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## Meeting Minutes Transmittal

Unit Managers' Meeting  
Hanford Patrol Academy Demolition Sites Closure Plan  
Ecology Kennewick Conference Room  
Kennewick, Washington

Meeting Held November 16, 1993  
From 8:30 to 9:30 AM

The undersigned indicate by their signatures that these meeting minutes reflect the actual occurrences of the above dated Unit Managers Meeting.

*Randall N. Krekel* Date: 12-14-93  
Randall N. Krekel, Unit Manager, RL

NOT PRESENT

Date: \_\_\_\_\_  
Daniel L. Duncan, RCRA Program Manager, EPA Region 10

*Fenggang Ma* Date: 12/14/93  
Fenggang Ma, Unit Manager, Washington State Department of Ecology

Hanford Patrol Academy Demolition Sites Closure Plan, WHC Concurrence

*Fred A. Ruck III* Date: 12/14/93  
Fred A. Ruck III, Contractor Representative, WHC

Purpose: Discuss Permitting Process

- Meeting Minutes are attached. The minutes are comprised of the following:
- Attachment 1 - Agenda
  - Attachment 2 - Summary of Discussion and Commitments/Agreements
  - Attachment 3 - Attendance List
  - Attachment 4 - Action Items
  - Attachment 5 - Action Items from the 11/2/93 HPADS ISSUE RESOLUTION MEETING



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**Attachment 1**

**Unit Managers' Meeting  
Hanford Patrol Academy Demolition Sites Closure Plan  
Ecology Kennewick Conference Room  
Kennewick, Washington**

**Meeting Held November 16, 1993  
From 8:30 to 9:30 AM**

**Agenda**

1. Approval of Past UMM Minutes (Ecology/RL/EPA/WHC)
2. Status Action Items  
- None
3. Status Closure Activities
4. New Business
5. Set Next Meeting Date

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Attachment 2

Unit Managers' Meeting  
Hanford Patrol Academy Demolition Sites Closure Plan  
Ecology Kennewick Conference Room  
Kennewick, Washington

Meeting Held November 16, 1993  
From 8:30 to 9:30 AM

Summary of Discussion and Commitments/Agreements

1. Approval of Past UMM Minutes (Ecology/RL/EPA/WHC):

The October 12, 1993, Unit Managers' Meeting Minutes were reviewed and signed by the Unit Managers

2. Status Action Items:

- No open action items.

3. Status Closure Activities:

Began the Issue Resolution Process on November 2, 1993.

4. New business:

- Discussion of NOD Comments

On November 2, 1993, Ecology, RL, and WHC began the Issue Resolution process on the HPADS' NOD response table. Several items came up in the issue resolution meeting. Attachment Five, a DSI from WHC (R. K. Bhatia) to Ecology (F. Ma) responds to these items. RL (R. N. Krekel) provided additional information to Ecology (F. Ma) via a DSI dated November 9, 1993, in response to a question raised at the November 2, 1993, Issue Resolution Meeting.

WHC (R. K. Bhatia) has located a computer model that helps to predict how explosives residues settle out in the vicinity of a detonation site. Using this computer model in conjunction with verification sampling RL/WHC should be able to show that any contaminated residues would fallout in the immediate vicinity of the detonation site. This computer model/sampling approach will be discussed in greater detail at the Data Quality Objectives (DQO) Meeting scheduled for December 8 and 9, 1993.

WHC (R. K. Bhatia) stated that the U. S. Army Corps of Engineers (USACE) did not perform any CERCLA Phase II sampling in the vicinity of the HPADS. CERCLA sampling in the vicinity of HPADS is outside the scope of the current 1100 Area Record of Decision. WHC (F. A. Ruck) stated that the DQO process may help to alleviate any concerns that Ecology may have over the pre-1984 detonation events. Mr. Ruck stated that if the computer model shows that the chemicals are consumed in the detonation and can not be deposited into the soil; RL/WHC could then use this information to design a simplified sampling scheme at the HPADS.

In response to a phone call from Ecology (F. Ma), WHC (F. A. Ruck) stated that the reason the HPADS became a TSD unit in 1984 was as conservative measure in the event that RCRA was applicable throughout

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the DOE Complex. Mr. Ruck stated that 1984 is when the Hanford site decided that the HPADS was a TSD facility and started keeping accurate records of the detonation events.

**5. Set new meeting date:**

The next Unit Managers Meeting was scheduled for 10:30 AM on December 14, 1993, in Richland, Washington.

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Attachment 4

Unit Managers' Meeting  
Hanford Patrol Academy Demolition Sites Closure Plan  
Ecology Kennewick Conference Room  
Kennewick, Washington

Meeting Held November 16, 1993  
From 8:30 to 9:30 AM

Action Items

Action Item #

Description

- No new action items.

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**Attachment 5**

**Unit Managers' Meeting  
Hanford Patrol Academy Demolition Sites Closure Plan  
Ecology Kennewick Conference Room  
Kennewick, Washington**

**Meeting Held November 16, 1993  
From 8:30 to 9:30 AM**

**Action Items The 11/2/93 HPADS Issue Resolution Meeting**

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**DON'T SAY IT --- Write It!**

DATE: November 15, 1993

TO: Fenggang Ma, Ecology Kennewick

FROM: Ravi K. Bhatia *RKB* H6-23

Telephone: 372-2720

cc: R. N. Krekel A5-15  
F. A. Ruck III H6-23

SUBJECT: ACTION ITEMS FROM THE 11/2/93 HPADS ISSUE RESOLUTION MEETING

Attached are the letters or tables that close out the action items from the November 2, 1993, HPADS Issue Resolution Meeting. Specifically, RL/WHC were asked to provide information verifying the following:

EPA/Ecology acceptance of Hanford Soil Background (Attachment One)

Physical Property Table showing that the chemicals treated at the HPADS were amenable to thermal decomposition (Attachment Two)

Concern that the CERCLA Investigation would not adequately address the contaminants from Past Practice Operation of the HPADS. (WHC is still collecting this information.)

Questions regarding the vertical/horizontal extent of contamination in vicinity of the HPADS detonation site will be resolved in the DQO process meeting scheduled for December 8, 1993.

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NOV 16 DSI. FMA

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 10 HANFORD PROJECT OFFICE  
712 SWIFT BOULEVARD, SUITE 5  
RICHLAND, WASHINGTON 99352

October 6, 1993

Steven H. Wisness  
Hanford Project Manager  
U.S. Department of Energy  
Richland Operations Office  
P.O. Box 550, MS A5-15  
Richland, Washington 99352

Re: Hanford Site Background: Part 1, Soil Background for  
Nonradioactive Analytes - Meeting Conclusions

Dear Mr. Wisness:

The U.S. Environmental Protection Agency (EPA) and its contractors and the Washington State Department of Ecology (Ecology) met with the Department of Energy (DOE) contractor representatives on September 23 to resolve some of the major issues that developed following our review of the Hanford Site Background: Part 1, Soil Background for Nonradioactive Analytes, Hanford Site, Richland, Washington (DOE/RL-92-24, revision 1).

The main emphasis of our discussions revolved around the hypothesis that the chemical composition throughout the vadose zone can be regarded as a single site-wide statistical background population. In the comments on the report, EPA and Ecology requested that the following be done:

1. Develop a single Hanford formation background data set from the systematic random samples that were collected from a depth greater than 2 meters. This data set will be used for definition of Hanford formation background for comparison with samples collected from the Hanford formation for which there are no associated particle size data.
2. Subdivide the Hanford formation systematic random data set (> 2m depth) based on particle size classifications ranging from < 0.037 mm to > 2mm as shown in Table 6-5a. This data will be used for comparison with samples collected from the Hanford formation for which particle size data exist or can be determined.

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3. Define separate background populations for surface soil (< 2m in depth), Ringold Formation soils, and ash deposits. The surface soil populations are probably best defined on a site specific basis as a part of individual operable unit remedial investigations or remedial actions. Evidence that the surface soil chemical properties are statistically different from subsoils is important for two reasons: (1) human and ecological risk assessment is concerned with vadose zone materials that are exposed to potential receptors and (2) the pH of the surface soils allows precipitation of insoluble metal carbonates, oxyhydroxides, hydroxides, and oxides.

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Jim Hoover and Tim LaGore of Westinghouse Hanford Company (WHC) presented information to the group that refuted the necessity of defining separate background populations for the different facies. Although the three parties could not reach agreement on the necessity of completing analysis using particle size distribution, it was determined that this was a significant increase in scope and not directly applicable to a site wide background. After further discussion of the information presented in the document and at the meeting, the regulators agreed to withdraw the above requests for revisions to the background report and requested that the document be completed with the following changes:

- 1) Delete Appendix F and references to it throughout the text. The application of the data should be determined by the end user.
- 2) Delete all tables that specifically reference the 95/95 thresholds for analytes.
- 3) Include, as a major reference, a table that lists threshold values for the data set at the 50, 30, 90, and 95 percentiles with upper and lower confidence values for each percentile for both log normal and Weibull distributions.
- 4) Delete references concerning sensitive ecosystems and associated risks for "naturally occurring" chemicals (ie. last paragraph on pg 2-2 and first paragraph on pg 2-3 and Section 6.4.3). This document should provide the information on the analytes and make no assumptions about risk.

The intention of these changes is to make the report a generic soil background data report (with data set characteristics) that is appropriate for all end users.

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Steven H. Wisness

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October 6, 1993

In addition, work should continue in developing a separate document that would incorporate the applicable Appendix F recommendations including the Monte Carlo simulations and Statistical tests as evaluated by Dick Gilbert of PNL. This document would provide the necessary tools to compare site-specific data to the Hanford sitewide background soils data. The methodology could be applied to background radiological soil and ground-water data and to nonradiological ground-water data as these databases are developed. The development of this document should be coordinated with the risk assessment working group and other effected parties to assure that the needs of each discipline are met.

- If you have any questions or concerns regarding these comments, please contact Chuck Cline at (206) 438-7556 or me at (509) 376-4919.

*Pamela S. Innis*

Pamela S. Innis  
Unit Manager  
U.S. Environmental Protection  
Agency

Sincerely,

*Charles S. Cline*

Charles S. Cline  
Unit Manager  
Washington State Department  
of Ecology  
Nuclear and Mixed Waste  
Management Program

Enclosure

cc: R.K. Stewart, DOE  
K. M. Thompson, DOE  
A.J. Foote, USACE  
D.R. Jensen, Ecology  
D. Teel, Ecology  
B.A. Austin, WHC  
J.D. Hoover, WHC  
S.W. Clark, WHC  
N.K. Lane, WHC  
R.P. Henckel, WHC  
A. DeAngeles, PRC  
W. Staubitz, USGS  
Administrative Record, General

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Table 4-3. HPADS WASTE CHARAC

Waste Identity and Quantity			Physical and Chemical Properties				
Chemical Identification	Quantity (kg)	C.A.S. Number	Phys. State at STP	Flash Point (°C)	Specific Gravity	Melting Point (°C)	Vapor Pressure (mm Hg)
Allyl ether	0.0005	557-40-4	liquid	-6	0.805		
Ammonium perchlorate	0.450	7790-98-9	solid	350	1.950	130	
Benzoyl peroxide	0.550	94-36-0	solid	68	1.334	106	<1
Boron trifluoride ether complex	0.500	109-63-7	liquid	63.8	1.154	-60	45
Boron trifluoride methanol cmplx	1.050	373-57-9	liquid	11	1.203	<38	
2-Butoxyethanol	3.955	111-76-2	liquid	60	0.902	-94	0.76
Butyl ethanol; syn. 2-hexanol	7.000	626-93-7	liquid	41	0.810		
n-Butyl ether	0.525	142-96-1	liquid	25	0.764	-98	4.8
Butyllithium/Benzene mix. (25:75)	0.200						
Butyllithium (in cyclohexane)		598-30-1	liquid	-17	0.769		
Benzene		71-43-2	liquid	-11	0.877	6	75
Carbon disulfide	9.800	75-15-0	liquid	-30	1.266	-111	
Dibutyl tetraethylene glycol	2.000						
1,4-Diethoxybutane	0.500						
2,2-Dimethoxypropane	0.025	77-76-9	liquid	-11	0.847	-47	74
2,4-Dinitrophenol	0.500	51-28-5	solid	ex	1.683	115	
2,4-Dinitrophenylhydrazine	0.463	119-26-6	solid	209		194	dec
2,4-Dinitroresorcinol	0.070	519-44-8	solid	ex		146	
1,4-Dioxane; syn. p-dioxane	14.040	123-91-1	liquid	12	1.036	-12	27
2-Ethoxybutanone	0.100						
(Ethylene) glycol dimethyl ether	0.800	110-71-4	liquid	-6	0.867	-58	61.2
Ethyl ether	47.296	60-29-7	liquid	-45	0.700	-123	442
Hexanitrodiphenylamine	0.345	131-73-7	solid	29	1.640	243	dec
Hydrazine monohydrate	3.300	7803-57-8	liquid	76	1.032	-50	
Hydroxylamine hydrochloride	0.250	5470-11-1	solid	140	1.570	151	dec
Isopropyl alcohol/Nitrocellulose mix	2						
Isopropyl alcohol		67-63-0	liquid	11.7	0.786	-89	40
Nitrocellulose		9004-70-0	solid	4	1.660		

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Table 4-3. HPADS WASTE CHARAC

Waste Identity and Quantity			Physical and Chemical Properties				
Chemical Identification	Quantity (kg)	C.A.S. Number	Phys. State at STP	Flash Point (°C)	Specific Gravity	Melting Point (°C)	Vapor Pressure (mm Hg)
Isopropyl ether	4.000	108-20-3	liquid	-28	0.726	-86	150
Lithium aluminum hydride	1.000	16853-85-3	solid	fl	0.917	125	dec fl.
Lithium triethylborohydride	0.900	22560-16-3	liquid	-17	0.920		fl.
Magnesium perchlorate	1.000	10034-81-8	solid	dec	1.980	251	dec
2-Methoxyethyl ether	1.000	111-96-8	liquid	57	0.945	-64	1.7
2-Methylfuran	0.0005	534-22-5	liquid	-30	0.914	-89	139
Naphacene	0.003	92-24-0	solid	unk	1.350	>300	
α-Nitrosomethyl isobutyl ketone	0.174						
Perchloric acid	76.653	7601-90-3	liquid	dec	1.764	-4	unk
Picric acid	1.120	88-89-1	liquid	unk	1.000	0	14
Picryl chloride	0.465	88-88-0	solid	unk	1.797	83	unk
Sodium azide	0.100	29628-22-8	solid	fl	1.846		ex.
Sodium-potassium alloy (NaK)	0.500	11135-81-2	liquid	fl	0.847	19	e
Tetrahydrofuran	76.780	109-99-9	liquid	-14	0.889	-108	145
Triethylaluminum in toluene	0.300	97-93-8	liquid	4	0.848	-95	py
1,3,5-Trinitrobenzene	0.100	99-35-4	solid	fl	1.688	122	0.39 e.
2,4,6-Trinitroresorcinol	0.025	82-71-3	solid	ex		180	e.
2,4,6-Trinitrotoluene	0.300	118-96-7	solid	fl	1.554	80	0.04 de

Abbreviations:

dec-decomposes  
 ex-explosive  
 fl-flammable  
 hs-heat sensitive

I E-inadequate evidence  
 ms-moisture sensitive  
 NDA-no data available  
 OM-oral, mouse  
 OR-oral, rat

pyr-pyrophoric  
 rv-reactive  
 ss-shock sensitive  
 tx-toxic  
 unk-unknown

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Distribution

R. K. Bhatia	WHC	H6-23
R. E. Bolls	WHC	T3-04
B. J. Broomfield	WHC	H3-16
R. C. Brunke	WHC	H6-23
R. M. Carosino	RL	A4-52
S. B. Clifford	WHC	H6-23
D. L. Duncan	EPA	HW-106 (Seattle)
D. M. Korematsu-Olund	WHC	H6-23
R. N. Krekel	RL	A5-15
S. J. Lijeck	MACTEC	B1-42
J. G. Lucas	WHC	H6-04
F. Ma	Ecology - Kennewick	
P. J. Mackey	WHC	B3-15
E. D. Macalister	RL	R3-80
R. D. Pierce	WHC	T3-04
T. J. Powell	MACTEC	R3-82
S. M. Price	WHC	H6-23
M. R. Romsos	WHC	T3-04
W. A. Skelly	WHC	H6-03
F. A. Ruck III	WHC	H6-23
J. L. Waite	WHC	B2-35
GHL/RCRA File	WHC	H6-23

ADMINISTRATIVE RECORD: Hanford Patrol Academy Demolition Sites Closure Plan, T-11-1. [Care of EDMC, WHC (H6-08)]

Washington State Department of Ecology Nuclear and Mixed Waste Hanford Files, P.O. Box 47600, Olympia, Washington 98504-7600

Environmental Protection Agency Region 10, Seattle, Washington 98101, Mail Stop HW-074

Please send comments on distribution list to Kym Tarter (H6-23), 376-4701.

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