

November 19, 1991

**Meeting Minutes Transmittal/Approval**  
**Unit Managers Meeting: Past Practices - General Topics**  
 450 Hills St., Room 47  
 Richland, Washington  
 October 16, 1991

From/ Appvl.: Robert K. Stewart Date: 11/20/91  
 Robert K. Stewart, R.I. Coordinator, DOE-RL (A6-95)

Appvl.: Douglas R. Sherwood Date: 11/20/91  
 Douglas R. Sherwood, Representative, EPA (B5-01)

Appvl.: Larry Goldstein Date: 11/20/91  
 Larry Goldstein, CERCLA Unit Supervisor, Washington Dept. of Ecology

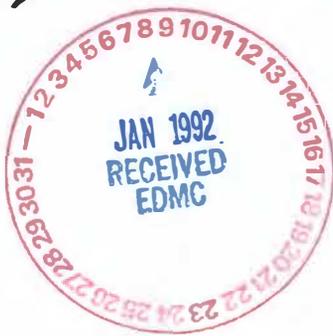
The purpose of this meeting was to discuss general topics which are common to all past practices operable units.

Meeting Minutes are attached. Minutes are comprised of the following:

- Attachment #1 - Summary of Meeting and Commitments and Agreements
- Attachment #2 - Agenda for the Meeting
- Attachment #3 - Attendance List
- Attachment #4 - Commitments/Agreements Status List
- Attachment #5 - Analytical Laboratory Status
- Attachment #6 - Current Integration/Coordination Activities
- Attachment #7 - Hanford Site Entry Protocol for Regulatory Agency Personnel
- Attachment #8 - Management of Investigation Derived Waste
- Attachment #9 - Federal Register Publication
- Attachment #10 - Transmittal of EII 4.3 and Strategy Document
- Attachment #11 - M-29-00 Milestones

Prepared by: W. M. C. Clegg Date: 11/22/91  
 SWEC, GSSC

Concurrence by: H. D. D. D. Date: 11/20/91  
 WHC



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**General Topics Unit Managers Meeting  
October 16, 1991**

**Distribution:**

Dave Einan, EPA (B5-01)	Mike Thompson, DOE-RL (A6-95)
Pam Innis, EPA (B5-01)	S.H. Wisness, DOE-RL (A6-95)
Doug Sherwood, EPA (B5-01)	J.M. Hennig, DOE-RL (A5-21)
Dan Duncan, EPA, Region 10, RCRA	John Stewart, USACE
Chuck Cline, WDOE (two copies)	Melvin Adams, WHC (H4-55)
Dave Nylander, WDOE (Kennewick)	Frank Calapristi, WHC (B2-35)
R.O. Patt, OR Water Resources Dept.	Steve Clark, WHC (H4-55)
Ward Staubitz, USGS	Larry Hulstrom WHC (H4-55)
Donna Lacombe, PRC	Wayne Johnson, WHC (H4-55)
Doug Fassett, SWEC (A4-35)	Alan Krug, WHC (H4-55)
C.E. Clark, DOE-RL (A6-95)	Merl Lauterbach, WHC (H4-55)
D.L. Clark, DOE-RL (A5-55)	Tim Veneziano, WHC (B2-35)
Julie Erickson, DOE-RL (A6-95)	Fred Roeck, WHC (H4-55)
R.D. Freeberg, DOE-RL (A5-19)	Jim Patterson, WHC (B2-15)
R.E. Gerton, DOE-RL (A4-02)	Steve Weiss, WHC (H4-55)
Jim Goodenough, DOE-RL (A6-95)	Tom Wintczak, WHC (L4-92)
Elizabeth A. Bracken, DOE-RL (A5-19)	R.D. Wojtasek, WHC (L4-92)
Mary Harmon, DOE-HQ (EM-442)	Don Kane, EMO (K1-74)
Paul Pak, DOE-RL (A6-95)	Terri Stewart, PNL (K2-12)
Jim Rasmussen, DOE-RL (A6-95)	Don Praast, GAO (A1-80)
Bob Stewart, DOE-RL (A6-95)	Bob Henckel, WHC (H4-55)
Nancy Werdel, DOE-RL (A5-19)	David Pabst, WHC (B2-35)

ADMINISTRATIVE RECORDS: 1100-EM-1, 300-FF-1, 300-FF-5, 200-BP-1, 200-UP-2, 100-HR-1, 100-HR-3, 100-BC-1, 100-BC-5, 100-NR-1, 100-NR-3, 100-FR-1; Care of Susan Wray, WHC (H4-22)

Please inform Doug Fassett (SWEC) of deletions or additions to the distribution list.

## Attachment #1

### Summary of Meeting Commitments and Agreements General Topics Unit Managers Meeting October 16, 1991

#### Introductions

1. Darci Teel and Billie Mauss of Ecology were introduced as representatives for CERCLA activities.
2. Dave Pabst's (WHC) primary role is to act as an interface for the TPA within WHC.

#### Update on Laboratory Status

3. Joan Kessner (WHC) gave a presentation on the status of analytical laboratories (see Attachment #5). Ms. Kessner provided the current status of the laboratory tracking system and outlined the additional staff OSM requires to alleviate problems in turnaround times.
4. Joan Kessner, Mike Korenko (WHC), and Gene Kosiancic (WHC) visited Weston the week of October 7, 1991. Weston is the laboratory of primary interest to WHC. Also, WHC is Weston's second largest customer, consuming approximately 35 percent of the Lionville laboratory capacity. As of October 7, 1991, Weston management had purchased an ICP for metals analysis and should now be able to meet the contract turnaround time for chemical analysis. Weston presently has the longest analysis turnaround time; 90 days on radiochemistry samples and about 60 days for chemical analysis.
5. OSM will be visiting Ecotech, a new subcontractor, the week of October 21, 1991. The subcontractor will be doing some radiochemical analyses. TMA had indicated they were having significant radiochemistry capacity problems, but it turned out to be a communication problem. Datachem and S-Cubed continued to operate within contract requirements and have had an average turnaround of 35 to 45 days.
6. Joan Kessner stated that WHC-Environmental Quality Assurance visits laboratories every six to nine months to do periodic assessments prior to awarding a contract. In some cases DOE observers accompany the audit team on laboratory visits.
7. WHC is presently two to three months behind on the validation of data received from laboratories because of a lack of personnel to do the data validations. Two additional people are presently being trained to validate data. OSM's staff has doubled in the last six months. OSM is employing "job shoppers" to help circumvent the present validation problem.
8. WHC and the laboratories are overcoming earlier problems in communication and schedules. Most of these situations have been corrected and work is progressing more effectively.

### DOE Integration of Past Practice Sites

9. Bill Fryer (SWECC) has been devoting most of his time to reviews of macro-engineering studies and the 100 Area work plans. The report on these activities should be available next month. Mr. Fryer noted that there is a lot of activity regarding integration and coordination of activities by various committees, and that RCRA/CERCLA integration is being actively pursued by Westinghouse.
10. There are a number of groups working on risk assessment, performance assessment and modeling issues. A lot of effort is being made to assure that the same concepts and perspectives are incorporated by each group, and to reduce redundancy of activities. Ward Staubitz (USGS) stated that USGS/EPA had produced a first draft paper on modeling. Bill Fryer is preparing an issue paper covering regulator coordination. The paper should be available in November.
11. Bob Stewart (DOE) stated that a new RL branch may be established within the environmental restoration program and it would be responsible for most general topics. He announced that as of October 20, 1991, Ron Izatt (DOE), who is deputy to Leo Little, will be heading a new office which will in part act as the coordination/integration focus for all Tri-Party Agreement activities.

### Update on Inspection Protocols at Past Practice Sites

12. Randy Krekel (DOE) discussed the contents of the draft site entry protocol document developed by WHC and reviewed by RL (see Attachment #7). Copies of the draft protocol document were provided to the regulators for review and comment. A memorandum of understanding (MOU) is being developed, which will be proposed to certain regulatory agencies. It is expected that the MOU and the protocol document will go into another review cycle in DOE the week of October 21, 1991. Once these documents have been approved, it will be necessary to develop an internal DOE procedure to make sure everyone understands the requirements. Comments concerning these documents can be submitted to Bob Stewart.

### Update on Investigation of Derived Waste

13. Ed Smith (WHC) presented an update on various activities associated with waste resulting from drill cuttings, decontamination rinsate and the production of solid wastes. Management is investigating a flexible approach to manage these types of wastes. These issues have been incorporated into the EII 4.3 document (see Attachment #10). A paragraph has been added to the first page of EII 4.3 to clarify the scope of the document.
14. Bob Stewart presented information on draft limits that had been proposed for derived waste encountered during cleanup activities.
15. Ed Smith suggested that a cost analysis based on different levels of cleanup should be pursued.

16. Concern was expressed about the removal of material from the trenches at the 618-9 burial ground. Bob Stewart stated that the soil removed from trenches in the 618-9 burial ground is placed beside the trench; foreign objects such as glass and metal are removed. The soil is then placed back in the trench. The material removed from the trenches is sent to be analyzed, and contaminated objects are taken to low level waste burial grounds. Uncontaminated material is sent to a sanitary landfill. Liquids that are removed are taken to off-site treatment facilities.

#### Update on Status of RCRA/CERCLA Integration

17. Fred Ruck (WHC) presented the status of the RCRA/CERCLA integration activity and described the direction the integration committee would like to take. The committee met last week and revised the format of the presentation that will be given to EPA. The committee would like to have a single document that covers closure plans, work plans, etc., that focuses on the investigation aspects of both RCRA and CERCLA and that both EPA and Ecology can approve. It may not be possible to place this document on the UMM agenda for the November meeting as the lawyers need to first review the site-wide part B permit. At this time DOE/WHC need to work very closely with Ecology and EPA to create a document that is acceptable to all parties. The document should inform all parties how to write a closure plan, a work plan, etc. DOE/WHC need to determine what areas can be put under one umbrella document to save money and provide a better working system.

#### Risk Assessments Codes and Standards

19. Jack Sonnichsen (WHC) covered the status of the M-29 milestones (see Attachment #11). Mr. Sonnichsen said the first milestone was completed by the end of September 1991, and work on the second milestone had just been initiated. A draft document covering the third milestone has been written and circulated for review. The package is due by the end of March 1992.

#### UMM Schedule Through December 1991

November 21 and 22, 1991  
December 17 and 18, 1991

**Attachment #2**

**Agenda  
Unit Managers Meeting  
October 16, 1991**

General Topics

- 9:00 - 9:10  
Approval of September Unit Managers Meeting Minutes - Doug Fassett
- 9:10 - 9:30  
Update on Laboratory Status - Joan Kessner
- 9:30 - 9:45  
DOE Integration of Past Practice Sites - Bob Stewart/Bill Fryer
- 9:45 - 9:55  
Update on Inspection Protocols at Past Practice Sites - Eric Goller
- 9:55 - 10:15  
Update on Investigation Derived Waste - Ed Smith
- 10:15 - 10:30  
Break
- 10:30 - 10:45  
Update on Status of RCRA/CERCLA Integration - Fred Ruck
- 10:45 - 11:00  
Risk Assessment Codes and Models - Jack Sonnichsen
- 11:00 - 11:30  
Action Item Status - Doug Fassett  
November Unit Managers Meeting - Bob Stewart

## Attachment #3

## Attendance List

General Topics Unit Managers Meeting  
October 16, 1991

Name	Org.	O.U. Role	Phone
Allender, Robert	B & C	Ecology Support	(503) 244-7005
Goodenough, Jim	DOE-RL	100-Area	(509) 376-7087
Stewart, Robert K.	DOE-RL	Gen. Top. Meet. Chair	(509) 376-6192
Wanek, Donna	DOE-RL	Laboratories	(509) 376-5778
Cline, Chuck	Ecology	Geohydrology	(206) 438-7556
Cross, Steve	Ecology	CERCL	(206) 459-6675
Mauss, Billie	Ecology	CERCL	(509) 546-2993
Teel, Darci	Ecology	CERCL	(509) 545-2312
Einan, Dave	EPA	Unit Manager	(509) 376-3883
Innis, Pamela	EPA	Unit Manager	(509) 376-4919
Sherwood, Doug	EPA	Unit Manager	(509) 376-9529
Lacombe, Donna	PRC	EPA Contractor	(206) 624-2692
Fryer, Bill	SWEC	GSSC to DOE/RL	(509) 376-9830
Knox, Kathy	CNES	GSSC to DOE/RL	(509) 376-5011
McClung, Bill	SWEC	GSSC to DOE/RL	(509) 376-1853
Shigley, Diane	SWEC	GSSC to DOE/RL	(509) 376-5038
Staubitz, Ward	USGS	EPA Support	(206) 593-6510
Bechtold, R.A.	WHC	Env. Eng.	(509) 376-9017
Carlson, R.A.	WHC	200/300 Env. Eng.	(509) 376-9027
Downey, H.D.	WHC	Program Office	(509) 376-5539
Henckel, Robert P.	WHC	Env. Eng., OU Support	(509) 376-2091
Kessner, Joan	WHC	Laboratories	(509) 373-3507
Lerch, J.A.	WHC	OSM	(509) 373-3419
Mix, Pauline	WHC	Activity Engineer	(509) 376-1543
Pabst, David	WHC	100 Area OCL Mgr.	(509) 376-9048
Smet, A.K.	WHC	NA	(509) 376-6558
Smith, Ed H.	WHC	Env. Scientist	(509) 376-0234
Sonnichsen, John C.	WHC	M-29-00 Milestone	(509) 376-9956

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Attachment #4

Action Items Status List  
General Topics Unit Managers Meeting  
October 16, 1991

Item No.	Action/Source of Action	Status
GT.38	If possible, at the May Unit Managers Meeting a presentation on the approved, preferred alternative method for disposal of the reactors will be given. Action: Jim Goodenough (4/18/90, GT-UMM)	Open The EIS will be reviewed by Admiral Watkins' office and Nuclear Safety (4/16/91). The RL program at DOE/HQ has written a letter to EH urging EH to quickly approve the final EIS and allow it to be published (6/19/91). Waiting for action from headquarters (8/8/91).
GT.71A	Provide the Environmental Information Management Plan (EIMP) and the Information Management Systems Plan (IMSP) to EPA and Ecology. Action: Nancy Werdel (9/18/91, GT.UMM)	Open The records management plan was completed and it will be sent to the regulators (9/18/91).
GT.76A	DOE is to respond to the comments that were provided by Ecology and EPA on the revised EII's 4.2 and 5.4. The EII's are related to the handling of drilling decontamination fluids. Action: Bob Stewart (7/17/91)	Open An updated draft strategy was provided to EPA and Ecology. (10/16/91)

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- 2 1 2 4 1 0 5 2
- GT.77A      A mechanism for the WHC to inform the regulators of sample results and disposal methods for rinsate is to be developed. Action: Hal Downey (7/17/91)
- Open  
This action has been forwarded to Bob Hobbs, the manager in WHC responsible for the disposition of decontamination rinsate waters generated at drill sites. His organization obtains the sample data, submits it for designation, and subsequently disposes of the waste. Mr. Hobbs will contact Mr. Hibbard to discuss a method for sharing data with regard to waste designation (8/6/91). Efforts to contact Mr. Hibbard in the weeks of 9/9/91 and 9/16/91 were unsuccessful (9/17/91). An alternate means of communication was arranged (9/18/91).
- GT.104      A presentation on inter-program coordination between the Waste Management Division and the Environmental Restoration Division is to be given. Ecology requests that information on management decision making, data management, field work and cross-program communication between ERD and WMD be included. Specific examples include: 1) decontamination and decommissioning of the reactors; 2) surface radiation reduction; 3) RCRA-site activities; and, 4) reactor operations (mulberry trees). The objective is to assure the regulators that these activities are being conducted in accordance with federal and state law, the TPA, and any ongoing or planned past practice work. Action: *David Pabst (WHC)* (4/16/91)
- Open  
Bill Fryer will partially address this action as part of the operable unit consistency task (7/17/91). Bob Stewart suggested that the presentation at the September Project Managers Meeting be given at a Unit Managers Meeting (9/18/91). The subject was not addressed at the September meeting and will be given at the October Project Managers Meeting (10/16/91).
- GT.108      Protocols are to be developed to facilitate conduct of regulatory inspections and site visits at past practice sites. Action: Eric Goller (DOE) (6/19/91)
- Open  
The unofficial draft was provided to the regulators on 10/16/91 (10/16/91).

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- GT.109      The surpassing of the turnaround times identified in the TPA for radiochemical sample analyses and the actions that will be taken to improve the turnaround times are to be provided to the regulators in a written document. Action: Joan Kessner (WHC) (7/19/91)
- GT.111      EPA and Ecology are to provide comments on the "Draft Data Validation Procedures for Chemical Analyses" received from WHC at the August 1991 1100-EM-1 Unit Managers Meeting. Action: Dave Einan and Rich Hibbard (8/14/91)
- GT.112      Conflicting requirements by the regulators will be described and provided to Julie Erickson by the end of the week of September 23. The conflicts will then be provided to the regulators (Larry Goldstein and Doug Sherwood) by the end of September. Action: Bill Fryer (9/18/91)
- GT.113      Provide an explanation of how information, including supplementary documents, on new sites and on sites that have been cleaned up is included in WIDS. Examples will be provided for illustration. The explanation is to be provided by the first week of October. Action: Nancy Werdel (9/18/91)
- Closed  
The documents were given to EPA and Ecology on 10/16/91 (10/16/91).
- Closed  
Billie Mauss (Ecology) and Donna Lacombe have completed their comments (10/16/91).
- Open  
The efforts are ongoing (10/16/91).
- Open  
Dick Fox (WHC) provided the information on WIDS to Nancy Werdel on the 8th of October (10/16/91).

GT.114

Determine where the macro engineering study is in the approval process of DOE. A presentation will be contingent on DOE management approval.  
Action: Allan Harris (9/18/91)

Open  
WHC gave a presentation to DOE at the unit manager level, then to upper management (Mr. Bixby and Mr. Little) on 10/10/91. A presentation to DOE-HQ will be scheduled before it is given to EPA and Ecology. The document is currently under DOE-RL review (10/16/91).

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CURRENT INTEGRATION/COORDINATION ACTIVITIES

- WORK PLAN CONSISTENCY
- RCRA/CERCLA INTEGRATION
- IDW
- RISK ASSESSMENT/PERFORMANCE ASSESSMENT/MODELING
- GEOPHYSICS
- FIELD ACTIVITIES/LABORATORY AND QA

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#5

# **ANALYTICAL LABORATORY STATUS**

**Joan Kessner  
October 16, 1991**

## WESTON

- **Visited by PAL and OSM Managers on October 7, 1991.**
- **Purchased additional ICP to support Westinghouse Hanford Company work. To be on line in November.**
- **Assesment of ECOTECH planned for week of October 21, 1991. Currently reviewing procedures.**
- **Overall performance continues to improve.**

## **TMA**

- **Visit by PAL and OSM Managers planned for November 91.**
- **Visit to Hanford Site planned in November by TMA Project Manager.**
- **Notification of capacity problems in Radiochemistry received October 7, 1991.**

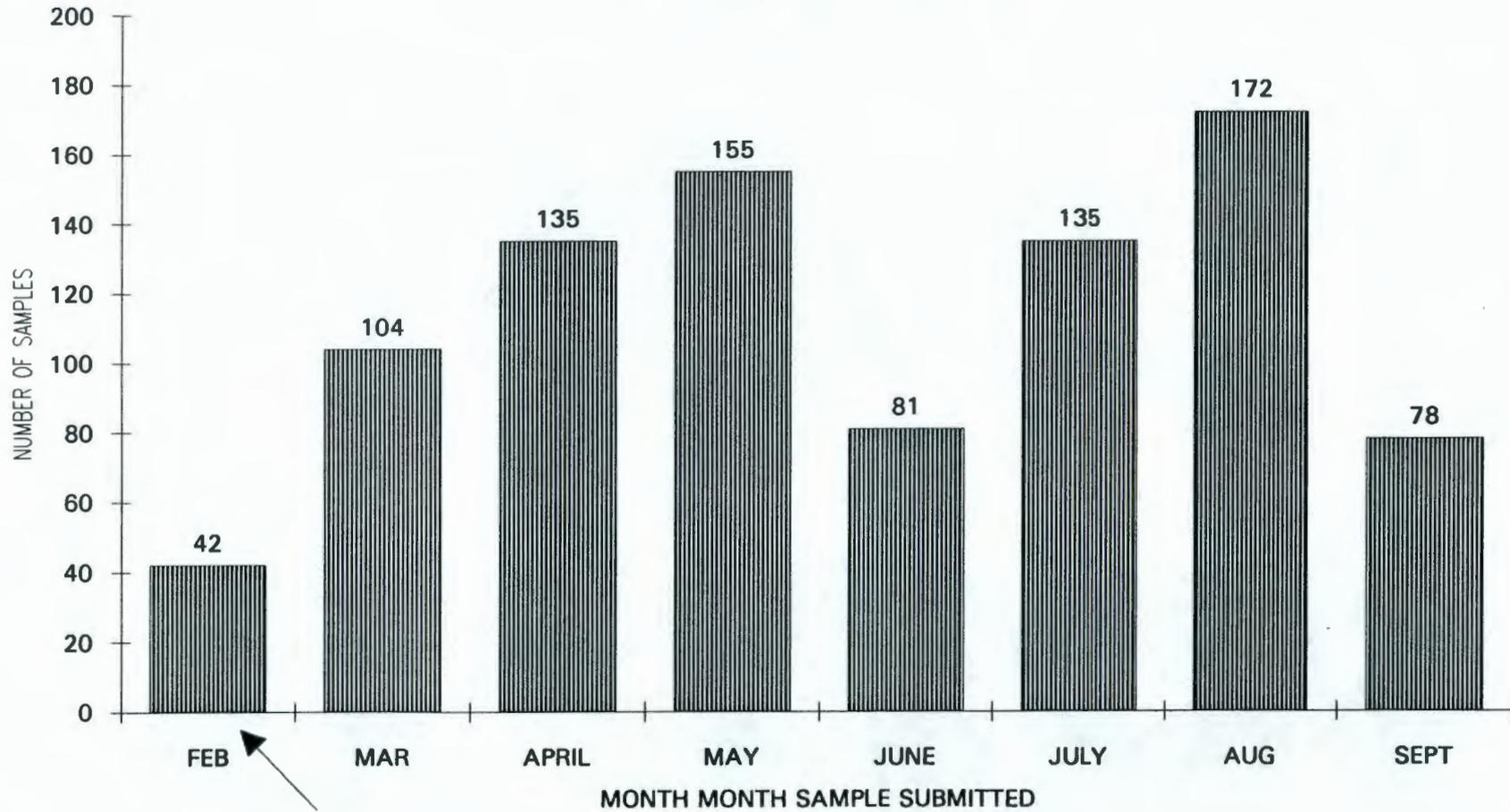
## **DataChem, S-Cubed**

- **Overall performance continues to be acceptable.**

## GENERAL

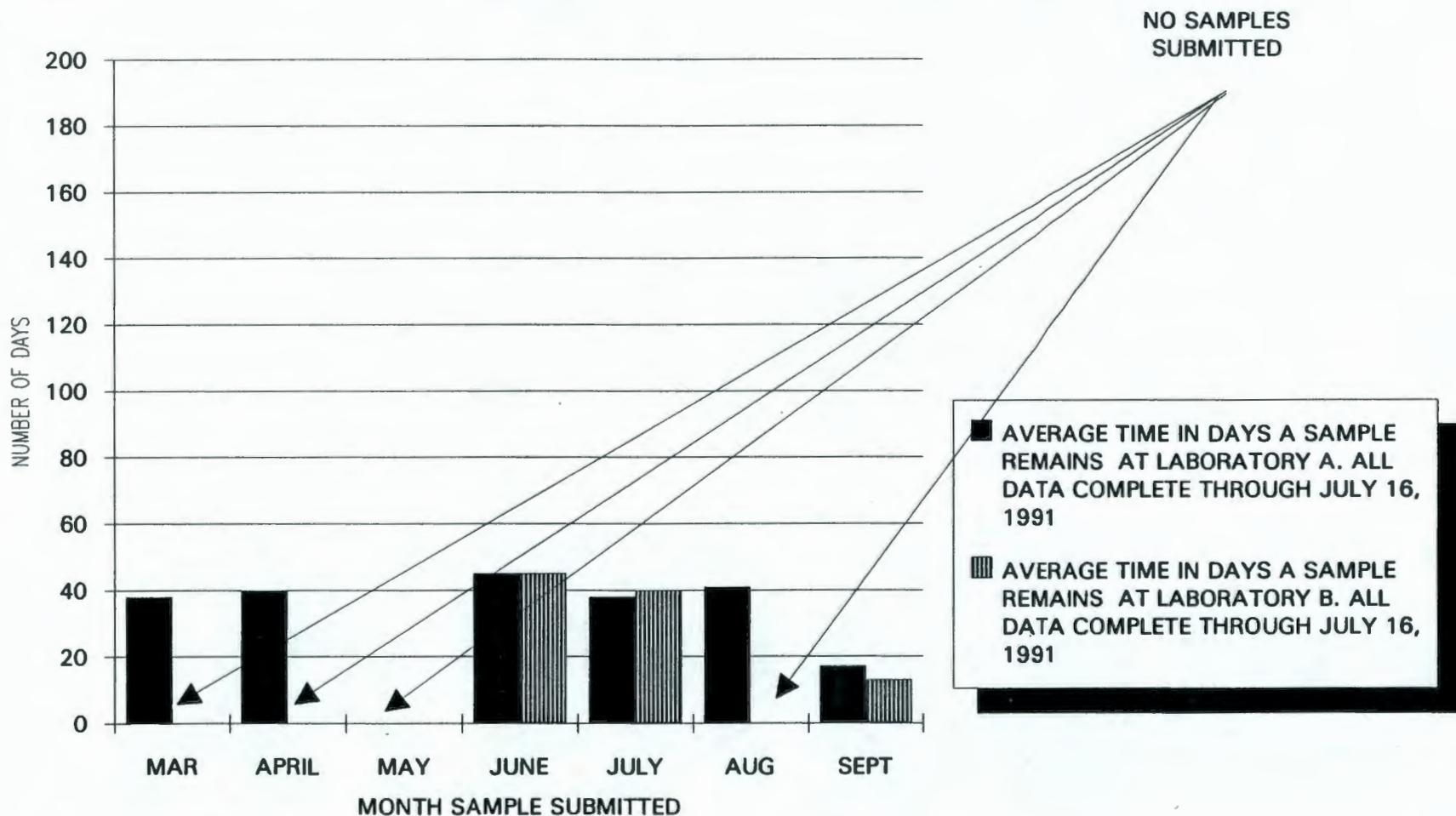
- **Response to EPA letter provided as a handout.**
  - **Includes due dates for data package, Validation, and Transmittal to regulators.**
  - **Projects 1100-EM-1, 200-BP-1, and 300-FF-1/5 for samples sent to commercial labs.**
- **Engineered Applications Manager in process of contacting the CEO's for the commercial labs.**
- **Proposal for \$250 million RFP are due to Westinghouse Hanford Company on October 31, 1991.**

### TOTAL NUMER OF SAMPLES SUBMITTED TO LABORATORY C



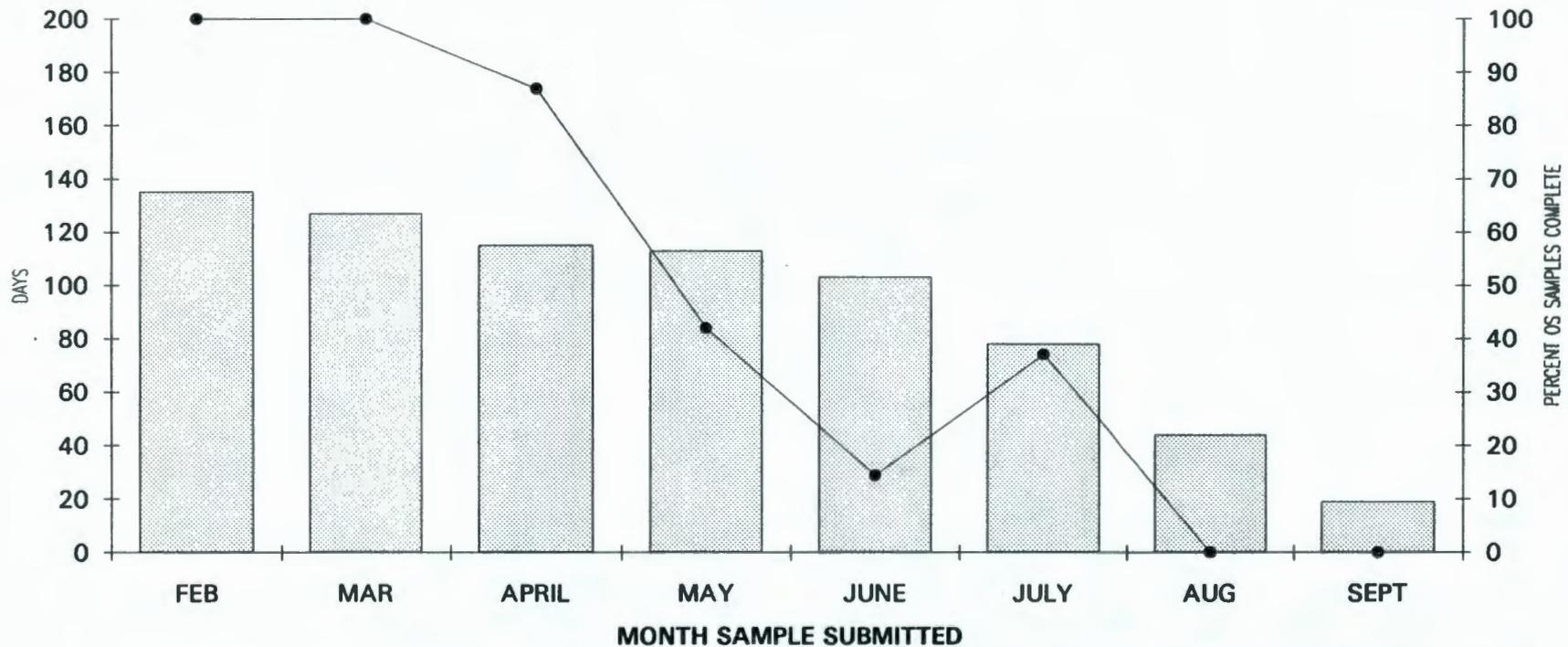
Initial samples submitted 2/13/81

## LABORATORY A AND B ANALYSES TURNAROUND TIMES\*



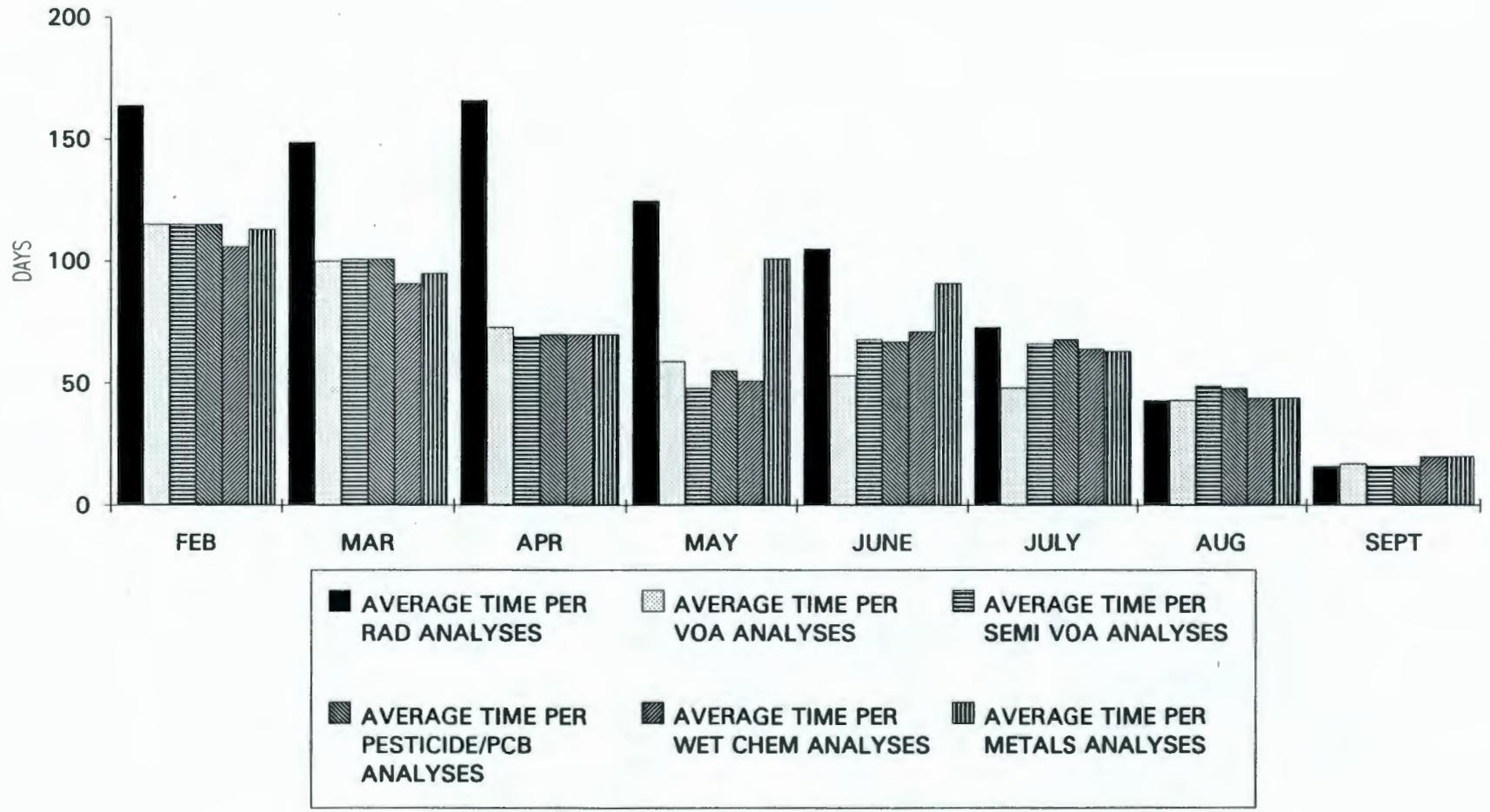
\* TABLE 2 SHOWS THE NUMBER OF SAMPLES COMPLETE BY MONTH

## AVERAGE TURNAROUND TIME FOR FULL ANALYSES AT LABORATORY C AND THE PERCENT OF SAMPLES COMPLETE



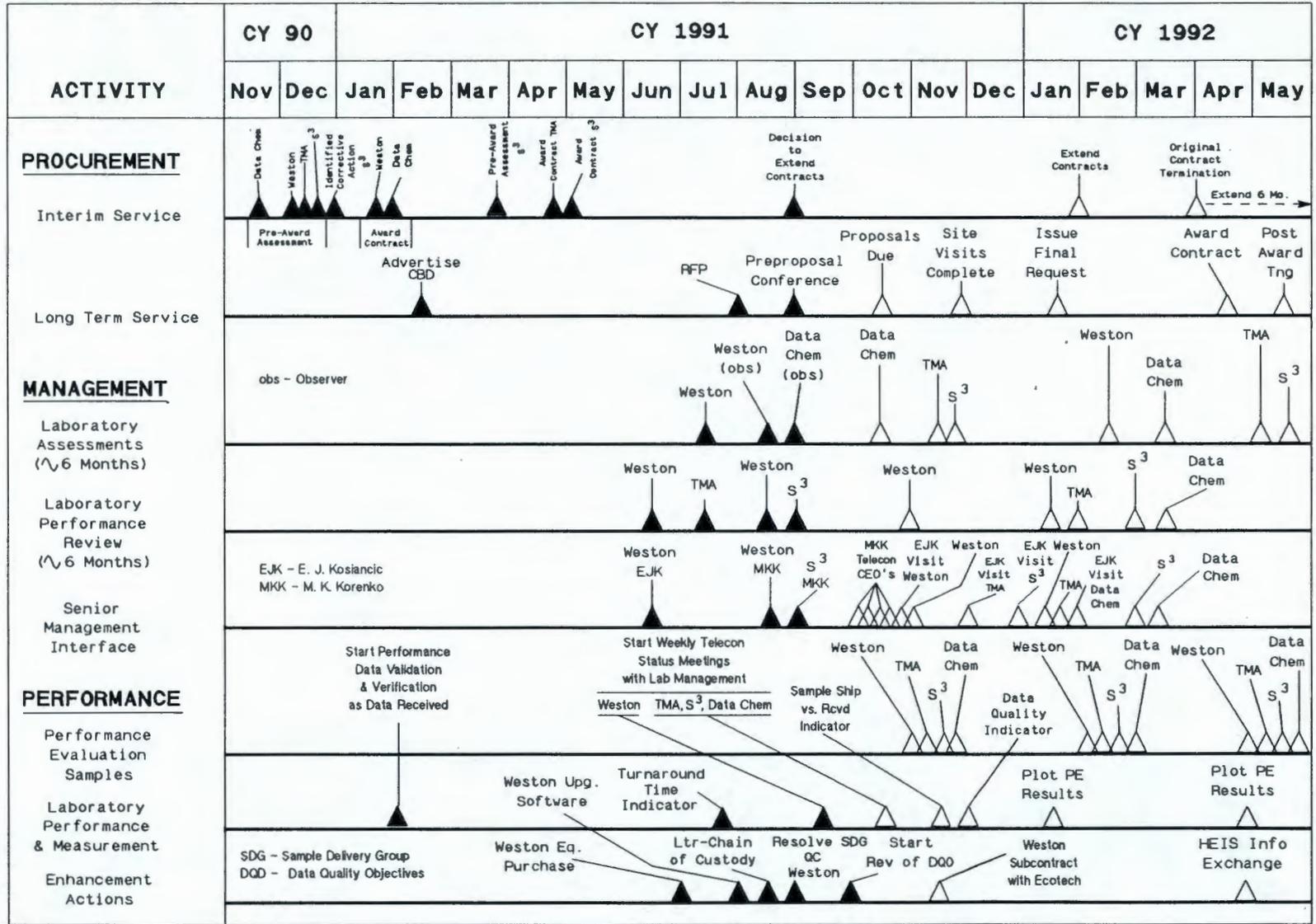
■ TOTAL TIME PER ALL SAMPLES SUBMITTED AT LABORATORY C    ● PERCENT OF SAMPLES COMPLETE

## AVERAGE TURNAROUND TIME BY ANALYSES TYPE FOR LABORATORY C\*



\*NOTE: PERCENT OF SAMPLES COMPLETE IS SHOWN IN FIGURE 3

### Commercial Laboratory Management Program



10-16-91

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## HANFORD SITE ENTRY PROTOCOL FOR REGULATORY AGENCY PERSONNEL

### I. SCOPE

This site entry protocol covers all areas on the Hanford Site that are accessible to regulatory agency personnel. Visitors or contractors of regulatory agencies shall meet the requirements applicable to any other site visitor. For more information contact the U.S. Department of Energy Field Office, Richland (RL) Point of Contact (POC).

### II. PURPOSE

This protocol identifies requirements and procedures that will ensure regulatory agency personnel safe and convenient access to the Hanford Site consistent with applicable statutes, regulations, and agreements. It also provides information on various types of general interface areas in order to clearly indicate how these areas will be dealt with.

Regulatory personnel may enter the Hanford Site at all reasonable times for the purposes of: performing inspections, reviewing the progress of the Department of Energy (DOE) and its contractors in implementing agreements, verifying data, and other activities authorized by applicable statutes or regulations.

The DOE shall generally honor all requests for access by regulatory agency personnel, conditioned only upon presentation of proper credentials, conformance with Hanford Site safety and security requirements, and conduct that minimizes interference with Hanford Site operations. Any denial of consent to access will be justified in writing within fourteen (14) days of such denial, and arrangements shall be made for access to the facility or area in question as soon as practicable. The DOE reserves the right to require regulatory agency personnel to be escorted while on the Hanford Site.

### III. ROUTINE ACCESS REQUIREMENTS

Regulatory agency personnel will contact the RL Point of Contact or the Westinghouse Hanford Company (WHC) Facility Compliance POC (Enclosure 2) prior to site access. This includes access to areas operated by contractors other than WHC. The WHC POC will arrange for access to other contractor facilities through the other contractor's management. Notice is required to identify an appropriate escort for regulatory personnel.

RL and/or its contractor personnel will accompany the regulatory personnel to ensure that: (1) access is provided to the facility consistent with the provisions of this protocol, (2) appropriate personnel (DOE contractors) are identified who can respond to questions regarding facility

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operation, (3) information required by the regulatory personnel is provided in a timely manner, and (4) any potential problems are clearly identified and/or corrected.

Questions regarding this protocol shall be referred to the RL POC.

#### IV. SPECIFIC ACCESS REQUIREMENTS

Regulatory agency personnel must have the appropriate security clearance, training, and/or other qualifications as necessary for the RL facility to be entered.

##### A. Security Badge

Permanent or visitor badge forms can be obtained by contacting RL POC (Enclosure 2). Where badge request forms require a payroll number, regulatory agency personnel shall provide their social security number. The completed form is then forwarded to DOE's Environmental Assessment Branch Chief (Enclosure 2) for approval.

##### B. Prohibited Article Pass

A prohibited article pass is required for bringing prohibited articles onto the Hanford Site. For information on prohibited articles and to obtain a prohibited article pass, contact the RL POC (Enclosure 2).

##### C. Radiation Protection

Radiation protection requirements for RL visitors are detailed in RL Implementing Procedure (RLIP) 5480.11, dated April 4, 1991. Radiation protection requirements vary depending on the frequency of visits and purpose of the entry. In addition, all regulatory personnel requiring routine access will be issued a multipurpose dosimeter and will be required to obtain a whole body count. The RL POC identified in Enclosure 2 can assist regulatory agency personnel in determining radiological access requirements.

##### D. Medical Surveillance

Federal Occupational Safety and Health Regulations in 29 Code of Federal Regulations (CFR) 1910.120 identify that employers of employees engaged in applicable hazardous waste operations shall institute a medical surveillance program in accordance with the specified regulations. It is understood that the regulatory agencies will be responsible for providing this medical surveillance for their employees, and for ensuring that their employees are actively participating in the medical surveillance program. RL and its contractors shall have no responsibility regarding medical surveillance for regulatory agency

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personnel, and shall assume that those regulatory agency personnel who enter the applicable hazardous waste operations areas are participating in their employers program.

## E. Training

The following sections identify the specific training requirements that apply to regulatory agency personnel. For additional information on more specific training requirements, contact RL POC (Enclosure 2).

### 1. Radiological Safety

Radiological safety requirements for regulatory personnel are based on the frequency and purpose of site access. These requirements are identified in RLIP 5480.11, dated April 4, 1991. For more information about these requirements, contact the RL POC.

### 2. Safety and Health Program

Federal Occupational Safety and Health Regulations at 29 CFR 1910.120, identify that employees must be trained per the applicable requirements in 29 CFR 1910.120 before they are permitted to engage in certain hazardous waste operations. It shall be understood that the regulatory agencies, as employers, are responsible for providing this training for their employees, and for ensuring that their employees are properly trained. RL and its contractors shall have no responsibility regarding the safety and health training program for regulatory agency personnel, and shall assume that those regulatory agency personnel who enter the applicable hazardous waste operations are trained per their employers safety and health training program.

#### a. Site Specific Safety and Health Plan

A site specific safety and health plan is required to be developed per 29 CFR 1910.120 for certain hazardous waste operations. These plans have been developed for the applicable Hanford Site hazardous waste operations areas and are identified as Hazardous Waste Operation Plans. The site specific safety and health plans are provided for pre-entry briefings and at such other times as necessary to ensure the individuals are apprised of the site safety and health plans and that the plans are being followed. All personnel shall document their review of the plans by signature in the site specific log book.

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### 3. Facility Specific Training

Facility specific training may be required depending on the area, facility, or hazard. Additional facility specific training information will be provided to the regulatory personnel by RL POC (Enclosure 2).

### 4. Security

Regulatory personnel must view the security training video prior to being issued a badge. Contact RL POC (attachment 1) for this security information.

## V. GENERAL INTERFACE AREAS

### A. Sampling

If samples are desired, regulatory agency personnel shall provide at least one week advance notice to the Facility Compliance POC of the intent to sample and the location of the desired sample point. The advance notice is necessary in order to schedule and coordinate Hanford Site personnel and equipment necessary to obtain a sample. RL contractors will facilitate site sampling of inspection sites by providing a sampling team along with the necessary equipment to meet regulatory agency personnel needs. Regulatory personnel may take direct area field measurements, but the recorded data shall be forwarded to the appropriate RL contractor responsible for the area where the measurements were taken.

If the sample area is in a Hazardous Waste Operations exclusion zone, and if the regulatory personnel need to be in the exclusion zone to observe sampling, additional training and equipment may be required. In this situation, RL contractors will provide the necessary equipment and sampling personnel for obtaining the sample while the regulatory personnel observes.

Once an agreement has been made on the type(s) of analysis to be performed, split samples will be provided to WHC and regulatory personnel. WHC Facility Compliance will assist in obtaining radiological clearance for the sample during chain of custody proceedings. Following appropriate chain of custody procedures the sample will be released to the regulatory agency for packaging and shipment of the split sample to be tested by the regulatory agency's laboratory.

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ENCLOSURE 1  
Page 6 of 7

## B. Documents

Facility Regulatory files are being established that will contain cleared information required to demonstrate compliance at each waste management unit (e.g., treatment, storage, and disposal units, Resource Conservation and Recovery past practice units, Comprehensive Environmental Response, Compensation, and Liability Act past practice units, etc.). These files are being cleared in advance for public release to regulatory personnel. When information is requested that is not identified in the Facility Regulatory file, the documents will be cleared in accordance with existing RL and contractor procedures. Access to classified information will only be provided to those individuals with the proper security clearance. RL reserves the right to ask regulatory personnel to provide a written request for documents that are not identified in the Facility Regulatory file.

## C. Meetings

Upon agreement by all parties, an exit meeting will be scheduled to allow Hanford Site personnel and regulatory personnel an opportunity to exchange information and to discuss compliance issues based on the inspection/visit.

Any action and findings from the meeting will be recorded in order for each representative to have a signed copy of the main points before leaving.

## D. Emergencies

To ensure the safety of the inspector/visitor during an emergency (i.e., spill site), the exclusion zone will be opened only at the discretion of the "senior official" (Occupational Safety and Health Administration, 29 CFR 1910.120 [q][3][I]). Restricted access will be enforced until the emergency is stabilized. These measures are to protect the safety of the regulatory agency and emergency response personnel.

## E. Record Keeping

Regulatory Agencies shall be responsible for maintaining records which demonstrate compliance with the requirements of this protocol, and for notifying their personnel of necessary training, refresher training, renewals, etc. Enclosure 3 shall be filled out for each regulatory personnel and submitted to RL. RL and its contractors will keep copies of these records to ensure that the

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ENCLOSURE 1  
Page 7 of 7

proper and applicable requirements have been met by regulatory agency personnel in order for them to enter accessible areas on the Hanford Site.

RL will maintain regulatory agency personnel radiation exposure records, as applicable, for exposure obtained only at the Hanford Site. Regulatory agency personnel may obtain a copy of their Hanford Site radiation exposure records by contacting the RL POC.

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ENCLOSURE 2  
Page 1 of 1

## POINTS OF CONTACT

### U.S. Department of Energy Field Office, Richland

Randy Krekel	RL	Primary	6-4264	Env. Assessment
Bob Holt	RL	Secondary	6-9989	Branch Chief

### Westinghouse Hanford Company

Brad Erlandson	WHC	Primary	6-5969	Facility Compliance
Mike Hall	WHC	Secondary	6-3664	Facility Compliance

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ENCLOSURE 3  
Page 1 of 2

Health Physics Entry Requirements,  
Hazardous Waste Site Entry Requirements,  
Security Training Requirements For Regulatory Personnel

1. Name: \_\_\_\_\_  
Job Title: \_\_\_\_\_  
Social Security Number: \_\_\_\_\_  
Company: \_\_\_\_\_

2. SECURITY TRAINING  
Security Training Video Date Completed: \_\_\_\_\_

SECURITY EVALUATED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

3. DOSIMETRY

Complete "Personal Radiation Exposure History" form

Dosimeter: \_\_\_ Basic, No. \_\_\_\_\_ \_\_\_ Multipurpose, No. \_\_\_\_\_

Whole Body Count Date: \_\_\_\_\_ Chest Count Date: \_\_\_\_\_

Bioassay (Type \_\_\_\_\_) Date \_\_\_\_\_

DOSIMETRY EVALUATED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

4. WHC ENVIRONMENTAL TRAINING EVALUATION:

BASIC TRAINING REQUIREMENTS DATE COMPLETED:

40 Hour Hazardous Waste Worker \_\_\_\_\_

Mask Fit from HEHF \_\_\_\_\_

Radiation Worker Initial Training  
(WHC #020001) (Requal: WHC #020003) \_\_\_\_\_

Scott SKA Pak-MSA PAPR  
(WHC #020032) \_\_\_\_\_

ADDITIONAL TRAINING REQUIREMENTS:

REQUIRED ?  
YES NO

DATE COMPLETED

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Noise Control/Hearing Conservation \_\_\_\_\_

Confined Space Entry \_\_\_\_\_

Other: \_\_\_\_\_

### 5. SITE SPECIFIC TRAINING:

o Hazardous Waste Operations Plan (HWOP) Briefings will be conducted at each site and documented in Field Logbook.

Please arrive at the job site with hard hat, steel-toed boots, and prescription safety glasses if applicable. Other safety glasses, and hearing protection will be furnished at the job site as needed.

o Facility Orientations: (Available in the facility & documented on WRAM)

Facility _____	Date _____

EVALUATED BY MANAGER, WHC ENVIRONMENTAL TRAINING: \_\_\_\_\_

DATE: \_\_\_\_\_

REGULATOR ACCESS WHC CARD ISSUED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

\_\_\_\_\_ has met the training, medical clearance, dosimetry, and security requirements listed above and is qualified for escorted access to Hanford Hazardous Waste Sites and/or facilities. If there are changes that effect the status of either the medical clearance or the training certification during the duration of the visit (such as medical restrictions or expired training), the WHC Facility Compliance POC will be notified immediately.

Responsible Manager: \_\_\_\_\_

Organization: \_\_\_\_\_

Date: \_\_\_\_\_

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Westinghouse Hanford Company

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# Management of Investigation Derived Waste

## Status of the IDW Strategy and EII 4.3

- Documents have been finalized
- Copies to Ecology and EPA are available

## Revisions to the Strategy and EII 4.3

- Limits scope to drilling activities only
  - Does not apply to trenching operations
- Establishes collection criteria at dangerous waste designation limits
  - MTCA is an ARAR only after remediation alternative is selected
  - Disposal of non-dangerous waste will be recorded

## Revisions to the Strategy and EII 4.3 (continued)

- Allows TCLP book designation
  - Current practice across the Hanford Site
  - Based upon language in Appendix II of procedure
- Container transport to Centralized Waste Container Storage Area (CWCSA)
  - Within 90 days after the Office of Sample Management receives analytical data
  - Reduces the number of times containers must be moved

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5. Section 261.30 is amended by revising paragraph (b) to read as follows:

§ 261.30 General.

(b) The Administrator will indicate his basis for listing the classes or types of wastes listed in this subpart by employing one or more of the following Hazard Codes:

Ignitable Waste .....	(I)
Corrosive Waste .....	(C)
Reactive Waste .....	(R)
Toxicity Characteristic Waste .....	(E)
Acute Hazardous Waste .....	(H)
Toxic Waste .....	(T)

Appendix VII identifies the constituent which caused the Administrator to list the waste as a Toxicity Characteristic Waste (E) or Toxic Waste (T) in §§ 261.31 and 261.32.

6. Appendix II of part 261 is revised to read as follows:

Appendix II—Method 1311 Toxicity Characteristic Leaching Procedure (TCLP)

1.0 Scope and Application

1.1 The TCLP is designed to determine the mobility of both organic and inorganic contaminants present in liquid, solid, and multiphasic wastes.

1.2 If a total analysis of the waste demonstrates that individual contaminants are not present in the waste, or that they are present but at such low concentrations that the appropriate regulatory thresholds could not possibly be exceeded, the TCLP need not be run.

1.3 If an analysis of any one of the liquid fractions of the TCLP extract indicates that a regulated compound is present at such high levels that even after accounting for dilution from the other fractions of the extract the concentration would be above the regulatory threshold for that compound, then the waste is hazardous and it is not necessary to analyze the remaining fractions of the extract.

1.4 If an analysis of extract obtained using a bottle extractor shows that the concentration of any regulated volatile contaminant exceeds the regulatory threshold

for that compound, then the waste is hazardous and extraction using the ZHE is not necessary. However, extract from a bottle extractor cannot be used to demonstrate that the concentration of volatile compounds is below the regulatory threshold.

2.0 Summary of Method (see Figure 1)

2.1 For liquid wastes (i.e., those containing less than 0.5 percent dry solid material), the waste, after filtration through a 0.8 to 0.8-um glass fiber filter, is defined as the TCLP extract.

2.2 For wastes containing greater than or equal to 0.5 percent solids, the liquid, if any, is separated from the solid phase and stored for later analysis; the solid phase, if necessary, is reduced in particle size. The solid phase is extracted with an amount of extraction fluid equal to 20 times the weight of the solid phase. The extraction fluid employed is a function of the alkalinity of the solid phase of the waste. A special extractor vessel is used when testing for volatile contaminants (see Table 1 for a list of volatile compounds). Following extraction, the liquid extract is separated from the solid phase by filtration through a 0.8 to 0.8-um glass fiber filter.

BILLING CODE 5540-50-4

DON'T SAY IT --- Write It!

DATE: October 16, 1991

TO: R. K. Stewart A5-19

FROM: E. H. Smith *EHS*

Telephone: 6-0234

cc: R. B. Hibbard Ecology  
P. Innis EPA  
EHS File/LB

SUBJECT: TRANSMITTAL OF EII 4.3 AND STRATEGY DOCUMENT

Please see the attached documents related to the management of investigation derived waste (IDW). Attachments 1 and 2 transmit the strategy and Environmental Investigation Instruction (EII) 4.3, respectively. As agreed upon at the August 27, 1991 meeting with Ecology and the EPA, both documents have been redlined to identify revisions from previous versions of these documents. In addition, language that has been added to or deleted from these documents has been identified by italics or strike outs, respectively.

These documents are considered to be final pending any comments received from the regulators. I recommend that these documents be distributed for a wide review within both WHC and RL, including a review by the Office of General Counsel.

If you have further question on this matter please contact me at 376-0234.

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ATTACHMENT 1

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## STRATEGY FOR MANAGEMENT OF INVESTIGATION DERIVED WASTE

### Purpose

The purpose of the Environmental Investigation Instruction (EII) 4.3 is to establish a flexible approach to the management of investigation derived waste (IDW). This procedure will apply to IDW generated from the characterization of past practice units regulated under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) and the Resource Conservation and Recovery Act (RCRA). The EII 4.3 has been developed to protect human health and the environment. Storing waste on-site in the manner outlined in this strategy will meet the substantive container storage requirements established in the Washington Administrative Code 173-303-630 for CERCLA and RCRA past practice units at the Hanford Reservation.

*This strategy and the EII 4.3 will only apply to site characterization and investigations that involve drilling activities. Characterization and investigation activities involving trenching or backhoe excavations will not be covered by the requirements of this strategy or the EII 4.3.*

### Regulatory Background

This strategy provides a flexible management approach for IDW generated at CERCLA and RCRA past practice units, while ensuring protection of human health and the environment and also meeting the substantive container storage requirements of WAC 173-303-630. The Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) participants, the Department of Energy-Richland Field Office (RL), the Washington State Department of Ecology (Ecology) and the U.S. Environmental Protection Agency (EPA), have participated in negotiation of this strategy and agree to the provisions contained herein.

The final rule to the National Contingency Plan (Federal Register, March 8, 1990, page 8756) provides guidance for removal actions conducted at CERCLA units as follows:

"Studies and investigations undertaken pursuant to CERCLA Section 104(b), such as activities conducted during the Remedial Investigation/Feasibility Study (RI/FS) are considered removal actions. Removal actions will comply with applicable or relevant and appropriate requirements (ARARs) to the extent practicable. Thus, the field investigation teams should, when handling, treating or disposing of IDW on-site, conduct such activities in compliance with ARARs to the extent practicable, considering the exigencies of the situation."

Investigation derived waste is defined as any waste generated as a result of conducting a RCRA Facility Investigation/Corrective Measures Study (RFI/CMS) or CERCLA RI/FS. Specific examples of IDW include the following: (1) ground water samples that must be disposed after analysis; (2) drill cuttings or core samples from soil borings or monitoring well installations; (3) purge water removed from sampling wells before ground water samples are collected, (4)

decontamination fluids, and (5) miscellaneous trash, such as personnel protective equipment, rags, etc.

The above referenced rulemaking further states that removal actions must comply with the substantive requirements of federal and state laws that are determined to be ARARs to the extent practicable. Administrative requirements, such as obtaining permits, documentation, reporting, and record keeping are not applicable to actions undertaken at CERCLA units. With regard to IDW, RCRA and the Washington Administrative Code (WAC) 173-303 are considered to be ARARs. Therefore, the substantive requirements associated with management of dangerous waste in containers will be complied with, to the extent practicable.

### IDW Management Summary

Large quantities of IDW are currently being generated as a result of investigation activities associated with past practice units. The RL will manage IDW in accordance with the substantive requirements of federal and state ARARs. Specific aspects of the EII 4.3 are discussed in detail in the following paragraphs.

#### 1. Waste Site Identification

In most cases, waste sites within a given operable unit will be identified in the associated work plan. The waste site boundaries establish the area within which all IDW will be collected in containers. When drilling operations are conducted within a known or suspected waste site, all IDW will be collected and placed in containers.

When drilling operations are conducted outside of or near the boundaries of a known waste site, discussions will be conducted at unit manager meetings to determine the need for IDW collection. The actual waste site boundaries, container storage location(s), and the need for soil piles, if any, will be agreed to through approval of meeting minutes *or similar agreed to written records*. A Waste Control Plan will be utilized to identify waste control activities. This form will be prepared by the Project/RI Coordinator and will identify waste site boundaries, soil pile collection areas, if any, and requirements for sampling of any soil piles.

#### 2. Collection of Waste

##### 2.a Investigations Conducted Within a Waste Site

The Project/RI Coordinator for characterization activities shall determine, in concurrence with the lead agency, waste site boundaries within an operable unit. This determination will be initially based upon existing process knowledge and substantiated in the field with the use of field screening instrumentation. Field screening instrumentation planned for use includes, but may not be limited to, field pH meters, organic vapor sensing instruments such as an organic vapor analysis (OVA) meter, instrumentation for detecting inorganic contaminants, and radiation detection equipment. If investigations

are being undertaken within a known waste site, all such IDW will be placed in containers at the time of generation.

## 2.b Investigations Conducted Outside of a Waste Site

IDW generated from site investigations conducted outside of a known or suspected waste site will not normally require sampling unless visual evidence or field screening indicates the potential presence of contamination or the unit managers identify a justified need for soil pile sampling. Soil piles generated from these activities that require sampling will be analyzed only for the constituents of concern identified in the associated work plan or as identified by the unit managers. Soil piles requiring sampling will have staked boundaries. Should the analyses indicate soil pile contamination not apparent via field screening, the soil pile and the soil surface to a depth of 2 inches below the soil pile will be drummed and transported to the Centralized Waste Container Storage Area (CWCSA) for appropriate storage.

## 3. Waste Characterization

In most cases, soil samples will be routinely collected as part of the investigation process. These samples will be submitted for analysis and will provide the basis for characterizing a subunit within a given operable unit. The results from these analyses will be utilized to characterize collected soils. Additional sampling of containerized IDW will not be undertaken because such wastes will be managed as dangerous waste in an environmentally sound manner. However, waste characterization information will be used in conjunction with field screening instrumentation to identify wastes which are ignitable, corrosive, reactive and toxic. Containers of waste will subsequently be labeled by the IDW Coordinator or delegate to identify major risks.

Certain dangerous waste characteristics will be determined through the use of field screening instrumentation and/or process knowledge. Corrosivity will be determined through the use of a field pH meter. In addition, ignitability will be determined through the use of combustible gas meters such as an OVA meter or HNu, and reactivity will be determined through the use of process knowledge, field instrumentation and/or field test kits.

*For solid materials generated within the boundaries of a waste site, the toxicity characteristic of WAC 173-303-090(8) will be determined by the Solid Waste Engineering Analysis (SWEA) Group after review of analytical data received from a total constituent analysis. If a total analysis of the IDW demonstrates that individual analytes are present only in such low concentrations that the appropriate regulatory levels could not be exceeded, the IDW in question will not be assigned the toxicity characteristic waste code. This approach is based upon information identified in Appendix II, Section 1.2 of the Toxicity Characteristic Leaching Procedure.*

At a minimum, soil samples will be collected from the area of investigation at five feet intervals and analyzed for radiological constituents. Additional screening for radiological contamination may be performed at the discretion of

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the site coordinator. The above actions, along with the use of existing process knowledge, will serve to protect human health and the environment during these specific types of activities.

Under certain conditions soil samples are not collected for chemical analyses because the area in question is not expected to be contaminated. These conditions are encountered, for example, when drilling operations are conducted for the purpose of collecting background environmental samples or installing ground water monitoring wells. *In these cases, drill cuttings will be collected in soil piles at the point of generation as discussed in Section 2.b.* ~~In these cases, drill cuttings will be collected in soil piles at the point of generation. As discussed in Section 2.b, soil piles will not normally require sampling unless visual evidence or field screening instrumentation indicates the presence of contaminants, or the unit managers identify a justified need for soil pile sampling. Any soil pile requiring sampling will be analyzed for the constituents of concern identified in the associated work plan or as identified by the unit managers. Should the analysis indicate soil pile contamination not apparent via field screening, the soil pile and the soil surface to a depth of two inches below the soil pile will be drummed and transported to the centralized waste container storage area (CWCSA).~~

#### 4. Waste Management Determinations

This section provides the rationale upon which IDW management determination will be based upon. Containers of IDW will be released from a radiological perspective under the following circumstances: (1) IDW contains less than 200 pico curies per gram of beta/gamma and (2) IDW contains less than 60 pico curies per gram of alpha radiation. Containers of IDW above dangerous waste designation limits will be transported to the CWCSA within 90-days after the *Office of Sample Management (OSM) receives analytical data from site characterization samples.* Containers of IDW containing hazardous constituents below dangerous waste designation limits and that have been released from a radiological perspective will be disposed to the ground at ~~locations agreed upon at unit manager meetings, or near the point of generation but outside of the exclusion zone.~~ *These waste disposal locations will be recorded in field logbooks.*

##### 4.a Soils

Containers of soil above dangerous waste designation limits will be managed in accordance with Section 5.

##### 4.b Slurries (soil and water mixtures)

*All groundwater slurries will be containerized and absorbed upon generation. Other slurries collected from within a waste site or area designated by the unit managers will be absorbed with a biodegradable absorbent to remove free liquids pending the record of decision for the associated operable unit.* ~~In order to remove free liquids, slurry wastes will be mixed with an appropriate amount of absorbent material at the time of generation. Containers of~~

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~~solidified slurries above dangerous waste designation limits will be managed in accordance with Section 5. The only case where slurries will not be solidified is when drilling operations are conducted under all of the following conditions:-~~

Slurries will not be absorbed if the investigation is being conducted outside of a waste site and one of the following conditions are met:

- o field screening instrumentation does not indicate the presence of chemical or radiological contamination; or
- ~~o the waste is awaiting radiological release from laboratory counting.~~
- o slurries are generated from the vadose zone as a result of hard tool drilling and are awaiting radiological analysis or slurries have encountered perched water and contain less than 50% solids, as determined by the Field Team Leader.

*Slurries meeting the second criteria specified above will be containerized and placed in 95-gallon polyethylene overpack drums to protect against freezing in the winter months.*

#### 4.c Liquids Other Than Decontamination Rinsate

~~All liquids other than decontamination rinsate will be managed in accordance with Section 4.b. Solidification of slurry waste will eliminate liquid waste with the exception of decontamination rinsate. Decontamination rinsate will be collected in 55 gallon containers and then placed in 95 gallon overpack drums. Absorbent material will be placed in the annulus to absorb liquids in the event of a release from the primary container. Containers of decontamination rinsate above dangerous waste designation limits will be managed in accordance with the Hanford Site purgewater agreement, "Strategy for Handling and Disposing of Purgewater at the Hanford Site, Washington," (DOE 90 ERB 073).~~

#### 4.d Decontamination Rinsate (water and/or non-regulated cleaning solutions)

*Decontamination rinsate generated from drilling operations conducted within the boundaries of a waste site will be collected in 55-gallon containers and subsequently placed in 95-gallon polyethylene overpack drums pending chemical and radiological analysis. Rinsate containing dangerous waste constituents at or above WAC 173-303 dangerous waste designation limits will be managed in accordance with Sections 3.2.2 through 3.2.4 of the Hanford Site purgewater agreement, "Strategy for Handling and Disposing of Purgewater at the Hanford Site, Washington" (DOE-90-ERB 073).*

*Decontamination rinsate generated from drilling operations conducted outside of the boundaries of a waste site will be determined to be non-regulated when field screening instrumentation does not indicate the presence of radiological and chemical contamination. In these cases, such waste will be disposed to*

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the ground at or near the point of generation but outside of the exclusion zone. These waste disposal locations will be recorded in field logbooks.

#### 4.d Miscellaneous Solid Waste (i.e, rags, gloves, personnel protective equipment)

All miscellaneous solid waste (MSW) that is generated as a result of site characterization efforts will be segregated from soils, slurries, ~~and/or~~ and liquids. All MSW ~~miscellaneous solid waste~~ will be collected in plastic bags upon generation and marked to indicate the *footage interval depth* at which associated soils were generated. Such waste will be bagged, sealed and stored in the upper portion and in the same container as the waste that it has contacted.

Waste management determinations will be based on results obtained from soil characterization activities *and subsequent determinations made by the SWEA Group. Where soil analysis data indicates that the dangerous waste constituents of concern are below dangerous waste designation limits, MSW will be disposed at the Central Waste Landfill. MSW that is determined by SWEA to exhibit a dangerous waste characteristic will be disposed in accordance with WAC 173-303.* When drilling activities are conducted at listed waste disposal sites, all miscellaneous solid waste generated from that site will be disposed in accordance with WAC 173-303.

#### 5. Container Management

##### 5.a Storage Location

The Tri-Party Agreement has divided the Hanford Site into operable units based on the type of disposal units and characteristics of the waste disposed in a given area, ~~among other things.~~ Therefore, for the purposes of the EII 4.3, the area of contamination will be defined as an operable unit as delineated in the Tri-Party Agreement. The exact location of a CWCSA within a given operable unit will be negotiated and agreed upon at unit manager meetings. *Containers of IDW above dangerous waste designation limits will be transported to the CWCSA within 90-days after the OSM receives analytical results from site characterization samples.*

All IDW will be treated or disposed in accordance with the record of decision for the operable unit from which the waste was generated, or, in cases where IDW presents a significant threat to human health, such waste will be transported to the Hanford Central Waste Complex (HCWC) or the 616 Non-Radioactive Dangerous Waste Storage (NRDWS) Facility.

##### 5.b Substantive Container Management Requirements

The federal and state regulatory requirements for management of containers are established at 40 CFR Subpart I and WAC 173-303-630, respectively. All containers of IDW that have been determined to pose a potential threat to human health and the environment will be managed in accordance with the following substantive requirements:

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1. All IDW that has been determined to pose a potential threat to human health or the environment will be placed in containers. ~~and labeled to indicate major risks. Each container will be labeled/marked upon filling to denote its content, major risks and location of generation (i.e., well number). Containers~~ Each container will have a permanent weather proof identification tag affixed to it within 90-days of sealing such containers. ~~In addition, containers will be transported to the CWCSA within 90 days of sealing such containers and all containers will be logged into a computer database for tracking purposes. All container information and subsequent inspection data will be entered into a computer database for tracking purposes.~~
2. Containers shall be in good condition and shall be compatible with the waste stored.
3. To ensure *IDW and container* compatibility, a determination regarding corrosivity and ignitability will be made based upon field screening instrumentation; reactivity shall be made with the use process knowledge, field screening and/or field test kits. In addition, all analytical results will be reviewed by the SWEA Group to identify major risks for *subsequent labeling and/or marking* purposes.
4. Containers shall be kept closed except when waste is added to or removed from a given container. Containers shall be managed in a manner that prevents rupturing or causes a container to leak.
5. A minimum of 30 inches shall be maintained between aisles of containers *with an aisle being no more than two containers wide.* ~~An aisle of containers will be no more than two containers wide. In addition, Containers~~ will not be stacked more than two high and the second row will be placed upon pallets and strapped together with a metal band.
6. Containers of liquid waste shall be inspected on a weekly basis and containers of solid waste shall be inspected on a monthly basis.
7. Inspection reports shall be completed for each inspection performed. and the data entered into the container inventory database. These reports will be submitted to Ecology and the EPA at the unit managers meetings.
8. ~~Containers of liquid waste will be initially collected in 55 gallon containers and then placed in 95 gallon DOT overpack drums. Absorbent material will be placed in the annulus to absorb liquids in the event of a release from the primary container. The 95 gallon overpack drum will serve as secondary containment. All containers of liquid waste shall be placed on pallets to prevent contact with the underlying soil.~~

- 9- 8. Containers of IDW that have been determined to be extremely hazardous waste (EHW), based upon site characterization data, will be protected from the elements by means of a building or other protective covering that otherwise allows adequate inspection as required per WAC 173-303-360(7)(d). Future management of this type of IDW will be determined by the unit managers.
- ~~10- 9. Containers of waste that do not contain free liquids and that are not EHW, will not be stored within a building. These containers shall be moved to the CWCSA and Adequate warning signs shall be provided at each CWCSA. These A77 containers of IDW stored at the CWCSA shall be placed on wooden pallets to prevent contact with the soil and/or accumulated liquids.~~
- 11 10 The CWCSA will be kept free of unnecessary debris. This includes, but may not be limited to, the removal of tumbleweeds and other miscellaneous trash on a monthly basis. This will allow easy inspection of containers.
- 12 11 Containers of IDW that pose an exceptional threat to human health or the environment shall be managed in accordance with WAC 173-303. This will include transportation to the HCWC or to the 616 NRDWS Facility, as appropriate.
- 13 12 Containers of radioactive and radioactive mixed wastes will be segregated from each other as well as from other nonradioactive containers or transported to the Low Level Burial Grounds or the HCWC, as appropriate.
- 14 13 If an inspection finds a container in poor condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, such containers will be placed in overpack containers and managed in accordance with this strategy. If more than two containers of a similar waste type begin to fail, a determination regarding subsequent management of those containers will be made by the unit managers.
- 15 14 Containers of radioactive and radioactive mixed waste shall be labeled with appropriate radiation warning labels and stored within the operable unit, as discussed above. If excessive radiation hazards are expected, the containers shall be transported to the HCWC.

### 5.c Release Reporting

The WAC 173-303-145 establishes the requirements for reporting releases of hazardous substances. Existing DOE-RL procedures require adherence to these requirements and the requirements for notification to the EPA for releases of hazardous substances in excess of a specified reportable quantity. These requirements are identified in the "Environmental Compliance Manual,"

(WHC-CM-7-5) and shall be revised to reflect Ecology's guidelines as such guidance becomes available.

#### 6. Disposal of IDW

The IDW will be stored within an operable unit until a record of decision is reached for the unit from which the waste was generated. Upon receiving the record of decision for a given operable unit, waste generated from that unit will be treated and/or disposed as appropriate.

As discussed above, a case by case disposal determination shall be made in instances where IDW poses a significant threat to human health or the environment. In these instances the IDW of concern shall not be managed at the CWCSA. These types of wastes shall be transported to the HCWC or to the 616 NRDWS Facility.

#### 7. Special Circumstances

The RCRA and CERCLA unit managers designated by the respective Tri-Party Agreement participants (DOE-RL, Ecology and EPA) shall have authority to negotiate unique IDW criteria not specified in this strategy. Any negotiations conducted outside of the scope of this strategy will only be conducted for unusual situations where unique application of the existing strategy is impractical. Prior to implementation of any special IDW management action negotiated by unit managers they will prepare a jointly signed decision paper specifying the technical and regulatory justifications for their actions for submittal to the Tri-Party Agreement project managers for approval.

The provisions of this strategy shall be reviewed annually by the signatory parties or their designees for purposes of amending the document if it is deemed necessary. If there is a significant need by any of the signatory parties for revision at any time, the strategy may be revised and approved by them.

It is the express intent of all parties that full implementation of this strategy will occur by XXX. Until such time as this IDW agreement is approved and signed by DOE-RL, Ecology and EPA, DOE-RL will continue to manage IDW in accordance with WAC 173-303.

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Steven A. Wisness  
Hanford Project Manager  
U.S. Department of Energy  
Richland Operations Office

---

Timothy L. Nord  
Hanford Project Manager  
State of Washington  
Department of Ecology

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Paul T. Day  
Hanford Project Manager  
U.S. Environmental Protection Agency  
Hanford Project Office

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ATTACHMENT 2

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WESTINGHOUSE HANFORD COMPANY

Manual  
Section  
Page

WHC-CM-7-7  
EII 4.3, REV. 0  
1 of 23  
DRAFT 10/09/91  
RR/Environmental  
Division

ENVIRONMENTAL INVESTIGATIONS AND  
SITE CHARACTERIZATION MANUAL

Effective Date  
Organization

TITLE:

Approved by

CONTROL OF CERCLA AND OTHER PAST  
PRACTICE INVESTIGATION DERIVED WASTE

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### 1.0 PURPOSE

This Environmental Investigations Instruction (EII) establishes a system to control the containment, labeling, and tracking of waste generated during Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and other past practice waste site environmental investigation, site characterization, and well maintenance activities.

### 2.0 SCOPE

This EII applies to all Environmental Engineering and Geotechnology (EE&G) personnel and subcontractors generating waste *specific to drilling operations* during CERCLA and other past practice waste site environmental investigation, site characterization, and well maintenance activities. This EII governs the handling and storage of wastes unless otherwise specified in working/planning documents approved by the U.S. Department of Energy (DOE) and regulatory agencies.

### 3.0 DEFINITIONS

Centralized Waste Container Storage Area. Operable unit-specific, centralized location(s) where contained waste, managed in accordance with this procedure (Sections 6.7, 6.7.1, 6.7.2) is stored pending final disposal. ~~Contained waste will be transported from the point of generation to the Centralized Waste Container Storage Area within 90 days of generation.~~

Field Screening. Utilization of field instruments and/or field test kits for the purpose of segregating potentially hazardous or radioactive waste from unknown waste. Field screening will include the monitoring of drill cuttings, soils, and slurries for radioactivity, organic vapors, corrosivity, reactivity and combustibility utilizing the following instrumentation/methodologies:

- RAD - Counters
- Organic Vapors - HNU, OVA
- Corrosivity - pH meter
- Reactivity - Process Knowledge and instrument/test kit detections
- Combustibility - Combustible gas meter if OVM/HNU readout capabilities are exceeded.

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NOTE: Instruments and/or tests other than those identified above may be utilized as appropriate.

Generated Waste. Waste, other than purge water (as defined in EII 10.3), that exists as a result of active field characterization or well maintenance activities.

Hazardous Waste. Hazardous Waste (EPA Term)/Dangerous Waste (WDOE Term:) Nonradioactive solid waste as defined in 40 CFR 261, "Identification and Listing of Hazardous Waste," as requiring special handling, transportation, and/or disposal methods; and as defined in WAC 173-303-040, "Dangerous Waste," as those solid wastes designated as dangerous or extremely hazardous waste in accordance with WAC 173-303-070 through 172-303-103.

NOTE: The Toxicity Characteristic Leaching Procedure (TCLP) has replaced the Extraction Procedure Toxicity test for the identification of hazardous wastes. (55 FR 26986)

NOTE: The WHC Solid Waste Engineering "TCLP Book Designation Procedure" will be used to appropriately classify and manage all IDW solid wastes (e.g. personal protective equipment, soil, etc.) subject to the TCLP.

Liquid Waste Storage Area. A centralized location within the boundaries of the operable unit-specific Centralized Waste Container Storage Area where investigative and well maintenance liquid waste, managed in accordance with this procedure, is stored until remedial action begins for that operable unit from which the liquid waste was generated or until disposed of as RCRA waste, as dictated by best management practices.

Mixed Waste. Radioactive waste that is also hazardous, dangerous, or toxic.

Process Knowledge. A scientific determination, based on the examination of available types of published data that would lead a scientist or engineer to believe there is a strong probability that hazardous waste exists at a site or area. Examples of published data that may provide site specific information include, but are not limited to:

1. Previous chemical or biological discharges.
2. Soil or water analysis results.
3. Scoping study results (i.e., soil gas measurements, air measurements, walking reconnaissances, geophysical studies).
4. Operations reports.
5. Unplanned events or accident reports.
6. Drawings or other documents.

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7. Data collected from ongoing characterization activities.

NOTE: The Waste Information Data System (WIDS) is a source of this information.

NOTE: Process knowledge shall be used in field determination in accordance with Sections 6.0, 6.3, 6.4, and 6.5 of this EII. (40 CFR 262.11, WAC 173-303-070)

Purge Water. Water that is removed from a ground water monitoring well from well development, aquifer testing, sampling, maintenance, or remediation activities.

Radioactive Waste. Solid, liquid, or gaseous material that contains radionuclides regulated under the Atomic Energy Act of 1954, as amended, and of negligible economic value considering costs of recovery (WHC-CM-7-5).

Solid Waste Storage Area. A location within the boundaries of the operable unit specific Centralized Waste Container Storage Area where investigative and well maintenance solid waste generated from that operable unit is stored until remedial action begins.

Suspected Hazardous Waste. Nonradioactive solid waste that meets the criteria for Suspected Hazardous Waste as defined in Section 6.4 of this EII.

Suspected Mixed Waste. Radioactive solid waste that meets the criteria for Suspected Hazardous Waste as defined in Section 6.4 of this EII.

Unknown Waste. Drill cuttings, decontamination fluids, materials, cloths, wipes, grab samples, and well maintenance soils/slurries from a hazardous waste site having no indications from initial field investigations that hazardous or radioactive material is present at the time of placement within the drum.

Unknown waste containers are those with known physical characteristics (solid, liquid, slurry, etc.) but unknown chemical characteristics; differentiating from unfamiliar (orphan) containers with unknown physical and chemical characteristics, such as ones found at abandoned waste sites.

Waste. Material that is discarded, abandoned, inherently waste-like or not exempted by regulations.

Waste Management. For the purpose of this document, management means the generation, characterization (analysis), storage, surveillance, record keeping, and reporting of CERCLA, or other past practice waste site waste.

Waste Site. Any past practice facility or location where waste was disposed. These sites may include burial grounds, cribs, ditches, ponds, tanks, storage facilities, and other units used for the intentional or unintentional disposal or management of wastes (WHC-CM-7-5). Utilizing process knowledge, the Project/Remedial Investigation (RI) Coordinator, in

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concurrence with the lead agency, would determine, on a case-by-case basis, waste site boundaries within an operable unit. Activities within the boundaries of a waste site would be governed by the site specific hazardous waste operations permit (HWOP). The purpose and authority for HWOPs is defined in EII 2.1, "Preparation of Hazardous Waste Operations Permits."

#### 4.0 RESPONSIBILITIES

See Waste Management Responsibilities Diagram (Figure 1).

#### 4.1 PROJECT/REMEDIAL INVESTIGATION COORDINATOR

The Project/RI Coordinator for characterization activities shall coordinate all activities for characterization and proper disposition of waste associated with projects on CERCLA and other past practice waste sites. The Project/RI Coordinator shall determine, in concurrence with the lead agency, DOE-RL, Site Safety Operations, and construction organizations, the boundaries of waste sites and locations for waste storage within each operable unit and is responsible for initiating development of the Waste Control Plan (Figure 2). The Project/RI Coordinator shall make available to EPA and Ecology all validated laboratory analytical data collected pursuant to the Tri-Party Agreement, with copies to the Investigation Derived Waste (IDW) Coordinator, within fifteen days of receipt of the data.

#### 4.2 FIELD TEAM LEADER/COGNIZANT ENGINEER

The Field Team Leader/Cognizant Engineer (FTL/CE) shall:

1. Ensure drill cuttings and well maintenance soils/slurries are monitored in accordance with the HWOP or other governing safety documents.
2. Minimize waste by segregating drill cuttings and well maintenance soils/slurries based on field determination criteria outlined in Sections 6.0, 6.3, 6.4, and 6.5 of this EII.
3. Collect and containerize unknown, suspected hazardous, hazardous, radioactive, suspected mixed, and mixed waste.
4. Have adequate supplies (e.g., drums/containers, liners, markers, forms, labels) to handle anticipated needs (unknown, suspected hazardous, hazardous, radioactive, suspected mixed, or mixed waste).
5. Obtain unique container tracking numbers from the IDW Coordinator.
6. Fill out the Interim Control of Unknown, Suspected Hazardous and Mixed Waste form (IC form), Figure 3; secure it on the container, and submit the copy to the IDW Coordinator in accordance with Section 6.6.4 of this EII.

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7. Move waste from the point of generation to the Solid Waste Storage Area or Liquid Waste Storage Area (as appropriate) during active field operations.
8. Set up container storage areas in accordance with Section 3.0 of this EII.
9. Notify the IDW Coordinator once active field operations have concluded.
10. Coordinate with the Health Physics Technician (HPT) on movement of radioactive and mixed waste drums to a properly marked location as identified by the HPT in accordance with WHC-CM-4-10, Section 7. Mixed waste shall be moved in accordance with Section 6.5 of this EII.

#### 4.3 INVESTIGATION DERIVED WASTE COORDINATOR

The IDW Coordinator shall:

1. Obtain unique container tracking numbers from the EE&G point-of-contact for the FTL/CE.
2. Review and sign the IC form provided by the FTL/CE and provide a copy to the Project/RI Coordinator.
3. Enter, update and retrieve information using the generator waste tracking database for all containerized waste generated during environmental investigation, site characterization, and well maintenance activities.
4. Maintain a controlled logbook for use in the field to document container activity.
5. Maintain a file of the sample lab analysis for each sampled waste container.
6. Submit a Request for Hazard Identification Form (Figure 4) and sample lab analyses to Solid Waste Engineering for interpretation and hazard identification of waste managed by this procedure.
7. Perform weekly inspections of Liquid Waste Storage Area and monthly inspections of Solid Waste Storage Areas and complete the Waste Inspection Logs (Figure 5).
8. Coordinate the storage and segregation of radioactive, hazardous, and mixed waste containers based on the sample lab analysis and in accordance with this EII.
9. Maintain records as specified in Section 6.11 and submit to the Field File Custodian for permanent retention processing in accordance with EII 1.6, "Records Management."

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10. Report any deviations from normal operations to their cognizant manager.
11. The IDW Coordinator is the emergency contact and must be notified immediately in the event of a spill or unplanned release. The IDW Coordinator would then follow proper notification steps in accordance with WHC-CM-7-5, Part B.

#### 4.4 SITE SAFETY OFFICER

The Site Safety Officer (SSO) ensures that all onsite investigative drilling and waste handling activities are conducted in a manner as to be protective of human health and the environment. All personnel directly involved with onsite drilling or waste handling activities will defer to the SSO regarding any operational decision (other than radiological) involving safety concerns.

#### 4.5 HEALTH PHYSICS TECHNICIAN

The HPT shall provide onsite radiation monitoring for all investigative drilling activities and waste handling operations in areas potentially contaminated with radionuclides. All personnel directly involved with onsite investigative drilling or waste handling activities will defer to the HPT regarding any operational decision involving radiological concerns.

#### 4.6 ENVIRONMENTAL ENGINEERING AND GEOTECHNOLOGY POINT-OF-CONTACT

The EE&G point-of-contact shall:

1. Issue unique container tracking numbers to IDW Coordinator(s).
2. Report the status of containers to the cognizant manager on a monthly basis.

#### 4.7 SOLID WASTE ENGINEERING

Solid Waste Engineering shall review the Request for Hazard Identification Form and relevant sample lab analyses provided by the IDW Coordinator and provide the IDW Coordinator with documented hazard identification of the subject waste. Hazard identification will include, when applicable, waste characteristics (corrosivity, ignitability, etc.), identification of constituent concentrations above regulated levels, and any additional packaging recommendations.

#### 5.0 REQUIREMENTS

##### 5.1 CONTAINERS/LINERS (DRUMS/PLASTIC LINERS)

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Until an alternate storage container (approved by regulators) can be identified and approved, the following DOT drums shall be used:

1. U.S. Department of Transportation (DOT) Specification 17-H, 17-C or 17-E steel drums shall be used to contain unknown or regulated waste. The 55-gallon drum size is generally used, however, 30-gallon, 55-gallon, 85-gallon, 95-gallon, and 110-gallon size containers of steel or other construction, meeting DOT specifications, may also be used for overpacking and salvage. Type 17-H or 17-C steel drums must have a gasket for the lid before containing wastes. Type 17-E drums must have a bung in good condition before containing fluids.
2. Prior to filling, the drum will be lined with a plastic liner at least 10 mil thick for all nonradioactive drill cuttings. All saturated radioactive drill cuttings shall be packaged in a drum lined with a plastic liner at least 90 mil thick.
3. When beta emitters are stored in metal drums, the criteria for storage is outlined in WHC-EP-0063, sections entitled "Surface Dose Rates," which limits surface dose rates of radioactive containers to <200 mrem/hr and <100 mrem/hr for mixed waste containers. This would include all energy emitting isotopes (beta, gamma, neutrons). Quantities of energy emitting isotopic IDW placed in containment will be limited to comply with this criteria.

## 5.2 UNIQUE CONTAINER TRACKING NUMBER

The IDW Coordinator shall track containers of waste using the following numbering system. Unique container tracking numbers shall also be used to track laboratory samples that might be returned to the original site where generated.

XXXX-XX-XXX

— sequential container numbers (up to 6 digits)

— year container filled

— generating facility:

EENG designates Environmental Engineering Group

GEOS designates Geosciences Group

EFSG designates Environmental Field Services Group

## 5.3 ENTRIES AND CORRECTIONS

All entries on the IC form shall be entered in permanent, reproducible black ink. Corrections shall be made by striking one line through the incorrect information, entering corrected data (when appropriate), initialing, and dating.

## 6.0 PROCEDURE

See Figure 6, "Waste Determination Logic Diagram."

Material that originated outside the boundaries of a waste site, is dry (absent of moisture, dusty, dry to the touch) or moist (damp, but no visible water) and originated above the water table shall not be drummed if field analytical screening protocol (as identified in Sections 6.4 and 6.5 of this procedure) does not detect radioactive or hazardous waste and if there is no process knowledge of hazardous or suspect hazardous waste. Such conditions shall be identified and included in sample and analysis plans or other appropriate documentation. Soil samples will however be collected at a minimum of five foot intervals from the area of investigation and analyzed for radionuclides.

Soils/drill cuttings that pass field screening, are generated outside waste site boundaries as identified at the Unit Managers Meetings and documented in the Waste Control Plan (Figure 2), will be collected in soil piles near the point of generation and surveyed intermittently (a minimum of once each day) to verify the absence of radiological components as indicated by process knowledge. Soil piles will not normally require chemical sampling unless visual evidence or field screening indicates potential contaminants, or the unit managers identify a justified need for soil pile sampling. Soil piles requiring sampling will have staked boundaries. These piles will be analyzed for the constituents of concern as identified in the relevant work plan or as identified by the unit managers. Should the analyses indicate soil pile contamination not apparent via field screening, the soil pile and the soil surface to a depth of 2 inches below the soil pile will be drummed and transported to the Centralized Waste Container Storage Area for appropriate storage.

When unknown, suspected hazardous, hazardous, radioactive, suspected mixed, or mixed waste is placed in a waste drum, the drum shall be managed in accordance with this EII.

The control, use, handling, maintenance, and calibration of health and safety monitoring equipment shall be in accordance with WHC-CM-7-7, EII 3.2, "Health and Safety Monitoring Instruments."

All decontamination fluids shall be managed as either nonhazardous or unknown waste. Decontamination fluids shall be collected as unknown waste when: drilling in areas where purge water is required to be collected; soil/slurries/drill cuttings are collected as suspected hazardous waste, suspected mixed waste, or radioactive waste. Otherwise, decontamination fluids will be nonhazardous and disposed of to the ground outside the exclusion zone. Decontamination fluids which are collected as unknown waste will be sampled and then managed in a manner similar to purge water (Sections 3.2.2 to 3.2.4 of the "Strategy for Handling and Disposing of Purge Water on the Hanford Site," DOE 90-ERB-073).

Decontamination fluids will consist of nonphosphate soap/water. Utilization of any decontamination agent other than nonphosphate soap will be addressed and managed as identified in the work plan.

Sampling of the decontaminated fluids will be limited to the constituents of concern, as identified from the soil/slurry sampling, the list of constituents for the purge water, or the constituent list obtained from process knowledge applied to the area.

Only materials (disposable personal protective equipment, rags, etc.) having potentially contacted hazardous, radioactive, or mixed waste will be considered potentially contaminated. Such waste will be bagged, sealed, and stored in the upper portion and in the same container as the waste contacted. These materials will be dispositioned with the waste contacted. Materials from different boreholes shall not be placed in the same drum. All other materials will be considered nonregulated and disposed of as such.

Decontamination water from different boreholes may be collected in the same container. A composite sample of decontamination water shall be taken, analyzed, and used for determination. Containers of decontamination water generated or stored during cold weather periods will be overpacked in D.O.T. approved polyethylene drums *and will remain contained* pending receipt of sample analyses, to protect against potential freezing and breach of containment. ~~Decontamination water will remain contained pending receipt of sample lab analyses.~~

## 6.1 CONTAINER PREPARATION

1. The entire container shall be checked for damage.
2. Prior to filling, the drum will be lined with a plastic liner at least 10 mil thick for all nonradioactive drill cuttings. All radioactive drill cuttings shall be packaged in a drum lined with plastic bag at least 90 mil thick.
3. Drum markings shall be durable and displayed on a background of sharply contrasting color.
4. The following should be legibly written on the lid with indelible black ink:
  - a. Project name
  - b. Borehole number
  - c. Footage (enter footage intervals)
  - d. Contents (enter contents of drum)
  - e. Beginning date (enter date material first placed in drum)
  - f. Date sealed (enter date material last placed in drum)
  - g. Unique container number (enter when sealed).
  - h. Name of person sealing the drum.
5. Secure IC form to side of container (as required) in accordance with Section 6.6.4 of this EII.

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6. Within 90 days of sealing, a permanent weatherproof identification tag will be affixed to the waste container.

NOTE: Containers must be closed except when material is being added or removed.

## 6.2 FIELD SCREENING DRILL CUTTINGS AND WELL MAINTENANCE SOILS/SLURRIES

1. Drill cuttings/soils/slurries shall be monitored in accordance with applicable HWOP and/or radiation work permit and field determination based upon criteria identified in Sections 6.0, 6.3, 6.4, and 6.5 of this EII.
2. Chemical/radiological sampling of IDW originating from within the boundaries of a waste site will be conducted as identified in the work plan. Chemical sampling of the vadose zone IDW originating from outside the boundaries of a waste site will not normally be required unless visual evidence or field screening indicates potential contaminants, or the unit managers identify a justified need for sampling. Soil piles requiring sampling will be analyzed for the constituents of concern as identified in the relevant work plan or as identified by the unit managers. IDW originating from outside the boundaries of a waste site will be sampled at five foot intervals and analyzed for radiological constituents.
3. A sample analysis request shall be prepared to accompany the sample(s) to the analytical facility to ensure that the correct analysis is performed. Some stationary analytical work can be eliminated by using an on-site mobile field screening facility. The Westinghouse Hanford Company (WHC) sample analysis request form (A-6000-406) is presented in EII 5.2, "Soil and Sediment Sampling." The Project/RI Coordinator may choose to use a different form depending on the analytical facility and project needs.

## 6.3 UNKNOWN WASTE DETERMINATION AND COLLECTION

1. Drill cuttings/soils/slurries/decontamination fluid shall be segregated as unknown waste when the material meets the following criteria:
  - a. Drilling occurs in a waste site but does not meet the criteria outlined in Section 6.4.1 of this EII; or
  - b. Encountering saturated soil, perched water, or ground water that may mask accurate field readings from field screening instruments; or
  - c. Any well where purge water is required to be collected as identified in DOE 90-ERB-073.

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2. Drill cuttings (dry soils) generated within the boundaries of a waste site as established by the Waste Control Plan shall be drummed upon generation. However, the material may be disposed of at the drill sites (exclusive of ponds, cribs, and ditches) when the material meets the following criteria:
  - a. The on-location HPT survey does not indicate the presence of radioactive materials.
  - b. The on-location site safety officer survey of expected contaminants does not indicate the presence of hazardous (chemical) materials above criteria defined in Section 6.4.1.
  - c. Further health physics screening confirms the activity of the material to be less than 200 pCi/gm beta/gamma and 60 Pci/gm alpha. Decontamination fluids generated in the intervals associated with materials described above may be disposed of outside the exclusion zone.

#### 6.4 SUSPECTED HAZARDOUS WASTE FIELD DETERMINATION AND COLLECTION

1. Drill cuttings/soils/slurries shall be segregated, handled, and managed as suspected hazardous waste based on process knowledge of material known to have been discharged to the area under investigation and any of the following in support of this process knowledge:
  - a. Direct instrumentation reading of organic vapor in excess of 5 ppm above background levels 1" above freshly excavated soil.
  - b. pH less than 3 or greater than 12.
  - c. Results from field screening instruments and/or tests which indicate the presence of contaminants above ? levels (~~TBD~~) *dangerous waste threshold limits*.
  - d. Screening lab analyses exceeding established limits as identified in the Waste Control Plan (Figure 2) for regulated waste determination.

NOTE: The above criteria is solely for the purpose of waste segregation and determination. Health and safety monitoring criteria will be detailed in the site-specific HWOP.

2. During the collection process, if the material no longer meets the suspected hazardous waste criteria in Section 6.4.1, it shall be segregated, handled, and managed as unknown waste for the remainder of the borehole unless the criteria for suspected hazardous waste is again met. Waste shall be segregated to meet the intent of EE&G's Waste Minimization Plan (WHC-SD-WM-EV-037).

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3. The words "SUSPECT HAZARDOUS" shall be written on the top and sides of containers containing suspected hazardous waste. Each container must be marked to identify the major risks associated with the waste in the container (e.g., corrosive, reactive, etc.). To prevent mixing contaminated waste, only material from the same borehole should be placed in a container.

#### 6.5 RADIOACTIVE WASTE/MIXED WASTE FIELD DETERMINATION AND COLLECTION

1. Drill cuttings/soils/slurries/decontamination fluid identified as radioactive shall be segregated into DOT specified drums or an approved alternate container for radioactive material.
2. Radioactive waste also suspected of containing hazardous constituents shall be handled as suspected mixed waste and segregated into DOT specified drums or an approved alternate container for mixed waste. The words "SUSPECT MIXED" shall be written on the top and sides of the container, as well as the major risks associated with the containers waste (e.g., corrosive, reactive, etc.).
3. Each container of radioactive and/or suspected mixed waste shall be labeled with a DOT Radioactive hazard class label and managed in accordance with this EII.
4. Containers of radiological material shall be segregated from containers of nonradiological material.
5. Radioactive/mixed waste drums shall be moved to a properly marked field location within a radiologically controlled area in accordance with WHC-CM-4-10, Radiation Protection.

#### 6.6 SEALING CONTAINER:

1. When the container is ready to be sealed, the opening of each plastic bag shall be twisted closed and secured with tape (when applicable). For drums, check to confirm a gasket is on the lid; then attach and secure with a locking ring and locking ring nut.
2. Footage, contents, and date filled markings shall be recorded on the container lid.

NOTE: For purposes of waste minimization, soils from different boreholes should not be placed in the same container.

3. When the container is sealed, a unique container tracking number shall be obtained from the IDW Coordinator. The unique container number shall be entered on the IC form and on the container lid.
4. All unknown, suspected hazardous, suspected mixed, and radioactive waste containers awaiting laboratory analysis shall have an IC

form completed and signed by the FTL/CE. The FTL/CE shall print the name of the IDW Coordinator on the IC form. The original shall be placed in a plastic sleeve and attached to the side of the container (for drums, place between the ribs on upper third of drum). The edges shall be completely taped to minimize exposure to moisture. Verification shall be made that the container number is legible on the form.

The FTL/CE shall document any indications of contamination (organic, radioactive) in the Comments/Suspected Hazards section of the IC form.

The IC form copy shall be submitted to the IDW Coordinator for review and processing. The IDW Coordinator shall sign the IC form upon completion of review.

## 6.7 MANAGEMENT OF WASTE CONTAINERS

Investigation Derived Waste managed in accordance with this procedure will be stored at operable unit-specific Centralized Waste Container Storage Areas. Liquid waste (other than decontamination water) that is subject to chemical sampling will be absorbed upon generation. Saturated waste requiring only radiological analyses for release will be contained and overpacked in polyethylene drums pending receipt of analyses. Decontamination water requiring analyses will also be contained and overpacked. Contained waste that has not been chemically/radiologically released will be transported to the Centralized Waste Container Storage Area within 90 days of ~~generation~~ *the Office of Sample Management's receipt of the waste sample analysis results.*

The exact locations of the Centralized Waste Container Storage Areas will be determined and approved at the Unit Managers Meetings. All Centralized Waste Container Storage Areas will be located within the boundaries of the operable unit from which the stored waste was generated.

Containers located within the Centralized Waste Container Storage Area will be inspected routinely (weekly for liquid waste/monthly for solid waste) by the IDW Coordinator or delegate. The IDW Coordinator will complete the Waste Inspection Log (Figure 5) for each Centralized Waste Container Storage Area. Drums showing signs of deterioration will be identified on the drum inspection log and immediately overpacked. A review and evaluation will be performed at this time resulting in a decision, based on best management practices, regarding future storage.

Spills or releases will be reported in accordance with WHC-CM-7-5, Part B, "Non-Routine Releases." Appropriate immediate action will be taken to protect human health and the environment.

Waste drums will be segregated into the following categories: solid, liquid, radioactive, mixed, hazardous, and unknown waste. Additionally, waste suspected of or containing known hazardous constituents will be segregated based on characteristics (e.g., reactivity, corrosivity, etc.).

### 6.7.1 Solid Waste Storage

The solid waste storage area located within the Centralized Waste Container Storage Area will have signs posted on two sides and a barrier surrounding the active portion of the facility. Drums will be elevated on pallets and otherwise protected from contact with accumulated liquids. Tape, pallets, and salvage drums will be available at the Centralized Waste Container Storage Area. EHW (as determined by characterization data) will be stored at the Centralized Waste Container Storage Area and protected from the elements by means of a building or other protective covering. Interim storage/final disposal of EHW will be determined at the Unit Managers Meeting utilizing best management practices.

All drums of solid waste will remain within the boundaries of the operable unit to be incorporated into the remedial action as identified in the operable unit-specific Record of Decision (ROD).

Only solid waste (soils, drill cuttings, sand) will be stored in the solid waste storage area. Any free liquids resulting from settling slurries of waste subject to chemical analyses shall be absorbed using a WHC-approved absorbent or decanted, as appropriate. *Waste will either be transferred to the Centralized Waste Container Storage Area or disposed to the ground as determined by the sample analyses results.*

### 6.7.2 Liquid Waste Storage

Containerized liquid waste (decontamination water awaiting radiological and chemical analyses and slurries awaiting radiological analyses results) will be overpacked in polyethylene drums, segregated from solid waste containers and stored on pallets ~~in the Centralized Waste Container Storage Area within 90 days of generation at the well site in an appropriately established field storage area (i.e. signs, ropes, pallets, etc.).~~ Containerized liquid waste that has not been chemically/radiologically released will be transported to the Centralized Waste Container Storage Area within 90 days of receipt of the sample analyses results by the Office of Sample Management. Liquid waste held for incorporation into the final remedial action will be absorbed prior to transport to the Centralized Waste Container Storage Area.

## 6.8 FINAL DISPOSAL

The final container waste status (non-regulated, hazardous, mixed, etc.) will be assigned by Solid Waste Engineering with the concurrence of the cognizant IDW Coordinator.

Based on the sample lab analyses, waste containers shall be handled as follows:

- a. The word "HAZARDOUS" shall be written on any containers identified as such and the associated major risk(s) identified on the container. (Refer to Section 6.4, 6.5, and 6.6 for hazardous determination criteria.) Solid hazardous waste shall remain in

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the container storage area until final remedial action. Liquid hazardous waste will either be removed from the site for appropriate RCRA disposal or remain for incorporation into the final remedial action, with the decision made on a case-by-case basis.

- b. Dry soil that is not regulated as a hazardous or dangerous waste and not contaminated with radiological constituents may be disposed of at the point of generation. *Disposal locales will be recorded in the Facility Generator's field logbook.*
- c. Wet soils/slurries that are not regulated as a hazardous or dangerous waste and not contaminated with radiological constituents may be disposed of on the soil surface outside the exclusion zone. *Disposal locales will be recorded in the Facility Generator's field logbook.*
- d. The words "SUSPECTED HAZARDOUS" shall be removed (e.g. lined out, painted over, etc.) from any waste containers initially field determined as suspected hazardous or suspected mixed waste when sample analyses indicate the waste is nonregulated with regard to hazardous constituents.
- e. Decontamination fluid that is not regulated as a hazardous or dangerous waste and not contaminated with radiological constituents shall be disposed of on the soil surface outside the exclusion zone.
- f. Decontamination fluid that is contaminated with radiological constituents, but not regulated as hazardous, shall be handled in accordance with WHC-EP-0063.
- g. Soils that are radiologically contaminated but not otherwise regulated under federal or state regulations, will be contained and stored within the operable unit from which they originated, pending the final ROD. The boundaries of the storage area will be roped and appropriately signed.
- h. Plastic bags of disposable personal protective equipment, foil, paper, gloves, etc., in drums identified as nonregulated material shall be collected and disposed of as trash (dumpster or central landfill). Regulated material will be dispositioned along with the IDW contacted.

## 6.9 REPORTING

The IDW Coordinator(s) shall send monthly reports to the EE&G point-of-contact statusing containers assigned to their group.

## 6.10 RECORDS

The IDW Coordinator shall maintain the following documents in record packages, as appropriate.

1. Copy of IC form(s). (Several IC forms may be grouped in one record package when a number of drums are represented by a single set of analyses, or when other related disposal criteria exist.)
2. Copy of the Request for Hazard Identification Form transmitted to Solid Waste Engineering.
3. Hazard Identification Response (original) received from Solid Waste Engineering.
4. Uniform Hazardous Waste Manifest (only applicable for regulated waste removed from the boundary of the operable unit).
5. Correspondence regarding management of drums.
6. Copy of the Waste Control Plan.

The record packages will be submitted by the IDW Coordinator for processing and transmittal for permanent retention by the Field File Custodian in accordance with EII 1.6 when:

1. The IDW Coordinator receives the original Uniform Hazardous Waste Manifest back from the receiving facility's operator or
2. Other waste drums have been properly disposed and documented on the CWDA letter or
3. Waste drums have been properly stored and await disposal action based on the ROD.

Inspection logs for container storage areas will be maintained by the IDW Coordinator and submitted for permanent retention every 6 months or once the inspection area is no longer in use. Inspection logs will be submitted in grouped packages, i.e., by location, project, well number, etc. Copies of the inspection logs will be provided to the regulators at the monthly unit managers meetings.

## 7.0 REFERENCES

40 CFR 261, "Identification and Listing of Hazardous Waste."

WHC-CM-4-10, Radiation Protection.

WHC-CM-5-16, Hazardous Waste Management.

WHC-CM-7-5, Environmental Compliance  
Part B, "Non-Routine Releases."

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ENVIRONMENTAL INVESTIGATIONS AND  
SITE CHARACTERIZATION MANUAL

Manual  
Section  
Page  
Effective Date

WHC-CM-7-7  
EII 4.3, REV 0  
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DRAFT 10/09/91

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WHC-CM-7-7, Environmental Investigations and Site Characterization.

- EII 1.6, "Records Management."
- EII 4.2, "Control of RCRA Waste."
- EII 5.2, "Soil and Sediment Sampling."
- EII 9.1, "Geologic Logging."
- EII 10.3, "Purge Water Management."

WHC-EP-0063, "Hanford Site Radioactive Solid Waste Acceptance Criteria."

WHC-SD-WM-EV-037, "Waste Minimization Plan - Environmental Engineering and Technology Function," 1989.

DOE 90-ERB-073, "Strategy for Handling and Disposing of Purge Water on the Hanford Site."

## 8.0 BIBLIOGRAPHY

DOE Order 5820.2A, "Radioactive Waste Management."

WHC-CM-2-14, Hazardous Material Packaging and Shipping.

WHC-CM-4-11, ALARA Program Manual.

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**M-29-00 MILESTONES:  
RISK ASSESSMENT AND MODELING STATUS**

**JC SONNICHSEN  
WESTINGHOUSE HANFORD COMPANY  
October 16, 1991**

**M-29-01:**

**IDENTIFY CODES AND MODELS TO BE USED IN RISK ASSESSMENT**

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**STATUS:**

- 1st xrs.*
- The milestone was completed on schedule (9/30/91)

**SUMMARY:**

- Computer codes were identified for the purpose of modeling contaminant transport for all pathways of interest (air, surface water, groundwater)
- Primary emphasis was placed on subsurface groundwater flow and solute transport computer codes
- A "bias for action" attitude favored the selection of computer codes presently in use at the Hanford Site.

**RECOMMENDATION:**

- Selected computer codes be reviewed once the M-29-03 milestone has been drafted to ensure consistency.

**M-29-02:****SUBMIT A PLAN FOR DEVELOPMENT OF AREA WIDE GROUNDWATER MODELS TO SUPPORT RISK ASSESSMENTS AND TO EVALUATE IMPACTS OF CHANGING GROUNDWATER FLOW FIELDS**

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**STATUS:**

- 228 MS* ● The milestone is scheduled to be completed December 31, 1991

**SUMMARY:**

- The "kick-off" meeting was held October 1, 1991, with subsequent meetings approximately every two weeks.
- Committee membership may increase as the need for specialized expertise is identified
- A plan for developing an area wide groundwater model will be the product of this milestone
- Development is defined to include code/model testing, i.e., benchmark
- The milestone is intended to build upon the discussion contained in the M-29-01 report

**M-29-03:**

**SUBMIT RISK ASSESSMENT METHODOLOGY DOCUMENT AND INCLUDE  
IN APPENDIX F (PRIMARY DOCUMENT)**

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**STATUS:**

- 3rd 7/95*
- **Work Progressing on-schedule-Due Mar. 92**

**SUMMARY:**

- **Initial draft was completed 9/30/91 and is currently being reviewed by committee members and internal WHC/PNL.**
- **Committee plans to meet and discuss comments November 12, 1991.**
- **The bounding future time period issue is being raised up to the TPA Project Managers for resolution.**

