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ENGINEERING DATA TRANSMITTAL

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1. EDT 133065

2. To: (Receiving Organization) DISTRIBUTION	3. From: (Originating Organization) ENVIRONMENTAL RESTORATION ENGINEERING	4. Related EDT No: NA
5. Proj/Prog/Dept/Div: ERA/ERE/ED	6. Cog/Proj Engr: F.W. GUSTAFSON	7. Purchase Order No: NA
8. Originator Remarks: APPROVAL/RELEASE		9. Equip/Component No: NA
		10. System/Bldg/Facility: NA
		12. Major Assm Dwg No: NA
		13. Permit/Permit Application No. NA
11. Receiver Remarks:		14. Required Response Date: 8/21/92

10/17/92 16:26

15. DATA TRANSMITTED					(F)	(G)	(H)	(I)
(A) Item No.	(B) Document/Drawing No.	(C) Sheet No.	(D) Rev No.	(E) Title or Description of Data Transmitted	Impact Level	Reason for Transmittal	Originator Disposition	Receiver Disposition
1	WHC-SD-EN-AP-099		2	NORTH SLOPE EXPEDITED RESPONSE ACTION FIELD SAMPLING PLAN	3Q	1, 2		

16. KEY		
Impact Level (F)	Reason for Transmittal (G)	Disposition (H) & (I)
1, 2, 3, or 4 see MRP 5.43 and EP-1.7	1. Approval 2. Release 3. Information 4. Review 5. Post-Review 6. Dist (Receipt Acknow. Required)	1. Approved 2. Approved w/comment 3. Disapproved w/comment 4. Reviewed no/comment 5. Reviewed w/comment 6. Receipt acknowledged

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1		Cog./Proj. Eng. Mgr.	W.L. JOHNSON	8/21/92	H4-55						
1		QA Safety	G.S. CORRIGAN	8-21-92	H4-16						
3		CENTRAL Files	(2)		L8-04						
3		EDMC (2)			H4-22						



18. Signature of EDT Originator F.W. GUSTAFSON Date: 8/21/92	19. Authorized Representative for Receiving Organization Date	20. Cognizant/Project Engineer's Manager W.L. JOHNSON Date: 8/21/92	21. DOE APPROVAL (if required) <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/comments <input type="checkbox"/> Disapproved w/comments
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Date Received: 8/21/92

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Reference: WHC-CM-3-4

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List attachments. NA			
Date Release Required 8/21/92			

Title NORTH SLOPE EXPEDITED RESPONSE ACTION FIELD SAMPLING PLAN	Unclassified Category UC-	Impact Level 3Q
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Title of Journal
NA

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Review Required per WHC-CM-3-4	Yes	No	Reviewer - Signature	Indicates Approval	Date
			Name (printed)	Signature	
Classification/Uncontrolled Nuclear Information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DL BECKER	<i>DL Becker</i>	8/21/92
Patent - General Counsel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	B.D. Williamson	<i>B.D. Williamson</i>	8/21/92
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RL Program/Project	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
Publication Services	<input checked="" type="checkbox"/>	<input type="checkbox"/>	M.S. Kowalski	<i>M.S. Kowalski</i>	8/21/92
Other Program/Project	<input type="checkbox"/>	<input checked="" type="checkbox"/>			

Information conforms to all applicable requirements. The above information is certified to be correct.

References Available to Intended Audience	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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Author/Requestor (Printed/Signature)	Date
F.W. Gustafson	<i>F.W. Gustafson</i> 8/21/92
Intended Audience	
<input type="checkbox"/> Internal <input type="checkbox"/> Sponsor <input checked="" type="checkbox"/> External	
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W.L. Johnson	<i>W.L. Johnson</i> 8/21/92

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Date Cancelled	Date Disapproved

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SUPPORTING DOCUMENT

1. Total Pages 10/11

2. Title

North Slope Expedited Response Action Field Sampling Plan

3. Number

WHC-SD-EN-AP-099

4. Rev No.

0

5. Key Words

landfills
military
defense
Nike
Wahluke

APPROVED FOR
PUBLIC RELEASE

V. Bickland 8/21/92

6. Author

Name: F.W. Gustafson

[Signature]
Signature

Organization/Charge Code 81225/PC131

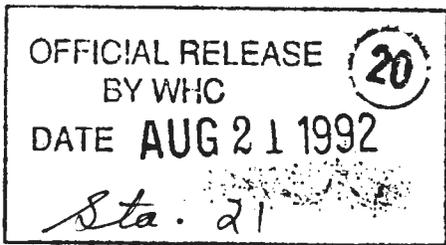
7. Abstract

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FIGURE

1 Location Map of North Slope 2

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1.0 SCOPE OF WORK

This document provides details for characterization sampling of North (Wahluke) Slope military landfills. These landfills are wastes sites included in a proposed expedited response action (ERA), which entails accelerated characterization/cleanup activities at waste sites located on Hanford's North slope. The ERA is promulgated by the *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) (Ecology et al. 1991).

The sampling efforts are necessary in determining the presence (if contamination is present) of environmental contamination at the military landfills. This sampling plan will serve as a field guide for those performing the work. It should be used in conjunction with the *Environmental Investigations and Site Characterization Manual* (WHC 1988c), which provides specific sampling procedures.

This sampling effort is the initial phase of the North Slope ERA and entails only the sampling of military landfills. Sampling locations are to be based on the results of geophysical surveys conducted over the landfills of interest. Additional characterization efforts may be conducted at these landfills based on the results of the initial sampling effort. A task specific sampling plan will be prepared for all additional sampling efforts.

1.1 SITE DESCRIPTION

The North Slope area was used for military defense of the Hanford Site (Figure 1). Defense positions originally consisted of seven anti-aircraft gun emplacements that were eventually replaced with three Nike missile positions. There has been no permanent military installations in the area since approximately 1960. Due to the remote location of these facilities, garbage collection was not practicable and onsite landfills were used to dispose generated wastes.

The contents of these landfills is unknown. It is expected that domestic trash makes up the majority of the contents of these landfills. The Nike missile sites may have contributed more hazardous constituents as operation information indicates JP-3 gasoline, red fuming nitric acid, aniline, hydrazine, and trichloroethylene were used in support of missile operations. Evidence indicated limited vehicle maintenance was also performed at these sites and may have contributed wastes including oil and solvents to the contents of the landfills.

Materials evident on the surface of these landfills include military paint cans, oil cans, pop and beer bottles as well as demolition wastes from decommissioning of the military sites. Demolition wastes may include asbestos based materials such as transite and electrical transformers containing PCB.

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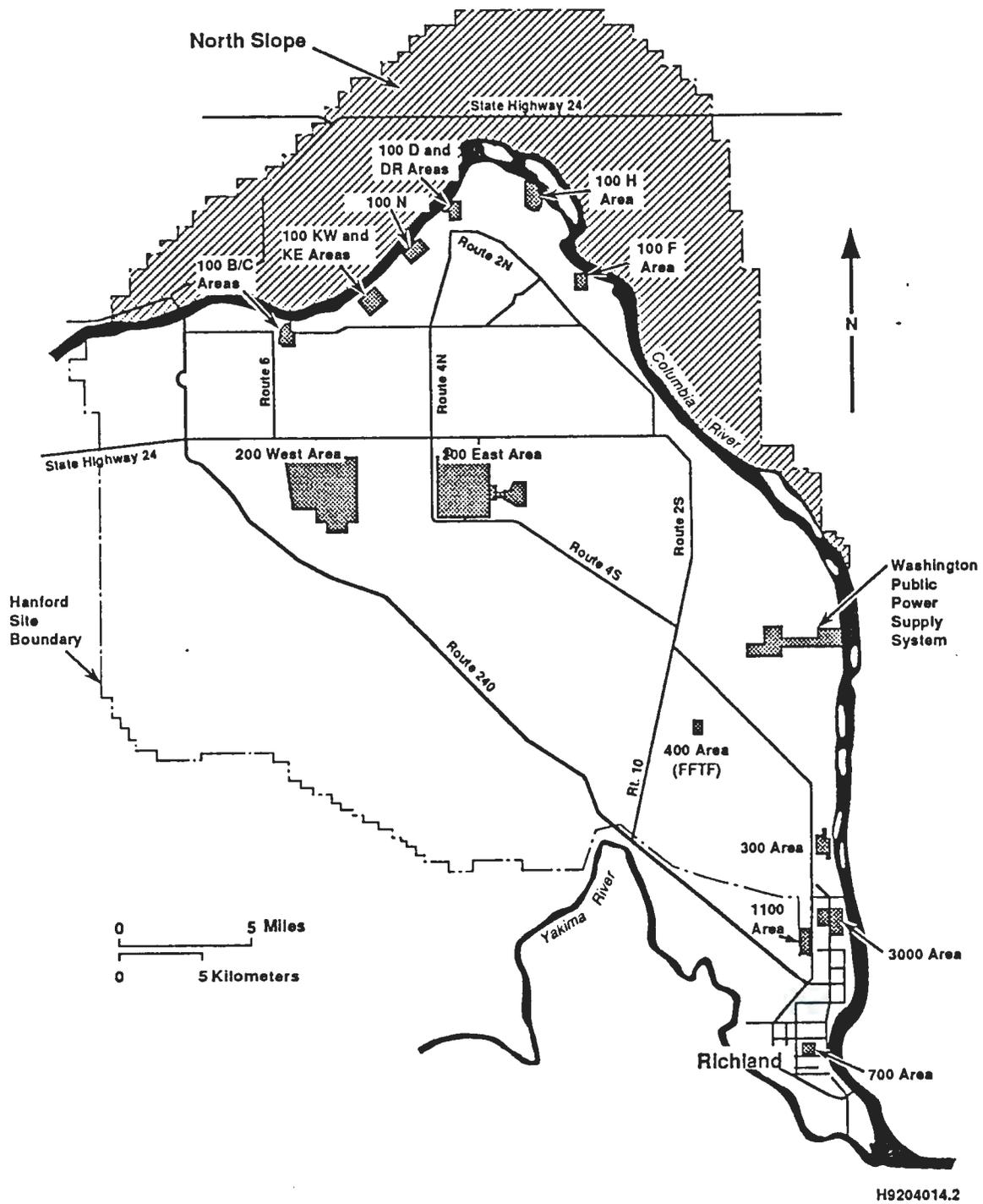


Figure 1. Location Map of North Slope.

The environmental hazards (if any) posed by these landfills will be common as the layout (as noted in field reconnaissance and as-built drawings) and operations conducted at the sites were essentially the same. In effort to minimize environmental impact posed by performing intrusive characterization activities, landfill areas at three of the military sites have been identified as representative of all the North Slope military landfills. The results of the investigations at these landfills will be considered to be representative of the remaining sites.

2.0 GENERAL REQUIREMENTS

2.1 APPLICABLE PROCEDURES

All personnel working to this description will perform work in accordance with the following:

- WHC-EP-0383, *Environmental Engineering, Technology, and Permitting Function Quality Assurance Program Plan* (WHC 1990)
- WHC-CM-4-10, *Radiation Protection* (WHC 1988d)
- WHC-CM-4-11, *ALARA Program Manual* (WHC 1988a)
- WHC-CM-4-3, *Industrial Safety Manual*, Vol. 1 through 3, (WHC 1987)
- WHC-CM-7-5, *Environmental Compliance Manual* (WHC 1988b)
- Site-specific Hazardous Waste Operations Plan or job safety analysis.

The associated field activities will also conform to the requirements of an existing safety assessment for soil sampling prior to initiation of the field activities. The requirements of this assessment may potentially impact specific sampling protocol. All changes resulting from this assessment will be documented using an ERA Sampling Project Change Form (Attachment 1).

2.2 PREREQUISITES

A readiness review (RR) for the military landfill sampling efforts will be completed by the cognizant engineer before sampling is attempted. The RR will be completed per EII 1.13, Environmental Engineering and Geotechnology Readiness Review (WHC 1988c). The Sampling Status Checklist (Attachment 2) will be initialed by the cognizant engineer or field team leader and dated as each step of the task is completed.

2.3 DATA QUALITY OBJECTIVES

The data obtained from this sampling effort will be used to determine if hazardous substances are present in the landfills at levels that warrant remedial efforts. It is not the objective of these efforts to determine the extent of contamination, if contamination is present.

3.0 SAMPLING AND FIELD ACTIVITIES

3.1 SAMPLE LOCATIONS

Due to the length of time since the military landfills were operated, the exact boundaries of the landfills are questionable. The results of non-intrusive geophysical surveys including ground-penetrating radar, will be utilized in determining landfill boundaries and location of subsurface anomalies prior to sampling. A minimum of six samples from each landfill selected for study will be taken utilizing a hollow stem auger drill.

Samples will be obtained at the approximate level of the landfill bottom. This level will be determined based on field observations. An experienced driller will inform the field team leader whenever drill performance indicates significant changes in lithology (possibly indicating the bottom of the landfill). Additional sampling locations/interval may be selected at the discretion of the field team leader.

Each sampling location and pertinent information will be documented in the field log book. The logbook will be used and maintained per EII 1.5 Field Logbooks (WHC 1988c).

3.2 SAMPLE COLLECTION

Soil samples shall be collected per EII 5.2, Soil and Sediment Sampling (WHC 1988c). Samples will be collected utilizing a split tube sampler. A field logbook will be used to document activities associated with the sample collection. The logbook will be used and maintained per EII 1.5 Field Logbooks (WHC 1988c).

A total of 21 samples will be collected, including quality assurance/quality control (QA/QC) samples. The equipment blank media shall be silica sand. The following is a summary of the estimated number of samples to be collected. (Note: the sample numbers below assume six samples will be taken from landfill).

- 18 samples from the landfills
- 1 equipment blank (per 20 samples)
- 1 duplicate sample (per 20 samples)
- 1 split sample (per 20 samples).

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3.3 SAMPLE LABELING

The Hanford Environmental Information System (HEIS) is used to track the sample and laboratory data obtained during environmental investigations conducted under this description of work. Each sample will be identified and labeled with a unique HEIS sample number. HEIS numbers will be assigned in the field per the *Hanford Environmental Information System (HEIS) Users Manual* (WHC 1991). The sample location and corresponding HEIS numbers will be documented in the field logbook.

4.0 SAMPLE ANALYSES

Samples will be analyzed for Target Analyte List organics and Target Compound List inorganics and nitrate (NO_3) using SW 846 or contract laboratory procedure (CLP) protocol. Eighty percent of the samples collected will be analyzed according to SW 846 protocol. The remaining 20% will be analyzed and validated in accordance with CLP protocol.

A total activity analysis will also be performed to permit for offsite shipment of the sample (no radiological contamination is expected). Sample custody will follow the EII 5.1, Chain of Custody (WHC 1988c) procedure. Total activity analysis will be performed in accordance with standard operating procedures developed for the Hanford Site 222-S Laboratory.

5.0 QUALITY ASSURANCE/QUALITY CONTROL REQUIREMENTS

Internal QA/QC samples shall be collected as specified by DOE-RL (1991), Appendix A, and documented in the sampling logbook per EII 1.5, Field Logbooks (WHC 1988c). Quality assurance samples will include one equipment blank sample, one duplicate sample and one split sample for every 20 soil samples collected. The trip blank and field blank have been deleted per OSWER Directive 9355.0-7B Appendix C, Section C.6 (p.13). The equipment blank media shall be silica sand.

6.0 SCHEDULE

Geophysical surveys were completed over three landfill areas the week of July 27, 1992. The landfills were located east of Nike position H-83-L, east of AAA PSN 04 and east south-east of Nike position H-06-L. Sampling activities within these landfills will be performed in early September 1992.

7.0 CHANGES TO DESCRIPTION OF WORK

Major changes to this description of work, such as analyzing for additional parameters or using different analytical methods, will be submitted on the Project Change Form (Attachment 1). The change will require, as a minimum, the verbal approval of field team leader and the operable unit coordinator. The change will be filed as an Engineering Change Notice (ECN) and a copy will be inserted into the project file. Copies will be submitted to the regulatory agencies and the appropriate field personnel within 10 working days of the change.

8.0 REFERENCES

- DOE-RL, 1991, *Environmental Restoration Remedial Action Quality Assurance Requirements Document*, DOE/RL-90-28, U.S. Department of Energy-Richland Field Office, Richland, Washington.
- Ecology, U.S. Environmental Protection Agency, U.S. Department of Energy, 1991, *Hanford Federal Facility Agreement and Consent Order*, Olympia, Washington.
- EPA, 1986, *Test Methods for Evaluating Solid Waste Physical/Chemical Methods*, SW-846, U.S. Environmental Protection Agency, Washington, D.C.
- WHC, 1987, *Industrial Safety Manual*, WHC-CM-4-3, Vol. 1 through 3, Westinghouse Hanford Company, Richland, Washington.
- WHC, 1988a, *ALARA Program Manual*, WHC-CM-4-11, Westinghouse Hanford Company, Richland, Washington.
- WHC, 1988b, *Environmental Compliance Manual*, WHC-CM-7-5, Westinghouse Hanford Company, Richland, Washington.
- WHC, 1988c, *Environmental Investigations and Site Characterization Manual*, WHC-CM-7-7, Westinghouse Hanford Company, Richland, Washington.
- WHC, 1988d, *Radiation Protection*, WHC-CM-4-10, Westinghouse Hanford Company, Richland, Washington.
- WHC, 1990, *Environmental Engineering, Technology, and Permitting Function Quality Assurance Program Plan*, WHC-EP-0383, Westinghouse Hanford Company, Richland, Washington.
- WHC, 1991, *Hanford Environmental Information System (HEIS) Users Manual*, WHC-EP-0372, Vol. 1, Rev. 1, Westinghouse Hanford Company, Richland, Washington.

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ATTACHMENT 1
NORTH SLOPE EXPEDITED RESPONSE ACTION PROJECT CHANGE FORM

Date: _____

Person Initiating Change: _____

Change: _____

Reason for Change: _____

APPROVAL:

Field Team Leader: _____

ERA: _____

Environmental QA Representative: _____

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ATTACHMENT 2

NORTH SLOPE MILITARY LANDFILL
EXPEDITED RESPONSE ACTION
SAMPLING CHECKLIST

Activity Performed

Signature/Date

PREJOB SAFETY MEETING COMPLETED

SAMPLES COLLECTED AND LABELED

LAB SAMPLES SURVEYED BY HPT

LAB SAMPLES PACKAGED IN SHIPPING CONTAINER

TOTAL ACTIVITY SCAN OF LAB SAMPLES COMPLETED

CHAIN OF CUSTODY FORM COMPLETED

SAMPLES SHIPPED TO LABORATORY

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