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Final

Meeting Minutes Transmittal/Approval
 Unit Manager's Meeting: General Topics
 450 Hills St., Room 47, Richland, Washington
 October 21, 1992

FROM/APPROVAL: Paul M. Sob ^{for RKS} Date 11/18/92
 Robert K. Stewart, R.I. Coordinator, RL (A5-19)

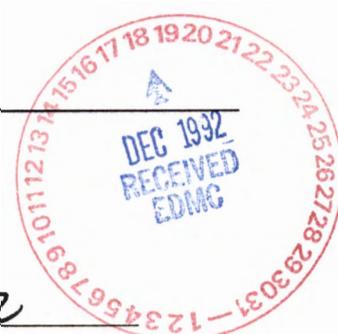
APPROVAL: Pamela A. Dennis for Date 11/18/92
 Douglas R. Sherwood, Representative, EPA (B5-01)

APPROVAL: Charles S. Cline Date 11/18/92
 Charles S. Cline, 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 - Attendance List
- Attachment #3 - Agenda for the Meeting
- Attachment #4 - Action Item Status List
- Attachment #5 - Analytical Services Status
- Attachment #6 - Backgrounder and Highlite On the HRA-EIS
- Attachment #7 - Environmental Restoration Storage and Disposal Facility
- Attachment #8 - Status Report ERE Mobile Screening Laboratory
- Attachment #9 - Hanford Environmental Restoration Program Roadmap Presentation
- Attachment #10 - Ordnance and Explosive Waste Program
- Attachment #11 - Summary Risk Assessment Working Group
- Attachment #12 - Summary Geophysics Working Group



Prepared by: Suzanne Clarke Date: 11/18/92
 Suzanne Clarke, Kay Kimmel, GSSC (A4-35)

Concurrence by: Hal Downey Date: 11/18/92
 Hal Downey, WHC Coordinator (L4-92)

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Attachment #1

Summary of Meeting and Commitments and Agreements

Unit Manager's Meeting: General Topics
October 21, 1992

1. SIGNING OF THE SEPTEMBER UNIT MANAGER'S MEETING MINUTES

Minutes were signed with no changes.

2. ACTION ITEM UPDATE: (Attachment 4 shows the status of the action items before today's meeting; the updates to Attachment 4 are listed below and the text is highlighted on Attachment 4.)

- | | |
|----------------------------------|---|
| GT.38
Jim Goodenough | Still at DOE-HQ. |
| GT.128
Jim Goodenough | Comments have been submitted. |
| GT.136
Daryl Koch | Presentation to be given at the March UMM on cost savings and efficiencies. |
| GT.144
Jim Goodenough | Closed 10/21/92. |
| GT.145
Larry Hulstrom | Closed 10/21/92. |
| GT.146
Jim Goodenough | Closed 10/21/92. Meeting scheduled 10/22/92 after 3:00 at EPA. |
| GT.147
Jim Goodenough | Closed 10/21/92. Packages were provided to EPA and Ecology. |
| GT.148
Darci Teel & Pam Innis | Will have results by November UMM. |

3. NEW ACTION ITEMS:

No new action items.

4. INFORMATION ITEMS:

- Update on Laboratory Status - Jeff Lerch presented the update on the laboratories (see attachment #5).

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- Road Maps - Walt Alaconis presented the roadmap planning strategy and methodology as applied to Hanford (See attachment #9). The regulators noted there were some areas not yet identified as issues and suggested that it might be beneficial to all parties to involve the regulators in the roadmap process.
- Unexploded Ordnance Surveys and Disposal - U.S. Army Corps of Engineers, Huntsville, AL division (Stan Lee, Leo Carden, and Sam Bolin) provided an overview of their experience and capability in handling unexploded ordnance and explosive waste contamination (see Attachment #10.)
- Working Groups - Jim Goodenough recommended that it would be beneficial to include working group presentations at each General Topics session. In addition to the Risk Assessment and Investigation Derived Waste working groups now in existence, Pam Innis suggested establishing the following additional working groups: Past Practice Disposal System, RCRA/CERCLA Integration, D & D/Operations/Past Practice Integration, Columbia River, Technology, Large Scale Remediation, Sampling & Analysis, and Radiological Background. The proposal was made that a tentative charter be established for each working group and their need would then be evaluated.
 - Status TPA development procedure of working groups- J. Goodenough had provided a draft protocol for establishing working groups at the October 20 technical meeting. RL will be issuing a letter to the regulators with the draft protocol attached in the near future. The EPA did not see a regulatory need to sign this procedure, but thought it would be helpful to implement it.
 - Risk Assessment - Steve Clark presented a summary of the working group (see Attachment #11).
 - Geophysics - Allan Harris presented a summary of the meetings (see Attachment #12).

5. QUICK STATUS ITEMS:

- Public Involvement on Document Review - Dennis Faulk presented EPA's strategy to increase public involvement. Examples include more write-ups and fact sheet mailings. EPA has also hired Jim Creighton, an expert in the field, to expand public awareness/involvement.
- Update on HRA EIS - J. Goodenough noted that all the public scoping meetings have been held for the HRA-EIS, with the last one held in Portland, Oregon on October 8, 1992. Scoping meetings were held in Spokane, Pasco, Seattle, Washington and Portland Oregon. A total of approximately 146 members of the public attended the meetings, with the largest attendance being in Portland with about 60 members of the public attending. There were many favorable comments from the public on DOE changing the format to include small group sessions in the scoping process. Many comments were received from the public with the two major concerns being cost to the taxpayers for the cleanup vs. risk to public health and safety and a desire to increase the scope of this EIS to include the whole Site. Publications used in the hearings are attached (see Attachment #6).
- Engineered Storage and Disposal System (ER-ESDS) - J. Goodenough highlighted the critical path activities (see Attachment #7). The first document is due from WHC as a draft at the

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end of October. The regulators would like to be involved at the strategy level. NEPA strategy is also essential, and it is important to integrate CERCLA and NEPA. The regulators are to be briefed on the value engineering study on November 9, 1992. Conceptual design is tentatively scheduled for 2/93.

- Field Screening Laboratory - Tim Moody presented the update on the ERE Mobile Screening Laboratory (see Attachment #8). Expected delivery is in the November/December time frame. Anticipated turnaround time for sample analysis using the mobile lab is 48 hours.

6. AGENDA ITEMS FOR NOVEMBER

- Lab Update
- Working Group Reports (with write-up for the minutes).

7. Next meetings are scheduled for November 18 and 19. Tuesday, November 17, will have working committee meetings scheduled in the morning and an informal technical forum in the afternoon.

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General Topics Unit Manager's Meeting
Official Attendance Record
October 21, 1992

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PRINTED NAME	SIGNATURE	ORGANIZATION	O.U. ROLE	TELEPHONE
Suzanne Clarke	<i>Suzanne Clarke</i>	SWEC	GSSC to RL	372-0630
Donald Clark	<i>Donald Clark</i>	WHC	ERE Supp. & Function	376-5935
BECKY BECHTOLD	<i>Becky Bechtold</i>	WHC	ERE	376-9017
Tom Jones	<i>Tom Jones</i>	PNC	OBSERVER	375-2710
BOB McLEOD	<i>Bob McLeod</i>	DOE-RL	300 Area	372-0096
Paul Beaver	<i>Paul Beaver</i>	EPA	Unit Mgr	376-8665
PAMELA INNIS	<i>Pamela Innis</i>	EPA	UNIT MANAGER	376-4919
Billie Mauss	<i>Billie Mauss</i>	Ecology	CERCLA	546-2993
John H. Jambson	<i>John H. Jambson</i>	USACE	ER-SPS	376-1250
DENNIS CANNON	<i>Dennis Cannon</i>	USACE	HONFORD PROG MANAGER	376-9487
Kevin Oates	<i>Kevin Oates</i>	USACE	Walla Walla Env Eng. Branch Support	522-6834
James D. Goodenough	<i>James D. Goodenough</i>	DOE-RL	Tech Support	376-7087
SEN MOY	<i>Sen Moy</i>	DOE-RL	Waste Mgmt DIV	376-8372
Hal Downey	<i>Hal Downey</i>	WHC	ER-Programs	376-5539
Diana Sickle	<i>Diana Sickle</i>	WHC	ER-Program	372-3141
Larry Gadbois	<i>Larry Gadbois</i>	EPA	Unit Manager	509 376-9884
DANNIS FAULT	<i>Dannis Fault</i>	EPA	Unit Manager	6-8651
Jonathan Speecher	<i>Jonathan Speecher</i>	Brown & Caldwell	Ecology Support	(509) 244-7005
Bill Kane	<i>William F. Kane</i>	Parametrix	Ecology Support	206-822-8880
Steve Goss	<i>Steve Goss</i>	Ecology	CERCLA	459-6675
Kyle Turner	<i>Kyle Turner</i>	Dames & Moore	GSSC	946-4833
Richard Hibbard	<i>Richard Hibbard</i>	Ecology	EA Group	(206) 433-9367
William J. Mallio	<i>William J. Mallio</i>	SWEC	GSSC	(509) 376-6995
CHARLES S. CLINE	<i>Charles S. Cline</i>	Ecology	Hydrology/O&M Mgr.	(206) 438-7556
CLAY SMITH	<i>Clay Smith</i>	WHC	OSM	373-3507

Attachment #3

Agenda

Unit Manager's Meeting: General Topics
October 21, 1992

Approval of September General Topics Meeting Minutes - Bob Stewart

Update on Laboratory Status - Jeff Lerch

Quick Status

- Public Involvement on Document Review - Dennis Faulk
- Update on HRA EIS - Sue Weissburg
- Engineered Storage and Disposal System (ER-ESDS) - Merle Lauterbach
- Field Screening Laboratory - Tim Moody

Working Groups

- General
 - Status TPA development procedure of working groups- Jim Goodenough
 - Short discussion: Need for Working Groups for: - Bob Stewart
 - Technology Development - Jim Goodenough
 - ARARS - Bob Stewart
 - Field Screening/Mobile Labs Implementation/Use - Jim Goodenough
- Risk Assessment - Bob Stewart/Steve Clark
- Geophysics - Jim Goodenough/Allan Harris

[Note: Chairmen of each Working Group (or delegate) is responsible for bringing to the meeting 1-2 paragraph summaries of Working Group Status]

Road Maps - Walt Alaconis

Unexploded Ordinance Surveys and Disposal - USACE
Stan Lee, Leo Carden, & Sam Bolin

Action Item Status - Suzanne Clarke

General Topics Meeting Recap - All

Agenda Items for November General Topics Unit Managers Meeting - All

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Attachment #4

Action Items Status List
 Unit Manager's Meeting: General Topics
 October 21, 1992

ITEM NO.	ACTION/SOURCE OF ACTION	STATUS
GT.38	If possible, at the May Unit Manager's 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 HQ (8/8/91). Waiting for status (11/20/91). J. Goodenough to update status at February 1992 UMM (2/25/92). Waiting on HQ approval 3/25/92. The distribution package for the final EIS is in preparation (4-17-92). Notice of Availability - June. Going through final EIS process. No change at HQ. It is anticipated that the NOI will be ready to be published in the <u>Federal Register</u> within a week to 10 days.
GT.128	Provide information on the date when Analytical Data Strategy document will be provided to Ecology and EPA. (2/26/92). Action: Jim Goodenough.	Open. To remain open pending outcome of meeting on 3/26/92. Eric Goller will give status of item at May UMM (4/22/92). Currently in RL review. The paper will be provided to EPA and Ecology upon satisfactory resolution of all RL comments. Pending formal transmittal (6/24/92). In internal DOE/RL review process (7/29/92). <u>Comments have been submitted (10/21/92).</u>

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ITEM NO.	ACTION/SOURCE OF ACTION	STATUS
GT.134A	Provide all performance evaluation results from contractor labs during the time of their contract. Action: Joan Kessner (6/24/92).	Closed 09/23/92.
GT.136	Present a progress report in a few months on how the IDW work is going. Action: Daryl Koch (6/24/92)	Open. Action given to Daryl Koch (WHC). Meeting tentatively scheduled for August 19. Presentation to be given at the March UMM on cost savings and efficiencies (10/21/92).
GT.138	Contact John Erickson (WA Dept. of Health) to determine if a representative from the health dept. needs to be a committee member on the Radiological Background Study Group. Action: Chuck Cline (Ecology) (5/27/92).	Closed 09/23/92.
GT.139	Bring a proposal from the regulators to change the format of the OU meetings, separating the technical and management aspects. Action: Chuck Cline (Ecology) (5/27/92) & Darci Teel (7/29/92).	Canceled 9/23/92.
GT.140	Read the IDW (Groundwater Slurry) proposal and determine the need for further meetings or information. Action: Pam Innis, Darci Teel	Closed and replaced by new Action Item GT.148 9/23/92.
GT.142	Provide to the regulators: 1) The standard forms the labs use to report SW-846 methods; 2) Current Statements Of Work from OSM to each of the labs; 3) Latest version of the data validation method(s) use by the contracted parties (IT, Golder, etc.). Actionee: Bob Henckel & Joan Kessner (WHC).	Closed. Items 1, 2, and 3 were open at the meeting, however, Becky Bechtold provided data validation information on 09/23/92, and Jeff Lerch provided the balance of the requested information by close of business 09/24/92.
GT.143	Present at the September UMM the average turnaround times specific to samples taken after June 1, 1992. Action: Joan Kessner.	Closed 9/23/92.

ITEM NO.	ACTION/SOURCE OF ACTION	STATUS
GT.144	Billie Mauss, Pam Innis, Mike Baehre, Bill Mallio, and Richard Roos. Each organization will provide a representative to sit on a field radiation screening technical group. The team will explore the need for a field screening team and reach consensus on a team "charter". Potential purposes include performing independent verification of field screening capabilities, familiarizing regulators with such capabilities, reaching consensus on use of portable laboratory, and helping determine future need (and rate of need) for mobile labs/field screening. Group coordinator is J.D. Goodenough (RL).	Closed 10/21/92.
GT.145	Provide the regulators with all completed groundwater 300-FF-5 split sample data packages (splits done via both SW-846 and CLP methodologies) by October 2. Action: L. Hulstrom.	Closed 10/21/92.
GT.146	Schedule a meeting between DOE and the Regulators to discuss Regulator concerns with respect to selection of analytical methodologies, level of QA/QC, and data reporting. Meeting is to evaluate data packages. Action: J. Goodenough.	Closed 10/21/92. Meeting scheduled 10/22/92 after 3:00 at EPA.
GT.147	Provide the status of the comparison of data and full data packages for analyses performed via CLP with those performed via SW-846. Both split samples from 300-FF-5 and historical data should be included. Status at the October UMM. Action: J. Goodenough.	Closed 10/21/92.
GT.148	DOE requests regulator response concerning the IDW proposal by P. Innis October 2. Action: D. Teel and P. Innis.	Open (9/23/92). Will have results by November UMM (10/21/92).

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ANALYTICAL SERVICES STATUS

**Jeff Lerch
October 21, 1992**

COMMERCIAL CONTRACTS

- DataChem and S-Cubed continue to have small workloads.
- S-Cubed has developed a small backlog.
 - Expected to be eliminated by October 1992.
- Turnaround times elevated for Weston and TMA as backlogs are eliminated.
- Weston/Teledyne personnel visited Hanford on October 1, 1992.
- Weston facility assessment performed on October 14 and 15, 1992.

COMMERCIAL CONTRACTS (continued)

- **TMA received a large number of samples in September 1992.**
- **Conditional approval for use of TMA/Eberline Facility expected by end of October 1992.**

ON-SITE LABORATORIES

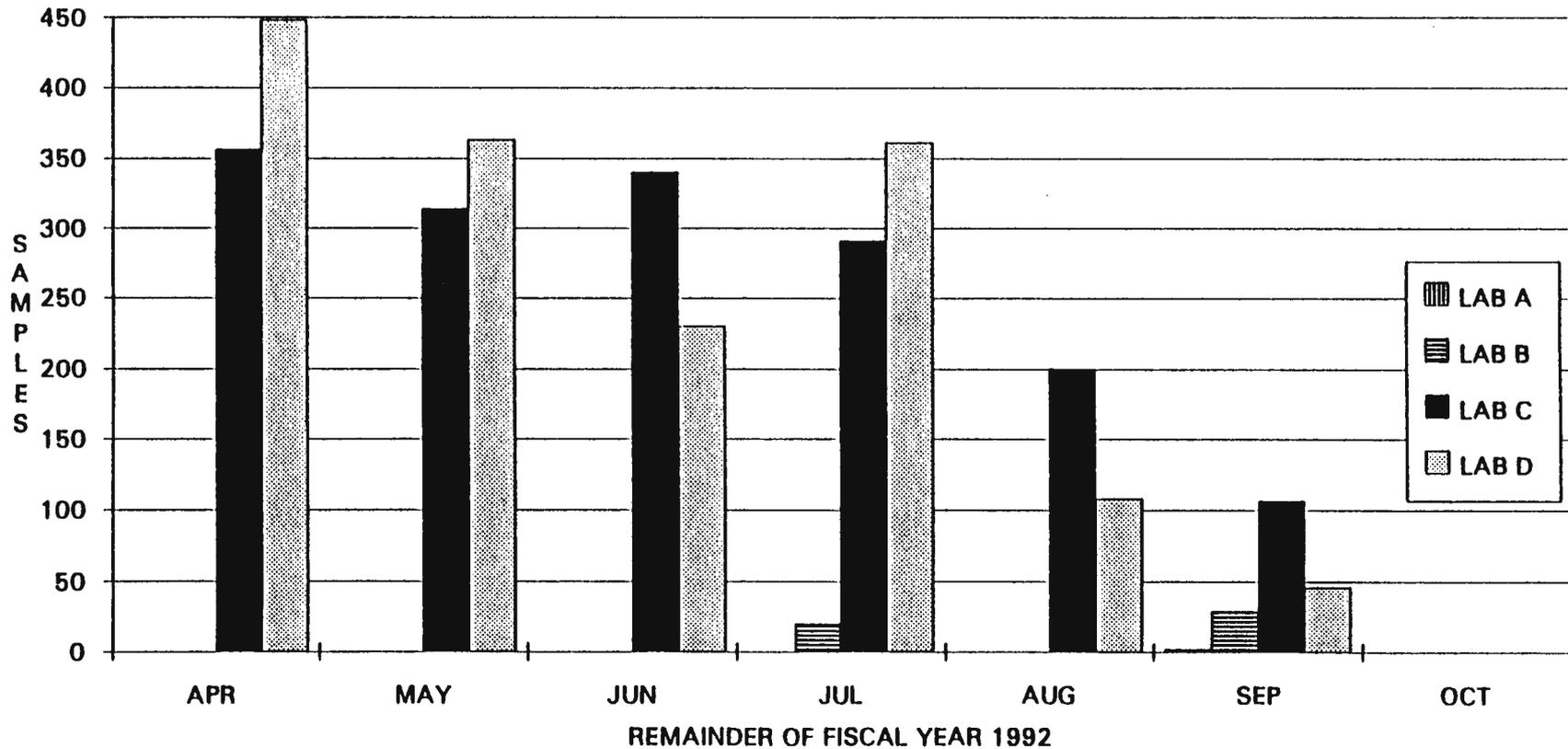
- PNL completed transmittal of the remaining 200-BP-1 Task 2 and 4 data packages on October 15, 1992.
- PNL is being set up to provide support to 241-T-106.

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RFP STATUS

- Draft award packages submitted to RL July 23, 1992.

COMMERCIAL LABORATORIES SAMPLE BACKLOG



BACKLOG DEFINITION: FOR LABORATORIES A & B SAMPLES WHICH HAVE BEEN AT THE LABORATORY LONGER THAN 35 DAYS. FOR LABORATORIES C & D SAMPLES WHICH HAVE BEEN AT THE LABORATORY LONGER THAN 60 DAYS.

LABORATORY A TURNAROUND TIME SUMMARY - 9/25/92

	APR	MAY	JUN	JUL	AUG	SEP				
# Samples Submitted	0	2	2	11	66	30				

Performance by Month Samples Submitted										
# Samples Completed	N/A	2	2	11	64	6				
Shipping Time	N/A	8	2	3	5	6				
Analysis Time	N/A	44	24	21	*	*				
Turnaround Time	N/A	52	26	24	*	*				

Performance by Month Complete Data Received										
# Samples Completed	4	0**	3	1	73	8				
Shipping Time	3	N/A	6	2	5	3				
Analysis Time	34	N/A	33	36	22	19				
Turnaround Time	37	N/A	39	38	27	22				

*Will not be calculated until all data is complete for the subject month
 (# samples submitted = # samples completed)

**No sample data due

Monthly Sample Backlog ¹		0	0	0	0	2				
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¹Backlog defined as samples which have been at Laboratory A for >35 calendar days.

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LABORATORY B TURNAROUND TIME SUMMARY - 9/25/92

	APR	MAY	JUN	JUL	AUG	SEP				
# Samples Submitted	24	79	69	36	37	21				

Performance by Month Samples Submitted										
# Samples Completed	24	79	69	36	9	6				
Shipping Time	13	3	4	46	3	3				
Analysis Time	10	29	21	26	*	*				
Turnaround Time	23	32	25	72	*	*				

Performance by Month Complete Data Received										
# Samples Completed	1	10	98	47	36	12				
Shipping Time	7	5	5	4	46	23				
Analysis Time	10	18	19	28	26	37				
Turnaround Time	17	23	24	32	72	60				

*Will not be calculated until all data is complete for the subject month
 (# samples submitted = # samples completed)

Monthly Sample Backlog ¹		0	0	20	0	29				
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¹Backlog defined as samples which have been at Laboratory B for >35 calendar days.

LABORATORY C³ TURNAROUND TIME¹ SUMMARY - 9/25/92

	APR	MAY	JUN	JUL	AUG	SEP				
# Samples Submitted	177	70	77	178	109	174				

Performance by Month Samples Submitted										
# Samples Completed	160	66	77	102	25	4				
Shipping Time	18	3	4	4	3	7				
Analysis Time	*	*	52	*	*	*				
Turnaround Time	*	*	56	*	*	*				

Performance by Month Complete Data Received										
# Samples Completed	68	150	103	135	204	226				
Shipping Time	5	3	3	4	4	10				
Analysis Time	126	135	122	120	121	132				
Turnaround Time	131	138	125	124	125	142				

*Will not be calculated until all data is complete for the subject month
 (# samples submitted = # samples completed)

Monthly Sample Backlog ¹		314	340	291	198	106				
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¹Backlog defined as samples which have been at Laboratory C for >60 calendar days.

LABORATORY D TURNAROUND TIME SUMMARY - 9/25/92

	APR	MAY	JUN	JUL	AUG	SEP				
# Samples Submitted	114	304	103	114	217	531				

Performance by Month Samples Submitted										
# Samples Completed	114	304	94	77	13	7				
Shipping Time	5	3	3	8	4	9				
Analysis Time	76	88	*	*	*	*				
Turnaround Time	81	91	*	*	*	*				

Performance by Month Complete Data Received										
# Samples Completed	203	148	338	155	348	192				
Shipping Time	6	29	57	5	10	5				
Analysis Time	116	195	168	150	103	86				
Turnaround Time	122	224	225	155	113	91				

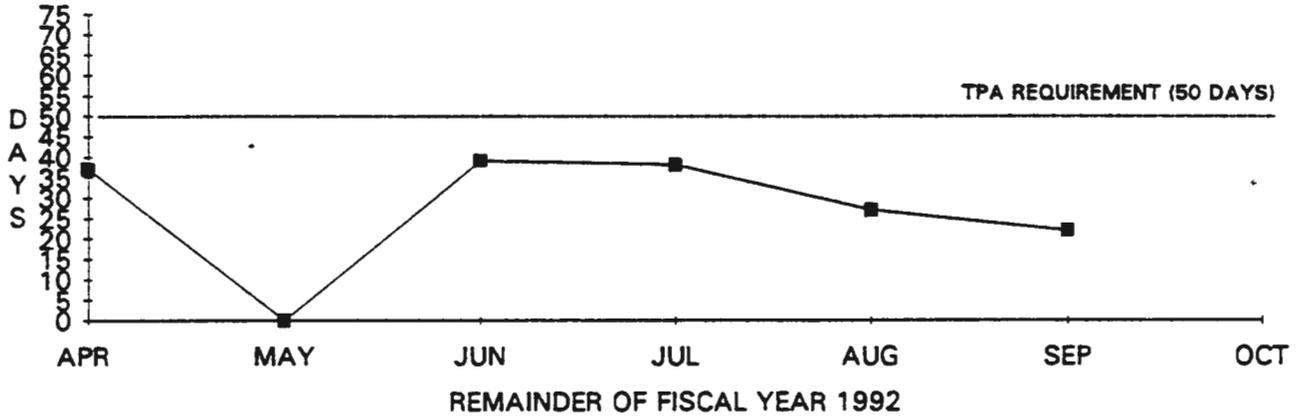
*Will not be calculated until all data is complete for the subject month
 (# samples submitted - # samples completed)

Monthly Sample Backlog ¹		363	230	361	108	46				
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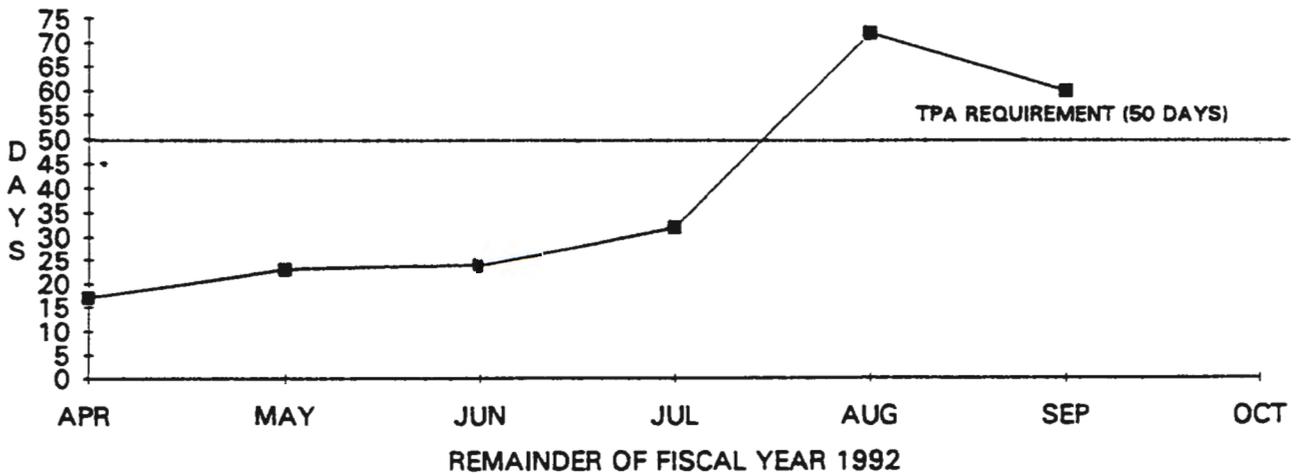
¹Backlog defined as samples which have been at Laboratory D for >60 calendar days.

**COMMERCIAL LABORATORIES AVERAGE TURNAROUND TIMES
FOR NON RADIOACTIVE SAMPLE ANALYSIS*
BY MONTH COMPLETE DATA IS RECEIVED**

**COMMERCIAL LABORATORY A AVERAGE
TURNAROUND TIME**



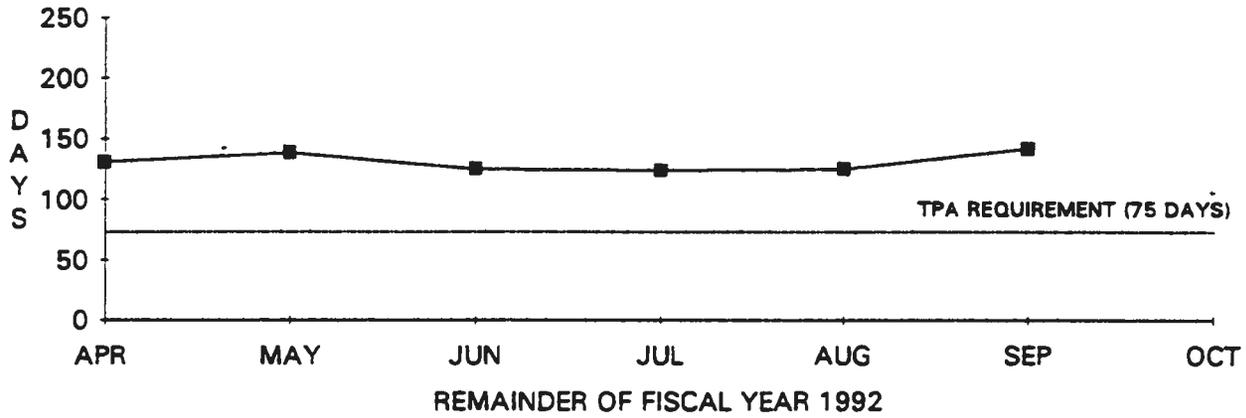
**COMMERCIAL LABORATORY B AVERAGE
TURNAROUND TIME**



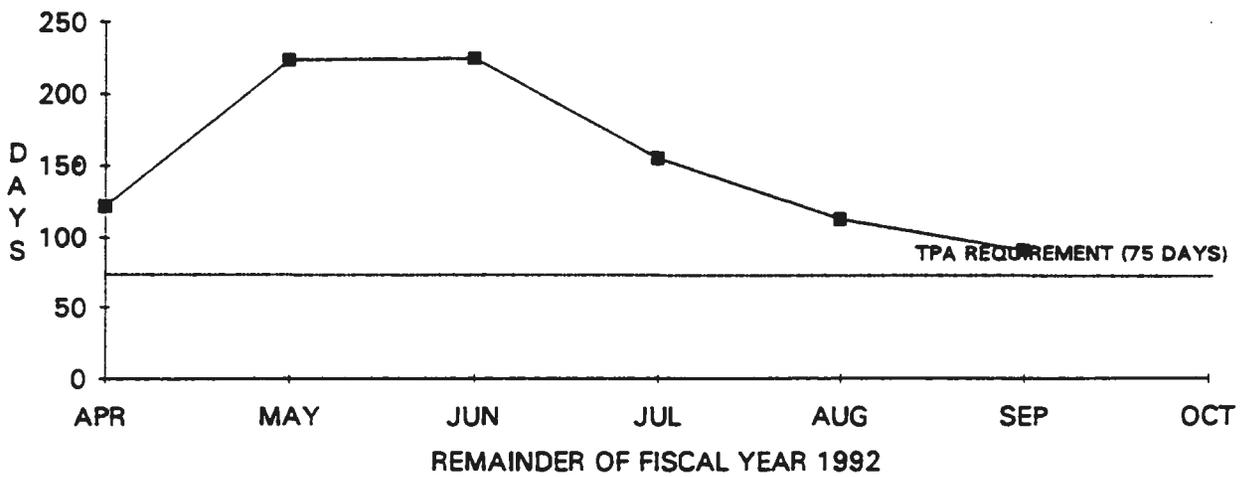
*Note: Turnaround times are calculated from the date of sample collection to the date of complete data received

**COMMERCIAL LABORATORIES AVERAGE TURNAROUND TIMES
FOR LOW LEVEL RADIOACTIVE SAMPLE ANALYSIS*
BY MONTH COMPLETE DATA IS RECEIVED**

**COMMERCIAL LABORATORY C AVERAGE
TURNAROUND TIME**



**COMMERCIAL LABORATORY D AVERAGE
TURNAROUND TIME**



*Note: Turnaround times are calculated from the date of sample collection to the date of complete data received

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BACKGROUND



September 1992

An Advisory on the Hanford Remedial Action Environmental Impact Statement

INTRODUCTION

An extensive environmental restoration program is under way at the Hanford Site. Over the life of this program, many decisions will be made about the type and level of cleanup at many different locations on the Site. While several laws and regulations provide the framework for making cleanup decisions, no mechanism currently examines the overall impacts to the environment, public health and safety, or establishes potential future Site uses as the result of this cleanup program. The Hanford Remedial Action Environmental Impact Statement (HRA-EIS) is intended to fill this role.

This Background provides a basic foundation for understanding the issues that will be examined in preparing the HRA-EIS.



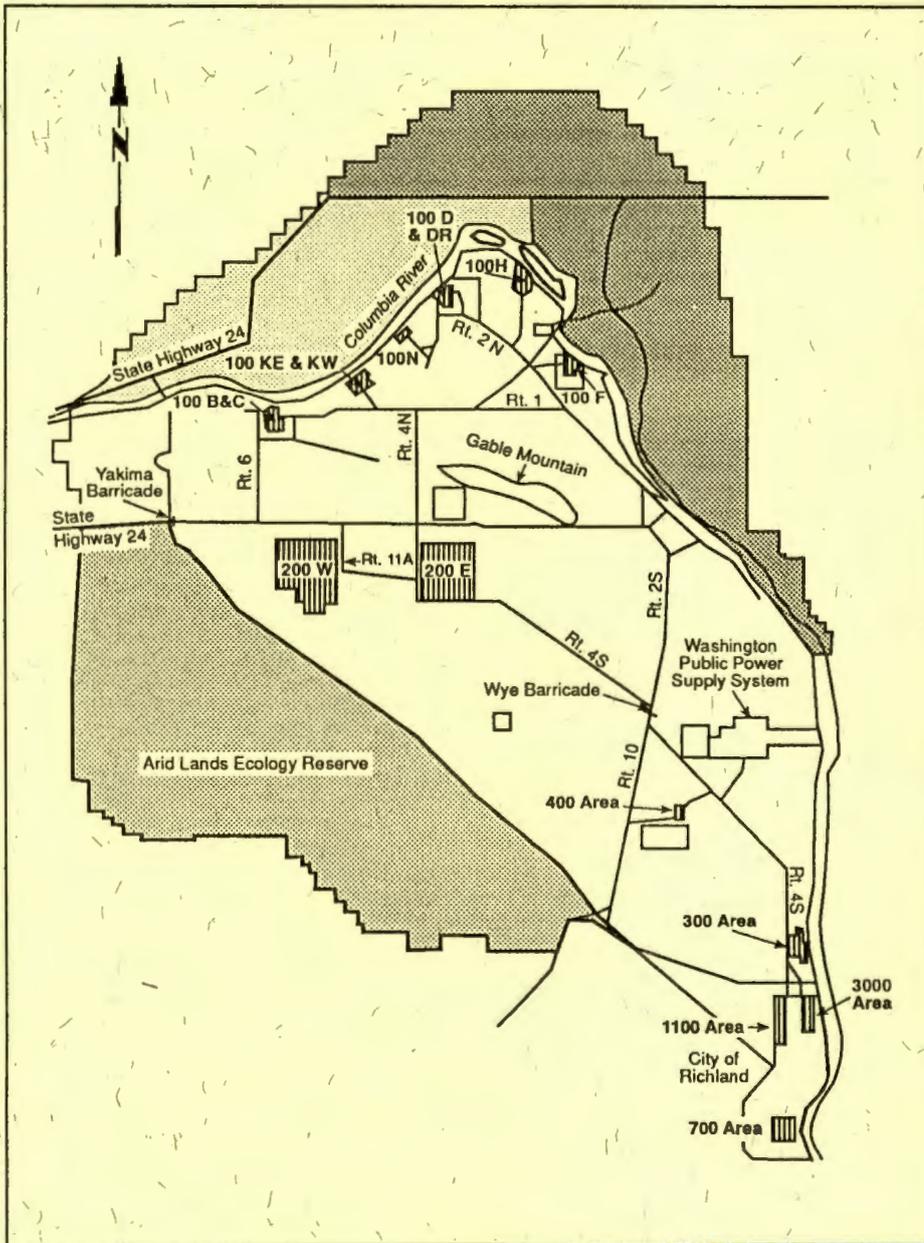
The HRA-EIS will examine various alternative cleanup strategies for the Hanford Site that may ultimately determine what future Site uses are possible. As a result, the U.S. Department of Energy (DOE) believes that a broad spectrum of individuals and organizations in the Pacific Northwest will be interested in participating in the development of the HRA-EIS.

The DOE, the Washington State Department of Ecology (Ecology), and the Environmental Protection Agency (EPA) have organized a group of citizens interested in the future of the Hanford Site. The

membership of the Hanford Future Site Uses Working Group represents agriculture, labor, government, environmental, tribal, and public interests. This special group has been meeting since April 1992 to help develop a range of future Site uses that can be evaluated in the HRA-EIS.

The first step in the HRA-EIS development process is called scoping. This is your opportunity to tell us what you think the HRA-EIS should examine in terms of cleanup alternatives, environmental resources that could be affected, and potential future Site uses that the cleanup alternatives should take into account. To assist you in participating in scoping, we are using this Background to provide a basic foundation for understanding the issues that will be examined in preparing the HRA-EIS. The purpose of providing this information is not to answer all your questions--we still have many ourselves--but to stimulate your thinking on many of the issues that will need to be resolved as we prepare the HRA-EIS.

This Background provides the following information that should help you participate in scoping: (1) the nature of contamination, how it originated, and where it is located on the Site; (2) the regulations and agreements that govern how contamination must be cleaned up; (3) the purpose of the EIS process; (4) resources that exist on the Hanford Site that could be affected by cleanup; (5) cleanup alternatives for the Site; (6) factors that could affect the evaluation of cleanup strategies, such as available cleanup technologies and site use decisions that have already been made; and (7) how you can participate in scoping.



Most of the operable units (see map) are clustered within the 100 Area (site of the original plutonium production reactors) and the 200 East and West Areas (locations where plutonium produced in the reactors was separated chemically from reactor fuel). Much of the waste was disposed of underground. Some is stored on the surface. In some cases, the wastes have been released or have leaked into the ground or groundwater.

Operations at the Hanford Site have generated a variety of wastes, including hazardous, low-level and high-level radioactive, transuranic (a class of radioactive waste), and mixed (hazardous and radioactive) wastes. Some wastes are solids. Others are liquids.

We do not know yet the total volume of waste at these sites. We do know that more than 800,000 cubic yards of the waste contain radioactivity. That amount would cover a football field to a depth of 460 feet. We also know that billions of gallons of contaminated liquids have been discharged to the soil. The total extent of soil contamination is not known, but we do know that about a 200-square-mile area of groundwater is contaminated to some degree.

THE NATURE OF THE PROBLEM

The Hanford Site is DOE's second oldest nuclear facility. Nuclear and chemical wastes have been accumulating at the site since 1943. Wastes are found in more than 1,100 different waste sites that vary in size from a few square feet to hundreds of acres. The large number of "past-practice" waste sites have been organized into 78 more easily managed "operable units" on the bases of waste type and geographic location.

Radioactive and hazardous materials from past-practice waste sites will be investigated to determine if they could pose a potential health hazard to the general public as well as to wildlife in the vicinity of the Hanford Site. Much of the radioactive and hazardous waste at past-practice sites was disposed of prior to the passage of current waste disposal regulations and without the benefit of modern waste disposal technology. As a result, some of these materials are uncontained and able to migrate from their original disposal sites.

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Migration of radioactive and hazardous wastes from certain past-practice sites has been observed and is being closely monitored. Currently, groundwater contamination containing heavy metals (e.g., chromium), certain hazardous organic solvents (e.g., carbon tetrachloride), and radioactive materials (e.g., tritium, strontium, and uranium) is migrating from its origin (chiefly the 100 Area and 200 East and West Areas).

Because of the slow rates at which these wastes migrate, and the decrease in concentration (as a result of dilution and decay), they are not causing a current hazard to the public or area wildlife. This conclusion is borne out by data from the comprehensive monitoring program at the Hanford Site, which indicate no current harmful levels of contaminants are present in the air or water surrounding the Hanford Site.

Although some radioactivity and chemicals have already reached the Columbia River, the concentrations measured within the river are not hazardous and are well below protective legal limits. The purpose of the cleanup program is to ensure that no hazard is created by these materials over the long term.

THE REGULATORY PROCESS

To help you understand what the HRA-EIS will and will not decide, the following information explains the regulations and intergovernmental agreements that guide specific types of cleanup activities at the Hanford Site. For example, the HRA-EIS will not make project-specific cleanup decisions. These decisions will be made under special federal laws that govern the selection of cleanup remedies.

The Atomic Energy Act of 1954 ensures that radioactive wastes are handled in a manner that protects public health and the environment.



The DOE carries out cleanup according to certain federal and state laws and other legal requirements.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or Superfund, as it is more commonly known, imposes requirements for cleanup of spills and sites with the potential for releases of hazardous substances into the environment. In accordance with CERCLA requirements, the Hanford Site has been placed on the National Priorities List of sites requiring study and remediation. The Resource Conservation and Recovery Act (RCRA) regulates the management of hazardous waste, including the treatment, storage, transportation, and disposal of waste from cleanup of past releases if the materials are removed from their CERCLA operable units. Certain DOE production processes generated wastes that contain both RCRA-regulated hazardous materials and radioactive components. This "mixed" waste is now regulated under both RCRA and the Atomic Energy Act of 1954. The Atomic Energy Act of 1954 ensures that radioactive wastes are handled in a manner that protects public health and the environment. In addition, the Hanford Site must comply with Washington State's Dangerous Waste Regulations, because they implement the federal RCRA regulations.

The National Environmental Policy Act (NEPA) requires federal agencies to use a systematic approach to evaluate the potential environmental impacts of projects that might significantly affect the quality of the environment. This law also requires that environmental information be made available to both government agencies and citizens before decisions are made to take action. NEPA governs the process for assessing the environmental impacts of a proposed project.

Faced with so many different waste forms, regulations, and disposal methods, Ecology and the EPA joined with DOE in May 1989 to sign the Hanford Federal Facility Agreement and Consent Order, commonly called the Tri-Party Agreement. The Tri-Party Agreement created a framework for compliance with CERCLA and RCRA and for bringing the Hanford Site into compliance with all federal and state hazardous and radioactive waste laws. The agencies ranked the problems and risks at the Hanford Site and agreed to a timetable for investigating and

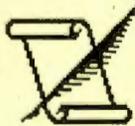
making decisions regarding cleanup. The Tri-Party Agreement attempts to streamline the compliance process by minimizing the overlap of the laws and coordinating the regulatory roles of Ecology and EPA with DOE's environmental restoration activities.

THE PURPOSE OF THE HRA-EIS

While the Tri-Party Agreement will result in operable-unit-by-operable-unit environmental restoration decisions for the Hanford Site, other mechanisms are necessary to link the effect of individual activities to each other and to the DOE complex as a whole.

The DOE is preparing two documents for considering and making decisions about overall impacts at the Hanford Site: (1) the Programmatic EIS (PEIS) for the nationwide integrated Environmental Restoration and Waste Management program and (2) the Hanford Remedial Action EIS. The PEIS will evaluate a number of alternatives for waste operations, environmental restoration, and technology development at various DOE sites nationwide. The PEIS will help us understand how Hanford's environmental restoration program will fit into the overall plan for cleanup within the DOE.

By identifying and evaluating alternative strategies for cleanup at the Hanford Site, the HRA-EIS will provide a direction and context for individual cleanup decisions.



At the Hanford Site, the U.S. Department of Energy, Richland Field Office will take information gathered in the nationwide PEIS and use it in the HRA-EIS to evaluate the individual and combined environmental impacts that would result from various cleanup strategies for the Hanford Site. By identifying and evaluating alternative strategies for cleanup at the Hanford Site, the HRA-EIS will provide a direction and context for individual cleanup decisions. The HRA-EIS will not, however, slow down any existing cleanup activities. It will speed up the remediation

process by coordinating resource commitments required by each of the individual operable units.

HANFORD SITE RESOURCES

As part of preparing the HRA-EIS, we have to identify the environmental resources that currently exist and evaluate the potential impacts to them from cleanup activities. Some of the primary resource areas that are typically examined in an EIS are:

- ✓ Aesthetics and Visual Resources
- ✓ Air Quality
- ✓ Archaeological and Cultural Resources
- ✓ Biological Resources
- ✓ Geology and Soils
- ✓ Historical Sites
- ✓ Public Health and Safety
- ✓ Socioeconomic Resources
- ✓ Threatened/Endangered Species
- ✓ Traffic and Transportation
- ✓ Utilities
- ✓ Water Resources/Rivers.

The Hanford Site, which covers about 560 square miles of semiarid shrub-steppe land in southeastern Washington, is home to sixty-six state or federally protected/sensitive plant and animal species like the Columbia milk-vetch, bald eagle, peregrine falcon, and white pelican, as well as thriving populations of mule deer and elk in one of the last native sagebrush grasslands in Washington State.

The 120-square mile ALE Reserve remains one of the largest natural research areas in the Pacific Northwest undisturbed by human development.



The DOE, in cooperation with The Nature Conservancy, the U.S. Fish & Wildlife Service, and the Washington State Department of Wildlife, works toward preserving and managing the biological

resources at the Hanford Site. Almost twenty years ago the Arid Lands Ecology (ALE) Reserve was established at the Hanford Site. The 120-square mile ALE Reserve remains one of the largest natural research areas in the Pacific Northwest undisturbed by human development.

In addition to providing a protective habitat for plant and animal life, the Hanford Site also offers opportunities for scientific study. By comparing the Hanford Site's wildlife populations with similar populations in unprotected areas, scientists may learn how to reduce the destructive impact of human activity on animal habitats. For example, a sizable elk herd has established itself on the Hanford Site. These elk have provided scientists with an opportunity to study them as they adjust to the shrub-steppe environment.

The Hanford Reach on the Columbia River is a habitat for one of the last thriving stocks of fall chinook salmon.



A variety of waterfowl also live in or migrate to the Hanford Site region. The Columbia River flows through the northern portion of the Hanford Site and forms the eastern boundary. It provides wintering and nesting habitat for many species. The Hanford Reach, beginning one mile below Priest Rapids Dam and continuing downstream approximately 51 miles to the McNary Pool north of Richland, is the last free-flowing segment of the Columbia River. The Hanford Reach on the Columbia River is a habitat for one of the last thriving stocks of fall chinook salmon. The Hanford Reach is frequently used for boating, fishing, hunting, nature observation, and hiking. A draft EIS prepared by the National Park Service for the Hanford Reach that includes a comprehensive river conservation study is in public review. Decisions made as a result of the National Park Service study could have relevance to overall Site cleanup and future Site uses.

Humans have populated the Columbia Plateau for more than 10,000 years. They left extensive archaeological deposits throughout the region. This area was the homeland for several Native American Tribes and a destination for Euro-American pioneers. There are 2 National Register sites, 5 archaeological districts, and 122 prehistoric sites that contain physical links to this rich past. At the Hanford Site, because public access has been limited, many of these resources are largely undisturbed and protected. The area is of spiritual significance to Native Americans because of its link to ancestral burial grounds and traditional religious practices.

CLEANUP ALTERNATIVES

In examining impacts on the environment, the HRA-EIS must select a range of alternative actions that are the "causes" of the impacts. The final determination to be made, at the end of the HRA-EIS process, is the selection of a reasonable cleanup strategy to accomplish the appropriate scope of cleanup, with consideration for potential future Site uses. In other words, remediation alternatives will need to be evaluated for cleanup of contamination, their impact on the environment and human health, and possible future Site uses. As part of initiating the EIS process, the DOE has proposed a range of preliminary cleanup alternatives. The preliminary strategies will be finalized after receiving comments from the public. During scoping we invite you to suggest other alternatives or new ways to look at these alternatives.

Preliminary alternatives for the HRA-EIS include engineering and institutional controls for protecting human health and the environment, full removal and treatment of various wastes, a combination of treatment and controls, and taking no action. Evaluation of the "no action" alternative is required by law, and provides a useful baseline for comparison of the other alternatives. These alternatives are described briefly in the following.

Engineering and Institutional Controls. This alternative would be used to minimize exposure to contaminants. Institutional controls would limit access to contaminated areas by using fences and land use restrictions. Another example of an institutional

control would be monitoring the level and location of contamination. Engineering controls include barriers made of earth, vegetation, concrete, stone, and/or steel. Hydraulic barriers created by pumps or slurry walls could also be evaluated. In this alternative, waste disposal and treatment could occur in place.

Removal and Treatment. This alternative involves removal of contaminants from the environment for subsequent treatment. Treatment could take place on-site or off-site in permitted facilities. Removal strategies include pumping groundwater and excavating soil for treatment. Constructing and operating on-site or off-site treatment, storage, and disposal facilities also would be considered in evaluating this alternative. Institutional and engineering controls could be used as temporary or supplemental measures along with removal and treatment.

Combination of Treatment and Controls. This alternative involves examining a variety of treatments, engineering and institutional controls, and innovative technologies that together could achieve effective cleanup. Depending on the risks they pose, contaminated materials could be treated in place, left in place with controls, or removed for treatment and/or disposal at either on-site or off-site locations.

No Action. This alternative would serve as a baseline for measuring the effectiveness of the other alternatives. Failure to clean up the past-practice waste sites could result in the movement of contaminants into previously uncontaminated areas.

CONSIDERATIONS IN DEFINING CLEANUP STRATEGIES AND FUTURE SITE USES AT THE HANFORD SITE

Whatever visions for future Site uses emerge from the Future Site Uses Working Group and from your participation in the scoping process will have to be framed by an understanding of what can be reasonably accomplished given the nature of the contamination and the cleanup technologies likely to be available. Several areas of the Site have been dedicated to waste management and waste disposal activities. Those activities will need to be considered

The HRA-EIS will analyze which cleanup strategies will be required to achieve the level of "clean" necessary to realize a particular vision.



when plans for surrounding land use are evaluated. The HRA-EIS will analyze which cleanup strategies will be required to achieve the level of "clean" necessary to realize a particular vision. For this reason, cleanup strategies and future Site uses must be examined together in the HRA-EIS so that a framework can be established for near-term and long-term decisions.

Available Technologies

The HRA-EIS will examine types of technologies that can be used to reach certain levels of cleanup for specified types of wastes. Different technologies will have different effects on the environment.

Individual waste areas, by nature of the contamination they contain and technologies available to clean them up, will vary in their suitability for future uses. Unfortunately, all cleaned up areas and facilities may not be suitable for unrestricted access in the near term.

New technological applications will continue to be developed, studied, and tested at the Hanford Site. The Hanford Site is in a unique position to serve as a model for cleanup at other DOE sites. Your opinion on how we should define cleanup strategies in terms of available technologies is the kind of valuable input we need during scoping.

Current and Future Commitments

Other factors that may affect the definition and selection of cleanup strategies in the HRA-EIS include current land use designations such as the land holdings on the Hanford Site by the Washington Public Power Supply System, and previous land use

commitments for waste management, waste disposal, and research facilities. We encourage discussion during the scoping process of any other factors you think we should consider in identifying the range of reasonable alternatives that we will examine in the HRA-EIS.

YOUR CONTRIBUTION TO THE DECISION MAKING PROCESS

The NEPA requires that environmental information be made available to both government officials and citizens

before decisions are made to take action. This law also requires that opportunities be provided to comment on the proposed action before any decisions are made. It takes more than regulatory compliance, however, to assure that the HRA-EIS takes into account all affected interests at the Hanford Site. We have established a 24-hour toll-free information line to provide you with information about the scoping period and the HRA-EIS process.



**Toll-free HRA-EIS Information Line:
1-800-786-2018**

Scoping meetings will be held in Spokane, Pasco, Seattle, and Portland during late September and early October. The schedule for these meetings is shown on the following page. You will also be able to submit your individual comments in writing at these scoping meetings.

The scoping meetings are designed to allow you to make comments individually or in a small group setting. The small group settings will allow you to meet informally with project staff and other interested citizens. The small groups will be organized along

three topical areas: (1) natural resources and human health and safety; (2) land use and cultural resources; and (3) cleanup technologies, alternatives, and strategies. There will be an afternoon and evening

session in each of the four cities.

Mail written comments to:

**Roger D. Freeberg, Chief
Environmental Programs Branch
U.S. Department of Energy, G6-75
P.O. Box 550, Richland, WA 99352**

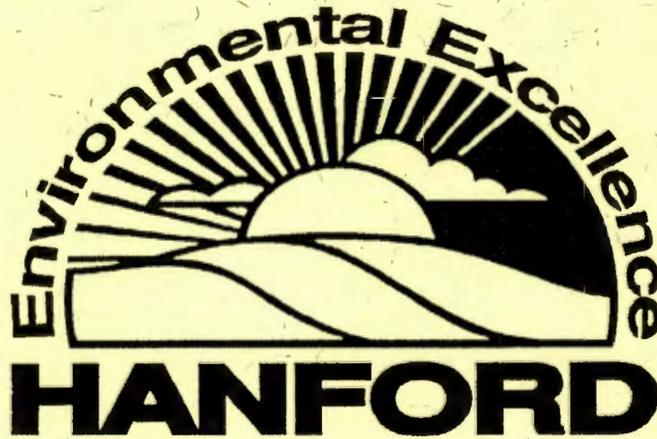
A technical resource person will also be present to provide an introduction to each small group discussion topic. The small group sessions will be assisted by a facilitator who will encourage comments and

record the discussions on flip charts.

The public scoping period is currently scheduled to extend through November 25, 1992. However, the Future Site Uses Working Group has requested that the scoping period be extended until January 15, 1993. The DOE is currently in the process of officially extending the scoping period to meet this request. Written comments will also be accepted during the public scoping period. For your convenience a postage-paid/addressed comment sheet is included with this Backgrounder.

Comments submitted during scoping and scenarios developed by the Future Site Uses Working Group will be factored into the Draft HRA-EIS. When the Draft HRA-EIS is prepared you will have the opportunity to comment on it at public hearings, or by submitting your written comments. The DOE will respond to public comments on the Draft HRA-EIS and develop a final document that will serve as one of the primary bases for a final decision to be made by the Secretary of Energy.

We appreciate your taking the time to read this Backgrounder. If there is other information you believe would help you participate more effectively in scoping please call the toll-free information line. We look forward to your participation.



*Hanford Remedial Action Environmental Impact Statement
Scoping Meeting Dates & Locations*

Spokane

September 29, 1992
12:30 – 5:00 p.m. & 6:30 – 10:30 p.m.
West Coast Ridpath Hotel
West 515 Sprague Avenue

Pasco

October 1, 1992
12:30 – 5:00 p.m. & 6:30 – 10:30 p.m.
Red Lion Inn/Pasco
2525 N. 20th Avenue

Seattle

October 5, 1992
12:30 – 5:00 p.m. & 6:30 – 10:30 p.m.
Sheraton Seattle Hotel and Towers
1400 Sixth Avenue

Portland

October 8, 1992
12:30 – 5:00 p.m. & 6:30 – 10:30 p.m.
Red Lion Hotel/Lloyd Center
1000 N.E. Multnomah Street

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HIGHLIGHT ON...

Hanford Remedial Action Environmental Impact Statement



September 1992

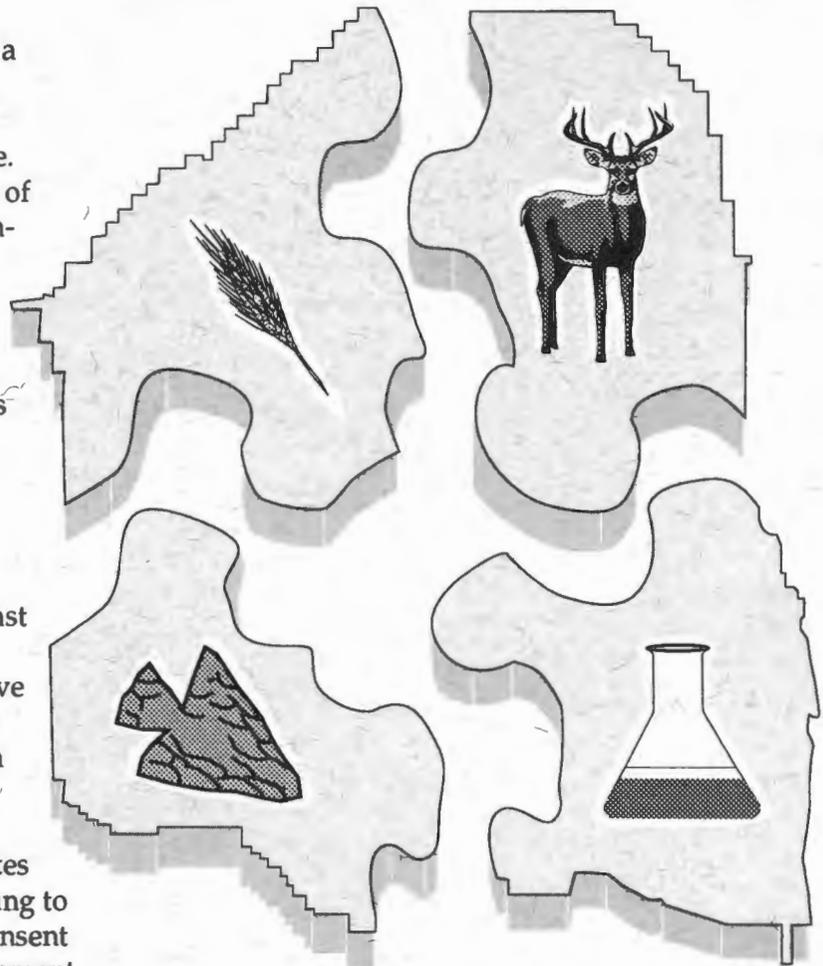
Shaping the Future of Hanford: The Hanford Remedial Action Environmental Impact Statement

The Hanford Remedial Action Environmental Impact Statement (HRA-EIS) is being prepared to determine the potential impacts associated with alternatives for environmental remediation. The HRA-EIS will include discussions regarding treatment, storage, and disposal options.

The Hanford Site near Richland, Washington, is a major U.S. Department of Energy (DOE) facility established in 1943 for the primary purpose of producing nuclear materials for national defense. Operations at Hanford have generated a variety of wastes, including hazardous, low-level and high-level radioactive, transuranic (a class of radioactive waste), and mixed (hazardous and radioactive) wastes. Past waste management practices for handling these wastes have led to environmental problems at various inactive sites at Hanford that now require cleanup under current federal and state requirements and guidelines.

The HRA-EIS will analyze a number of issues related to over 1,100 inactive waste sites from past practices that have been identified for cleanup. For efficiency, these past-practice waste sites have been combined into 78 operable units for which individual cleanup decisions may be made. (An operable unit is a group of waste sites placed together for study purposes and subsequent cleanup actions.) Remediation at these waste sites will be conducted over a 30-year period, according to the Hanford Federal Facility Agreement and Consent Order, commonly known as the Tri-Party Agreement.

This HIGHLIGHT gives an overview of the purpose of the HRA-EIS and how it relates to other DOE activities, the alternatives being considered, and why *we want you involved.*



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The Tri-Party Agreement was signed in 1989 by the DOE, the U.S. Environmental Protection Agency, and the Washington State Department of Ecology for the purpose of ensuring that action is taken to protect the public health, welfare, and environment; establishing a framework and schedule for cleanup actions; and facilitating cooperation and coordination among the parties.

The Purpose of an EIS

An Environmental Impact Statement (EIS) is a detailed evaluation of the potential environmental impacts of any major proposed federal action that may significantly affect the environment. Once these impacts are identified, ways to reduce, mitigate, or avoid them altogether can be identified. The preparation of an EIS is guided by the National Environmental Policy Act (NEPA) of 1969 and the Council on Environmental Quality guidelines developed to implement NEPA.

The EIS will aid decision makers by evaluating potential impacts to public health and safety and the environment from the proposed federal action and its alternatives. This analysis and the associated public input help decision makers decide whether they should proceed with the proposed action, some modification of the proposed action, or one of the alternative actions.

The value of an EIS is the emphasis it places on preventing or avoiding damage to the environment and encouraging public participation in the decision-making process.

Alternatives Being Considered in the HRA-EIS

The HRA-EIS will evaluate a range of reasonable cleanup alternatives. Final alternatives will be developed after receiving your comments.

A preliminary range of alternatives for cleanup at Hanford has been identified for consideration in the HRA-EIS. These alternatives include:

Institutional and Engineering Controls - This alternative includes a combination of institutional and

EIS Process and Tentative Schedule

Public Scoping Period (Verbal and Written Comments Welcomed)	August – November 1992
Draft EIS	March 1994
Public Comment Period on Draft EIS	March – May 1994
Final EIS	March 1995
Minimum 30-day Waiting Period	March – April 1995
Record of Decision	June 1995

engineering controls. Institutional controls are security measures or other restrictions that limit use of contaminated areas. Engineering controls involve physical barriers made from earth, concrete, stone, and/or steel constructed to prevent contaminants from migrating into previously uncontaminated areas.

Full Removal and Treatment - This alternative involves the removal of contaminants from the environment and subsequent treatment which could be performed on- or off-site. Transportation of contaminated materials could be required.

Combination of Treatment and Controls - This alternative would rely upon varying degrees of treatment and institutional and engineering controls.

No Action Alternative - The no action alternative is used to establish a baseline against which the effects of the other alternatives may be evaluated. The consideration of the no action alternative is required by the Council on Environmental Quality guidelines for implementing NEPA.

Does the HRA-EIS Make Cleanup Decisions?

The HRA-EIS will evaluate alternatives and environmental impacts for accomplishing an environmental remediation program for the past practices sites identified in the Tri-Party Agreement.

Individual cleanup decisions will be made under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 and the Resource Conservation and Recovery Act (RCRA) of 1976, through the framework of the Tri-Party Agreement.

Although the site-specific cleanup decisions will be made through the Tri-Party Agreement under CERCLA and RCRA, the HRA-EIS will serve as a source document which will be referenced when determining remedial alternatives at each operable unit. The HRA-EIS is important because it examines the "big picture" of environmental impacts, both beneficial and adverse, from cleanup activities at the Hanford Site. It also will allow DOE to see more clearly how site-specific decisions contribute to Hanford-wide goals for cleanup.

The Relationship Between the HRA-EIS and the DOE Programmatic EIS for Environmental Restoration and Waste Management

DOE is preparing a Programmatic Environmental Impact Statement (PEIS) on the integrated Environmental Restoration and Waste Management (EM) program. The PEIS will assess broad programmatic issues and integrated approaches to DOE environmental and waste management activities. It is not intended to assess impacts for remediation alternatives at the specific DOE sites.

The HRA-EIS will be coordinated with the PEIS to ensure that cleanup decisions made for Hanford are consistent with DOE's overall environmental restoration and waste management objectives.

Why We Want You to Be Involved

While this EIS will not propose specific future site uses, it will examine cleanup strategies necessary to achieve a range of site use options. During the scoping period through November 25, 1992, you will have an opportunity to share your ideas for future site use at Hanford.

Because people may have different visions for Hanford, the Hanford Future Site Uses Working Group was formed and has been meeting regularly (about once a month) since April 1992. This working group represents interests from agriculture, labor, government, environmental, and public interest groups and is examining the range of options for future uses of the Hanford Site. The future use scenarios they develop will be considered in shaping land uses/cleanup strategy alternatives to be analyzed in the HRA-EIS.

What Are the Opportunities to Get Involved?

Under NEPA, the preparation of an EIS follows a series of steps to ensure that the public, as well as other government agencies, are given ample opportunity to contribute to the evaluation process. These steps include a number of opportunities for the public to offer comment on the proposed action and its alternatives.

The HRA-EIS process began with publishing a Notice of Intent (NOI) in the Federal Register. The NOI describes the proposed action and declares DOE's intent to prepare the EIS and hold a public scoping period. The scoping period will include public meetings using a workshop format. Four scoping meetings are planned for September and October in the cities of Spokane, Pasco, Seattle, and Portland.

During this scoping period, the public is encouraged to provide input on the scope of issues and alternatives to be considered in the EIS.

Comments on the scope of the HRA-EIS may be made in a number of ways. Members of the public can verbally state their comments at any one of the scoping meetings. The times, dates, and exact locations of the workshops are detailed below. This information also will be announced in the local public media approximately two weeks before the planned scoping meetings.

A toll-free 800 number has been set up to allow members of the public the opportunity to request information on the HRA-EIS and upcoming public scoping meetings. This number, 800-786-2018, will operate 24-hours a day. Members of the public may also comment by mailing their written comments to the address above during the public scoping period that ends on November 25, 1992.

A draft EIS is scheduled to be issued in March of 1994 which will include a detailed analysis of the proposed action and alternatives. A public comment period will follow the release of the draft EIS. This public comment period will provide the opportunity for detailed comments on the content of the draft EIS.

After the close of the public comment period for the draft EIS, all comments will be considered for incorporation in the final EIS, which is scheduled for release in March

of 1995. The final EIS document will contain responses to comments made on the draft EIS. The Record of Decision (ROD), which will be issued in mid-1995, will announce DOE's final decision on the proposed action and alternatives.

Mail written comments to:

**Roger D. Freeberg, Chief
Environmental Programs Branch
U.S. Department of Energy, G6-75
P.O. Box 550, Richland, WA 99352**

***Hanford Remedial Action Environmental Impact Statement
Scoping Meeting Dates & Locations***

Spokane

**September 29, 1992
12:30 - 5 p.m. & 6:30 - 10:30 p.m.
West Coast Ridpath Hotel
West 515 Sprague Avenue**

Pasco

**October 1, 1992
12:30 - 5 p.m. & 6:30 - 10:30 p.m.
Red Lion Inn/Pasco
2525 N. 20th Avenue**

Seattle

**October 5, 1992
12:30 - 5 p.m. & 6:30 - 10:30 p.m.
Sheraton Seattle Hotel and Towers
1400 Sixth Avenue**

Portland

**October 8, 1992
12:30 - 5 p.m. & 6:30 - 10:30 p.m.
Red Lion Hotel/Lloyd Center
1000 N.E. Multnomah Street**

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**Environmental Restoration
Storage and Disposal Facility**

M. J. Lauterbach

October 30, 1992

Presentation Topics

- **Scope and Purpose of the Disposal System**
- **Proposed Site Location**
- **Components of the Disposal System**
- **Operational Approach**
- **Construction Decision Analysis**
- **Preliminary Schedule**

Scope and Purpose of the Disposal System

- **To Dispose and Store All Environmental Restoration Generated Waste**
- **To Permanently Isolate Waste on the 200 Area Plateau**
- **To Support Remediation and Restoration of the Hanford Site**
- **Enable Realization of Land-Use Goals**
 - **In the Process of Determination**

Components of the Disposal System (Cont.)

- **Waste Disposal Units**
 - **Trenches for:**
 - **Low Activity**
 - **Low Activity/Mixed**
 - **Hazardous/Dangerous**
 - **Non-Rad/Non-Dangerous**
 - **Vaults for:**
 - **High Activity**
 - **High Activity/Mixed**
 - **Waste Storage Units for:**
 - **Transuranic Waste**

Proposed Site Location

- **Initial Screening Criteria Used to Evaluate All Potential Sites on the 200 Area Plateau**
- **Three Sites Met Initial Screening Criteria and Were Evaluated in a Site Evaluation Report**
- **Final Site Chosen based on Siting Evaluation Criteria**
- **Proposed Site Yet to be Formally Approved**

Components of the Disposal System

- **Actual Site Design Will be Generated During Formal Design Process**

- **Design layout Will Include:**
 - **Waste Disposal Trenches**
 - **Vaults**
 - **Waste Storage Units**
 - **Above Grade Storage Pad**
 - **Material Handling System**
 - **Equipment Decontamination System**
 - **Personnel/Equipment Support Facilities**
 - **Groundwater/Vadose Zone Monitoring System**

Operational Approach

- **Classification and Containerization of Waste at Remediation Site**
- **Transport by Rail/Truck System in Reusable and Non-Reusable Containers**
- **Off-Loaded to Truck or Container Handling Equipment**
- **Dispatched to Disposal or Storage Unit**
- **Decontamination of Reusable Containers and Transporters**

Construction Approach

- **Waste Type/Volume Estimated Based on Existing Data**
- **Initial Construction phased to Meet Initial Five-Year Projection**
- **Subsequent Waste Disposal/Storage Units Constructed as Needed**

Waste Type and Volume Estimate

Assumptions -

- **WIDS - Process and Historical Information**
- **Specific Waste Plume Geometry for a Given Waste Unit**
- **Removal Action Will be the Chosen Remedial Alternative (100 and 300 Areas)**
- **Two Separate Land-Use Scenarios - use bounding case of general use**
- **Will be Continually Updated as New Information is Received**

Waste Type and Volume Estimate (Continued)

Volumes -

(Initial Phase)

- **Five-Year Operation**
 - 100 B/C ~ 3.5 Million Bank Cubic Yards
 - IRM's - ERA's
- **Significant Portion Will be Low Activity Only**

(Long Term Phase)

- **Complete by 2018 ~ 30 Million Bank Cubic Yards**

Preliminary Schedule

Engineering and Construction -

- **Functional Design Criteria Completed
January 31, 1992**
- **Conceptual Design Report Completed
September 30, 1993**
- **Definitive Design Effort Completed
September 30, 1994**
- **Procurement Initiated to Support Construction
Schedule Based on CDR**
- **Disposal/Storage Units Operational as Early as Third
Quarter of 1996**

ERE Mobile Screening Laboratory

**Status Report
ERE Mobile Screening Laboratory
October 21, 1992**

**T. E. Moody
Environmental Restoration Engineering
Westinghouse Hanford Company**

Status

- Contract (notice to proceed) awarded June 26, 1992
- Responsive vendor = ATC Corporation, Mystic, CT
- Coordination with Kaiser for delivery and set-up
 - a) plumbing
 - b) electrical
 - c) water, sewer
 - d) HLAN
 - e) site design plan completed by Nov. 16
- Finalized 93 CAP
 - a) Set-up, Readiness Review, Operational Checkout
 - b) Operational Expense

ERE Mobile Screening Laboratory

Cost Savings Analysis

Average cost CLP (12 labs)	\$2,548. sample ⁻¹	
20 samples/day	4,400. yr ⁻¹	
CLP cost	\$11,211,200. yr ⁻¹	
Set-up, Readiness Review (1st yr)	580,000.	
Yearly operating cost		
7 yr depreciation	328,571.	
management	38,700.	
4 chemists	182,000.	
support personnel	111,300.	
data interface support	19,600.	
maintenance	27,300.	
expendables	22,400.	
waste disposal	20,000.	
service contracts	40,000.	
warehouse	10,000.	
misc	62,500.	
overhead	<u>102,100.</u>	\$964,471.
DQO's ~ 10% CLP	1,121,120.	
Set-up, Readiness Review (1st yr)	580,000.	
Mobile lab cost/yr	<u>964,471.</u>	\$2,665,591.
CLP (4,400 samples)	\$11,211,200.	
Mobile lab cost/yr	\$2,665,591.	
Cost Savings/yr (1st yr)	\$8,545,609.	
(2nd yr)	\$9,125,609.	

Status (cont'd)

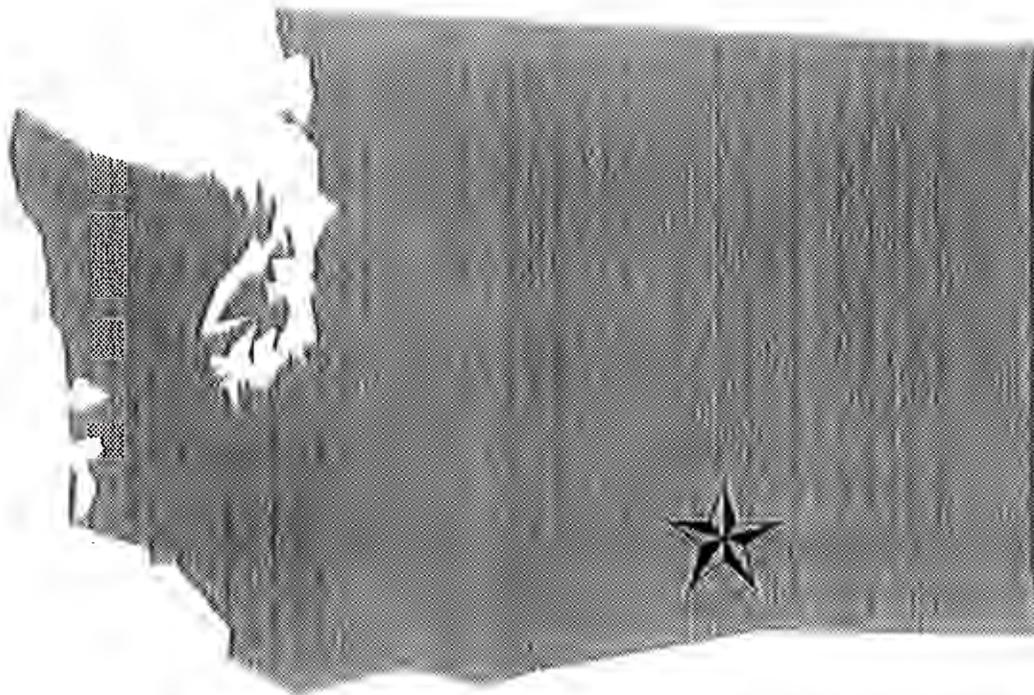
- 4 chemists matrixed from WHC Special Analytical Studies assigned to Mobile Lab
- Off-site technical training of WHC chemists
- Expendibles being ordered and stored at 2101M warehouse
- Coordination of lab buildout
- Finalized instrument configuration
- Finalized computer configuration
- Defense Contract Audit Agency (DCAA) Audit currently being executed

Future

- Delivery anticipated November-December 92
- On-site coordination of buildout
- On-site coordination of method development
- Data deliverable format
- Coordination with Kaiser for delivery and set-up
- Scheduled to be fully operational by March 93

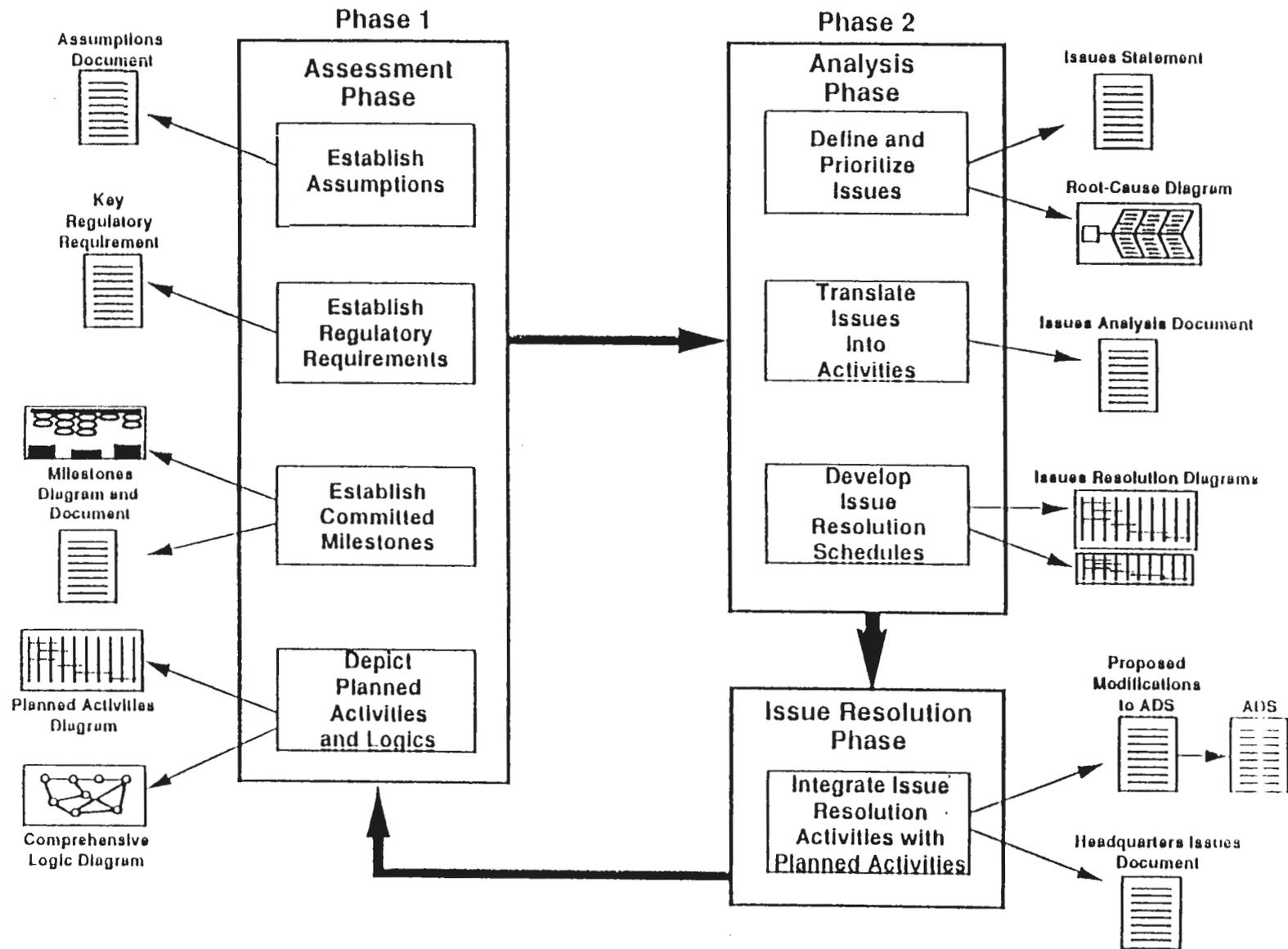
HANFORD ENVIRONMENTAL RESTORATION PROGRAM

ROADMAP PRESENTATION



W.C. Alaconis, Westinghouse Hanford Co.

ROADMAP METHODOLOGY



- **Identification and Resolution of Issues Associated with Remediation of Hanford's ER Program Waste Sites**
- **78 Operable Units Associated with the ER Program**
- **D & D of Surplus Facilities Including Surveillance and Maintenance**
- **Permitting and Closure of RCRA TSD Facilities**
- **Underground Storage Tank Program (Petroleum)**

ROADMAP TEAM

WC Alaconis	WHC/ER Program
RV Bynum	SAIC/Facilitator
SA Chilvers	RL/ERD
PM Daling	PNL/Facilitator
RD Evans	ASI/Facilitator
TW Ferns	WHC/NEPA
RD Freeberg	RL/ERD
HL Garrison	WHC/Site Integration
RB Gerth	WHC/Site Integration
JD Goodenough	RL/ERD
MC Hughes	WHC/ER Program
PH Jacobsen	WHC/WM
KN Jordan	WHC/ER Program
KM Leonard	WHC/Regulatory Analysis
SM O'Toole	WHC/Site Integration
TM Wintczak	WHC/ER Program
JG Woolard	WHC/Environmental Engineering

The Hanford ER Roadmap identified 6 primary issues:

- 1. The Tri-Party Agreement approach does not achieve efficient cleanup of past-practice sites.**
- 2. Treatment, storage, and disposal policy, technology, and facilities to meet the defined mission and potential early (accelerated) remediation decisions are not established.**
- 3. The ER Program is not receiving the timely selection and development of site-specific technology that it requires.**
- 4. Lack of timely analytical results delays remedial investigation activities.**
- 5. Lack of timely decisions extends schedules and increases costs.**
- 6. Non-RCRA/CERCLA work required to meet the 30 year (2018) cleanup goal is not driven by the TPA.**

HANFORD ER PROGRAM - ISSUE #1

1. The Tri-Party Agreement approach does not achieve efficient cleanup of past-practice sites.

A
1 TPA milestones do not reflect a programmatic approach to ER cleanup activities.

1 The TPA is a regulation-driven, consensus document.
RL SA #2 3/31/93

1 Legal or political consequences of missing milestones as opposed to technical needs drives budget decisions.
RL SA #1 4/30/93

2 Substantiation of budget bases are not adequately communicated.
RL SA #2 6/30/92

3 Funding commitments are only identified for the current year and the following year. This is unacceptable for a 30-year program.
RL SA #2 9/30/92

B Final approved annual budgets may not be sufficient to complete TPA milestones.

C If not managed appropriately, the transition from a production mission to an environmental mission could increase the costs and schedule.

2 The transition from production procedures and operational policy to environmental procedures and operational policy is not complete.
HQ HQ ISSUES 9/30/93

1 The skills needed in the ER Program workforce differ from the skills needed in the former production workforce.
RL SA #4 6/30/93
HQ HQ ISSUES 6/30/95

1 DOE has no recourse to assure timely review of documents by regulators.
RL SA #1 9/30/92

D TPA-driven documents are not reviewed in a timely fashion.

SA = Summary Activity

HANFORD ER PROGRAM - ISSUE #2

HQ Comment S10, G1, G2

2. Treatment, storage, and disposal policy, technology, and facilities to meet the defined mission and potential early (accelerated) remediation decisions are not established.

A

Current regulations do not allow onsite disposal of TRU or Greater Than Class C (GTCC) waste, therefore EM-30 has not communicated criteria for providing sufficient waste transportation, storage, and disposal capacity to EM-40. Hanford WM has no existing criteria for onsite disposal of TRU (pre-1970 buried TRU waste and TRU contaminated soil) and GTCC waste generated by ER.

2

Waste-form criteria, associated disposal requirements, and waiver process have not been established for onsite disposal of ER-generated TRU wastes or GTCC wastes.

RL SA #4 4/30/93
HQ HQ ISSUES 2/28/93

1

The decision for onsite/offsite disposal has not been made for ER-generated TRU wastes or GTCC wastes.

HQ HQ ISSUES 12/31/92

1

Current roles and responsibilities do not reflect evolving ER Program TSD requirements.

HQ HQ ISSUES 12/31/92

B

The division of technical and programmatic responsibility between EM-30 and EM-40 for waste TSD has not been clarified.

C

The lack of ER Program documentation hinders the TSD process.

2

Volume estimates for all wastes types are required but unavailable.

RL SA #4 9/30/93

1

ER Program NEPA documentation (HRA-EIS) is not completed.

RL SA #4 6/30/95
HQ HQ ISSUES 7/17/92

SA = Summary Activity

HANFORD ER PROGRAM - ISSUE #3

3. The ER Program is not receiving the timely selection and development of site-specific technology that it requires.

A Site-specific requirements and associated ER Program technology baseline are lacking.

2 Technology development efforts to date have focused on broad-based needs assessments.
RL SA #2 9/30/92

1 Future Hanford site-use decisions and subsequent cleanup criteria which will drive the ER Program technology requirements have not been established.
RL SA #3 6/30/95
HQ HQ ISSUES 6/30/95

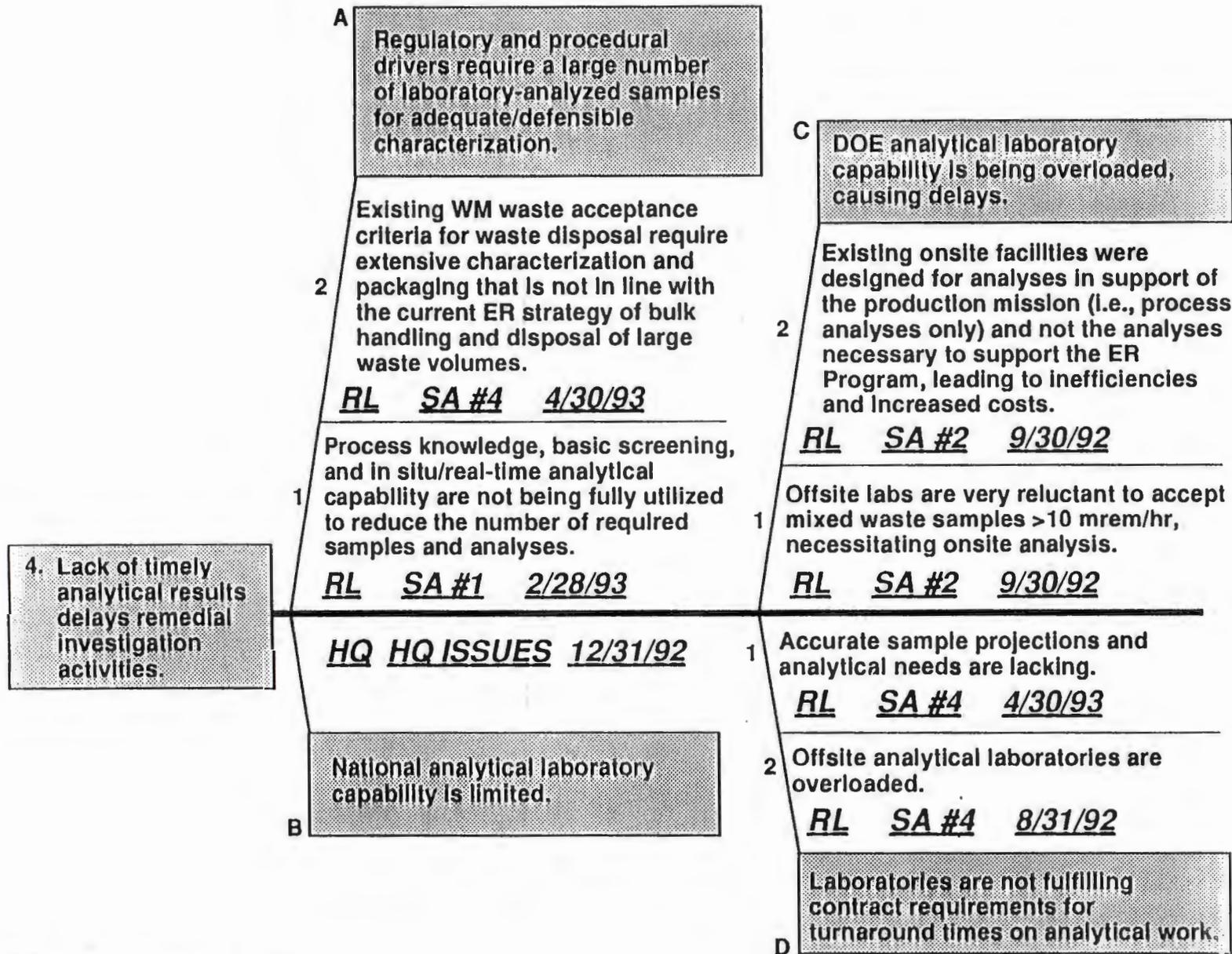
RL SA #2 12/31/92
HQ HQ ISSUES FY 1994

B Funding for site-specific technology support has not been provided due to lack of regulatory drivers.

HQ Comment S11

SA = Summary Activity

HANFORD ER PROGRAM - ISSUE #4



SA = Summary Activity

HANFORD ER PROGRAM - ISSUE #5

SA = Summary Activity

A Future Hanford site-use determinations and subsequent cleanup criteria have not been established.

8 There is no clear definition of "How clean is clean".

HQ HQ ISSUES 12/31/92

7 Contaminant pathways to man and the biosphere, and their implications, are not adequately understood by stakeholders.

RL SA #3 3/31/95

6 There is a lack of decision on the point of compliance.

RL SA #1 4/30/93

5 There is a lack of decision on the time of compliance.

RL SA #1 4/30/93

4 The methodology for risk assessment and performance assessment has not been accepted by the regulators.

RL SA #1 4/30/93

3 The HRA-EIS Record of Decision is not in place.

RL SA #3 6/30/95

HQ HQ ISSUES 6/30/95

2 The EM PEIS Record of Decision is not in place.

HQ HQ ISSUES 3/31/94

1 The decision process must factor in the concerns of multiple stake holders who hold diverse goals and motives.

RL SA #3 12/31/92

C Regulators do not agree with the DOE-HQ position (as articulated in SEN 15-90) that NEPA requirements apply to the CERCLA process.

HQ HQ ISSUES 4/30/93

5. Lack of timely decisions extends schedules and increases costs.

1 Inactive RCRA TSD sites, regulated by the State, and CERCLA waste sites, regulated by EPA, fall within the same operable units.

RL SA #1 9/30/93

B ER cleanup decisions are impacted by the differing regulatory approaches of the lead regulatory agencies.

HANFORD ER PROGRAM - ISSUE #6

HQ Comment S12

6. Non-RCRA/CERCLA work required to meet the 30 year (2018) cleanup goal is not driven by the TPA.

A Required ER activities outside of TPA milestone activities do not receive adequate priority.

C A baseline schedule for accepting facilities into the D&D program has not been established.

1 The ER Program has limited funding which is allocated to meet high priority TPA-driven activities.

1 A plan for transitioning production facilities into the D&D Program does not exist.

RL SA #2 12/31/92

HQ HQ ISSUES 9/30/93

1 Remedial Action decisions are driven by the TPA, whereas D&D of physical structures are not designated as RCRA/CERCLA Past Practice Units under the TPA.

RL SA #2 12/31/92

B The decision processes for D&D and Remedial Actions are not complementary.

SA = Summary Activity

Root-cause analysis of the 6 primary issues generated 35 root-causes and subsequent corrective actions (roadmap section 5)

- **21 RL Actions**
 - **Scheduled**
 - **Prioritized**
 - **Assigned to ADSs**
 - **Merged into 4 summary activities (roadmap section 6)**

- **8 HQ Actions**
 - **Discussed in HQ Issues Document (roadmap section 7)**
 - **4 issues deal with HRA-EIS ROD**

- **6 Dual RL/HQ Actions**

SUMMARY ACTIVITY #1**Latest
Need Date**

- The RL ER Program Office will coordinate with other RL divisions to develop strategies to resolve roadmap-generated issues which involve regulator approval. 9/30/93

- Issues concerning TPA scope/approach and stakeholder concerns (1B1, 1D1, 5B1)
ADS = 3400 9/30/93

- Issues concerning regulator approval of a streamlined approach to characterization and remediation activities (4A1)
ADS = 3400 2/28/93

- Issues concerning regulator approval of risk assessment and compliance requirements (5A4, 5A5, 5A6)
ADS = 3400 4/30/93

SUMMARY ACTIVITY #2**Latest
Need Date**

- **RL will develop a draft technically-based alternate baseline summary document that reflects integration of all ER baseline scope and assumes an achievable, consistent level of annual funding. The ER Program Baseline Technology Plan will be completed and rolled into the technically-based alternate baseline summary document.** **3/31/93**

- **Issues concerning availability of adequate program funding and infrastructure to meet TPA requirements (1B2, 1B3, 4C1, 4C2)
ADS = 3400** **9/30/92**

- **Issues concerning approval of technology baseline and availability of funding for site-specific technology (3A2, 3B)
ADS = 3400** **12/31/92**

- **Issues concerning integration of planning and scheduling (1A1, 6A1, 6B1)
ADS = 3410** **3/31/92**

SUMMARY ACTIVITY #3**Latest
Need Date**

- **RL will ensure that the NOI is issued and the HRA-EIS ROD is completed and issued in accordance with the established schedule. RL will also ensure that the mission of the Future Site Uses Working Group is completed as scheduled.**

6/30/95**(2C1, 3A1, 5A1, 5A3, 5A7) ADS = 3400**

- **Notice of Intent** **7/17/92**
- **Public Scoping** **8/31/92**
- **Implementation Plan** **3/31/93**
- **Draft EIS** **3/31/94**
- **Final EIS** **3/31/95**
- **Record of Decision** **6/30/95**
- **Future Site Uses Working Group** **12/31/92**

SUMMARY ACTIVITY #4**Latest
Need Date**

- **Miscellaneous activities that do not fit within the first three summary activities:**

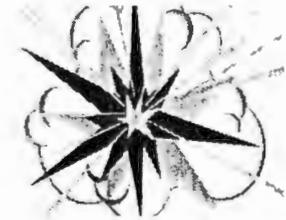
- **Activities to resolve issues concerning waste acceptance criteria (2A2, 2C2, 4A2)
ADS = 3400, 3700** **9/30/93**
- **Activities to resolve issues concerning analytical laboratory turnaround time (4D1, 4D2)
ADS = 3400** **4/30/93**
- **ERMC to identify/fulfill staffing needs and prepare transition plan (1C1)
ADS = NA** **6/30/93**

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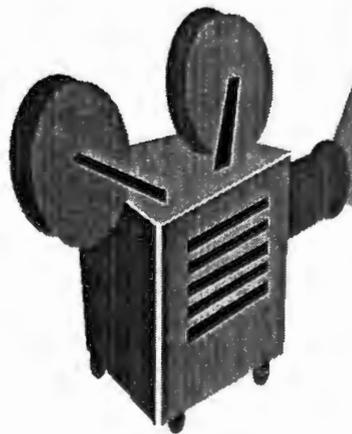
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OVERVIEW

ORDNANCE AND EXPLOSIVE WASTE PROGRAM



- OEW DEFINITION
- AUTHORITY
- CEHND EXPERIENCE
- CAPABILITIES
- STRATEGY FOR RESPONSE AT HANFORD



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DEFINITION OF OEW

ORDNANCE AND EXPLOSIVE WASTE CONTAMINATION PRESENTS AN IMMINENT HAZARD TO EXPOSED INDIVIDUALS. IT IS OF MILITARY MUNITIONS ORIGIN.

EXAMPLES OF OEW ARE LISTED:



UXO

- BOMBS
- WARHEADS
- GUIDED MISSILES
- ARTILLERY AMMUNITION
- MORTAR AMMUNITION
- SMALL ARMS AMMUNITION
- ANTI PERSONNEL MINES
- ANTI TANK MINES

MILITARY CHEMICALS

- DEMOLITION CHARGES
- PYROTECHNICS
- EXPLOSIVES
- PROPELLANTS
- CHEMICAL AGENTS
- INCLUDING CSM



COMPONENTS

- FUZES
- BOOSTERS
- BURSTERS
- ROCKET MOTORS



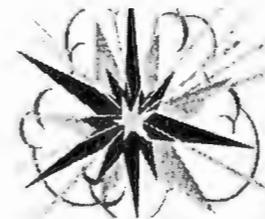
CONTAMINATED SOIL

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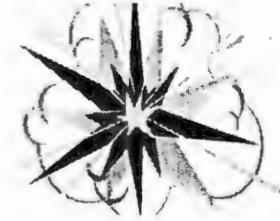


AUTHORITIES



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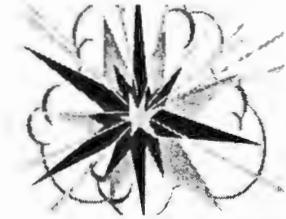
SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT
(SARA)

- REAUTHORIZED CERCLA
- ESTABLISHED THE DEFENSE ENVIRONMENTAL RESTORATION PROGRAM (DERP)
- REQUIRED REVISION OF THE NATIONAL CONTINGENCY PLAN (NCP) TO INCLUDE CERCLA RESPONSE ACTIONS
- REQUIRES CONSIDERATION OF CONTAMINATION PRIOR TO THE TRANSFER OF REAL PROPERTY (SECTION 120 H) (BRAC)



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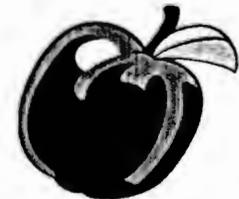


SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 CHAPTER 160

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM GOALS

HTRW

1. THE IDENTIFICATION, INVESTIGATION, RESEARCH AND DEVELOPMENT, AND CLEANUP OF CONTAMINATION FROM HAZARDOUS SUBSTANCES, POLLUTANTS AND CONTAMINANTS.



OEW

2. CORRECTION OF OTHER ENVIRONMENTAL DAMAGE (SUCH AS THE DETECTION AND DISPOSAL OF UNEXPLODED ORDNANCE) WHICH CREATES AN IMMINENT AND SUBSTANTIAL ENDANGERMENT TO THE PUBLIC HEALTH OR WELFARE TO THE ENVIRONMENT.



BD/DR

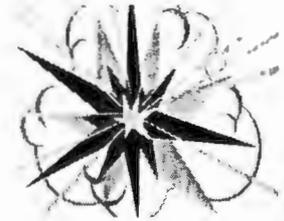
3. DEMOLITION AND REMOVAL OF UNSAFE BUILDINGS AND STRUCTURES, INCLUDING BUILDINGS AND STRUCTURES OF THE DEPARTMENT OF DEFENSE AT SITES FORMERLY USED BY OR UNDER THE JURISDICTION OF THE SECRETARY.





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THE NATIONAL CONTINGENCY PLAN

- **PRESCRIBES A FORMAT FOR RESPONSE ACTIONS**
 - FORMAL DECISION MAKING
 - CONTINGENCY PLANNING/AGENCY ROLES
 - CLEAN UP OF CONTAMINATED SITES
- **DOD IS THE REMOVAL RESPONSE AUTHORITY FOR ORDNANCE CONTAMINATED SITES**



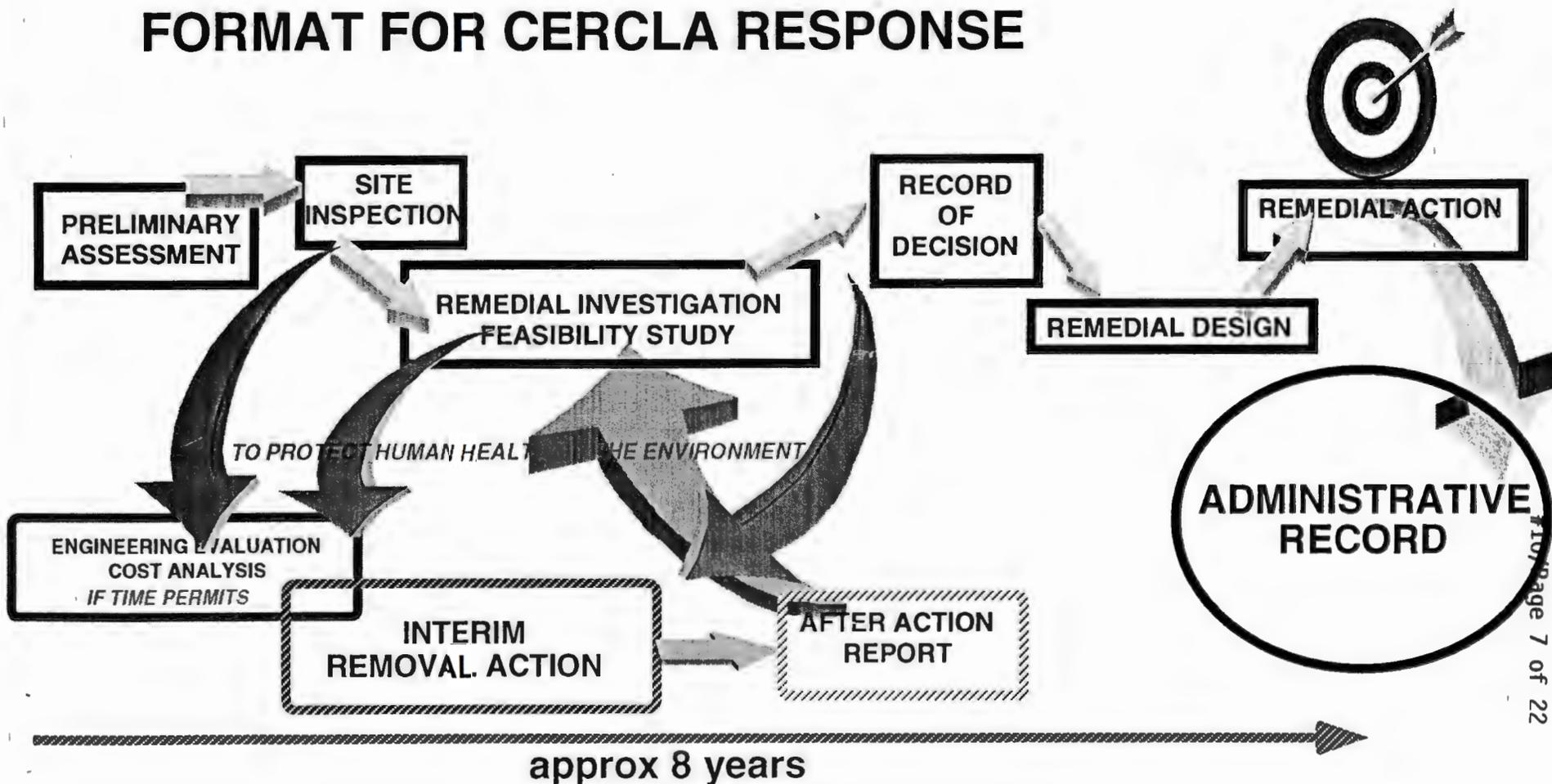
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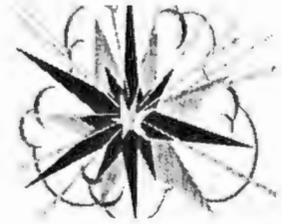
NATIONAL CONTINGENCY PLAN



NCP FORMAT FOR CERCLA RESPONSE

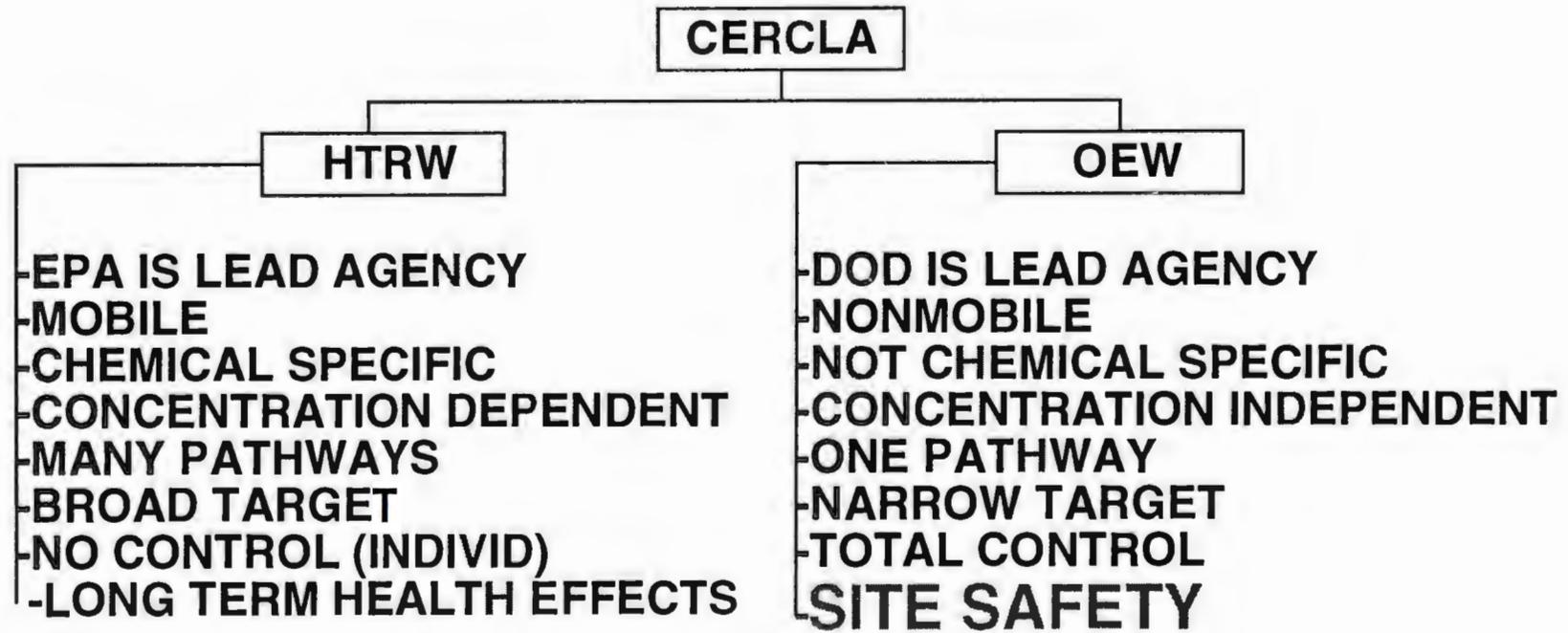


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EXPLOSIVE ORDNANCE ENGINEERING HTW VS OEW





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40 CFR 300.120(c)

**DOD WILL BE THE REMOVAL RESPONSE AUTHORITY WITH RESPECT
TO INCIDENTS INVOLVING DOD MILITARY WEAPONS AND MUNITIONS**

DOD

DELEGATED AUTHORITY FOR THE
DEFENSE ENVIRONMENTAL RESTORATION PROGRAM

DEPARTMENT OF THE ARMY
DELEGATED

USACE EXECUTIVE AGENT FOR DERP
DESIGNATED

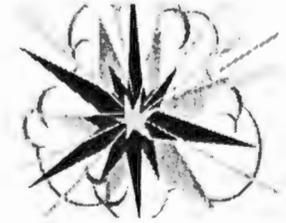
CEHND MANDATORY CENTER OF EXPERTISE AND DESIGN CENTER FOR
EXPLOSIVE ORDNANCE ENGINEERING

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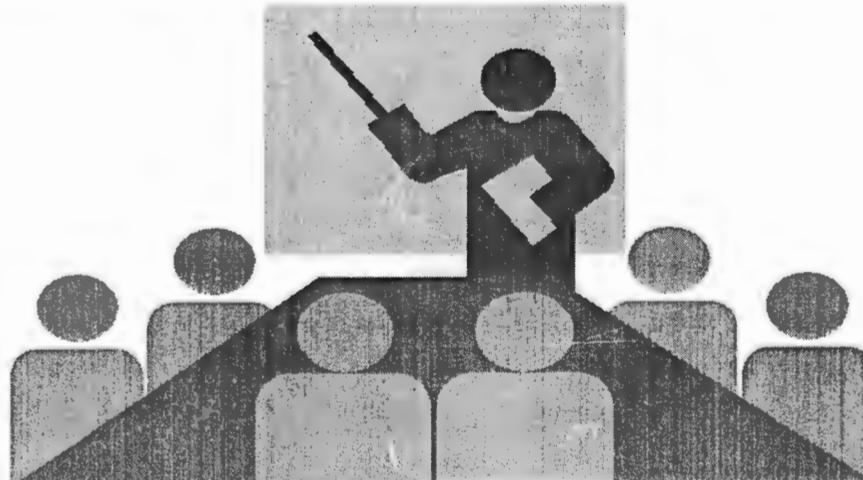
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MISSION OBJECTIVES

REDUCE RISK TO GENERAL PUBLIC THROUGH
CERCLA RESPONSE ACTIONS FOR SITES
CONTAMINATED WITH ORDNANCE AND EXPLOSIVE WASTE

TO EXECUTE RESPONSE ACTIONS WITH MINIMUM RISK
TO GOVERNMENT PERSONNEL AND CONTRACTORS

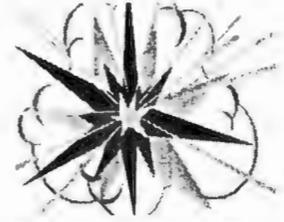


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OEW EXPERIENCE



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SUMMARY

<u>PROJECT TYPE</u>	<u>NUMBER</u>	<u>CONTRACT K\$</u>	<u>ORDNANCE REMOVED</u>
ARCHIVES SEARCH	12	540	21
SITE INVESTIGATION	8	1,176	1,352
FEASIBILITY STUDY	3	1,826	1,967
REMEDIAL DESIGN	3	613	0
REMOVAL ACTION	24	22,256	352,879
	<u>50</u>	<u>26,410</u>	<u>356,219</u>

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REMOVAL ACTIONS

<u>LOCATION</u>	<u>CONTR TYPE</u>	<u>CONTRACT AMOUNT</u>	<u>*ORDNANCE REMOVED</u>	<u>PROPERTY TYPE</u>	<u>PROJ. ACREAGE</u>	<u>SITE ACREAGE</u>
Baywood Park, CA	T&M	239,554	on-going	State Park	102	102
Brooksville Range, FL	2-P/O	42,999	452 rckts.	Private	Pond	-
Buckroe Beach, VA	3-P/O	43,551	24-76mm	Public Beach	40	40
Camp SLO, CA	T&M	224,000	8 grenades	County Park	5	3,900
Erie Ord. Depot, OH	T&M	615,000	835	Commercial	125	125
Fort Belvoir, VA	T&M	354,869	19 mines	Commercial Dev.	17	820
Fort Flagler, WA	T&M	252,275	3 rockets	State Park	25	806
Fort Monroe, VA	P/O	7,617	on-going	Active Army	10	10
Kingsbury OP, IN	T&M	2,592,000	187,300	State Park	92	14,000
Lake Ontario OW, NY	T&M	238,735	HTW	Commercial	1	7,567
Martha's Vineyard, MA	Military	650,000	1,700	Public Beach	25	53
Mission Trails, CA	T&M	4,800,000	on-going	Park	1,410	1,410
NAD, Hastings, NE	T&M	856,608	268	Farm & College	100	48,753
Pease AFB, NH	T&M	175,049	17,455	Air Natl. Guard	1	1
Pueblo Depot, CO	P/O	20,250	133-75mm	Active Army	11	400
Raritan Arsenal, NJ	T&M	4,516,513	114,000	College	210	3,200
Raritan Arsenal, NJ	T&M	402,697	181	County Park	155	3,200
Summit, Akron, OH	T&M	127,554	10,223	Commercial	6	6
Temecula, CA	T&M	252,044	19,686	Residential Dev.	100	385
Tidewater College, VA	2-P/O	42,972	Bulk Exp.	College Campus	3	975
Tierrasanta, CA	Cnstr	5,200,000	592	Residential	1,900	5,000
		-----	-----		-----	-----
Total		\$21,654,287	352,879		4,338	90,673

*Removed by Contractor.



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STANDARDS FOR CLEARANCE

DOD

- Render Innocuous
- Reduce Public Risks to an Acceptable Level

CEHND

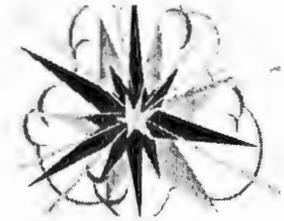
- Detection Capability of Best Available Technology
- 100% On Site Safety Supervision
- Minimum 10% QA Sampling
- Zero Failure Acceptance

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CAPABILITIES

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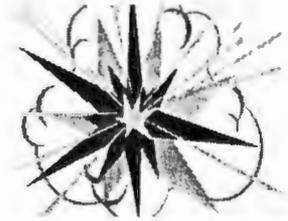
CEHND OEW SAFETY EXPERIENCE

<u>TECHNICAL EXPERIENCE</u>	<u>YEARS APPLICABLE EXPERIENCE</u>	<u>AREAS OF EXPERTISE</u>
ENGINEERING	30+	SYSTEMS SAFETY EXPLOSIVE DESIGN RANGE DESIGN CHEMICAL DESIGN
EXPLOSIVE ORDNANCE DISPOSAL	200+	UNEXPLODED ORDNANCE DISPOSAL CHEMICAL ORDNANCE EXPLOSIVE SAFETY TRAINING
INDUSTRIAL HYGIENE	15+	OCCUPATIONAL HEALTH VENTILATION HAZARDOUS AND TOXIC WASTE ASBESTOS



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OEW CONTRACT CAPABILITIES FOR WESTERN UNITED STATES (AS OF OCT 92)

<u>FIRM</u>	<u>TYPE</u>	<u>CAPACITY</u>	<u>EFF. DATE</u>	<u>COMPL. DATE</u>	<u>PURPOSE</u>
Human Factors, Inc.	T&M Service	\$8M / 1 year	14 Sep 92	13 Sep 92	SIs, IRAs
TBD	T&M Service	\$15M / 2 years	Feb 93	Feb 95	SIs, IRAs
TBD	CPFF Service	\$30M / 3 years	Feb 93	Feb 96	SIs, IRAs
Dames & Moore	A-E CPFF/FFP IDO	\$21M / 3 years	6 Apr 92	5 Apr 95	Archives Studies, RI/FS, Design



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TYPICAL PROJECT EXECUTION

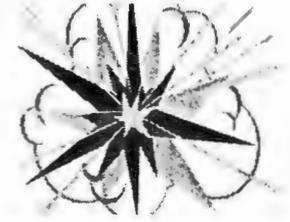
- **Transfer COR Authority to Local District**
- **On Site CEHND Safety and Health Specialist**
- **Maintain Site Safety for Duration of Project**
- **Perform Quality Assurance Oversight**

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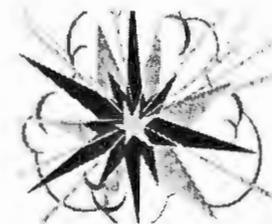


STRATEGY FOR OEW RESPONSE AT HANFORD



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**EXPLOSIVE ORDNANCE ENGINEERING
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STRATEGY FOR OEW RESPONSE
AT HANFORD**



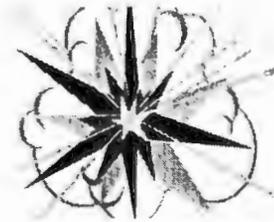
ORDER OF EVENTS:

- **DETERMINE IF IMMINENT OEW HAZARD EXISTS**
- **ELIMINATE IMMINENT HAZARDS IF FOUND (IRA)**
- **DEFINE / CHARACTERIZE EXTENT OF OEW CONTAMINATION AND ASSOCIATED PUBLIC RISK**
- **DOCUMENT BASIS FOR ACTION OR NO ACTION**
- **EVALUATE RA ALTERNATIVES (IF REQUIRED)**
- **SELECT / APPROVE RA ALTERNATIVE (IF REQUIRED)**
- **PREPARE REMEDIAL DESIGN (IF REQUIRED)**
- **EXECUTE REMEDIAL ACTION (IF REQUIRED)**



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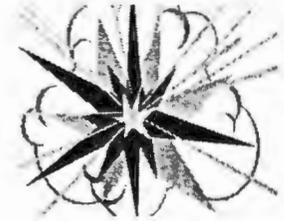
INVESTIGATION APPROACH

1. Reduce the OEW study area via:
 - a. Archives search and personnel interviews to determine past operations.
 - b. Previous site investigations.
 - c. Knowledge of where and what direction(s) ordnance was fired to determine maximum travel distance down range.



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INVESTIGATION APPROACH (CONT.)

2. Prioritize OEW study area parcels according to:
 - a. Access by employees, public, and/or contractor personnel (near term exposure).
 - b. Type of ordnance (source potential).
 - c. Density of contamination.
 - d. Ammo storage areas.
 - e. Future land use (future exposure).

3. Defer large area sweeps having low density contamination until more cost effective technology becomes available, e.g. airborne detection.

4. Document all findings in an administrative record.

SUMMARY RISK ASSESSMENT WORKING GROUP

The Inter-Agency Working Group for Risk Assessment (the Risk Assessment Committee) has met regularly to disposition comments on the Hanford Site Baseline Risk Assessment Methodology and to revise drafts of text for the next revision of the document. The methodology is scheduled to be finalized at the end of November 1992. To accomplish this, a meeting will be held October 28, 1992, in the EPA Hanford Project Office, to resolve issues of background analyses for baseline risk assessments and revise the qualitative risk assessment portion of the methodology.

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SUMMARY OF GEOPHYSICAL ACTIVITIES FOR PERIOD 23 SEPT. TO 21 OCT.

Logging of the remaining accessible boreholes for the 200 AAMS project was completed with The Radionuclide Logging System (RLS), four during the last week of September. Three four-inch-cased, driven holes were logged for the "In Situ Characterization Probe Demonstration" project, producing complementary data to the 200-BP-1 Operable Unit studies. During the second week of October the 101-T tank in the 241-T tank farm was logged and a data analysis and presentation package prepared. Other miscellaneous boreholes were logged in support of the CERCLA projects in the 100 areas.

Three to-be-drilled borehole sites were surveyed with the ground-penetrating radar system to verify the drill locations free of metal debris or other obstructions to drilling. Letter reports describing the data and results were prepared and given to the field team leaders. All initial field data collection for the non-radioactive dangerous waste landfill (NRDWL) has been completed. Work continues on the reports for the 300-FF-5 geophysics, the 200 AAMS logging, and the Riverland Expedited Response Action (ERA) project. The report Geophysical Investigations at the Sodium Dichromate Barrel Landfill (WHC-SD-EN-ES-030) has been released.

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