

ERC CONTROLLED MANUAL TRANSMITTAL

Date Prepared: 02/01/96

ISOM, DA (EDMC)
003
H0-09

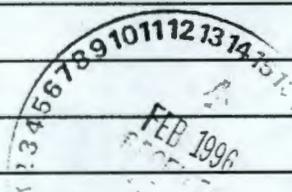
Transmittal Number: BHI-EE-01-V2-TR19

Document Number: BHI-EE-01, VOLUME 2

Title: ENVIRONMENTAL INVESTIGATIONS PROCEDURES

- Instructions:**
- (1) Remove and/or insert indicated procedure/section into manual as shown.
 - (2) Sign this form and return it to Procedures Coordination within 10 working days of receipt.

Procedure/Section Numbers and Titles	Remove		Insert	
	Rev	Date	Rev	Date
TABLE OF CONTENTS	6	01/10/96	7	02/01/96
FORMS	1	02/01/95	2	02/01/96
BHI-EE-015, "DRILLING PLANNING FORM"	--	12/94	--	02/96



If you have any questions about this release, please contact Sharon Lee 372-9555.

Receipt Acknowledgment

I have inserted this material into the manual per the above instructions:

DA / ISOM

Signature

2/26/96

Date

New address or MSIN if different than listed above:

FOLD DOWN TO THE DOTTED LINE--PLEASE DO NOT STAPLE OR TAPE.

RETURN TO: Procedures Coordination, MSIN H0-10
Bechtel Hanford, Inc., 3350 George Washington Way, Richland, Washington 99352
BHI-DC-001 (01/96)

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THE BHI-EE-01 MANUAL CONSISTS OF TWO VOLUMES, ORGANIZED AS FOLLOWS:

- VOLUME 1
 - Section 1 General Information
 - Section 2 Sample Management

- VOLUME 2
 - Section 3 General Sampling
 - Section 4 Soil, Groundwater, and Biotic Sampling
 - Section 5 Sampling Techniques
 - Section 6 Drilling
 - Section 7 Geologic and Hydrologic Data Collection
 - Glossary/Acronyms
 - Cross Reference
 - Forms

<u>NUMBER</u>	<u>TITLE</u>	<u>REV.</u>	<u>EFFECTIVE DATE</u>
<u>Section 3, General Sampling</u>			
3.0	Chain of Custody	1	11/06/95
3.1	Sample Packaging and Shipping	0	02/01/95
<u>Section 4, Soil, Groundwater, and Biotic Sampling</u>			
4.0	Soil and Sediment Sampling	0	02/01/95
4.1	Groundwater Sampling	0	02/01/95
4.2	Sample Storage and Shipping Facility	1	11/06/95
4.3	Biotic Surveying and Sampling	0	02/01/95

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<u>NUMBER</u>	<u>TITLE</u>	<u>REV.</u>	<u>EFFECTIVE DATE</u>
<u>Section 5. Sampling Techniques</u>			
5.0	Cone Penetrometer	0	02/01/95
5.1	Soil-Gas Sampling	0	02/01/95
5.2	Test Pit Excavation in Contaminated Areas	0	02/01/95
<u>Section 6. Drilling</u>			
6.0	Documentation of Well Drilling and Completion Operations	0	02/01/95
6.1	Drilling and Sampling in Radiological Contaminated Areas	0	02/01/95
	REVISION ORDER	A	06/29/95
6.2	Field Cleaning and /or Decontamination of Drilling Equipment	0	02/01/95
6.3	Well Development Procedure	0	02/01/95
6.4	Control and Storage of Radioactive Materials and Equipment	0	02/01/95
<u>Section 7. Geologic and Hydrologic Data Collection</u>			
7.0	Geologic Logging	0	02/01/95
	Procedure Change Authorization 001	0	05/31/95
7.1	Aquifer Testing	1	11/06/95
7.2	Geophysical Survey Work	0	02/01/95

* Changes are indicated by revision bars shown in the margins.

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<u>NUMBER</u>	<u>TITLE</u>	<u>REV.</u>	<u>EFFECTIVE DATE</u>
7.3	User Calibration of Groundwater Measuring and Testing Equipment	0	02/01/95
	<u>Glossary/ Acronyms</u>	0	02/01/95
	<u>Cross Reference</u>	0	02/01/95
	<u>Forms</u>	2	02/01/96

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Forms List

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The forms within this section are referenced within this manual. You may copy the forms for use. Changes to these forms are not allowed unless approved by the appropriate responsible manager.

FORMS LIST

Form Number	Name	Date	Procedure Reference
54-3000-479	Off-Site Property Control	01/94	EIP 3.1
54-3000-596	Hazardous Material Shipment Record (HMSR)	10/87	EIP 3.1
54-6000-088	Offsite Radioactive Shipment Record	10/88	EIP 3.1
54-3000-609	Onsite Radioactive Shipment Record	06/87	EIP 3.1
A-6000-354	Quality Assurance Record Transmittal	02/92	EIP 2.6
A-6000-369 (WEF111)	Assigned Reading	03/90	EIP 1.12
A-6000-382	Borehole Log	01/93	EIP 7.0
A-6000-384	Well Summary Sheet	01/93	EIP 7.0
A-6000-436	Well Construction Summary Report	01/93	EIP 6.0
A-6000-451	Resource Protection Ground Water Well Structure Fitness for Use Checklist	11/89	EIP 1.8
A-6000-480 (GEF075)	Groundwater Sample Report	06/93	EIP 4.2
A-6000-528	Onsite Routine Radioactive Shipment Record (For information only)	09/93	EIP 3.1

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Form Number	Name	Date	Procedure Reference
A-6001-188 (WEF232)	Field Activity Report Cone Penetrometer	01/94	EIP 5.0
BC-6000-278	Field Activity Report - Well Services	04/94	EIP 7.1
BC-6000-279	Field Activity Report - Cement Calculations	03/93	EIP 6.0
BC-6000-280	Field Activity Report - Tubular Goods Tally	03/93	EIP 6.0
BC-6000-281	Field Activity Report - Drawing Continuation Page	03/93	EIP 6.0
BC-6000-453	Well Purge Water Transport Log	09/92	EIP 1.11
BD-7800-009	Radioactive Shipment Checklist	04/88	EIP 3.1
BHI-EE-001	Field Sampling Requirements Laboratory Analysis	12/94	EIP 2.0
BHI-EE-002	Sampling Authorization Form	12/94	EIP 2.0
BHI-EE-003	Request for Analytical Services	12/94	EIP 2.0
BHI-EE-004	Field Sampling Requirements/Field Screening Requirements	12/94	EIP 2.1
BHI-EE-005	4701-C Temperature Log Sheet	10/94	EIP 4.2
BHI-EE-006	4701-C Sample Log Sheet	10/94	EIP 4.2
BHI-EE-011	Chain of Custody/Sample Analysis Request	01/95	EIP 3.1 EIP 4.1
BHI-EE-015	Drilling Planning Form	02/96	EIP 6.0

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Form Number	Name	Date	Procedure Reference
BHI-EE-017	Filed Activity Report - Drilling	12/94	EIP 6.0
BHI-EE-018	Field Activity Report - Drilling Continuation Page	12/94	EIP 6.0
BHI-EE-035	Field Cleaning And/Or Decontamination	11/94	EIP 6.2
BHI-EE-043	Procedure Change Authorization	12/94	EIP 1.1
BHI-EE-083	Sample and Data Management Administrative Verification Form	11/94	EIP 2.3
BHI-EE-084	Validation Services Request	11/94	EIP 2.5
BHI-EE-085	Volatile Organic Data Verification Checklist	11/94	EIP 2.4
BHI-EE-086	Semi-Volatile Organic Data Verification Checklist	11/94	EIP 2.4
BHI-EE-087	Pesticide/PCB Data Verification Checklist	11/94	EIP 2.4
BHI-EE-088	Gas Chromatography Data Verification Checklist	11/94	EIP 2.4
BHI-EE-089	Dioxin/Furan Data Verification Checklist	11/94	EIP 2.4
BHI-EE-090	Inorganic Analysis Data Verification Checklist	11/94	EIP 2.4
BHI-EE-091	General Chemistry Data Verification Checklist	11/94	EIP 2.4
BHI-EE-092	Verification Checklist for Beta and Gas Proportional Counting	12/94	EIP 2.4

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Form Number	Name	Date	Procedure Reference
BHI-EE-093	Verification Checklist for Alpha Spectroscopy	12/94	EIP 2.4
BHI-EE-094	Verification Checklist for Gamma Spectroscopy	12/94	EIP 2.4
BHI-EE-095	Verification Checklist for Alpha-Emitting Radium Isotopes Using Scintillation Counting	12/94	EIP 2.4
BHI-EE-096	Verification Checklist for Radium-226 Analysis Using Scintillation (Lucas Cell) Counting	12/94	EIP 2.4
BHI-EE-097	Verification Checklist for Liquid Scintillation Counting	12/94	EIP 2.4
BHI-EE-098	Verification Checklist for Uranium Analysis by Fluorometry	12/94	EIP 2.4
BHI-EE-099	Verification Checklist for Total Uranium Analysis by Kinetic Phosphorimetry	12/94	EIP 2.4
BHI-EE-100	Verification Checklist for Selected Radioisotope Analysis Using Inductively-Coupled Plasma/Mass Spectrometry	12/94	EIP 2.4
BHI-EE-101	Verification Checklist Comments Sheet	12/94	EIP 2.4
BHI-EE-102	Daily Verification Summary and Missing Information Report: Chemistry (DVS-MIR-C)	12/94	EIP 2.4
BHI-EE-103	Daily Verification Summary and Missing Information Report: Radchem (DVS-MIR-R)	12/94	EIP 2.4
BHI-EE-104	Transmittal Form to Validator	12/94	EIP 2.4
BHI-EE-105	Data Folder Traveler Sheet	07/93	EIP 2.2 EIP 2.5

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Form Number	Name	Date	Procedure Reference
BHI-EE-108	NPL Agreement/Change Control Form	11/94	EIP 1.3 EIP 1.4
BHI-EE-109	Sample Disposition Record	11/94	EIP 2.7
BHI-EE-110	Request for Map or Data Product	12/94	EIP 1.7
BHI-EE-111	Course Critique	12/94	EIP 1.12
BHI-EE-112	Well Development, Testing, and Pump Installation	12/94	EIP 7.1 EIP 6.3
BHI-EE-113	Survey Project Log	12/94	EIP 1.6
BHI-EE-114	Coordinate Data Form	12/94	EIP 1.6
BHI-EE-115	Radioactive Storage Area Inventory List	12/94	EIP 6.4
BHI-EE-117	Certificate of Qualification	12/94	EIP 1.12
BHI-EE-118	Indoctrination Attendance Form	12/94	EIP 1.12
BHI-EE-119	Chemical Data Package Verification Cover Sheet	12/94	EIP 2.4
BHI-EE-120	Radiochemical Data Package Verification Cover Sheet	12/94	EIP 2.4
BHI-DC-002	Procedure Request	07/94	EIP 1.1
BHI-DC-003	Review/Approval Sheet	07/94	EIP 1.3
BHI-DC-009	Document Review and Approval Form	10/94	EIP 1.1

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Form Number	Name	Date	Procedure Reference
BHI-DC-010	Approval Page	10/94	EIP 1.4
BHI-TM-R006	Radiological Survey Record	No Date	EIP 6.1
BHI-TM-R007	Radiological Survey Record Continuation Sheet	No Date	EIP 6.1

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DRILLING PLANNING FORM

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Work Description:

List Well Designation(s):

Reference:

Rev:

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Print/Sign Name and Date

Documentation and Permitting

EA / NEPA Documentation

Cultural & Endangered Species Reviews

Waste Control Plan

Davis-Bacon Act Determination

Final Hazard Classification

Safety Assessment

Well Specification

Site Evaluation Letter

Procedures and Protocol Adequate

Health and Safety Plan

Ground Penetrating Radar Data Reviewed

Excavation Permit

Start Card(s) Submitted to WDOE

Radiation Control Documentation and Permitting

Radiation Work Permits

ALARA Planning

Pre-grub Surveys Completed

Subcontract / Work Order

Drill Pad & Access Road

Drilling Services

Geophysical Logging

Location Survey

Sample Analysis Laboratories

Laundry / Mask Services

Field Verify Readiness

Mechanical Equipment Readied

Waste Containers Available

Personnel Training & Qualifications Verified

Medical/Bioassay Requirements Verified

Project Required Reading Completed

Pre-job Safety Meeting Documented

Safety Inspection Checklist Completed

Approval: Field Coordinator (print/sign and date)