u>
Enter site at Airport Way ent South on Meridian and turn le right side of road after Luzo	ett on Monta	ceed o	n Gaffne Road. A	y to Meridi ccess road	an Roa to FTF	d. Proceed es is on the
01 OWNER (N Angen)		107 57055				
U. S. Army		INT STHEE	T (Butnest miley,	residenturi		——————————————————————————————————————
Ft. Wainwright		O4 STATE AK	99703	OS TELEPHONE	NUMBER	T
U. S. Army		08 STREE	T (Burunes), menny,	45 viánjují		<u> </u>
Fort Wainwright		AK	99703	12 TELÉPHONE	YUMBER	
13 TYPE OF OWNERSHIP (Charanna) TI A PRIVATE KI B. FEDERAL:						<u> </u>
	(Agency name)		U C, STAT	E CID COUNTY	I E MU	INICIPAL
17 F OTHER:	<u> </u>		- TI G, UNKI	NOWN		
14 OWNER OPERATOR NOTIFICATION ON FILE (CASC) as that about 13 A RCRA 3001 DATE RECEIVED. MONTH DAY YEAR		ED WASTE	SITE (CERCIA 16	1d DATE BECEN		
IV. CHARACTERIZATION OF POTENTIAL HAZARD				- OXICHEDENE	MONTH D	X C NONE
OI ON SITE INSPECTION BY IC	vch of that analy)					
IJ NO MINITH DAY YEAR DE.	LOCAL HEALTH OFF		F. OTHER			CONTRACTOR
02 SITE STATUS (Check one)	TRACTOR NAME(S):	<u>Ecolo</u>	qy & Env	<u>ironment, Ï</u>	nc.	
☐ A ACTIVE □ B INACTIVE □ C. UNKNOWN	03 YEARS OF OPER	196		ent r	UNKNOW	<u> </u>
04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN	N. OR ALLEGED	EGPPONIG YE	UR EMONY	YEAR		· · · · · · · · · · · · · · · · · · ·
Diesel Range Hydrocarbons						
os description of potential Hazard to Environment and Exposures to contaminants are 1. dermal contact 2. incidental ingestion o			3.	g: inhalation	of VO	Cs
V. PRIORITY ASSESSMENT						
OF PRIORITY FOR INSPECTION (Charte one Minigh or medium is checked. 1.3 A HIGH 1.3 B. MEDITAL	Complete Part 2 - Waste Inform	ration and Parl	3 - Description of Ha-	ardnus Confirmes and inco	ents)	
VI. INFORMATION AVAILABLE FROM	OX C. LOW		EJ D. NONI	E Per action needed, complete		ton tamil
D1 CONTACT	Tagos					
David Williams 04 PERSON RESPONSIBLE FOR ASSESSMENT	U.S. Army		of Engir	neers		03 TELEPHONE NUMBER 753-5657
Jacqueline Lundberg	05 AGENCY	05 ORGAN	LE E	1907, 257		08 DATE 11 ,1 ,91
P . FORM 2070-12 (7 81)		<u> </u>				MONTH DAT TEAR

≎ EF	Ά	S	NTIAL HAZARDI SITE INSPECTIO ART 2 - WASTE IN	ON REPORT	ITE	1. IDENTIFICAT	
II. WASTEST	ATES, QUANTITIES, AN						
	IATES (Com 6 prings angula	07 WASTE QUANT	HIY AT SHE	03 WASTE CHANACTE	FRISTICS of the Lambar Are		- -
X B LUMBER	I TRIES F LIQUID	march ha	Unknown	X ¥ TOXIC	CTIVE ! G FLAME	TKNUS LIJEXTLC MABIF !!K REAC	DSIVE TIVE
, היושונים ק	(Seedy)						APPEICABLE
III. WASTE T	YPE			1			
CATEGORY	SUBSTANCEN	IAME	DI GROSS AMOURIT	12 Utal OF MEASURE	03 COMMENTS	-	
SLU	SLUDGE		Unknown		US CONTRACTOR		
OFM	OILY WASTE		-				
SOL	SOLVEINS		Unknown		ļ		
ครถ	resticibes		- OII KIIO W.	 	ļ		
OCC	OTHER ORGANIC CI	LIEMICALS	Unknown		·		
'UC	PIONGANIC CHEMIC		- UIKIIOMII	 	 		
ACD	ACIDS			· · · · · · · · · · · · · · · · · · · 	·		
BAS	BASES			· — — — — — .	·		
MES	HEAV - METALS		Unknown	·	·		
	OUS SUBSTANCES (5+4	4		J	<u>.l</u>		
OT CATEGORY	02 SUBSTANCE		03 CAS NUMBER	1	<u> </u>	·	
OLW	C10-C18			04 STORAGE/DIS		D5 CONCENTRATION	COMPLAINMEN
OLW	C20-C28		- 	Land Trea		2,958 21,460	mg/kg mg/kg
·	DCKS (See Appendes to CAS Man	Market 1.3					
CATEGORIA	/ 011E0S10	CK NAME	07 CAS MIMBER	VIKOGHAD	OTTEEDST	TOCK NAME	DZ CAS RULINI II
ros	NONE		_	rus	 	7	
ros				IUS	<u> </u>	 -	
1 05				105			
rps			_	105	 		
VI. SOURCE	S OF INFORMATION ICA	ія прастіствіченов, в	g , state files, sample analysis		<u></u>	_ 	
E & 1	E, 1991			-			

I. IDENTIFICATION

SEPA	Si	TE INSPECTION REPORT LOF HAZARDOUS CONDITION	NS AND INCIDENTS	0. 5	
. HAZARDOUS COND	ITIONS AND INCIDENTS				
OTTEA GROUNDWAT	·	02 LI OBSETVED (DATE 04 NATIBATIVE DESCRIP		N LOIENHYF	I) ALLEGED
		cted immediately abo oundwater is contami		able are co	ontaminated.
	THALLY ALLEGIED	02110BSERVED(DATE 04 NAMIAINT DESCRIPTION in the soil could t gside roads.	rtiou	ixrotential	to the
OT FIC CONTAMINA		02 () OBSERVI U (DATE 04 NAMBATIVE DESCRI	: . 3	LI POTERIIAL	L' ALLEGED
	Cs were detected n l ppm in the am	in surface soils, a bient air.	PID did not de	tect organ:	ic vapors
OT FED THE EXILOT OT FORTH AROUTED	ENTIALLY ALFECTED	OS EL DOBLEMEN (DVII	E . I	JAHUTHOTELL	LLAUFGED
None known.					
OT IX E DIRECT COL	HACI	0211 OBSERVED (UAT	E j	Ж готгина	' ALLEGED
WFTP-3B is ι	unfenced. A lock	ne to come into cont ed gate prohibits mo e to get to WFTP-3A.	torized access		
DE VIEW DOTHERING	LY AFFECTED 29.5 ac	res 02 M OBSERVED (DAT	E 6/16/91 1	LI LOTENHVI	11 ALLEGED
	il samples were c on has not been d	contaminated, the lat letermined.	eral and verti	ical extent	of
01 M.C. DURKRICA	ATENCONTAMINATION 15,	,000 021 FORSERVED IDAT	E I	Ø POTENTIAL	L' ALLEGED
The Ft. Wain	owright drinking	water wells are over site flows northwest	· 1 mile to the t toward the C	e southwest hena River.	of the There is
a very limi to the drin	ted potential tha king wells.	it soil contaminants			
OTTH WORKER E	KLOZOUE-BROUKA	02 I I OBSERVED (DAT 04 NATRATIVE DESCR	E)	11 FOTENHAL	11 ALLEGED
The site is	inactive. A wor	rker exposure or inju	iry is not doc	umented in	the files.
DI IXI, POPULATION DI POPULATION POI	EXPOSLINE INJURY 15	000 0211 OBSERVED (DAT		M POTENTIAL	11 ALLEGED
	N _C				

	_	
9	EF	A

I. IDENTIFICATION

SEPA		INSPECTION REPORT HAZARDOUS CONDITIONS AND INCID	FNTS	O1 STATE 02 SF	re Number
II. HAZARDOUS CONI	DITIONS AND INCIDENTS (Communication)				
01 M J DAMAGE TO F	LONA	02 1X OBSERVED (DATE 6/16/91	1 (1 POTENTIAL	11 ALLEGED
WFTP-3A did cover. Fire	not have any veget training activiti	ation growing on it. WFTP- es at WFTP-3A may have stre	3B had ssed t	d moderate the vegeta	vegetation tion.
DI M K, DAMAGE TO I	FAUNA IP11014 (the histories real of all squares)	02 I I ORSENVED (DATE	1 1	XLO1EI1HYF	I I ALLEGED
		herbious to consume vegeta is surrounded by the base;			
01 ITE CONTAMBIAT		0211 OBSERVED (DATE	1	I I COTENTIAL	11 ALLEGED
Contamination	on of the Food Chai	n is unlikely. The site is ult, large animals are not			
D3 POPULATION POTE	OHIAINMENT OF WASTES	02 M OBSERVED (DATE 6/16/91	1	LITOTENTIAL	I I ALLEGED
Surface soi adequately.	l is contaminated,	and therefore wastes must n	ot ha	ve been co	ntained
DI LETT DAMAGE TO		0211OBSERVED IDATE	1	LILOIENINE	LIAULFOLD
None Known					
04 HATHATIVE DESCR	HON OF SEWERS, STORM DRAINS IPTION	WWIPs 0211 OBSERVED (DATE	1	I POTENTIAL	11 ALLEGED
None Known					
01 LLD TREGALUM 04 NAMIATIVE DESCR	ANTION ALLIONATED UNIVERIG	D2 L1 OBSETIVED (DATE	1	LIPOIENHAL	L' ALLEGED
None Known					
OF DESCRIPTION OF	MIT OTHER KNOWN, POTENTIAL, O	OR ALLEGED HAZARDS			
None Known					
III. TOTAL POPULAT	ION POTENTIALLY AFFECTED:	15,000			
None	·				
V. SOURCES OF INF	ORMATION IL 10 SPOCING 10101000003, E. 9	. State Mes., gample Analytis, reports)		·	
E & E, Nove Training Pi	mber 1991, Draft Pr ts at Fort Richards	ogress Report for the Confi on, Fort Wainwright and For	rmation	on of the eley, Alas	Fire ka.

TTATORM2070 12 (7 A1)

PAR	OTENTIAL HAZ PRELIMINA T1-SITE INFOR	RY ASSE	SSI	MENT		I. IDENTI	FICATION 22 SITE NUMBER	- <u>-</u> -
II. SITE NAME AND LOCATION								
01 SITE NAME ILegal, common, or descriptive name of site!		02 STRE	ET. F	ROUTE NO., OR	SPECIFIC LOCATION	DENTIFIER	_	
Fort Greely FTPs	 	513	(th	Avenue				
Fort Greely		04 STAT	E 05	ZIP CODE	N/A		07 COUNT \	TRICON
	ONGITUDE 43			1			!	<u> </u>
Enter Ft. Greely at the main Turn right onto Evergreen Ro	gate and pr ad and then	oceed left o	ea n	st. Tu to Sixt	rn left on h Avenue.	to Rol	oin Road.	•
III. RESPONSIBLE PARTIES	_	 -						
U.S. Army		02 STREE	1 (80	smess, mailing re-	rientiali	<u>-</u>		
Ft. Greely	<u> </u>	04 STATE	05 2	ZIP CODE	06 TELEPHONE NI	UMBER		
07 OPERATOR III known and different (inmowner) U.S. Army	-		T (Bu	sness, mailing res	elentian			
Ft. Greely		10 STATE AK	11 Z	IP CODE	12 TELEPHONE NU	JMBER	· 	
13 TYPE OF OWNERSHIP (Che-4 one)	_							
() A PRIVATE (X B. FEDERAL:	(Agency name)		_	U C. STATE	1 D COUNTY	() F MUN	ICIDAL	
[] F. OTHER:				□ G. UNKNO		C. MON	ICIPAE	
14 OWNER OPERATOR NOTIFICATION ON FILE (Chest and						<u> </u>		
A. RCRA 3001 DATE RECEIVED / MONTH DAY YEAR	B. UNCONTROL	LED WASTE	SIT	EICERCLA ICI -	DATE RECEIVED		./ X C I	NUME
IV. CHARACTERIZATION OF POTENTIAL HAZARD		-			· · · · · · · · · · · · · · · · · · ·	MONTH DAY	YEAR	
$x_{\text{YES}} = \frac{7}{17} - 21/91 = \frac{87}{12}$	heck at Inal apply) . EPA UB, EP . LOCAL HEALTH OFF	A CONTRAC	TOF	THER FCO	STATE (T) t	OTHERC	 QNIRACTOR	
CON	TRACTOR NAME(S):				10gy & LITY ISne	ir Offile	111 <u>0</u> 111 <u>0</u> .	
DE STESTATUS (Check one) C A ACTIVE (XB INACTIVE C C UNKNOWN	03 YEARS OF OPER	RATION					_	
	<u> </u>	196 BEGINNING YEA	- 1	1983		INKNOWN		
04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOW!								
-, DDT, DDD, D	DE, Lead and	i diese	1 1	range hy	ydrocarbons	;		
DES DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND EXPOSURE to contaminants are 1. Direct dermal contact 2. Incidental ingestion of		- 3	_	owing: Inhala	tion of air	-borne	contamir	
/. PRIORITY ASSESSMENT	<u> </u>]
I PRIORITY FOR INSPECTION (Check one if high or measures checked, of I.) A. HIGH (Inspection required prematity) (Inspection required)	- V. EVII		- De sc	JIP NONE	us Conditions and incidents	1	 -	
I. INFORMATION AVAILABLE FROM	(Inspect on time a	ivadable basis)		(No tunner a	clion needed, complete cur.	rent disposition :	form	
David Millia	02 OF (Agency Organical	(ion)					VELET	
David Williams 4 PERSON RESPONSIBLE FOR ASSESSMENT	U.S.Army		ρf	Fngines	re	1	TELEPHONE NUE	
	05 AGENCY	06 ORGANI	ZATIO	-11911166	07 TELEPHONE NUM		07 ⁾ 753-5	657
Jacqueline Lundberg	<u> </u>	E	& E		(907) 257-5	1 00	11 / 01	91
- Comm 2070-12 (7-81)							MONTH DAY IT	ĀĒ

&EP		PA PA	ELIMINARY AS RT 2 - WASTE IN	US WASTE SIT SESSMENT FORMATION	Ē	LIDENTIFICATION	AND IT
II. WASTESTA	IES, QUANTITIES, AN					 	
DITTIVENE STA	IFE of her & green would	TO WARTE OUTSHIT	IV AI SIIE	DE WASIF CHARACTE	METHOR HAND HERMAN		
TO STREET X P COMPUTE X V 20F/P	VIRITYO 3'1 CHUCHY I CHIBY PAG G '	terra 1	Unknown	MA TOXIC LIB CONTROL LIC HADRAN	CHYF L'TIFLANTIN	OUS TIJEXTLOSIV	
. n canda	<i>i7,333,</i> i	отнику функция Отнити		X. ध धासलता	FFIT TITE WITH ATT	TF 1!L TICOVEN	TR: APLT
III. WASIE TY	re						
CATEGORI	SUBSTANCE	JATAE .	01 GHOSS AMOUNT	TIZ UTAT OF THE ASSURE	03 COMMENTS		
รเบ	SLUDGE						<u> </u>
OLW	OIL 4 MAGLE	- 	Unknown				
701	SOLVENIS		Unknown			· · · · · · · · · · · · · · · · · · ·	
1.20	resticions		Unknown				
000	OTHER ORGANIC C	HLMICALS	Unknown				·-·
ioc	HIGHRANIC CHEMI				- 		
v(t)	ACIDS		<u> </u>		·		
2013	UVZEZ						
MEG	HEAV. METALS		Unknown	•••••••••••	·		
IV. HAZARDO	DUS SUBSTANCES (5-4	4			.l		
r ATEGORY	DZ SUBSTANCE		D3 CAS NUMBER	045100AGE DE	STOSAL METHOD	05 CONCENTRATION	OG KILASIJIT. OF CONCENTRATION
							Arabi Edunalia as
							
ōōō ·····	דתת		50-29-3	Land Trea	tment		ug/kg
occ	DDD		6088-51-3			81,000	
occ	DDE		72-55-9	Land Trea	tment	2,900	ug/ką ug/kg
OLW	C10-C18			Land Trea		↓ · - ~ ~ -	
	C18-C24		- 	1		2,450	mg/kq
OLW	· · · · · · · · · · · · · · · · · · ·			Land Trea		1_040_	mg/kg
OTM	Qi1		-	. .Land_Trea		<u>8</u> 20	mg/kg
OFM	C12-C28	···	_ 	_ Land Trea	itme <u>nt </u>	808	. mg/.kg
OTM -	C22-C24			Land Trea	itment	284	. ∏g/.kg .
<u> </u>							
			_				
					·	·	-
V. FEEDSTO	OCKS (See Appendix Mark CASA)	pod-przj	_ 1	_ l		<u> </u>	_1
CATEGOR	ottetosi	OCK HAME	os cas tiurmiti	L CATTERMY	nittee	TOCK HAME	1
103	None			- 103		- 00-2 total	07 C ASTROLIST O
				-	-		
703	···	 :		- l! US			
103	<u></u>	·		- <u> 105</u>			
	ES OF INFORMATION	ICAa spacale intereses,	e g , slate idas, sample posty	20.1 (Pports)	_!		J
		-	 				
1							
1	,						
				-		•	

11 AT 01017070 17 [7 N1]

POTENTIAL HAZARDOUS WASTE SITE 1. IDENTIFICATION **PRELIMINARY ASSESSMENT** OF STATE OF SHE MOMEN PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS II. HAZARDOUS CONDITIONS AND INCIDENTS OF IXA GUOUNDWATER CONTAMINATION OZ I I OBSERVED (DATE RI POTENTIAL 11 ALLEGED 2,000 D3 POPULATION POTENTIALLY AFFECTED **04 NATIFIATIVE DESCRIPTION** The groundwater is recharged via Jarvis Creek. Overland waterflow can transport contaminants from the GFTP's to Jarvis Creek. However, this potential should be considered very limited. DIKIB SINDACE WATER CONTAMBATION DZ I I OBSERVED (DATE. XI POTENTIAL 1 I ALLEGED Unknown ON NAMED TO SERVICE OF SERVICES OF SERVICE Jarvis Creek is 2,000 ft. east of the FTPs. Although no sediment or surface water samples were collected, there is a potential for contaminants at the site to migrate via overland runoff and drainage ditches to Jarvis Creek. OF U.C. COMPARIMATION OF AID D2 () OBSERVED (DATE ... LI POTENTIAL LIALLEGED OF LOLDICATION LOTENTIVITA VILLECTED **04 HABITATIVE DESCRIPTION** A P1D did not detect organic vapors above 1 ppm in ambient air. OLITED THE EXPLOSIVE COMMINUS OZ I J OBSERVED IDATE 11 POIENDAL LIABLECTO MA DOMER VIRORICOTERRIVELY VILECIED. 04 HARBABUT DESCRIPTION None observed. DI IXE PRIECI COMINCI 02 1) ODSERVED (DATE INTERPRETATION I ALLEGED 2,000 OF LOCAL VIRORIALISM WIT A VILLECTED 04 NATIOATIVE DESCRIPTION None of the GFTPs are fenced. Motorized and pedestrian access if uncontrolled. OF IX CONTAMBATION OF SOIL 02 LFORSERVED (UNIE7 / 19-21 / 91)
04 NARDATIVE DESCRIPTION 11 ALLEGED 17 acres DA VIIEV GOTERINY LA VELECTED Although soil samples were contaminated. The lateral and vertical extent of contamination has not been determined. 011 G DRIBKING WATER CONTAMINATION OSTI OBSERVED IDATE. LLAULEGED 0 The Ft. Greely drinking water wells are located south of the FTPs. Groundwater flows to the north. 0211 OBSERVED (DATE OT LLIL MOUKELLEXI, OSUIEWINDUA 11 ALLEGED DA MOUKEUS LOTENHYITTA VELECTED 0 04 NATHRATIVE DESCRIPTION The site is inactive. There is no documentation of a work exposure or injury on site OT LXI, FORULATION EXPOSUME/HAJURY 02 (1 OBSERVED (DATE: **IX POTENTIAL** I I ALLEGED DE POPULATION POTENTIALLY AFFECTED 2,000 The population exposed to injury includes those that use surface water for recreation or who are in the FTP area.

1. IDENTIFICATION

VEPA		ELIMINARY ASSESSMENT OF HAZARDOUS CONDITIONS AND IN	ICINENTE	GI STATE OF SIL	E in while is
HAZARDOUS COND	THONS AND INCIDENTS (COM	_			
TXJ DAMAGE TO F	LONA	07 I NOBSETIVED (DATE	1	I I POTENHAL	11 ALLEGED
	•	in the area of GFTP-4A s			
ege ta cron n	as not grown back	The the area or or the the			
TIXK. DAMAGE TO F	AUDA PHOH thick to a support of spaces;	02 LT ORSETIVED (DATE:	1	(XPDIENTIAL	LIALIFGED
There is a p	otential for faun	a to consume contaminated	flora.	The GFTPs	
are not fend	ed, and therefore	e, animals have access to	them.		
T.L. CONTAMBATI 4 HARRATIVE DESCRI		DSTLODSERVED (DATE	1	I POTENTIAL	L1 VFLEGED
None known.					
45 - 45 ·	OUTAINMENT OF WASTES	02 (XODSERVED (DATE 7/19	-21/1991	11 LOIENINT	LLVILLEED
ITOT HOITA JUTOT E	OUL 2 - CHINILY AFFECTED	O DA HAHMAHVE DESCRIPTION ed, and therefore, wastes	were no	t contained	
DI 1111 DAMAGE 10 DA HARRATIVE DESCI		0211 Observed (DATE	1	I I POTEIMINE	11 Atteces
None known.					
OF LEO COLLEMBIA	MOHOE SEWERS, STORM DRA	1143, WWITE 0211 ORSERVED (DATE	1	11 POTERHAL	11 ALLEGED
None known.					
OFFICE REGALDING	AUTHORIZED DUMPING	02 CT OBSERVED DATE	1	TUBOLEHIM	() ALLEGED
Noné known.	•	•			
os prechietica or flone	VIIA OTHELI KNOMIT LOJEITII	IAL, OR ALLEGED HAZARDS			
III. TOTAL POPULA	TION POTENTIALLY AFFECT	1ED: 2,000			
			· · · · · · · · · · · · · · · · · · ·		
V. SOUNCES OF I	IF ORMATION IGAO SPORTE INFORME	es. e. y., state Mes, spropie protysis, reports)			
E & E. Nov	ember 1991. Draft	Progress Report for the	Confirma	tion of the	Fire
Training P	its at Fort Richa	rdson, Fort Wainwright an	d Fort G	Greely, Alas	ska

O CDA POT	ENTIAL HAZAR	RDOUS	WASTESITE		I. IDENTI	FICATION
I YYEPA	PRELIMINARY	ASSES	SMENT			22 SITE NUMBER
II. SITE NAME AND LOCATION	- SITE INFORMAT	TION AN	ID ASSESSMEN	Τ	<u> </u>	
21 SHE NAME AND LOCATION		* = * = = = = =				
Ft. Richardson Fire Training Pi	it !) We	i nour no conservest of Bryan	nt Field		
Ft. Richardson		AK	05 20° CODE 06 C	chorage a		or. N/A
6 1 1 6' 16.3" 1 4 9	<u>'===:</u>	J				—·
Enter Ft. Richardson from Arctic marked). Follow the road to a the road before the road T's on ULRESPONSIBLE PARTIES	turk ann tu	irn la	TT (NO L	on first TP is on	availa the le	ble road (un- ft side of
OI OWNER (PAnne)		OZ STREE	I (Histories manny secule	-at-at		
U. S. Army		-	· · · · · · · · · · · · · · · · · · ·	ייבינטיי		
Ft. Richardson		04 STATE AK	05 ZIP CODE	on telephone i	HIMPER	T
U. S. Army		OR STOLE	I (Business making service	intra#		
Ft. Richardson		AK	11 ZIP CODE	is technique	пзами	Τ
13 Tyle Or OWNERSHIP IC back one		<u> </u>	<u> </u>	1 1	· <u> </u>	<u> </u>
II A PRIVATE IXB FEDERAL U.S.	Army		. UC STATE	I D COUNTY	TEMU	MICIDAL
11 F OHIER (Special	•	,	- ITG UNKNOV			Major M.
14 OWNER OF FRATOR HOUSEIGATION ON FILE (Check affine)	···				 -	
1' A RCRA 1001 DATE RECEIVED MONTH DAY YEAR	LIB ONCONTROLL	ED WAST	ESUFICERCIA (01-)	DATE RECEIVE	. ابیات ۵	C NONE
IV. CHARACTERIZATION OF POTENTIAL HAZARD					MONIH I	AT YEAR
X YES DATE 6 ,24, 91 IJAE	ekastiniannyi EPA IJ B. EPA LOGAL HEALTH OFFIC	CIAL I	CIOR (1C)	STATE M	D OTHER	CONTRACTOR
CONTI	RACTOR HAME(S).	Ecolo	gy & Enviro	nment Ind	Erry And	chorage
1. V VCLINE & B INVCTINE 1.1 C ANKHOMN	DE YEARS OF OPERA	VIENT	971 1985		<u>===</u> :	===
14 DESCRIPTION, OF SURSTANCES POSSIBLY PRESENT, KNOWN.	· —	EGRAING YE		я1 ^{**}	UNKNOW	N .
Tood discol	ORALLEGED	_	 _			
lead, diesel range hydrocarbor	is and oil					
Exposure by the following:						
 Dermal contact and incitation Inhalation of contamination 	idental inge ated	estior	of surfac	e soils.		
V. PRIORITY ASSESSMENT						
01 PRIORITY FOR INSPECTION (Charle one if high or implayers checked on						
(In the temperal promptly) (Inspection required)	IXC. LOW (Marie Indicate IXC LOW		!!D NONE	clam needed complete		
VI. INFORMATION AVAILABLE FROM						1 04 (Olm)
	D2 OF (Agency Grasnital)					HAUMONE NOMBER
Dave Williams MIFFISCHURESEONSBEEFOR ASSESSMENT	U.S. Corp		Engineers	<u>-</u>	1	907 1753-5657
Jacqueline Lundberg	05 AGENÇY	GRONGAI	E, Inc.	1 907 257		OR DATE
PA FORM 2070 12 (2.81)	<u> </u>		L, 100.	1 3011 231	-2000	MONTH DAY VEAR

EP		PR PA	TIAL HAZARDO IELIMINARY AS IRT 2 - WASTE IN	SESSMENT	E	I. IDEN IIF ICA HOI	
	ES, QUANTITIES, AN						
HARRIAL GIAH	To or the . A state of apply \$	TO WASTE GUATITE	ta VI GILE	NA WASTE CHARACTE		•	
IVA POLITI LIT PLINEL		unknown	1 - B COMMAN 1 - B COMMAN 1 - B COMMAN	CILVE THE FLAN	ママスティスタ しょうしょう	r I	
ti onitii	con on c o error tot	CHINC VARIES		[1 14 1425241	res tite kum	ARIF FILTROUR'S	
WASIE IYP		thy th thinks	· · · · · · · · · · · · · · · · · ·	J			
MEGOU.	SUBTANCE (IAIAE	of Choss Amount	TIZ CHAL OF MEASING	03 COMMENTS	—.— 	\
SLU	SLUDGE		unknown				
OLW	JIF WATIE		·				······
50L	SOLVEILIS		unknown				·• -•
1:30	resticités	·	-				
1000	DILIEN ONGAING	CHENICALS	unknown	A			
100	PROPERTY OF THE PROPERTY OF TH						
	Actis		-	-	\		
TAS	BASES				\		
MEG	TIENZI METALS	~	unknown	-			
	US SUBSTATICES IS	e formada for mali base	_ 1		.1		
CATEGORY	OZ SUDSTANC		O3 CASTRUMBER	04 STONAGEAN	SPOSAL METHOD	OS CONCENTRATION	CONCIDENTAL OF
:-:	610 610			Land Tre	tmont		
OLW.	_C10-C18 		_	_ l		$-\frac{10,200}{24,000}$	mg/kg
OFM	VII		\	Land Tre	a cinen c		mg/kg
			 -				
				~ \			
·			}				
			_ ,				
				_			
							j
		·]	\			
							_
			:				
	J			. I			1
V. I EEDSI	UCKS ISOn Approved the egal	Num herel					
CATEGOR	1777	STOCKHAME	DE CASTRUMA	EU CVIEGRAIA	9116	LOSTOCK HANK	tiz t Asimayi
105	H/A			105	-		-
103	.== : ==	··		105	-		~- <i>*</i>
105				ius	^-		-
11:5			_	105	-		
VI. Sounc	ES OF INFORMATION	1 IC40 "potac relarant	es, e g , vista lies, sample o	!	!		
							
1							
1							
I							

APPENDIX B
EPA FORMS 2070-13

Q.EDA	РОТ	ENTIAL HAZAR	DOUS WASTE SITE		LIDENTIFICATION
\/LI/-\		SITE INSPECT	ION REPORT		OI STATE OF SITE NUMBER
II. SITE NAME AND LOCA	MION	- COCKTION AND	INSPECTION INFO	MATION	ll
OT SHE HAME Henry Common of	electriquism existent ed sides		nz sthret, notitt ho , ot	I SPECIFICAÇÃO A NEW	
Ft. Richardsor	Fire Training	Pit RFTP #2	East of Bryan	nt Air Field	d
Ft. Richardsor	1		व्यक्तका व्यक्तका । AK 99506-08	98 Greater	orough) orcomination con Anchiarea N/A
6.1011616.3"	149 ^{0.0} 38" "532 1"	IT A PRIVATE	ET FEDERAL	II C SIME II	O COUNTÝ LIE MUNICIPAL
III. INSPECTION INFORM	ATION			<u></u>	3. UNKNOWN
6,24,91	() VCIIVE	·	1971, 1985	(JNKNOWN
DA AGENCY PETE ORDANG HIST		1	HINNI YEAR ENDING +	EAR	
TIA EPA - LI B EPA CO	CONTRACTOR	Same of furni	отнея ЕсоТо	MUNICIPAL CONTR	onment Inc. (E & E)
वेद टावार भवा स्ट्राटीय		De TILE		ISOVETYI DZ ODYSANIZA	
Jacqueline Lur	dberg	Geologis	t	E & E	19071 257-500
Jack Wells		Geologis	t	E & E	12 feterman no. (907) 257-50(
					<u> </u>
					()
THE DEFRESENTATIVE STATE	FRVIEWEN	14 1111 6			()
None			,15ADDRESS		रह रहेरहीयांज्ञा राज् ()
					
		-			()
			<u>-</u>		()
·					()
					1 1
	· ·				
TT ACCESS GAINED BY	TH TIME OF INSPECTION	19 WEATHER CONDI	TROMS		
M FERMISSION 11 WARRANT	1000-1600	0verca	st, ~60°F		
IV. INFORMATION AVAIL	ABLEFROM				
Dave Williams		U.S. Army	Corps of Engi	ineers	1907 1753-5657
A CEE RECOLDESCONSINGE CON		75 AGENCY	OF ORGANIZATION	D7 TELEPHONE N	•
Jacqueline Lui	ndberg		E & E -	907/257-	

&EP/		P	SITE INSPECTI ART 2 - WASTE			L IDENTIFICATION	
. WASTESTA	TES, QUANTITIES, AN				<u>- — — — — — — — — — — — — — — — — — — —</u>	·	
THISHOAL STA	IFS it has been supply	02 WASTE QUANTIL	TY AT SHE	DĀ WASTE CHĀRĀCITRISTR	CC et em, 6 prophys sign	41	
'X A SOUD	t. E. Stillativ	-more fram	enteleted ient i	LEA TOXIC	TE SOLUBE	LE LEMMENT VO	ų Afri f
A B LUMOEU	TRIES F (190in)	1043	unknown	LLC BYDROYCHAL	THE THE ECT		
		CHUIC AVUUS		, , ti stitesessi	TO HE RESTATE	HE ILL INCOMPA	TIPLE
. politica	Signe-sign	NO OF DRUMS				T M HOT APP	HEARI F
II. WASTE TY	re	.t		<u> </u>			
CATEGORIA	SUBSTANCE	/AME	O1 GROSS AMOUNT	TO UNIT OF MEASURE 03 C	COMMENTS		
SLU	SLUDGE		unknown	-	Owwell 13		
ULW	OIL / WASIE			·			
SOL	SOLVENIS		unknown		· · · · · · · · · · · · · · · · · · ·		
· { -			- directional				
(151)	PESTICIDES		l		·		
OCC	OTHER ORGANIC C	HENICALS	unknown	<u> </u>			
loc .	INDUGATIC CHEMI	CALS					·· ···
VCD	ACIUS						
FIAS	BASES		-				
MES	HEAVI METALS		unknown		·	· · · · · · · · · · · · · · · · · · ·	
IV. IIAZARDO	OUS SUBSTANCES (5.4	Amendu for most frague		-la ar via respensió			
OF CATEGORY	OZ SUBSTANCE		OD CAS HUMBER	04 STORAGE DISCOS	At Mit thop	05 CONCENTRATION	OR ATE AST ITE OF CONCENTRATE
					<u>r</u>		COUCLAIMAIN
OLW	C10-C18	······································		Land Treatmo	ent	10 200	-==71,
OLW	011		-	Land Treatmo	_	$-\frac{10,200}{24,000}$	mg/kg
↑ <u></u>				· Land II catill		24,000	mg/kg
· · ·			_	.		·	
				, <u>-</u>		-	.
]	.]			
			_				
~ ~				-		·	-{ - · ·
			_	-		·	- · · · · · · · · · · · · · · · · · · ·
				-		- 	-
			- [_		-	.
				-		-	
. ,=			-			-	
]		_	_		_]	.
	})·	_			
 	<u>]</u>		İ	1			
V. FEEDST	DCKS iter appende to PAS N	her herst					, <u>.</u>
CATEGOR	e nifeeds	TOCK NAME	DZ ÇAŞTIRDADEF	T CATEGORY	ULLEEDS	TOCK NAME	07 CASTRONIC
105	N/A		_	103			
105	— <u>— — — — — — — — — — — — — — — — — — </u>		-	- -			·
] 	· _			- 103			
F 1147	I			របន			1
103				105			·

SEPA PAR	SITE INS	AZARDOUS WASTE SITE SPECTION REPORT AZARDOUS CONDITIONS AND INCIDE	1. IDENTIFICATION OF STATE OF SHE REMORE
HAZANDOUS COMDINO	IS AND INCIDENTS		
na tampa asemprasi pita na tampa asemprasi pita			. Chatting traited
		er than 3 miles from the si	te. The depth to
		fore, groundwater contamina	
OFF A PROPERTY OF A PIECE AND THE PROPERTY OF A PIECE AND THE PROPERTY OF A PIECE AND THE PIECE AND	CONTAMINATION	OF DESCRIPTION DESCRIPTION	1 PERMIN CANTER
Surface water	contamination is	not predicted.	
ot M.o. communication		THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON OF THE PE	A 11 Moragina registration from the party of the contract of t
a rear a violitarith	IOI AIT 16,040	DS LEOUSTRY DESCRIPTION FOR	1 K. COLLINIA C. MILLION
		ide a nearby road. The IIII	u detected 20 ppm of
organics in	the air along this	s road.	
01 (10 that (41(03):2	COURTHERING	טפון ויטטין וויערט נטאור,	1 CERTAIN MINISTER
		OF MANUALISE OF SOMETICES	
Hone known			
wing kutiwu			
OF IX E THIERE COME	C1		1 Kitomuna i antono
There is a p	ntential for perso	ons traveling on the road t	to come into contact with
contaminated	soil.		
OT MIT COMARMAN	Off SOFF OF The same of	ozix onstructurati 6/24/5	91 Krontina Carrott
1	Attretts 0.2 acres	OTHANIATIVE DESCRIPTION	
The Fire Tra	ining Pit was onl	y 0.2 acres. The extent of	f contamination is unknow
	used in the FIP c irrounding area.	ould not be estimated becau	use road construction re-
	,		
orter of the ment of the	THATT ATTECTED	U211 OUBLING IN DATE	1 I CONTENTIAL L'ALTERIT
Drinking wat	ter wells are grea	ter than 3 miles from the	site.
	,		
at the womether		nat concepts to lovit	1 Profession Patters
to womenstairn	HALL A VITECTED	NATIONALIVE DESCRIPTION	
1	inactive.		

OSTIOUSENALDIONIE I KLOOLINIE ITALLEOLD

16,040 TO THE PROPERTY AND THE TRANSPORTED TO THE PROPERTY OF
Λ		n
	 p,	Ш
77	 	

POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT ART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

L. IDENTIFICATION

liatamonia com		HAZARDOUS CONDITIONS AND I	NCIDENTS	·	
I IX J DANIAGE TO F		021X000000000 MAIR 6/24/	91 , ·	Literitum	~ r . - ITALLEGEN
	· ·	ie FTP, but does grow sp			
FTP.			•		
	Not 1871 plan have a paregal set of most of	9711 ORGENVEN HATE	1		
Λ potential around the		to consume contaminated	flora or	soil that	is growing
A TRUBUNDAL DE 201. DI COMPANINE	INTERNATION CHAIR	UST CONSERVED WATE	1	PARTITION	HAMITAIN
ar in in this the	COMMANDED OF WASTES	OF LEONST NATE WATE		Ministoria	K AHIDID
Petroleum FTP.	was poured into a p	ortronomive procumplou of that was unlined dur	ing the	operation (of the
OF LEAR DAMAGE IC	मारामा १ चित्र स्थान म्युरमानाम् ४	02 D ORST IMED IDAEP	·· · · · · · · · · · · · · · · · · · ·	t i roithiid	T MITTER
None knowr					
OF IT O COMMAND OF HARMANDE DESC	ATMENT SEWERS, STORM DRAFE SUSTAIL	S WWWs 021 CONSTINCT (DATE	1	I I froit titlat	L) Attrict
tlone know					
ON HADRAHAL DES	IAUTHORIZED DUMPIRA	0211 OPER DVEH (DATE		PERMIT	t! Attrorp
None know	n				
est th gremented en	ANT OTHER PROMITED FORTHING	OR ANTEGED HAZARIDS	· ·	<u> </u>	
None know	'n				
III. TOTAL FORUL!	THON POTENTIALLY AFFECTER	D:	- ,		# 1J- 12
	y " **				
V Sounces or i	NEONMATION ICON SPECIAL PRINCIPLES				·· •·-··
~ -		Report for the Confirmat	•		

\$EPA	POTENTIA	I. IDENTIFICATION			
X//LI/A	SITE INSPECTION PART 4 - PERMIT AND DESCRIPTIVE INFORMATION				
I. LEUMIT INFORMATION					
THE STREET WITTERS	DZ FE IMIT RUMBER	OT DATE IS:	and bar-amendar	ATE OS COLONI ILES	·
	}	Ì	İ		
A HPDES		-			
in mc	- - 	-			
C AIR		-			
1 [1 NCRA				\	
E HORA INTERIM STATUS	_				
''I SPCCPLAN	_]	
G STATE Spreedys				\	
11 TOCAL (Sperdy)					<u>-</u>
1 OHIER-Speeds					
X 1 NONE		_			
SHE DESCRIPTION	- 				
CONTRACT PRESENTAL OF CARBONIA CO	02 AMOUNT DE DINE	OF MEASURE	O CHITAIN DITE	178° 11 11 11 14 14 1	os cuen
A SUBTACE IMPOURDMENT			I FA HETTERIARNE		}
क रम हिंद			TER IMPERCIONS		O V BOILDINGS OF SEE
е опила уволь спопив			LLC CHEMICAL PH		NONE
4- IVIN MINÂL GROEBD			tto moreacar		NONE
* 1 TAUR PETOW SHOUND			OF WASIE OF THE	oot paine	OR AUT A OF SHE
C LATRACTES	·		TEL SOLATOR CO) an
II OCCUPIUM			Companies	_	.05
x, ourn Burn Pit	•		≱иониги Вι	irned Fuel	
are on-site. The	site consists o	only of	contaminated	1 5011.	
IV. CONTAINMENT					
Marie Control HEAW ALL HASHING HEAVE					
v VDEONVIE ZECHNE	118 MODERATE	Ki C i	HADEOUATE, FOOR	בנוני לו בו	ECURE, MUSOUMD DANGEROUS
CONTRACTOR DESIGNATION OF THE STREET	PAROURS FIG				
The RFTP is unline	ed and contains	no sur	face water b	arriers.	
V. ACCESSIBILITY		·····			
on the series of	•			_	
Surface soil is c	ontaminated, an	d the F	TP is not fe	enced.	
VI. SOURCES OF INFORMATION #	de trecilic references, é g. sliefe lées, s	Zany de analysis, re	ipevis)		
E & E, 1991					
		-			

1 A # / 4 P 3 2 P 2 P 13 (7 B 1)

ומיאקופין זיסטיסנ

SEPA		POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT					NTIFICATION TE 02 SITE NUMBER	
		PART 5 - WATER	, DEMOGRAPHI	C, AND ENVIRO	NME	NTAL DATA	<u> </u>	<u></u> _
II. DRINKING WATER SU	IPPLY			·				
01 TYPE OF DRINKING SUPPLY (Check as applicable)	4		02 STATUS				03	DISTANCE TO SITE
COMMUNITY	SURFACE A. DÍ	WELL B.XJ	· ENDANGERE		М	OMTORED		√ 3
NON-COMMUNITY	C. []	D.X3	b. c	e.co e.co Un	kno	C. 2 <u>1</u> w5. □	A.	>3 (ml)
II. GROUNDWATER				011	KIIO	WII -	-	(ml)
OI GROUNDWATER USE IN VIC	THITY (Check o	ne)	_					
C) A. OPLY SOURCE FOR (DHINKING	M B. DRINKING (Other sources evalual COMMERCIAL, IN (Mo allest water source	DUSTRIAL IRRIGATIO	(Canded Olive	CIAL, II	NDUSTRIAL, IRRIGAT Preversion	KON I	D NOT USED. UNUSEABLE
OZ FOPULATION SERVED BY (GROUND WAT	16,040	_	03 DISTANCE TO NE	ARESI	DRINKING WATER	 VELL	
04 DEPTH TO GROUNDWATER	1	05 DIRECTION OF GRO	SUNDWATER FLOW	06 DEPTH TO AOURE	-	07 POTENTIAL VIE		08 SOLE SOURCE AQUITER
38 <u>' to 140'</u>	(ft)	_Southwe	est	OF CONCERN 140	_(m)	of Adulfer Unknown		ET YES XI NO
09 DESCRIPTION OF WELLS (F	whiching usesoe	depth, and meather relative to	Distribution and by a series	l	(10)		_ (gpd)	
O RECHARGE AREA COMMENTS	percol	Recharge occ ation of pro water to the	curs through	I I DISCHARGE ARE	A	-		upper unconfi aquife
IV. SURFACE WATER	il lace	water to the	e aquirer.	X 110				
OI SURFACE WATER USE (Che.		 						
A. RESERVOIR, RECE DRINKING WATER	REATION SOURCE	IMPORTAN	N. ECONOMICALLY	C. COMME	RCIA	L, INDUSTRIAL	. 0	D. NOT CURRENTLY USED
02 AFFECTED/POTENTIALLY	AFFECTED BO	DIES OF WATER	<u>-</u>					
маме: Ship Creek	٠	•				AFFECTED		DISTANCE TO SITE
<u> </u>	 -					13	_	2.75
· · · · · · · · · · · · · · · · · · ·		_					_	(mi
V. DEMOGRAPHIC AND	PROPERTY							
11 TOTAL POPULATION WITH		INFORMATION	_				<u> </u>	<u> </u>
ONE (1) MILE OF SITE		0 (2) MILES OF SITE	THREE (3) MILES OF SITE	021	IRASH OT SOMATEK	1.25	
NO OF PERSONS		NO. OF PERSONS		O OF PERSONS				<u>(mi)</u>
03 NUMBER OF BUILDINGS WI				04 DISTANCE TO NE	ARESI	OFF-SITE BUILDING)	
	22	<u>0</u>				0.4	1	mi)
The site is lo Immediate sur areas at Fort	roundin	g area cons	installation	on boundarı avel pits a	es .nd	at Fort R forests.	ichai Res	rdson
	·			•				

, codpd papatose

· A France	POTENTIAL HAZARDOUS WASTE SITE					
WEPA	SITE INSPECTION REPORT	1. IDENTIFICATION				
VI. ENVIRONMENTAL INFORMA	PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA					
OI PERMEABILITY OF UNSATURATED ZO						
	6 cm/sec [] B. 10 ⁻⁴ - 10 ⁻⁶ cm/sec [] C. 10 ⁻⁴ - 10 ⁻³ cm/sec [] D. GREATER	THAN 10 ⁻³ cm/sec				
02 PERMEABILITY OF BEDROCK ICheck o						
	(10 7 - 10 feman) (10 7 - 10 feman)	VERY PERMEABLE				
300 ~ 500 (m)	Unknown (11)					
DE NET PRECIPITATION	111) 107 DNE YEAR 24 HOUR RAINFALL UB SLOPE					
(ln)		SLOPE TERRAIN AVERAGE SLOPE				
09 FLOOD POTENTIAL	10					
SITE IS IN > 100 YEAR FLO						
ESTUARINE	TO CONTINUE TO CONTINUE MABILAT (OF BANGANGAN					
	OTHER	> 3 (ml)				
A > 3 (ml)	B [mi] ENDANGERED SPECIES: N	one				
DISTANCE TO:						
COMMERCIAL/INDUSTR	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, AGE RIAL FORESTS. OR WILDLIFE RESERVES PRIME AG LA	RICULTURAL LANDS ND AG LAND				
,	0.9 > 3					
A (ml)	B(mi) · C	> 3 (ml) 0 (mi)				
14 DESCRIPTION OF SITE IN RELATION	TO SURROUNDING TOPOGRAPHY					
the coastal trou terized by grown	is located within the Cook Inlet - Susitna low ugh physiographic province of Alaska. The lowl nd moraines, drumlin fields, eskers and outwash 75 m. Relief at the site is generally less th	ands are charac- plains. Local				
•						
	•					
	· ·					
VII. SOURCES OF INFORMATION (CRE EDECAC references, e.g., State Mes. Surface energists, Laddrids)						
	of Agriculture, 1968, Potential Evapotranspira thwaite's Classification, U.S.D.A.Forest Servic					
EPA FORM 2070 13 (7 81)	·					

····· - 1 · · · 1 - · · · ·

⇔EPA		OTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT ART 6 - SAMPLE AND FIELD INFORMATION		LIDENTIFICATION		
I. SAMPLES TAKEN			·			
SAMPLE TYPE	OT NUMBER OF SAMPLES TAKEN	OZ SAMPLES SPINT TO		OR ESTIMATE DIDATE		
GROUNDWATER			·	· 		
SURFACE WATER						
WASIE	-					
AIR						
BUNOFF						
SPILL						
SOIL	16	Southwest Lab in Oklahoma	· · · · · · · · · · · · · · · · · · ·	On File		
VEGETATION						
OTHER						
III. FIELD MEASUREMENT	S TAKEN	- 	<u></u>	.L		
1 TYPE	02 COMMENTS			· · · · · · · · · · · · · · · · · · ·		
None						
			·			
·	· · · · · · · · · · · · · · · · · · ·					
- · 		-		·		
IV. PHOTOGRAPHS AND I	MAPS					
א אי מוזעסחם וא פיזיד נס	FRIAL	Army Corps of Engineers	nt Inc., Alask	1 & U. S.		
NATES 04100	ATION OF MAPS	<u> </u>	Alaska	DISTRICT		
UNO —		ironment, Inc Alaska		· · · · · ·		
V. OTHER FIELD DATA CO	DLLECTED (Fromde narrative de	२८८चनंत्रत)		·		
None						
	:					
			-			
VI. SOURCES OF INFORM	ATION (Cité saecilic references.	e q , siste lées, sample analysis, reports)				
E & E, 1991	1					
L G L, 1331						
		•				

ार्ट्यक्षयः स्थात्रे देवरः . •

\$EPA	Þ	SITE INSPE	ARDOUS WASTE SITE COTION REPORT HER INFORMATION	I. IDENTIFI	CATION SITE INHABER
. CURRENT OWNER(S)			PARENT COMPANY # 315-4#		
1 HAME		07 D + B NUMBER	OR HAME		no tre tradition is
U. S. Army			None		
		04 SIC CODE	TO STREET ADDRESSED DO MO . MO . mo !		11 हमहरूराम
172nd Infantry Brigad					
5 CHY		17 ZIP CODE	12 0115	12 STAIC	विशेष्टली
Ft. Richardson	AK				ļ
1 LIVINE		02 D) B () () () () () () () () () () () () ()	OB NAME		क्ष्या । शिक्षां स्था । व
3 STREET APONE 33 in in no. mile en 1		1/14 SIC CODE	TO STREET ADDRESS OF BUT DEPORTS	<u>.</u>	l_, <u>,,</u> _
			The state of the s		। । चार् स्ट्रिंस
is CID	PESIÁIT	US SHI CODE	12 (31)	1135171	1 de zir con
	1	į			
OI NAME		05 D + EI MINNELL	ORMANE		on to a transaction
		1	1		
STITET ADDRESS OF DISTRIBLE FOR		74 SIC CODE	TO STREET ADDRESS A DO TO THE SELE		1126.004
		1	į		į
יג רוו ץ	OBSTAIL	17 7IF CODE	12 CHY	TARIATI	T 17 20 07 9 0
II NAME		02 D + B NIJMBER	OR HALAF		OOF CREATING O
DESTREE ANNIESSIED DA BEDE -P. J.		<u> </u>			
DOZIONE VARIO 22/0.0 Dec 10/08 2001		94 SIG CODE	IO STREET ABORESSA O nos artis or 1		मंत्रिक संस्कृत
75 CHY		107 ZIP CODE		·	
	106 31 81	DA Suscione	12 (317)	TRIAL	हे कि जार स्थाप
III ODEVIOUS OUNISONS	_上	l			
III. PREVIOUS OWNER(S) (List most recent	frati	OZ D I B NUMBER	IV. REALTY OWNER(S) IN APPRINCED AND	mastro-mathytt	
None		"2 O F G ROMIGHT	None		021010000000
DESTREE LADDRESS (O Box mile me)		04 SIG COUF	DESTREET ADDRESS (CO. Dog. Of D AC.)		04 880 6000
		_	and a second		CALSE FIN
OS CHY	ORSTATE	DY ZIF CODE	05 cat +	109 51 41	F 107 700 1 1009
	1	} .	1	1	
OT HAMP	· · · · · · · · · · · · · · · · · · ·	02 D + B NUMBER	OT HAME		27 (c) ii 11/2/30 ii
		1	1		
DISTREE ANDRESSED BOOM DE ME)		04 SIC CODE	OR STREET ADDRESS to the title stat		व क्यां स्वाप
חקרווץ .					{
BELITA	DE STATE	DI ZIP CODE	as city	OR STAT	11 07 ZIP COUR
O1 NAME		02 D + B NUMBER			<u> </u>
		02 I) T II N()MREIT	OT NAME		ក់2 ពី ខែពេលកំណាម
OBSINEEL ADDRESS (FO Don IN De etc.)		104 SIC COOF	OR SHIFT ADMITTANT Res DIDS on I		1,
S-		}	and the state of t		रोब कार्य स्ट्रांस व
ISCITY	OBSTATE	D7 211° CODE	05 CH Y	logstat	<u>।</u> होतर स्वन्टलंबर
	<u>l</u>				
V. SOURCES OF INFORMATION (5.4)	*neckie jelaienna:				<u> </u>
			A College		
•					
			•		

⊕EPA		SITE INSPE	ANDOUS WASTE SITE CTION REPORT	L. IDENTIFICATION OF STATE OF SUE REPAREN	
		PART 8 - OPERA	TOR INFORMATION	<u> </u>	
II. CURRENT OPERATOR (From the # of	fferent from owner)		OPERATOR'S PARENT COMPAN	Y (H arrete about	_ _
THE ST	-	25 D 1 B WANTEL	TONAME		11 01 no may 11
Inactive			None		
DESTREET ADDRESS (CO Por RED F. MC)	<u>-</u> -	04 SIC CODE	12 STREET ADDRESS at a nov mitte, en a		ia sir coor
DS CITY	08 STATE	07 ŽIP COUF	14 CITY	112 51 217	10 Sto CODE
	•			1351411	TR NO CODE
B YEARS OF OPERATION OF NAME OF	OWNER 1		_ 		<u> </u>
III EREVIOUS OPERATORIES	-	_			
III. FREVIOUS OPERATOR(S) (List me			PREVIOUS OPERATORS: PAREN	IT COMPANIES (*	urpe des
U. S. Army		OS D I H NUMBEU	10 NAME	·	1
DO STREET AUDRESS IN D BOX BID F ME)			None		
		94 SIC CODE	12 STREET AUDRESS IN IS BOD BED & HE !		कि अर्थ देखकी
DS CITY		<u> </u>			
		07 ZIP CODE	t4 City	15 STATE	IN ZIE CONE
Ft. Richardson	AK			ŀ	
DR YEARS OF OPERATION - 119 HAME OF	OWNER DUNNE THE	SPERIOD			<u> </u>
OT HAKE		OS D FRIMINGER	TONAME		tro-Russenn
			1		
OR STREET ADDRESS IF O how HED F. MIST		04 SIC CODE	12 STREET ADDRESS # O BOX DIDE OF 1		<u> </u> विचल स्वात
05 CITY	06 STÁIF	07 ZIP CODE	स्ब हरा र	LISSIAII	1878 6699
OB YEARS OF OPERATION OR NAME OF	OWNER DUNING THE	9 PERIOD	— 		<u> </u>
OT NAME		02 D + B HUMBER	10 NAME		Tri tri tromanen
03 STREET ADDRESSIED Bos, REDF, etc.)	<u></u>	04 SIC CODE	12 STREET ADDRESS IF O Pay OFFICE OF L		13 SHOT COLE
					,,,,,
05 CITY	OR STATE	07 ZIP CODE	14 CITY	-11581215	15 SID CODE
				l'a sivil	12 An CLOTH
OB YEARS OF OPERATION OF NAME OF	OMNEU DUURIG IIII	S PERIOD		<u> </u>	L
		-			
IV. SOURCES OF INFORMATION	ICRA tenedar total			·	
	was species references, (g "SIMB Mas, sarqsia pisaly	rks, reports)		·
F 0 F 100*					
E & E, 1991 .					
	-			•	
•					
FPAFORM 2010 1317 BU					

⊕EPA		SITE INSPE	ARDOUS WASTE SITE COLON REPORT RANSPORTER INFORMATION	1. IDENTIFICATION OF STATE OF STREETMEN		
I. ON-SITE GENERATOR						
HAME	· · · · · · · · · · · · · · · · · · ·	02 D B HUMBER				
None	Ì					
STREET ADDRESS IN O Pay TITLE PICT		04 SIC CODE	7			
SCHY	ONSTATE	nz zin cone			·	
II. OFF SITE GENERATOR(S)						
HUAME	<u> </u>	OS D L B MUMBELL	OLUANE		oz to i Bibiling it	
None	1					
COUNTY AND THE STATE OF THE PARTY OF THE PAR		04 SIC CODE	DESTRUCT ADDRESS OF O POS HIDS OF L		94 SIC CODE	
CHA	OF STATE	07 7IP CODE	05 CHY	PRESIAIR	<u> </u>	
1 DAME		02 D FB (A)MDER	01 RAMI	l	92 () () () () () () () ()	
·			1		İ	
TO DEET ADDRESS IF O But Diffe of	-	04 SIC CODE	O.I. S. H. H. A. P. P. P. P. P. P. P. P. P. P. P. P. P.		04 SIC CODE	
is Cit s	TIATE TO	07 ZIP CODE	05 CITA	74 57 Å11	OF EUR CODE	
IV. TRANSPORTER(S)	_L	!			<u> </u>	
LHAME		02 D FB MIMMEN	OT NAME	·	OZ D CH LEGISHER	
U.S. Army		1				
FOURTEL VUDILED A TO THE OLD A MET		04 SIC CODE	DESCRIPTION OF A COURSE OF STREET		DA SIC COOK	
Ft. Richardson	OR STATE	07 7IP CODE	05 City	ORSIAI	07 7IP COPE	
1 DAME	!	02 D CHINIMOFIL	O1 NAME		OS D4 to NORMER	
13 STREET ADDITEDS IN OUR DIED & ALE F		04 SIC CODE	03 STREET ADDRESS (FO FIR DELLA PARTIE	_	015/25/06	
		1			tri any octor .	
SCHY	OBSIATE	DZ ZIP CODE	05 CITY	06 STAI	02 SIL CODE	
V. SOURCES OF INFORMATION (CAR S)			l	l	<u> </u>	
1000	341819161243,	TO , STATE THEY, CANCEL BRIDE	st, rehorts	·		
F & E, 1991						
	:					
,						

&EPA	TENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT ART 10 - PAST RESPONSE ACTIVITIES	I. IDENTIFICATION
. PAST RESPONSE ACTIVITIES		
01 LLA WATER SUPPLY CLOSED 04 DESCRIPTION	02 DA1E	OU VUELYCY
N/A		
01 LI B. TEMPORARY WATER SUPPLY PROVIDED	02 DAIE	O3 AGEUGY
04 DESCRIPTION		
N/A		
OT LIC. PERMANERIT WATER SUPPLY PROVIDED OF DESCRIPTION	OS DATE	03 AGENCY
N/A		
01 (I D. SPILLED MATERIAL REMOVED 04 DESCRIPTION	DZ DATE	03 ÅGENCY
N/A		
01 LJ E. CONTAMINATED SO L REMOVED	02 DATE	03 AGENCY
04 DESCRIPTION		ovinciano.
N/A		
01 L) F. WASTE REPACKAGED 04 DESCRIPTION	. 02 DATE	OB AGENCY _
N/A		
01 (1 G WASTE DISPOSED ELSEWHERE 04 DESCRIPTION	02 DATE	OR AGENCY
N/A		
01 LLH ON SHE BURIAL	02 DATE	OT AGERICY
04 DESCRIPTION		
N/A		
01 LLL IN SITU CHEMICAL TREATMENT 04 DESCRIPTION	OZDAJE	DB AGENCY
N/A		
01 LLJ IN SHU WOLOGICAL TREATMENT 04 DESCRIPTION	02 DATE	D3 AGENCY .
<u>_</u>		
01 L) K. IN SITU PHYSICAL TREATMENT	D2 DAIF	03 AGENCY
ол реаспіртком N/A		
<u> </u>		
OT LEERCAPSULATION 04 DESCRIPTION	U2 DA1F .	03 VBERGA
N/A		
01 LI M. EMERGENCY WASTE TREATMENT 04 DESCRIPTION	02 DATE	03 AGENCY
N/A		
OLLIN CUTOIT WALLS	O2 DATE	D3 VGLHGA
OA DESCRIPTION		
OT LEO, EMERGELICY DIKING SURFACE WATER	A DIVERGION OF THE PARTY	
04 DESCRIPTION	RDIVERSION 02 DATE	DB VOLEKIA
N/A	<u> </u>	
01 LLP, CUTOLE THENCHES/SUMP 04 DESCRIPTION	OZ DATE	03 VIGENICA
. N/A		
01 (10. SUBSURFACE CUTOFF WALL	02 DATE	D3 AGENCY
G4 DESCRIPTION	VE VIIII .	40 · · · · · · · · · · · · · · · · · · ·
N/A		

FFATO0442070 13(7.04)

400% applications

&EPA		POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT PART 10-PAST RESPONSE ACTIVITIES	N. IDENTIFICATION DI STAIT DE SIE MINAPEN
I PAST RESPONSE ACTIVITIES	Culphala		
OI LITE BARRIER WALLS COM	STRUCTED	OZ DATE	53 AGENCY
D4 DESCRIPTION	N/A		
01 LLS, CAPPING COVERING 04 DESCRIPTION	N/A	02 DATE	03 AGENCY
OT LET BULK TANKAGE BEPA	INED	02 DA1E	03 AGENCY
O4 DESCRIPTION	N/A	•	
OT LT U GROUT CURTAIN COL	ISTRUCTED	D2 DATE	D3 AGENCY
O4 DESCRIPTION	N/A		
01 LTV. BOTTOM SEALED 04 DESCRIPTION	N/A	OZ DATE	03 AGENCY
01 LTW GAS CONTROL 04 DESCRIPTION		05 DVIE	03 AGENCY
	N/A		
04 DESCRIPTION 04 DESCRIPTION	N/A	02 t)A1F	03 AGENCY
01 LLY LEACHATE TREATM 04 DESCRIPTION	N/A	O2 DATE .	03 AGENCY
OLI I ANTA EVACUATED			
01 (1.2. AREA EVACUATED 04 DESCRIPTION	N/A	07 DAIE	DB VQENCA "" "
OT LEE ACCESS TO SITE HE		D2 DATE	D3 AGENCY
ON DESCRIPTION		OZDATĘ .	OB AGENCY ,
OLI LA COMUNATO DELC	/A		
0 1 1 1 2 POPULATION RELO 04 DESCRIPTION		O2 DATE	03 AGENCY
	N/A		
01 LT3, OTHER REMEDIAL, A 04 DESCRIPTION	ACTIVITIES	02 DATE	03 AGENCY
	None		,
		•	
	:•		
III. SOURCES OF INFORMATIO	ON ICHO SPECIA	references, e.g., state blus, sample analysis, reports!	
E & E, 1991			

EL VEDRIN 2010 1211 811

THE PROPERTY OF THE PARTY.

\$	EP	Д
H. ENF	ORCE	MEN
OT PAS	T REGIA	AIO

POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION of STATE 02 SHE MIMBER

II. ENFORCEMENT INFORMATION

OF PAST REGIA ATORY ENFORCEMENT ACTION 11 YES - X NO

DESCRIPTION OF FEDERAL, STATE LOCAL REGULATORY FROM CEMENT ACTIVAL

N/A

III. SOURCES OF INFORMATION (Cite specific references, e.g., state fires, sample emerysis, reports)

E & E, 1991

FFAFORM 2070 13 (7-81)

○ EDA POTE					I. IDENTIF	
SEPA PART 1-SITE	SITE INSPECT LOCATION AND			ATION	UISIAIE	2 SITE NUMBER
II. SITE NAME AND LOCATION			The state of the s			
O1 SILE NAME (Legal common, or descriptive name of site)			T, ROUTE NO , OR SP		DENTIFIER	
Ft. Wainwright FTP's	<u></u>	· -	iontgomery			
Ft. Wainwright		AK	99703	No. Star	airbank Boroug	
64º 49' 45 _ 147 36 00	10 TYPE OF OWNERSH C) A PRIVATE U F. OTHER	₩ B. FEL	DERAL	I I C STATE LI	D COUNTY G. UNKNOW	(] E. MUNICIPAL N
III. INSPECTION INFORMATION DI DATE OF OPPET 10091 - 02 SITE STATUS	03 YEARS OF OPERAT					
MONTH DAY TEAR DI INACTIVE	at least	1961 NNING YEA	Presen		UNKNOWN	
DA AGENCY PERFORMING INSPECTION (CAPITA MILITARI MORIF) LA EPA DE BEPA CONTRACTOR						
THE STATE OF STATE CONTRACTOR	ame of tem)	M G OT	HER ECOTOR	y & Envir	onment,	Inc: (E & E)
Jacqueline Lundberg	Geologist			07 ORGANIZ E 8	ATION E	08 TELEPHONE NO (907) 257-5000
GROTHERINSPECTORS Jack Wells	Geologist			11 ORGANIZA E 8		12 TELEPHONE NO. 1907, 257-5000
Jeff Taylor	Biologist	:		E 8	Ε	907, 257-5000
						()
		· 			·	()
.						()
NONE	14 TITLE		SADDRESS			16 TELEPHÔNE NO
						()
						()
	ļ					()
	 		·			()
}	· ·					()
17 ACCESS GAINED BY 18 TIME OF INSPECTION	19 WEATHER CONT	<u> </u>				
(Creck own) (3) PERMISSION (3) PERMISSION (4) (7) (7) (7) (7) (7) (7) (7) (7) (7) (7	91 Supply 6		to rainy	- 60 ⁰ F		
IV. INFORMATION AVAILABLE FROM	Top of					
David Williams	U.S. Arn		ps of Engi	neers		907 1753-5657
Jacqueline Lundberg	05 AGENCY		& E	907 /257		7 , 30 91
EPA FORM 2070-13 (7-81)						MONTH DAY YEAR

&EP/	4	SI	ITAL HAZARDO TE INSPECTIO RT 2 - WASTE IN		TE.	LIDENTIFICATION	1
I. WASIESIA	IES, QUANTITIES, AN						
	FC Peak orna upst	117 NASIE OUALILL	YATSHE		HTTH'S A FULL HARMAN	•	
X a construct X a construction	. is dec thus 1 1 thoma the behinds	10112	Unknown	тт пепаан Ка севиз Ка севиз	ATPLANT D 11 TVIII	art ink hevenst Rig till Extrosise	
ក ការក្រា	est or my	DO OF DUDING	•			LIE HOLOVAN	
III, WASTE TY	re		·····	J			· · · ·
CATEGORE	SIMBLANCE I	IAIXE	HIJOMA SEORS ID	112 UINT OF MEASING	OJ COMMENTS		
<u> </u>	SURGE		Unknown	3.5 = 1			·]
OLA	OILYWASIE						
sot.	SOLVEIUS	· · · · · · · · · · · · · · · · · · ·	Unknown	1	·	·	Ì
1:50	resuciols		Ottinio IIII	\$			
999	DHEROHGAIRC	THE MICALS	Unknown	•••			
'OC	WIGHTERATHE CHIEFA		. Louising.				- -
ACD	VCID.						
[1/2]	DAGES						-
MES	TH AV. LIFTALS		Unknown				
	DUS SUBSTANCES (See		-1	1	1		
or Cate Bolls	92 SURSTAINCE		OB CASTOMBED	T masternaur be	SPOSAL AT MOD		। व्हें पर स्थान क
OLW	C10-C18			Land Treat		2,958	CONTRIBUTION
		· · · · · · · · · · · · · · · · · · ·	- -	· [7 -		21,460	mg/kg
_OLW	. C20-C28		- = =	Land Treat	ment	21,40U	mg/kg
	بيده منهم فيست			-			
<u> </u>	.		, _		-1 - 10-4		
Š			·	. 1			1
							}
			<u>.</u>				
					era a la era a era era era era era era era era		
			_	_	v		}
1	1 .			. 1			1
							
1	,			_	.,		1
				_			-
				.		1	
							1
V. FEEDST	Tana ii aa aa aa aa aa aa aa aa aa aa aa aa	lander)	I		· · ·	1	. 1
CAILCOL		STOCK HALIF	OZ CASTRIANI	NOOTES	1	TOCK NAME	t .17.5
103	NONE			103			417 F ASSTRUMENT
105	· · · · · · · · · · · · · · · · · · ·				- <u></u>		
105				- 105			1
103				105			
ļ	J		!	108	!		<u>l</u> ,
	E, 1991	· · · · · · · · · · · · · · · · · · ·	g , time for (gample gag	ryset, reports)			NA compa

13:31(100) 2020 12 (7 D))

11 ALLEGED

M POITHING

SEPA	TENTÍAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT PTION OF HAZARDOUS CONDITIONS AND INC	L IDENTIFICATION OF STATE OF SHE THATTER
II. HAZARGOUS CONDITIONS AND INCIDEN		
OTTOTAL VIOLENTALITATE A VIGEOUS OF THE CONTRACTION OF THE CONTRACTION	0211 OBSERVED (DATE 04 HARMANY OF SCHIEBER) Krommy myrtarb
	ollected immediately above the w t groundwater is contaminated al	
Contaminants that were f	or representation of the soil could travel in	surface runoff to the
OT LAC COMPANIEMENT OF VITA CITA	OZ I I OUSERNI DOATI OZ I ROBINI DO TO TO TO TO TO TO TO TO TO TO TO TO TO	I D'EGIFHIAL CALLEDIN
greater than 1 ppm in th	021 LODGE BUT DOWN	1 Programat Liantes to
None known.		
ortharia virgitalitalivit (villeild) ut IX E tanlei Controli	02 FORTHINED (BATE 04 HARMANYE DE SCHIESTICH	1 WESTERNAL CALLEGED
WFTP-3B is unfenced. A	someone to come into contact with locked gate prohibits motorized e gate to get to WFTP-3A.	
	.5 acres DZ M OBSERVI DIDATE 6/16/9	1 1 POTENTIAL PARTOED
Although soil samples we contamination has not be	ere contaminated, the lateral and een determined.	d vertical extent of
OT M.C. DITHISHO MATER CONTAMINATION	15,000 OSTIONSEINTDIDATE	1 M POTEMBAL LY ALLEGED
site. Groundwater from	king water wells are over 1 mile the site flows northwest toward	the Chena River. There i
little potential that s	oil contaminants would migrate t	o the drinking wells.
OF LEFT MORKER CALOCRIDERRITHA	0 02 1 7 OBSERVE DESCRIPTION	1 DOBBINAL DARGED

The site is inactive. A worker exposure or injury is not documented in the files.

OZ LI OBSETIVED (DATE. DA HADITATIVE DESCRIPTION

restantanta tota un

OTIXI POPULATION ESPOSUME MUJIMY 15,000

SITEIN	HAZARDOUS WASTE SITE ISPECTION REPORT IAZARDOUS CONDITIONS AND IN	1. IDENTIFICATION OF STATE OF STATE PARKETS
II. HAZANDOUS CONDITIONS AND MICHDENTS ICOMPANY		
OF MAINAGE TO FEORA OF NATIONALITY PERCENTION	02 IX DISTRICTO IDATE 6/16/	d i troitaini truitain
MFTP-3A did not have any vegeta cover. Fire training activitie	tion growing on it. WF	TP-3B had moderate vegetation
OT M.K. DAMAGE TO FAUNDA	02 () OBESTAVED (OATE	desirati municiki t
There is a potential for small! a contaminated area. The site are scarce.	is surrounded by the ba	
	0211 ORGENVED (DATE	1 DEPOSEBBLE DE ALEGED
Contamination of the Food Chair base by the airport. As a resusite.	ult, large animals are r	ot likely to frequent the
OF LOGIC VIOLE GOLLISHMEN A VELCTED	02 M ONG EVEN HALE 6/16/	91) troughnal transcen
Surface soil is contaminated, a adequately.		st not have been contained
OF LEIT DAMAGE TO OLI 200 ERIOLETT A	0511 Obstaven invit.	1 HOTHING HARRED
None Known		
OLD TO COMMANDADIOLOGICAL STORMANDIANIS OF MAINTAINS IN SCHIMANDIA	WWITE DELLORGING DATE	1 CLEOTERINA CLASSICALIS
None Known		
OF FIGUREAL DESCRIPTIONS OF FIGURE BY A COMPANY OF THE BY BY BY BY BY BY BY BY BY BY BY BY BY	OS LLOUSERIVED (DATE) (Troiting Patroco
flone Known	•	
os de scribnori de vida difficial knower, continuer.	OR ALFOED HAZAINS	
None Known		·
III TOTAL POPULATION POTENTIALLY AFFECTED:	15,000	
Mone		
V. SOURCES OF INI ORMATION II de specific inference, a	g , state feek. Sample an Hysis, reposits)	
F & E, Movember 1991, Draft Pr Training Pits at Fort Richards		

	POTENTIAL	HAZAD	DOU	CWASTE SITE		I. IDENT	IFICATION
ŞEPA	POTENTIAL HAZARDOUS WASTE SITE IL IDENTIFICATION SITE INSPECTION 1. IDENTIFICATION 01. STATE 02 SITE NUMBER					02 SITE NUMBER	
17 E-17 (PART 4 - PERMIT				ON	L	
I. PERMIT INFORMATION							
ITYPE OF PERMITISSUED	02 PE TMIT NUMBER	03 DATE IS	SUED	O4 EXPIRATION DATE	05 COMMENTS		· — — — — — — — — — — — — — — — — — — —
1'A NPDES	<u>{</u>	{		;			
⊕B, UIC							
'TC AIR		l			,		·
L'D. RCRA		 				 -	
· 'E RCRA INTERIM STATUS						·	
IIF SPCCPLAN							
G STATE (Specific)							
II LOCAL (Spredy)							
1 OTHER (Specify)							
X J NONE	<u> </u>	<u> </u>		<u> </u>			
II. SITE DESCRIPTION							
MISHOHAGE DISPOSAL IT from Milhotarini 0.	S WOONI 03 NUIL OE	MEASURE	04 11	IFAIMFIII if here at the ea	Friel	05 01	HER
' ' A SURFACE IMPOUNDMENT			LLV	INCENERATION		1 ,,	A BUILDINGS ON SITE
* B PILES ** C DRUMS, ABOVE GROUND	· · · · · · · · · · · · · · · · · · ·			UNDERGROUND III.			A DOICOINGS CHAILE
The TANK, ABOVE GROUND				CHEMICAL PHYSICA BIOLOGICAL	L	\ ,	NONE
* * F TANK, BELOW GROUND				WASTE OIL PROCES	SING		FAOLSHE
'F LANDFILL		- .		SOLVENT RECOVER		1 28	. 22 Asuss
G LANDFARM		·	ΠG	OTHER RECYCLING	RECOVERY	J 3A	: 22 Acres : 7.5 Acres
XICHER Burn Pits			KIH	OTHER Burn F	<u>uei</u>) SB	: 7.5 ACT ES
Gardy Of COLOMBIAS			L		·	_L_	
Although aerial photos were observed during for the containment of wastes iche annumant of the containment o	&E's June insp	ectior 	·	uate.Foon			OUND, DANGEROUS
				+ linad			
No drums are presentl	y on-site. Ine	e site	15	not linea.			
V. ACCESSIBILITY							
DI WASTEFASH Y ACCESSIBLE XI YES 02 COMMENTS WFTD-3A, but pedestri							
VI. SOURCES OF INFORMATION (Cité spe	cilic releiences e g state lives, sampl	le analysis, rep	oris!				
E & E, 1991		· · · · · ·					

CCATORM 2070 13 (7-81)

sanen halavasis

≎EPA	POTE	ENTIAL HAZAR SITE INSPECT	I. IDENTIFICATION	•		
II. DRINKING WATER SUPPLY		<u> </u>			<u>-</u> -	
01 TYPE OF DRINKING SUPPLY (Check as applicable)		02 STATUS			03 DISTANCE TO S	 !TE
COMMUNITY A. E	J B. 12	ENDANGERE A. 🗆	8. □	MONITORED C. DX	A 1.2	(mi)
	D. 0X	D. 🗆	Ę. □ UN K	nown _{F. D}	B	_(ml)
III. GROUNDWATER 01 GROUNDWATER USE IN VICINITY (C	thank and			 _		
述 A. ONLY SOURCE FOR DRINKIN	IG B. DRINKING (Other sources availe	IDUSTRIAL, IRRIGATIO	(Limited other	CIAL, INDUSTRIAL, IRRIGA Sourcey evalable)	TION [] D. NOT USED,	UNUSEABLE
02 POPULATION SERVED BY GROUND	WATER 15,000	_	03 DISTANCE TO NE.	AREST DRINKING WATER	well 1.2	
04 DEPTH TO GROUNDWATER 7 - 10 ((1)	os direction of and Northwe		06 DEPTH TO AQUIFE OF CONCERN 7-10	OF POTENTIAL YIE OF ACUIFER 1000-3000		RCE AQUIFER
the site. Ft. I	charge of grou	 undwater	11 DISCHARGE AREA	Dischar	ge of ground	water
V. SURFACE WATER			UNO			···
01 SURFACE WATER USE (Check one)		_ -				
ば A. RESERVOIR, RECREATIO DRINKING WATER SOURCE		ON. ECONOMICALLY NT RESOURCES	C. COMME	RCIAL, INDUSTRIAL	D. NOT CURRE	ENTLY USED
02 AFFECTED/POTENTIALLY AFFECT	ED BODIES OF WATER					
Chena River				AFFECTE	DISTANCE TO 0.6	
·						(mi)
						(mi)
V. DEMOGRAPHIC AND PROP	ERTY INFORMATION					
01 TOTAL POPULATION WITHIN				02 DISTANCE TO NEAR	EST POPULATION	
ONE (1) MILE OF SITE A. 5,000 NO OF PERSONS	TWO (2) MILES OF SITE B. 15,000 NO. OF PERSONS	C. <u>1</u>	7,013).75 (mi)	
03 NUMBER OF BUILDINGS WITHIN TW	O (2) MILES OF SITE		04 DISTANCE TO NE	AREST OFF-SITE BUILDIN	g.	, -
3) , 1 (mi)	
05 POPULATION WITHIN VICINITY OF S					······································	
The site is loca The closest barr population is ov	ted within the acks are 0.4	installat miles west	ion bounder of the sit	ies of Fort	Wainwright.	
PA FORM 2070-13 (7-81)					 	

₩EPA	₽AÞ1	POTENTIAL HAZA SITE INSPEC	I. IDENTIFICATION 01 STATE 02 SITE NUMBER		
/I ENVIDONMENTAL MITTER	FARI	5 - WATER, DEMOGRAPI	HIC, AND ENVIRO	NMENTAL DATA	
I. ENVIRONMENTAL INFORM.	ATION				
					
	∘ cm/sec	□ B. 10 ⁻⁴ = 10 ⁻⁶ cm/sec	9 C. 10-4 – 10-3 cn	1/sec 11 D. GREATER	THAN 10-3 cm/sec
2 PERMEABILITY OF BEDROCK (Check	ane)			<u></u>	
	MEABLE 10 ⁻⁸ cm-sect	IX B. RELATIVELY IMPERMEAE	BLE C. RELATIVE	LY PERMEABLE [] [). VERY PERMEABLE (Greater than 10 = 2 cm sec)
DEPTH TO BEDROCK	04 DEPTH C	F CONTAMINATED SOIL ZONE	05 SOIL p		
<u> 300 - 700 (tt)</u>		Unknown		known	
NET PRECIPITATION	67 ONE VE	—————(ft)			
_	OF ONE YEA	R 24 HOUR RAINFALL	08 SLOPE SITE SLOPE		————————
(ln)	<u> </u>		l n	DIRECTION OF SITE S	SLOPE TERRAIN AVERAGE SLOP
FLOOD POTENTIAL	' -	10	1		_ <u>-<1</u>
SITE IS IN 100 YEAR FLO	0000 444	N/A D'SITE IS ON BARRI	IFRISI AND COASTA	Lucini	
DISTANCE TO WETLANDS 15 ecre miner					
	ium)		12 DISTANCE TO CRIT	ICAL HABITAT (of endangers	of species
ESTUARINE		OTHER	Ì		3(mi)
A(ml)	В.	N/A —————— (mi)			(mi)
LAND USE IN VICINITY		(////	ENDANGERE	D SPECIES:	
DISTANCE TO:					
		RESIDENTIAL AREAS NATIO	NAI /STATE DADVO		
COMMERCIAL/INDUSTRI	IAL	FORESTS, OR WILDLIF	E RESERVES	AGRI PRIME AG LAN	CULTURAL LANDS ID AG LAND
A(mi)		в <u>2</u>	(_ 1)	c>3	/mil 2 >3
DESCRIPTION OF SITE IN RELATION T	O SUBBOUND			C	_ (ml) D(ml)
The site is locat Rivers floodplain	ted on n. Loc	the nearly level al relief is 15 f	ground of t	he Chena and	Tanana
Bedrock hills ris	se 550 he site	feet to an elevat	ion of 1,09	7 feet, appr	oximately 1.5
				,	
					•
	,				
	,				
SOURCES OF INCOME.	,			·	
SOURCES OF INFORMATION	ICRe adecalic rele	Hances, e g., almie Mes, semple anelysis, rec	orts)		
& E. 1991					
SOURCES OF INFORMATION & E, 1991 S.Department of Ag aska by Thornthwai W-71.	ricult	1000		ansniration	and Climate

⇔EPA		OTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT ART 6 - SAMPLE AND FIELD INFORMATION	I. IDENTIFICA	
SAMPLES TAKEN				
SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO		03 ESTIMATED DATE PESULTS AVAILABED
GROUNDWATER	<u> </u>			
SURFACE WATER	-		-	
WASIÉ	- -			
AIR	-			
RUNOFF	1			
SPILL				
SOIL	12	Southwest Lab of Oklahoma, Ri	enken Arrow	On File
. VEGETATION			· · ·	
OTHER			·	
II. FIELD MEASUREMENTS	TAKEN			
None				
IV. PHOTOGRAPHS AND MA	IAL	Ecology & Environment	, Inc Ala man Alaska D	ska istrict
(X YES ECC	ology & Envir	onment, Inc Alaska		
V. OTHER FIELD DATA COL	LECTED (Provide narrative o	(escription)		
None	÷			
VI. SOURCES OF INFORMA	TION (Cité specific référence	s, e.g., state Mes, sample analysis, reports)		
E & E, 1991		-		

≎EPA	.	POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT			I. IDENTIFICATION	
AN E. 1 1-1			NER INFORMATION	<u> </u>		
II. CURRENT OWNER(S)			PARENT COMPANY III SEPTEMBER	<u> </u>		
U.S. Army		02 D+B NUMBER	OR NAME None	<u></u>	09 D + B NIIMPEN	
03 STREET ADDRESS IF O BOY BID #, etc.)		04 SIC CODE	TO STREET ADDRESS IF O Par RED.	#Ic J	LLSID CODE	
oscuv Ft. Wainwright	OB STATE	07 ZIP CODE	15 CILA	13 STATE	14 ZII' GC DE	
OT NAME		02 D+B NUMBER	OB NAME		09 D4 B N/MPFN	
03 STREET ADDRESS (P.O. Bes RID F. etc.)	 -	04 SIC CODE	10 STREET ADDRESS (F O Box BID)	, etc.)	LI SIC COPE	
05 ČÍTY	OB STATE	07 ZIP CODE	12 CITY	113 61 A16	14 ZIP CODE	
01 NAME	<u> </u>	02 D+B NUMBER	- Constitute	1337815		
	· <u>.</u>		OB NAME		va D + E Mcircust ti	
03 STREET ADDRESS IP O BOX RIO 4 etc)		04 SIC CODE	10 STREET ADDRESS IF O BOS BED	etc 1	1 1 SIC COPE	
OS CITY	OS STATE	OT ZIP CODE	12 CITY	13 STAIC	14 ZIP CODE	
OI NAME		02 D+B NUMBER	OB NAME		UBD4 B NUMBER	
03 STREET AUDRESS (P.O. Box RED #, etc.)		04 SIC CODE	10 STREET ADDRESS IF O RAN PERA	, etc.)	i raio deleti	
05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP GOVE	
III. PREVIOUS OWNER(S) (List most recent let	<u> </u>	· 	IV. REALTY OWNER(S) (# RODNICS			
None None		02 D+8 NUMBER			O2 D FB DOMBER	
03 STREET ADDRESS IF O Box RED # etc.)		04 SIC CODE	03 STREET ADDRESS IP O Not HED &	. etc 1	04 5% CODE	
OS CITY	OBSTATE	07 ZIP CODE	05 CITY	UB STATE	07 ZIP COPE	
OI NAME	! <u></u>	OZ D + B NUMBER	01 NAME		02 D) B (បាប់ប្រែ	
03 STREET ADDRESS (F O Box RED #. etc.)		04 SIC CODE	03 STREET ADDRESS (F.O. But REO.	, etc t	na sin code	
05 CITY	05 STATE	07 ZIP CODE	05 CITY	D6 STATE	OF ZIP CODE	
O1 NAME		02 D+8 NUMBER	01 NAME		02 D + FLNDMREII	
03 STREET ADDRESS IF O Pro PLOS AIC	<u>.</u>	04 SIC CODE	03 STREET ADDRESS IF O Per RIO.	etc 1	04.80.000€	
75CITY	OBSTATE	07 ZIP CODE	05 CITY	IOB STATE	O7 ZIII CODE	
V nounce of many	1					
V. SOURCES OF INFORMATION (Cite sae	CHIC references,	e g , slate Hes, sample enaly	SiS. répoils)			
E & E, 1991						
_ ~ _,						
PA FORM 2070-13 (7-81)	 -					

successive and seem bear considered

\$EPA	POTENTIAL HAZAI SITE INSPEC PART 8- OPERAT			ARDOUS WASTE SITE CTION REPORT TOR INFORMATION		ICATION 2 SITE NUMBER
L CURRENT OPERAT	OR IProvide & different fro	m caner)	<u> </u>	OPERATOR'S PARENT COMPAN	NY (If another that	·
NAME	· -	•	02 D+B NUMBER	10 NAME		1 1 D + B NUMBER
U. S. Army				None		1
3 STREET ADDRESS (P.O. B	ox. RFD #, etc.)	·	04 SIC CODE	12 STREET ADDRESS IF O Box. RED . etc.)	·	13 SIC CODE
						NOC GOOL
Ft. Wainwrig	nt	AK	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
S YEARS OF OPERATION	09 NAME OF OWNER		<u> </u>		l .	
II. PREVIOUS OPERA	OR(S) (List most recent	fix:1: provide on	ly if different from (wmer)	PREVIOUS OPERATORS' PARE	NT COMPANIES	II applicable)
1 NAME			02 D+8 NUMBER	10 NAME	Julia Alvico	11 D + B NUMBER
None				None		}
STREET ADDRESS (F O E	lor. RFD #, etc		04 SIC CODE	12 STREET ADDRESS (P.O. Box, RID #, etc.		I a sic cope
				The state of the s	r	13 55 0006
5 CITY	,	OB STATE	07 ZIP CODE	14 CITY	1,6 61 216	18 ZIF CODE
		1	[-		1.551415	10 211 0.008
8 YEARS OF OPERATION	09 NAME OF OWNER	DURING TH	S PERIOD			
I NAME	'	<u> </u>	02 D+B NUMBER	10 NAME		110+6 мумрей
3 STREET ADDRESS (P O B	ok, RFD #, etc.}		04 SIC CODE	12 STREET ADDRESS (P O Box. RFD # P'c		ia sic cone
S CITY		06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
B YEARS OF OPERATION	09 NAME OF OWNER	DURING TH	IIS PERIOD		L	<u> </u>
1 NAME	·! ·		02 D+B NUMBER	10 NAME		11 [) + គី ស៊ូប៉ូស៊ាគួក
3 STREET ADDRESS (P.O. 8	ox RFD #, etc.)		04 SIC CODE	12 STREET ADDRESS (P O Box, RED P atc)		13 SIC CODE
5 CITY		06 STATE	07 ZIP CODE	14 CITY	15 \$17.1	E 16 ZIP CODE
8 YEARS OF OPERATION	09 NAME OF OWNER	R DURING TH	IS PERIOD			
IV. SOURCES OF INFO	DRMATION (Citatores	Go salasaasa		<u> </u>		
E & E, 199		fic reterences.	a g , siele lies. sample analy	ss. (epods)	•	

⊕EPA	PART!	I. IDENTIFIC			
II. ON-SITE GENERATOR		<u></u> -			
NONE		02 D+B NUMBER			
3 STREET ADDRESS IP O Box, RFD P, etc.)		<u> </u>			
STACET ADDRESS (P.O. BOX, RED.P., 41C.)		04 SIC CODE			
05 CITY	06 STATE	07 ZIP CODE			
			}		
III. OFF-SITE GENERATOR(S)		<u> </u>			—
OT NAME		02 D+B NUMBER	01 NAME		2 D+B NUMBER
NONE		<u> </u>		}	
3 STREET ADDRESS (P O Box RID +, etc.)		04 SIC CODE	03 STREET ADDRESS (F O Bes. RED F. etc.)		04 SIC CODE
05 CITY	108 STATE	107 ZIP CODE	Or City		
	[]	o, zir dobe	05 CITY	D6 STATE	77 ZIP CODE
NAME		02 D+B NUMBER	OT NAME	<u></u>	DE D+B NUMPER
		1]	
13 STREET ADDRESS IF O Box, RED + etc.)		04 SIC CODE	03 STREET ADDRESS IF O Box. RFD # etc 1		04 SIC CODE
OF CITY	7				
OS CITY	OB STATE	07 ZIP CODE	05 CITY	OB STATE	7 ZIP CODE
IV. TRANSPORTER(S)	L	L	<u> </u>		 -
TV. THANSPORTER(S)		02 D+8 NUMBER	01 NAME		
U. S. Army			, or many	ľ	D2 D+B NIJMBER
3 STREET ADDRESS IF O BOX RED . NC)	<u>-</u>	04 SIC CODE	03 STREET ADDRESS IF O Box. RED # +IC		04 SIC CODE
Ft. Wainwright	OG STATE AK	07 ZIP CODE	05 CITY	08 STATE	07 ZIP CODE
INAME		· · · · · · · · · · · · · · · · · · ·		\}	
110000		02 D + B NUMBER	OT NAME		D2 D+ B NUMBER
3 STREET ADDRESS IF O Box RED 4. etc.)		04 SIC CODE	03 STREET ADDRESS (P O Box ATD + etc.)		
			OSSINCE ADDRESS (FO BAS IND VIC)		04 SIC CCDE
95 CITY	08 STATE	D7 ZIP CODE	05 CITY	[06 STATE]	D7 ZIP CODE
				1	· /
V. SOURCES OF INFORMATION (CAR'S					

\$EPA	POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT PART 10 - PAST RESPONSE ACTIVITIES	I. IDENTIFICATION O1 STATE 02 SITE NUMBER
II. PAST RESPONSE ACTIVITIES		
01 (.) A. WATER SUPPLY CLOSED 04 DESCRIPTION	02 DATE	O3 AGENCY
N/A		
01 [] B. TEMPORARY WATER SUPPLY P	ROVIDED 02 DATE	. 03 AGENCY
04 DESCRIPTION N/A	•	
01 LJ C. PERMANENT WATER SUPPLY P	ROVIDED 02 DATE	O3 AGENCY
04 DESCRIPTION		
N/A	02 DATE	03 AGENCY
01 L. D. SPILLED MATERIAL REMOVED 04 DESCRIPTION	02 DATE	US AGENCY
N/A		
01 L E. CONTAMINATED SOIL REMOVED 04 DESCRIPTION	02 DATE	03 AGENCY
N/A		
01 [] F. WASTE REPACKAGED	. 02 DATE	03 AGENCY
04 DESCRIPTION		
N/A 01 L) G. WASTE DISPOSED ELSEWHERE	02 DATE	03 AGENCY
04 DESCRIPTION		
01 L) H. ON SITE BURIAL	02 DATE	03 AGFNCY
04 DESCRIPTION	V2 U///	
N/A		
01 L) I. IN SITU CHEMICAL TREATMENT 04 DESCRIPTION	02 DATE	03 AGENCY
N/A		
01 LJ J. IN SITU BIOLOGICAL TREATMEN 04 DESCRIPTION	NT 02 DATE	_ 03 AGENCY
N/A		
01 LI K. IN SITU PHYSICAL TREATMENT	02 DATE	O3 AGENCY
04 DESCRIPTION		
01 () L. ENCAPSULATION	02 DATE	03 AGENCY
04 DESCRIPTION N/A		
01 LI M. EMERIGENCY WASTE TREATME	ENT 02 DATE	03 AGENCY
04 DESCRIPTION	<u> </u>	
N/A		
01 LI N. CUTOFF WALLS 04 DESCRIPTION	02 DATE	OB AGENCY
N/A		
01 11 O. EMERGENCY DIKING SURFACE 04 DESCRIPTION	E WATER DIVERSION 02 DATE	03 AGENCY
N/A		
01 LI P. CUTOFF TRENCHES/SUMP	02 DATE	03 AGENCY
04 DESCRIPTION		
N/A		OR ACCINOV
01 (1 Q. SUBSURFACE CUTOFF WALL 04 DESCRIPTION	02 DATE	C3 AGENCY
N/A	·	

EPA		POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT PART 10 - PAST RESPONSE ACTIVITIES	OF STATE OF SITE NUMBER
AST RESPONSE ACTIVITIES	(Continued)		
01 L) R. BARRIER WALLS CO 04 DESCRIPTION	NSTRUCTED	O2 DATE	03 AGENCY
04 DESCRIPTION	N/A		
01 L) S. CAPPING/COVERING		02 DATE	03 AGENCY
04 DESCRIPTION	N/A	•	
01 [] T. BULK TANKAGE REF	AIRED	02 DATE	03 AGENCY
04 DESCRIPTION	N/A		
01 L) U GROUT CURTAIN CO		02 DATE	03 AGENCY
04 DESCRIPTION	N/A	•	
01 (1 V. BOTTOM SEALED		02 DATE	D3 ACENCY
04 DESCRIPTION		VEUNIG	03 AGENCY
	N/A		
01 L! W. GAS CONTROL 04 DESCRIPTION		02 DATE	03 AGENCY
	N/A		
01 () X. FIRE CONTROL 04 DESCRIPTION		02 DATE	03 AGENCY
	N/A		
01 LLY. LEACHATE TREATM	MENT	02 DATE	03 AGENCY
or besonit tion	N/A	_	
D1 L) Z. AREA EVACUATED		UZ DATE	03 AGENCY
04 DESCRIPTION	N/A .		
01 LI 1 ACCESS TO SITE RE		02 DATE	03 AGENCY
04 DESCRIPTION	NI Z A		
01 L12. POPULATION RELO	N/A CATED	02 DATE	03 AGENCY
04 DESCRIPTION			
01 [] 3. OTHER REMEDIAL	N/A ACTIVITIES	02 DATE	
04 DESCRIPTION	VALIÈ IN ES	OZ DATE	OB AGENOT
•	NONE		
	-		
			<u></u>
I. SOURCES OF INFORMATIO	ON (Cite specific)	elerences, e.g., stale Mas, sample analysis, reportst	
E & E, 1991			
ι α c, 19 91			

\$ L	A

POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT PART 11 - ENFORCEMENT INFORMATION

I. IDENT	IFICATION
01 STATE	02 SHE NUMBER

II. ENFORCEMENT INFORMATION

OF PAST REGULATORY ENFORCEMENT ACTION THES IX NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

NONE

III. SOURCES OF INFORMATION (Cité specific references, e.g., state lifes, sample analysis, reports)

E & E, 1991

EPA FORM 2070-13 (7-81)

O FOA POTEN	ICATION				
PART 1-SITE L	05 211E NOWLIEU				
II. SITE NAME AND LOCATION					
FORT GREELY FTP'S			i nouteno conse h Avenue	ECITIC LOCATION IDENTIFIE	
ON COLUMN TO THE STATE OF THE S			os ze cope	<u>ne consila</u>	
Fort Greely		AK		N/A	N/A on court
6 3 5 9 2 3 1 4 5 0 4 3 1	17PE OF OWNERSHIP 13 A. PRIVATE L.) F. OTHER _	M B. FEI	FRAT	I C STATE LID COURTY	ITE MUNICIPAL
III. INSPECTION INFORMATION	YEARS OF OPERAL				
7/17-21/1991 U ACTIVE MONTH DAY TEAM MONCHUE		1961	~	UNKNOWN	
DA AGE NOT PELL OTHÁING BASTECTION (Check pathal anna)					
I (E SIATE TIE SIATECONIDACTOR	. D. MANI			UNICIPAL CONTRACTOR	Inc. (E & E)
[Nem	OB TILE	KI G OI	men Eco rogy	& Environment,	
Jacqueline Lundberg	Geologi	st		E & E	(907) 257-5000
OF OTHER INSUECTORS	10 THE			NOTASINADRO 11	12 TELEPTHANE NO
Sue Wolfe	Chemist			E. & E	1907) 257-5000
					()
			•	.	()
					()
					()
13 SUE REFRESENTATIVES INTERVIEWED	14 TITLE	—т	15ADDRESS	!	16 TELETHONIC TIO
					()
					1)
					()
					()
					
	-				-
					1, ,
17 ACCESS CANED BY TA THE OF INSPECTION		}			
1730 - 7/17/91	19 WEATHER CON				
() WARRANT 1215 ~ 7/21/91	Sunny 7	5° -	Rainy 55 ⁰	F	
IV. INFORMATION AVAILABLE FROM					
Dave Williams	United St		Army Corps	of Engineers	1907, 753-5657
74 FERSON RESPONSIBLE FOR SITE WISPECTION FORM	05 AGENCY		SANIZATION	OZ TELEPHONE NO.	DBDAIE
Jacqueline Lundberg		1	& E	907/257-5000	8 , 1 , 91

\$EPA

POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT

L IDENTIFICATION OF STATE OF SITE HUMBER

I IXJ DAMAGE TO FLOTIA	021 MODSERVED (DATE	1	LIPOTENHAL	I ! ALLEGED
4 DANDATIVE DESCRIPTION		•		
Vegetation has not grown back	c in the area of GRIP-4A Si	nce it	was crosed	III 1905.
LIXK, DAMAGE TO FAUNA 4 HANDATIVE DESCRIPTION for to remove the consense	0211 ORSERVED (DATE	1	тХратения	11 ALLEGED
There is a potential for fau are not fenced, and therefor	na to consume contaminated e, animals have access to	flora. them.	The GFTPs	
HILL CONTAMBATION OF FOOD CHAIN	DS LLOBSERVED (DATE	. 1	JAITHATO" II	L1 WTEGED
None known.	•			
N IN W THISTABLE CONTAINMENT OF WASTES	021XOBSERVED (DATE 7/19-	<u> 21/1991</u>	11 POTENTIAL	DALLEGED
os ropulation rolentally arrected 2,00 Surface soils are contaminat adequately.	00 of themselve beschirten ted, and therefore, wastes	were no	ot contained	1
OT LETE PAMAGE TO OFF SHE PROPERTY 34 HADRATIVE DESCRIPTION	. 02110BSERVED (DATE	1	JAIRUSTOS I I	I I ALLEGED
None known.				
OT LEO CONTAMINATION OF SEWERS, STORM OR OF NARRADIZE DESCRIPTION	ANS, WWTPs 0211 ODSFOVED (DATE	1	I I POTEITIM	LIALLEGED
None known.				
OT LEE JEEGYPANYAMINOUSED DAMPING	0211 OBSERVED (DATE	,	LI POTENTIAL	LLALLEGED
flone known.	·			
OS DESCRIPTION OF ANY OTHER KNOWN, POTEN	TIAL, ON ALLEGED HAZARDS			
tlone				
		··		
III. TOTAL POPULATION POTENTIALLY AFFECTIVE COMMENTS	7 (100) TEO: 2,000			
TV. COMMENTS				
	· · · · · · · · · · · · · · · · · · ·			
V. SOURCES OF INFORMATION ICAE SPACE FOR THE PERSON				

\$EPA

L DENTFICATION OI STATE OF SITE HANDEN

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

HAZABANA GANAMANA AMARANA	to remark y
HAZARDOUS CONDITIONS AND INCIDENTS	
OI IXA GROUIDWATER CONTAMBATION 2,000	OSTIOBSENVED (DATE I KI POTENTIAL TIALIFRED
	of Hammaine Description Jarvis Creek. Overland waterflow can transport
contaminants from the GETP's to	Jarvis Creek. However, this potential should be
considered very limited.	out vis creek. However, this potential should be
considered very limited.	
OT X'S SURFACE WATER CONTAMBIATION	DZ 1 1 OBSETIVED (DATE
OT X'B STREACE WATER CONTAMBIATION UNKNOWN	04 HARRATIVE DESCRIPTION
Jarvis Creek is 2,000 ft. east o	of the FTPs. Although no sediment or surface water
samples were collected, there is	s a potential for contaminants at the site to mi-
grate via overland runoff and di	rainage ditches to Jarvis Creek.
OFFIC CONTAMINATION OF AN	83 L ORGER AND AND AND AND AND AND AND AND AND AND
O F LALLICATION LOTENMATTA VLLECTED	DE LEONGENVEU (DATE
shows I now in ambient six	A PID did not detect organic vapors
above 1 ppm in ambient air.	
OLLIN THE EVENTER COMMISSION	
OF LOTAL VIOLE OF STATE OF STA	02 LT ODSERVED (DATE : 1 POTENTIAL LEALECED OF NARRATIVE DESCRIPTION
	The second state of the second
None observed.	•
,	
OTTAL THECT CONTACT 0.117011 ANTECIED 2,000	04 NAMATIVE DESCRIPTION 1 EXPORTMAL 1: AREGED
none of the arres are fenced.	Motorized and pedestrian access if uncontrolled.
·	
OF IXE COMMINIMINITY OF SOIL 17 acres	021.100SERVED (DATE 7/19-21/91) IT POTENTIAL TRAILEGED
[Acces]	04 NATITATIVE DESCRIPTION
Although soil samples were cont	
contamination has not been dete	ermined.
011 G DRITIKING WATER CONTAMINATION 0	ST LONGPOWER WALE
	oztiousenvenidate j i rotenia, tialegen na namative resonmition wells are located south of the FTPs. Groundwater
The Ft. Greely drinking water w	wells are located south of the FTPs. Groundwater
flows to the north.	
01 1111 WORKER EXPOSURE/RUMMY	02 FT OBSERVED (UATE
	s no documentation of a work exposure or injury on si
ine site is mactive. There is	s no documentation of a work exposure of injury on sa
01 CO. POPULATION EXPOSUREMUMY 2,000	0211 OBSENVED (DATE:) IX POTENTIAL IT ALLEGED
	ry includes those that use surface water for
recreation or who are in the F	- -
recreation of who are in the r	ir alea.
,	

VI. SOURCES OF 1141 UNMATION ICES MOSTIC MISSENSE, S. B. LIMS Met, verythat membras, reports 1 50.4 SOI 60.1 1.02 SOL None SOL 504 transcourse (Co) DELECTION OF THE PROPERTY OF T CVILGIJIA UDUMNUTEAD SO DITTIDZIOCKIIVINE CVILGOIA V. LEEDS LOCKS IS -- AIRud/kg 284 tnemtserT.bnsl. C22-C24 MIO ud_kd Land Treatment C12-C28 808 OFM ud/kd Land..Treatment. 850 ΙĩΟ OTN шã/ка 0 t 0 T MI0 inemiseri bnsi C18-C54 C10-C18 ú₫\kď 2,450 MIO Land Treatment <u>006'2</u> üDE na\kg Land Treatment 220 72-55-9 nä\ká 000,18 Land Ireatment บัยยั ŌÖC £-12-8809 nā\ka TUU 0CC 120,000 Land Treatment <u>20-53-3</u> COMERNIUVIEM OR MEVENIUM OF DZ CONCENTIVOR OF STORAGE DISHOUNT METHOD OB CV2HAMBEH AIIGD HV 2 is US 20021 VICE HVIVE 14. 11AZ ANDOU'S SUBSIANICES 15re fryends for most in quenty ceed CAS Mondard Ппкпомп HEVA! METALS SVI **MYZEZ** 0.3v HOURGYING CHEMICALS CR H OTHER ORIGINAL CHEMICALS 550 <u> Ипкпомп</u> Unknown LESTICIDES. (15.1 Ппкпомп COFAEILLS **ገ**Օ5 Пикломп 315AW YJIQ ALIO 2000JE MIS 03 CONNEILS MILLS A 3NF OF THTU SI O1 CHO22 YMORIS SUBSTANCE NAME UNDSALVO III' MVZIE IALE SYMBIA TO OU 1555 LER HOLVELIKENIE n prins is LIE NICOMININE LIK NEVENAL TINATREM IT'I しいけん いいけつ X, ν is intrastitut TIRALIMALT D'I I I C IIVDIOVCIIAL LI B CCIIIDZIAL LVUU. BABILLO. ME SOUME IND EXITORIAL AND A L STATE TOWNS OF STATE имы Дикиоми HIV YOU A RIGHT LIST DIXOL 4 24 Darender Foren Spitzin Hoanand Hisaw En BUS IA VIIIIAUO BIPAN CO Harman and Aced to PRIATE PARTIES AND ARTERIOR II. WASTE STATES, DUANTILIES, AND CHARACTENISTICS PART 2 - WASTE INFORMATION A93令 SITE INSPECTION REPORT PERMUNENTE SO STATE TO POTENTIAL HAZARDOUS WASTE SITE LIDENTIFICATION

\$FPA	POTENTIAL HAZARDOUS WASTE SITE					I. IDENTIFICATION		
	PART 4 - PERM	SITE INSPECTION PART 4 - PERMIT AND DESCRIPTIVE INFORMATION				OF STATE OF SITE BURDED		
II. PERMIT INFORMATION			SCHIPTIVE	NEORMATION	l 	!		
OF THE OF PERMIT ISSUED	02 F IMIT NUMBER	DEDATE	Issues Inc.					
''A NPDES		13,77,74	PER CONTRACTOR	MATION DATE OF	COMPLAIS			
1.8 ALC	 -	 _	_					
' C AIR	- 							
O RCRA		 _					——	
E RCRA INTERIM STATUS	- 					·		
SPCC PLAN	- 							
G STATE STATE	- -						 -	
14 TOCAL (Scendal								
1 OTHER Specifit		_					 -	
XX i tions								
III. SITE DESCRIPTION								
U.S. LOUISE DISTANCE	27 AMOURT 03 IBRI 6							
v. WINEVCE IMPOUNDMENT	is vonctiful. On that t	OF MEAGURE	O4 HIEAHAEN	Latina Language Market		05 CHIER		
13 till tie	T=		I TA INCENE	HOHAN				
C DUDING VBOAF GROUND	-		TIB Umbend	अस्य वाम्यातास्य १८८३ १८	ŅΝ	LLA BUILDINGS (4)	1 SHE	
to take and a ground			11.C CHEMIC	A DITCH		Nama		
T TABLE PELOW GROUND T TABLE O			THE WASTE	oir bisock adind iovr		None		
G LAMPEARIA			HE SOLVER	T RECOVERY		OR AREA OF SHE		
X. Ourn Burn Pits	- • •	-	LIG OTHER:	RECYCLING RECO	PVFRY	17		
Xionin Burn Pits	••		XH OHEN	Burn_Fue	l		14	
				,				
Currently, the FTPs of indicate that drums will 1961 to 1983.	ere regularly	stored	on-site	for fire	traini	ing purposes fi	om	
4 ADEQUATE SECUME	LIB Arres							
	LIB MODERATE	ХСш	ADEQUATE, CO	on ii	D INSECTION	RE, UIDSOUND, DANGEROI	ID.	
The east of the same of the sa	MIERS, ETC					(MNGENC)	1-4	
The site is not lined	and does not	have a	ny surfad	e water d	iversi	on system.		
. ACCESSIBILITY								
OF TABLE ASH A VEG COME I NES								
The site is not fence		y acces	isible fr	om 6th Av	enue.			
SOURCES OF INFORMATION (Cite special	r references, e o state des est						•	
	Train 1945, 32-14-16	enalysis, injusts	'				 -	
E & E, 1991	•							
			-					
	•						ļ	
Francis (7.81)								
the street of the Ath								