

START

Meeting Minutes Transmittal

Unit Managers' Meeting  
183-H Solar Evaporation Basins  
Federal Building, Room 784-B  
Richland, Washington

Meeting Held September 20, 1995  
From 1:30 to 3:30 p.m.

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

Jeffrey M. Bruggeman  
Jeffrey M. Bruggeman, Unit Manager, RL

DATE: 14 Feb 96

Robert E. Cordts  
Robert E. Cordts, Unit Manager, Washington State Department of Ecology

DATE: 26 Feb 96

183-H Solar Evaporation Basins Closure, Contractor Concurrence:

[Signature]  
Contractor Representative, ERC

DATE: 14 Feb 96

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 1**

**Unit Manager's Meeting  
183-H Solar Evaporation Basins  
Federal Building, Room 784-B  
Richland, Washington**

**Meeting Held September 20, 1995  
From 1:30 to 3:30 p.m.**

**Agenda**

1. Approval of Past UMM Minutes
  - The July 1995 UMM minutes are presented for approval.
2. Status Open Action Items
  - 01-26-95:4 Listed Waste Letter
  - 03-06-95:1 Residue Sampling
  - 06-22-95:1 Soil Cleanup Criteria
  - 06-22-95:2 Permit Conditions
3. Closure Activities / Planning
  - Schedule
  - Closure Strategy
  - Summary of open and resolved issues
4. New Business
  - Data Quality Objectives
  - Chrome VI
  - Cadmium
5. Set Next Meeting Date

**Attachment 2**

**Unit Manager's Meeting  
183-H Solar Evaporation Basins  
Federal Building, Room 784-B  
Richland, Washington**

**Meeting Held September 20, 1995  
From 1:30 to 3:30 p.m.**

**Summary of Discussion and Commitments / Agreements**

1. The July UMM minutes were presented for approval by the Unit Managers.
  - The minutes need to reflect that there was no Unit Managers' meeting in August 1995.
  
2. Status Action Items
  - 01-26-95:4 Listed Waste Letter  
*[Mr. Rex Miller stated the ERC had a copy of the EPA letter to RL dated September 8, 1995. R. Cordts stated that Ecology would issue a contained in concurrence within the week.]*
  
  - 03-06-95:1 Residue Sampling  
*[Residue sampling of the waste is pending a contained-in concurrence by the Regulators. R. Miller stated that a time is crucial, subject to the 90-day storage criteria. An additional 30 days will still impact a number of barrels as they need to be shipped to the WHC Solid Waste Complex in order to stay in compliance. R. Cordts stated he was willing to sign the sampling and analysis plan for concrete, but felt that 15% of the waste barreled should be sampled per basin versus 10%. The 15% sampling was agreed to.]*
  
  - 06-22-95:1 Soil Cleanup Criteria  
*[The Data Quality Objectives have been signed off by the ERC and RL. Ecology is in the review process for signature. Cadmium and chrome will be dealt with as separate issues and agreed to by signature as an addendum to the soils DQO.]*
  
  - 06-22-95:2 Permit Conditions  
*[Ecology is reviewing the draft that was prepared by the ERC.]*
  
3. Status Closure Activities / Planning

#### 4. New Business

##### - Chrome VI

*[M. Wasemiller made a presentation regarding chrome VI. The ERC proposes to take samples every 2 feet through the vadose zone at borehole No. 7. Chrome VI analysis using the colormetric method will be incorporated. It is proposed to extrapolate the data across the basins. Ecology will review this method.]*

##### - Cadmium

*[J. Lowe of the ERC spoke to a demonstration method devised by Ecology that could eliminate cadmium concerns. This would involve sampling, analysis, and a modeling effort. A discussion was also made for recognizing the two hot spots in the vadose zone as outlying and not associated with the basins.]*

##### - Contained-in Soil

*[Ecology is in receipt of the Contained-in request for soils and they are reviewing.]*

#### 5. Set Next Meeting Date

*[The next meeting was tentatively set for October 5, 1995.]*



Attachment 4

**Unit Manager's Meeting  
183-H Solar Evaporation Basins  
Federal Building, Room 784-B  
Richland, Washington**

**Meeting Held September 20, 1995  
From 1:30 to 3:30 p.m.**

**Open Action Items**

<u>Action Item #</u>	<u>Description</u>
01-26-95:4	Listed Waste Letter. Ecology/EPA need concurrence.
03-06-95:1	ERC will investigate the vanadium levels.
06-22-95:1	Soil Cleanup Criteria Criteria to establish the cleanup limits for the soil at the basins.
06-22-95:2	Permit Conditions
09-20-95:1	Chrome VI. Samples every 2 ft at borehole 7; analysis to use the colorimetric method. Ecology to review.
09-20-95:2	Cadmium. Possible demonstration method devised by Ecology to eliminate cadmium concerns.
09-20-95:3	Contained-in Soils. Ecology is reviewing.

**Closed Action Items**

<u>Action Item #</u>	<u>Description</u>
03-02-93:1	WHC will make a proposal for closure of the 183-H basins that will include a new closure date.  As a result of contractor change, this action is conferred to ERC.
08-18-94:1	ERC will issue a letter requesting that the concrete be released from consideration as listed waste. Due September 1, 1994.

- 09-20-94:1 Ecology will evaluate debris rule compliance of 6 mm basin concrete removal with a fractional area of resistant aggregate protruding above the 6 mm level.
- This Action Item is CLOSED (November 1, 1994).
- 09-20-94:2 Ecology will provide means to produce a direct soil exposure nitrate cleanup level, assuming that the value calculated from WAC 173-340-740(3)(a)(ii) is unacceptable.
- B. Cordts to review and comment.
  - ERC to present alternatives for nitrate cleanup levels.
- 09-20-94:3 ERC will provide letter(s) addressing compliance with the Hanford Facility RCRA Permit conditions (V.1.B.g, V.1.B.j, and V.1.B.k).
- 09-20-94:4 Ecology will review the 183-H Data Evaluation Report.
- 12-15-94:1 Ecology: Are the statistics of WAC 173-340-740(7)(d) applicable to MTCA cleanup levels?
- 12-15-94:2 Ecology: Since the MTCA method B arsenic cleanup level is less than background, can we use the Method A Table, which is based on state background?
- B. Cordts to review and comments.
- 12-15-94:3 Ecology: Comment on existing stage of closure proposal, with particular focus on our recommendations for cleanup levels / strategy for constituents without MTCA method B cleanup levels.
- 12-15-94:4 ERC: Have staff toxicologist review the nitrate cleanup level produced by WAC 173-340-740(3)(a)(iii) and propose direct soil cleanup level and rational.
- 12-15-94:5 ERC: Finalize Data Evaluation Report and submit final by March 28, in order to satisfy the Hanford RCRA Permit condition V.I.B.g and V.I.B.j. Closed. See 09-20-94:3
- 12-15-94:6 ERC: Continue development of closure proposal.
- 12-15-94:7 ERC: Compare statistical guidance of Ecology, from Toxics Cleanup Program with our current MTCA-based method.
- B. Cordts to review and comment.
- 12-15-94:8 ERC: Make sure that our cleanup level / extent method is consistent with CERCLA.

- 01-26-95:1 Groundwater monitoring compliance. J. Badden/R. Miller  
We are not presently in compliance with the permit. Working with  
Mary Hartman and Legal for immediate compliance and proposing  
a new monitoring plan.
- 01-26-95:2 Cleanup level for arsenic. B. Cordts to concur. Tracked through  
12-15-94:2.
- 01-26-95:3 Cleanup strategy for operable units. N. Werdel to issue copies.
- 01-26-95:5 Disposal of basin rainwater. Concurrence of the listed waste letter.  
J. Badden is working with Dan Duncan for concurrence. Water  
has been analyzed and the data is being reviewed by ERC for  
recommendation.

## CADMIUM CONTAMINATION AT 183-H

029189

- \* Current action level set at 0.5 ppm based on 100X MCL
- \* Discernable from Hanford Site natural background
- \* 183-H contains cadmium above action level:
  - \* Extensively in surface soils
  - \* In two locations in vadose zone
    - \* 13 feet in Borehole 6 at 4.5 ppm
    - \* 24 feet in Borehole 2 at 4.0 ppm

## CADMIUM CONTAMINATION AT 183-H

- \* No discernable plume is in association with vadose zone contamination
- \* 8 near-background values at 6.2 ppm (90th percentile on the mean)
- \* Cadmium tends to be higher in riparian zones of Hanford - maximum of 11 ppm found in volcanic ash sample during background sampling effort
- \* Probability high that the vadose zone hits are not a result of 183-H activities

## CADMIUM CONTAMINATION AT 183-H

## \* OPTIONS FOR RESOLUTION

- \* Demonstration that alternative action level is protective of groundwater per WAC 173-340-740(3)(a)(ii)(A)
- \* Establishment of unit background through more extensive sampling effort near 183-H
- \* Closure as a landfill
  - \* No soil removal would occur
  - \* RCRA cover design and construction

## MERCURY CONTAMINATION AT 183-H

- \* Mercury action level set at 0.33 ppm (90th percentile on the mean Hanford Site natural background)
- \* One area in surface soil zone that is above this value, will be removed with other contamination
- \* No vadose zone contamination

## CHROMIUM CONTAMINATION AT 183-H

## \* Chromium Action Levels

- \* Total Cr is 27.9 ppm (Hanford Site natural Background)
- \* Trivalent Cr is 1600 ppm (100X MCL)
- \* Hexavalent Cr is 8 ppm (100X MCL)
- \* Small area in surface soil zone on eastern side of basin 1 is above Total Cr value, would be removed with other contamination

\* Vadose zone contamination

\* None of the vadose zone is above the CrIII or total Cr action levels

\* Virtually entire vadose zone is above Cr(VI) action level  
CHROMIUM CONTAMINATION AT 183-H

\* Chromium Sampling and Analysis

\* Proposed Sampling Site is the location of Borehole 7, just outside of the east wall next to basin 1

\* Propose using X-Ray Fluorescence as split spoons are pulled from borehole to determine highest chromium concentration and sample collected from here, and/or from a fine grained layer over a coarse grained layer

\* Sampling will be virtually continuous for entire length of borehole - every 2 ft for roughly 30 ft (15 samples)

\* Analytical method for Cr(VI) - EPA SW-846 7196 colorimetric - detection limit is 0.5 ppm

CHROMIUM CONTAMINATION AT 183-H

\* Chromium Sampling and Analysis (cont.)

\* Variance from this method would be the possibility of exceeding the 24 hr holding time given in SW-846

\* Proposed EPA SW-846 method for Alkaline Digestion for Cr(VI) and its adaptation to a standardized ASTM method state:

"Hexavalent chromium has been shown (interlaboratory studies) to be quantitatively stable in field-moist soil samples for at least one month from sample collection. In addition, Cr(VI) has been shown (interlaboratory studies) to be stable in the alkaline digestate for up to 96 hours after extraction from soil." - Draft ASTM standard currently in approval process

CHROMIUM CONTAMINATION AT 183-H

\* Chromium Sampling and Analysis (cont.)

\* 2 issues that need agreement

\* First - Acceptable holding times for this effort agreed upon

\* The extrapolation of data obtained from this single borehole across the entire soil profile for 183-H

**DISTRIBUTION**

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J. M. Bruggeman	RL	H0-12
R. E. Cordts	Ecology - Lacey	
C. W. Hedel	BHI	H0-17
R. G. Hollenbeck	ICF KH	G3-17
P. K. Jackson	BHI	X5-53
M. N. Jaraysi	Ecology - Kennewick	B5-18
J. J. McGuire	BHI	X5-53
M. A. Mihalic	BHI	X5-53
L. R. Miller	CHI	X5-53

**ADMINISTRATIVE RECORD:** 183-H Solar Evaporation Basins Closure, T-1-4 [Care of EDMC, WHC (H6-08)]

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