

2101-M POND MEETING

DATE: July 7, 1989

TIME: 9:00 AM

LOCATION: Richland, Washington
450 Hills/Room 35

PARTICIPANTS: Ecology
T. Michelena

Westinghouse Hanford Company

K. C. Burgard

C. J. Geier

D. E. Mahagin

J. E. Thrasher

B. L. Vedder

J. G. Woolard

Department of Energy

D. L. Duncan

P. H. Turner

PURPOSE OF MEETING:

- DISCUSS THE INFORMATION THAT WILL BE CONTAINED IN THE SEPTEMBER 1989 2101-M POND INTERIM STATUS CLOSURE PLAN SUBMITTAL.
- REACH AN AGREEMENT AS TO WHAT WILL BE IN THE SEPTEMBER 1989 SUBMITTAL.

AGENDA:

- Meeting Objectives (D. L. Duncan)
- Background Information (J. G. Woolard)
 - Previous permitting activities
 - Historical data
- Review Closure Strategy for the 2101-M Pond (J. G. Woolard)
- Discuss Information to be Included in September 1989 Submittal (J. G. Woolard)
- Discuss Closure Criteria Upon Which Document Will be Based. (B. L. Vedder)
- Summary and Agreements (D. L. Duncan)



July 7, 1989 Meeting, DOE-RL, Ecology, and WHC

ATTENDEES

J. W. Badden
K. C. Burgard
D. L. Duncan
C. J. Geier
N. M. Hutchins
D. E. Mahagin
T. Michelena
J. E. Thrasher
P. H. Turner
J. G. Woolard

This meeting was called in response to the June 6, 1989 letter transmitted from Mr. Stanley of Ecology to Mr. Izatt and Mr. Lerch of DOE-RL and WHC respectively. The letter stated that the 2101-M Pond Closure Plan was being returned unreviewed, that the plan was apparently submitted inadvertently, and did not meet the requirements or submittal schedule within the Hanford Federal Facility Agreement and Consent Order.

Mr. Duncan discussed the purpose of the meeting and indicated that meeting minutes would be distributed for signature by the Unit Managers. The purpose of the meeting was to discuss and reach an agreement on the information that will be contained in the September 1989 submittal of the 2101-M Pond Closure Plan.

During discussions of the background information, Mr. Michelena asked if organics had been discharged to the 2101-M Pond. Ms. Woolard of WHC RCRA Closure Activities Section stated that the laboratory primarily used inorganic chemicals. The BWIP Laboratory documented the discharge of groundwater samples containing barium to the 2101-M Pond. No other written records are available concerning the discharge of potentially dangerous chemicals to the 2101-M Pond. The inventory of chemicals that may have been maintained by the laboratory is contained in the closure plan.

During the discussion of the pond soil sampling activities, Mr. Michelena asked how deep samples were obtained. Ms. Woolard stated that samples were collected down to 12 feet.

Mr. Michelena asked where the background samples were taken. Ms. Woolard indicated that the samples were taken in an area near the pond. Mr. Michelena indicated that questions might be raised concerning the quality of background samples taken on the 200 Area Plateau. Samples must be taken in an area free of contaminants, so that a true measure of background can be obtained. Proof of previous land use, such as maps, would probably be required. Ms. Woolard stated that maps indicating previous land use could probably be provided.

Ms. Woolard indicated that health based and regulatory standards are being used to assess clean closure. Mr. Michelena asked what these standards are. Ms. Woolard indicated that the following were being evaluated: drinking water standards, reference doses, WAC 173-303 designation procedures, and information from the Integrated Risk Information System (IRIS) data base and Registry of Toxic Effects of Chemical Substances (RTECS).

Mr. Michelena asked if any organic constituents were detected in the pond soil. Ms. Woolard indicated that acetone, methylene chloride, toluene, butanoic acid, and ethanol were detected. The first three are believed to be artifacts of the laboratory conducting the soil analyses. All concentrations of all constituents were below health based standards or regulatory standards. Ms. Woolard indicated that the concentrations of constituents were generally in the ppb or low ppm level.

Mr. Michelena asked what kind of laboratory QA/QC was conducted. Ms. Woolard indicated that blanks, duplicates, and spikes were used to evaluate the quality of the laboratory data. Hart Crowser evaluated the laboratory and QA/QC information. U.S. Testing provided the analytical services.

During the discussion of the groundwater monitoring program, Mr. Michelena asked what direction groundwater flows in the vicinity of the 2101-M Pond. Ms. Woolard indicated that the groundwater gradient in the 200 East Area is very flat, and it is very difficult to determine the direction of ground water flow. The ground water is presumed to flow to the northeast below the 2101-M Pond. Additional work is ongoing to assess the actual flow direction. It may not be possible to determine the direction of groundwater flow beneath the pond. In this instance the ground water samples from the four wells will be compared to samples taken from a well in the general vicinity for a background comparison.

Mr. Michelena asked if there was an identifiable influence from other facilities in the area. Ms. Woolard indicated that at this time there appears to be no influence on the groundwater from other facilities. The information from the groundwater monitoring program is inconclusive at this time. The four quarters of groundwater monitoring data must still be statistically analyzed and compared to background.

Mr. Michelena asked if we felt that the soil had been adequately characterized. Ms. Woolard indicated that WHC and DOE-RL felt that an adequate characterization had been conducted.

Ms. Woolard indicated that the pond is currently receiving nondangerous waste water, and the plans are to continue to do so.

Ms. Woolard indicated that the closure/post-closure plan will address the appropriate aspects of WAC 173-303-610 and the interim status standards in 40 CFR 265. A annotated outline has been included in the handout that shows how these requirements are to be met. Mr. Michelena asked what specific interim status standards would be followed. Ms. Woolard indicated that the removal and decontaminate standards for surface impoundments in 40 CFR 265 Subpart K would be followed.

Mr. Michelena asked why we were following interim status standards. Ms. Badden of WHC Regulatory Analysis Section explained the rationale for following the interim status standards and only portions of WAC 173-303-610.

In summary, Ms. Badden explained that the Hanford Federal Facility Agreement and Consent Order states that the DOE-RL is to follow applicable regulations for RCRA closures. Applicable regulations are the interim status standards in 40 CFR 265 invoked by WAC-173-303-400. Section 5.3 of the action plan does state that all TSD units that undergo closure, shall be closed pursuant to the authorized State Dangerous Waste Program in accordance with WAC 173-303-610.

It appears there maybe a discrepancy between the Action Plan and the Agreement. In the event of any inconsistency between the Agreement and the Action Plan, the Agreement shall govern.

The interpretation of the requirement in section 5.3 is that only portions of WAC 173-303-610 are applicable. Those portions of WAC 173-303-610 that invoke other final status standards (e.g., -650, -660, -670) are not applicable, as the appropriate regulations are interim status standards found in 40 CFR 265. In addition, the Hanford Federal Facility Agreement and Consent Order does not specify compliance with the final status except those found in WAC 173-303-610. The requirement in WAC 173-303-610 to clean to background is also not applicable as this requirement is invoked by final status standards found outside of -610, and where the closure requirements of -610 call for the removal or decontamination of dangerous wastes, waste residues, etc. WAC 173-303-610 does not specifically call for the removal or decontamination of dangerous waste but only requires that the closure plan discuss removal and decontamination.

There are also requirements in WAC 173-303-610 that cannot be met by facilities under interim status such as the schedule requirements for completing closure.

Mr. Michelena indicated that the intent behind invoking WAC 173-303-610 requirements is to invoke all the final status standards as referenced by -610, as the entire Hanford Site would soon be under final status standards. Mr. Michelena indicated that one permit would be issued for the entire Hanford Site. Approval of the Hanford permit would occur with approval of the first Part B Permit Application (e.g., 616 Storage Facility Part B Permit Application). As a result, the entire Hanford Site would be subject to the final status standards. Mr. Michelena stated that Ecology does not have the ability to permit less than the entire facility.

Within the permit, there will be a chapter that addresses each TSD unit at the Hanford Site. The permit will contain compliance schedules for submitting the Part B Permits and closure/post-closure plans for these TSD units per final status regulations.

A Part B Permit has not yet been approved for Hanford; therefore, Hanford is under interim status. Mr. Michelena stated that he believes Ecology has the authority to invoke final status standards under the provisions of WAC 173-303-283. Mr. Michelena was asked if Ecology had invoked final status

standards on any other interim status facility. Mr. Michelena stated that he was not aware of Ecology requiring this at any other facility.

Mr. Michelena was asked if any agreement concerning submittal of the 2101-M Pond Closure Plan as an interim status plan had been reached during the Hanford Federal Facility Agreement and Consent Order. It was the belief of WHC that the four closure plans, 183-H, 2727 S, 300 Area Solvent Evaporator, and 2101-M Pond, in preparation at the time of negotiations, would be submitted as interim status plans. Mr. Michelena indicated that he had asked Ecology staff about this, and no one had any recollection of agreeing to submitting 2101-M Pond Closure Plan as an interim status plan. Mr. Michelena indicated that he understood that there had been discussion on 2727S, 183-H, and 300 Area Solvent Evaporator.

Mr. Michelena agreed to ask Ecology staff one more time if any agreement concerning the 2101-M Pond had been reached. If so, the agreement would be honored. Mr. Michelena indicated that he was sure that an agreement concerning the submittal of this plan had not been made. Therefore, the September submittal will have to comply with all final status standards.

Mr. Michelena was asked if this submittal must comply with the background levels for cleanup standards. Ms. Woolard indicated that by using health based standards, we were following guidance issued by EPA in March 19, 1987 Federal Register. This federal register modifies the interim status regulations to provide conformance between cleanup requirements for certain interim status surface impoundments and those requirements contained in the permitting rules of 40 CFR 264 (final status regulations).

Additionally, other units on the Hanford Site (e.g. 300 Area Solvent Evaporator) are being allowed to use health based standards and not background as clean up standards.

Mr. Michelena asked what constituents were detected above background. The constituents detected above background and their concentrations were discussed. The constituents and the respective concentrations, background concentrations and action levels (based on health based/regulatory standards are included in the closure plan. The acetone, toluene, and methylene chloride detected in the soil samples are suspected of being introduced into the samples by the laboratory conducting the analyses. Mr. Michelena indicated that this problem should be looked at very closely, and asked what was being done to rectify the situation. Ms. Woolard stated that the contract for U.S. Testing was administered by PNL, and PNL has been looking into this problem.

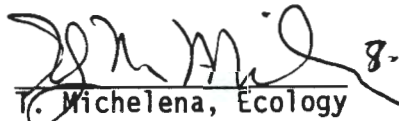
Mr. Michelena indicated that for 2101-M Pond only, he would be willing to look at our proposal for using health based standards for developing cleanup levels. Mr. Michelena stated that this does not necessarily mean that the cleanup standards will be acceptable. The rest of the final status standards must be incorporated into the closure plan.

WHC stated that all the final status requirements could not be incorporated to meet the September 1989 milestone. WHC indicated that a contingent closure and post-closure plan would have to be developed. This would take approximately 6 months. WHC stated that the milestone would either have to be renegotiated or dispute resolution may need to be initiated.

Mr. Michelena indicated that Ecology does not want to renegotiate the milestone or go into dispute resolution. Mr. Michelena suggested that an incomplete plan could be submitted in September 1989, with a note included in the text that states all WAC 173-303-610 standards will be incorporated including contingent closure plans and post-closure plans.

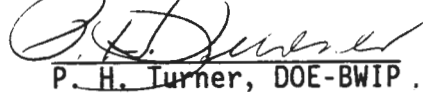
In addition, all other plans must also be submitted under final status standards. Mr. Michelena was very concerned over the fact that all the other plans currently under preparation are not being prepared to final status standards.

A consensus as to the content of the September 1989 closure plan submittal was not reached at this meeting. Further consideration of this issue is required, and a letter response to the June 6, 1989 letter from Roger Stanley will be prepared.

 8-1-89
T. Michelena, Ecology

 7/26/89
C. J. Geier, WHC

 7/26/89
D. L. Duncan, DOE-RL


P. H. Turner, DOE-BWIP.

BACKGROUND INFORMATION

PREVIOUS PERMITTING ACTIVITIES

- o PART A APPLICATION
- SUBMITTED - 8/86
- o INTERIM STATUS CLOSURE/POST CLOSURE PLAN, REV 0
- SUBMITTED - 9/87
- o REVISED PART A, REV 1
- SUBMITTED - 11/87

BACKGROUND INFORMATION

- o U-SHAPED, EARTHEN POND, COVERING LESS THAN 1 ACRE IN 200 EAST AREA.
- o CONSTRUCTED IN 1953 TO RECEIVE NONDANGEROUS WASTE WATER FROM 2101-M BUILDING HEATING, VENTILATION AND AIR CONDITIONING SYSTEM.
- o BASALT WASTE ISOLATION PROJECT (BWIP) RESEARCH LABORATORY PLUMBED INTO DRAIN LEADING TO 2101-M POND IN 1979-1981. BWIP LABORATORY OPERATIONS CEASED IN APRIL 1988.
- o RECEIVED DISCHARGES OF BARIUM SOLUTIONS FROM BWIP LABORATORY.

CLOSURE STRATEGY

- o CLEAN CLOSE.
- o SOIL CHARACTERIZATION COMPLETED. NO CONSTITUENTS PRESENT THAT REPRESENT A THREAT TO HUMAN HEALTH AND THE ENVIRONMENT.
- o GROUNDWATER MONITORING ONGOING TO VERIFY POTENTIAL CONTAMINANTS HAVE NOT MIGRATED INTO THE GROUNDWATER.

SEPTEMBER 1989 CLOSURE PLAN SUBMITTAL

- o WILL ADDRESS THE APPROPRIATE ASPECTS OF WAC 173-303-610:
 - CLOSURE PERFORMANCE STANDARDS
 - MAXIMUM EXTENT OF OPERATION
 - INVENTORY OF DANGEROUS WASTES
 - DETAILED DESCRIPTION OF METHODS TO BE USED DURING FINAL CLOSURE
 - DETAILED DESCRIPTION OF THE STEPS NEEDED TO REMOVE OR DECONTAMINATE WASTE RESIDUES.
- o WILL USE REGULATORY AND HEALTH BASED STANDARDS FOR ASSESSING CLEAN CLOSURE.
- o WILL ADDRESS THE APPROPRIATE INTERIM STATUS STANDARDS IN 40 CFR 265.

CLOSURE CRITERIA

- o HANFORD FEDERAL FACILITY AGREEMENT AND CONSENT ORDER STATES THAT U. S. DOE SHALL COMPLY WITH APPLICABLE REGULATIONS FOR RCRA CLOSURES.
- o THE ACTION PLAN STATES THAT APPROPRIATE WAC 173-303 REGULATIONS WILL BE USED FOR CLOSURE.
- o FOR FACILITIES AT HANFORD, THE PERTINENT REGULATION IS WAC 173-303-400 WHICH INVOKES 40 CFR 265, INTERIM STATUS REGULATIONS.
- o IN ADDITION, THE ACTION PLAN ALSO STATES THAT TSD UNITS UNDERGOING CLOSURE WILL ALSO BE IN COMPLIANCE WITH APPLICABLE REQUIREMENTS OF WAC 173-303-610. DOES NOT INCLUDE ALL FINAL STATUS REQUIRMENTS.

ADDITIONAL CLOSURE CRITERIA

- o BASED ON THE FOLLOWING SECTIONS OF THE HANFORD FEDERAL FACILITY AGREEMENT AND CONSENT ORDER:
- ARTICLE VII, PARAGRAPH 27. U.S. DOE shall comply with RCRA closure requirements "under applicable regulation." Applicable regulations for interim status facilities are those in 40 CFR 265.
 - ARTICLE XLIX, PARAGRAPH 144. Actions are to be pursuant to applicable federal and state laws and regulations. The pertinent state regulation (WAC 173-303-400) established 40 CFR 265 (with minor notifications) as the applicable regulations.
 - ACTION PLAN, SECTION 6.3.1. Clean closure of any unit "... will be carried out in accordance with all applicable requirements described in 173-303-WAC." as noted above, WAC 173-303-400 establishes interim status standards in 40 CFR 265 as the applicable closure requirements.
 - ACTION PLAN SECTION 6.3. Specifies closure is to follow "applicable Federal and State statutes, regulations and guidance documents, and written policy determinations that pertain to the closure process for TSD groups/units."
 - ACTION PLAN SECTION 5.3. "All TSD units that undergo closure, irrespective of permit status, shall be closed pursuant to the authorized State Dangerous Waste Program in accordance with 173-303-610 WAC."

ANNOTATED OUTLINE

INTRODUCTION

- Closure strategy - clean closure.
- Hanford Site location and general description
- 2101-M Pond location and general description
- Security Information
- Process Information

CLOSURE PERFORMANCE STANDARDS

- No maintenance will be required once clean closure has been certified.
- Pond soil has been sampled and analyzed for a broad spectrum of drinking-water quality, 40 CFR 264 Appendix IX, and WAC 173-303-9905 constituents. Concentrations of constituents in pond soil is not considered to pose a substantial present or potential threat to human health or the environment, and does not warrant handling as a dangerous waste. Therefore, no further action is required to control, minimize, or element postclosure escape of dangerous waste, dangerous waste constituents, leachate, contaminated run-off, or dangerous waste decontamination products to the ground, surface water, or the atmosphere.
- There are no contaminated waste residues, containment system components, contaminated subsoils, and structures and equipment contaminated with waste and leachate to "remove or decontaminate". March 19, 1987 Federal Register interprets the terms "remove and decontaminate" to mean removal of all wastes and liners and the removal of leachate and materials contaminated with the waste or leachate that pose a substantial present or potential threat to human health or the environment".
- 2101-M Pond was originally constructed to receive nondangerous waste water and will continue to be used in this capacity.

DESCRIPTION OF FINAL CLOSURE

- Clean closure.
- 2101-M Pond soil sampling completed.
- Groundwater monitoring is being conducted to verify that potential contaminants have not migrated from the 2101-M Pond into the groundwater.

MAXIMUM EXTENT OF OPERATION

- 2101-M Pond no longer receives dangerous waste and is undergoing RCRA closure.

REMOVAL AND MANAGEMENT OF DANGEROUS WASTES

- Maximum Inventory of Dangerous Wastes
 - o The potential types of dangerous waste that may have been generated and the amount of dangerous wastes that may have been discharged to the 2101-M Pond have been estimated.
 - o Assuming dangerous waste and/or dangerous waste constituents did enter the 2101-M Pond, the waste is present in concentrations that do not pose a substantial present or potential threat to human health or the environment.
- Detailed Description of the Removal of Dangerous Waste Inventory
 - o As verified by soil sampling, no dangerous waste inventory remains at the 2101-M Pond that would require removal, transportation, treatment, storage, or disposal.

DESCRIPTION OF DECONTAMINATION AND REMOVAL OF DANGEROUS WASTES RESIDUES

- No dangerous waste residues and contaminated containment system components, equipment, structures, and soils to remove or decontaminate.

SOIL SAMPLING

- 23 soil samples taken in pond from 0.0 to 12.0 ft at four different locations during 1988.
- 19 background soil samples taken from 4 different locations.
- Summary statistics calculated for both pond and background samples.
- Soil samples statistically evaluated and pond samples compared to background.
- Concentration of soil constituents that varied significantly from background values were compared to regulatory and health based standards.
- Conclusion: No constituents in soil that pose a substantial present or potential threat to human health and the environment.

GROUNDWATER MONITORING

- Four groundwater monitoring wells installed in Summer 1989

- Four quarters of groundwater samples collected and analyzed for the parameters listed in 40 CFR 265: 40 CFR 265 Appendix III parameters, parameters establishing water quality, and parameters used as indicators of groundwater contamination. Water level measurements taken at each sampling event.
- Second quarter samples analyzed for WAC 173-303-9905 constituents.
- Statistical analyses will be performed on the full four quarters of data.
- Starting in November 1989, groundwater samples will be collected semi annually until clean closure has been certified. An interim groundwater characterization report will be prepared to provide the technical support to certify closure in 1990.

SCHEDULE FOR CLOSURE

- Activities to be completed include groundwater monitoring, preparation of the groundwater monitoring site characterization report, and certification of closure.
- Certification of closure expected to be completed in 1990, dependent on approval of the closure plan and groundwater monitoring results.

AMENDMENT OF PLAN

- Amendments to this closure plan, if required, will be prepared per 40 CFR 265.112(c).

SCHEDULE FOR BEGINNING CLOSURE

- In July 1985, administrative controls were established to eliminate the disposal of dangerous waste to the 2101-M Pond.

WASTES TREATED, REMOVED, OR DISPOSED OF WITHIN 90 DAYS

- No dangerous waste remains at the 2101-M Pond that warrants removal.

CLOSURE COMPLETED AND EXTENSION OF TIME PERIOD

- Closure will be completed within 180 days of approval of the closure plan or a petition will be filed with Ecology requesting an extension of the closure time.

CERTIFICATION OF CLOSURE

- Closure will be certified by DOE-RL and an independent professional engineer registered in the State of Washington.

POST CLOSURE PLAN REQUIREMENTS

- No postclosure activities are necessary to clean close 2101-M Pond.

DISTRIBUTION

M. R. Adams	H4-55
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D. J. Wiggins	H4-52
B. D. Williamson	B3-15
EDMC	H4-51
FAR/LB	H4-57