



Department of Energy

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JAN 25 1993

93-DOE-00977

Mr. Martin Hestmark
U. S. Environmental Protection Agency, Region VIII
ATTN: Rocky Flats Project Manager, 8HWM-RI
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Denver, Colorado 80202-2405

ADMIN RECORD

Mr. Gary Baughman
Hazardous Waste Facilities Unit Leader
Colorado Department of Health
4300 Cherry Creek Drive South
Denver, Colorado 80222-1536

Gentlemen:

This letter revises and supersedes our letter of December 15, 1992, 92-DOE-14192.

As you know, the Interim Measure/Interim Remedial Action (IM/IRA) Decision Document (DD) for the Solar Evaporation Ponds, Operable Unit Number 4 (OU-4), dated April 1992, selected a remedy to cease the addition of interceptor trench system (ITS) water to the Solar Evaporation Ponds at the Rocky Flats Plant (RFP) by installing a series of holding tanks and an evaporator system to treat the water. The schedule for commencing the operation of the evaporator system and modular tanks has slipped from that proposed in Section 3.1.6 of the IM/IRA DD.

Two primary sources of delay were encountered in implementing the IM/IRA. Adaptation of the portable evaporator units to the Rocky Flats Plant physical and procedural environment was more complicated than expected. Equipment failures along with multiple field change-orders that were required to implement the adaptation greatly impacted the schedule. Secondly, unexpected soil conditions were encountered at modular tank location, which complicated and delayed their installation. Currently we are pursuing a plan to dewater the tanks to inspect the primary liners of all three tanks which appear to be leaking, further impacting the schedule.

The original planning implied that the evaporator system would be operational prior to diverting the ITS water to the modular tanks. ITS water is currently pumped to Pond 207B North. DOE is committed to achieving the objectives of the IM/IRA as soon as possible and has identified several actions that will allow us to accelerate the major objective of diverting the ITS water from the ponds and to the modular tanks. We feel these actions are within the intent of the IM/IRA, however, approval is requested from your agencies prior to implementation. In a previous meeting, representatives from the Colorado Department of

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Health, the Environmental Protection Agency, the Department of Energy, and EG&G, discussed several of these actions. At that time, you indicated that the proposed actions were probably minor modifications to the IM/IRA DD and, therefore, could be documented and approved via an exchange of letters.

DOE, therefore, requests your concurrence with the following:

1) Provide a connection to allow ITS water to be pumped directly from the modular tanks to the Building 374 Evaporators for treatment. This would allow us to take advantage of any excess capability of the Building 374 evaporators on demand and thereby, mitigate the risk of diversion to the modular surge tanks prior to Building 910 being operational.

While receiving ITS water, Building 374 will continue to operate under the current conditions. That operation includes treatment of waste waters similar to the trench water, the use of the evaporator distillate below a conductivity of 150 micro ohms/cm (higher conductivity distillate is recycled through the evaporator) under the commercial exclusion provisions (6 CCR 1007-3, section 261.2 (E) (ii), and cementation of the bottoms into saltcrete. The saltcrete is stored on-site pending disposal at the Nevada Test Site. The distillate supplements the plant's raw water supply for plant cooling towers. The distillate is collected in a tank and sampled prior to transfer to the raw water system. Use of the Building 374 distillate is the same as the use of the Building 910 distillate as described in the IM/IRA.

Currently, ITS water is pumped from the ITS to Pond B-North and from B-North to Building 374. This configuration has been in use since the early 1980s. Over 90% of the water pumped to the pond from the ITS has been subsequently pumped to Building 374, with the remainder, evaporated from the pond. Averaged over 1991 and 1992, about 240,000 gallons per month have been transferred to B374 via this configuration. After diversion of ITS water to the modular tanks, the option of pumping pond water directly to Building 374 would still be available for controlling water levels in the ponds. The data on the water in Pond B-North presented in the IM/IRA (Table 2.2) still constitutes a valid characterization of the water involved.

2) Divert ITS water to the modular surge tanks following completion of the Building 374 connection and prior to the Building 910 Evaporators becoming operational. The scheduled date for this diversion is April 16, 1993. There is a certain amount of risk associated with this action, namely, that the capacity of the tanks could be reached prior to the Building 910 evaporators being operational. This risk is mitigated however by the incorporation of item one above.

3) Permanent removal of the .020" ultraviolet liners in all three tanks. The schedule for diverting the Interceptor Trench Water to the surge tanks can be compressed if we modify the modular tank design to delete the .020" ultraviolet protection internal liners. We must remove these liners to inspect and repair leaks in all 3 tanks. According to the material manufacturer, the underlying .080" liners are warranted for a 20 year life without any UV protective liner. By not replacing the .020 liners, we will save nine days of time from the critical path. Furthermore, this will improve our ability in the future to conclusively determine the integrity of the primary .080" liners. When

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present, the .020" liners act as a bladder, which can mask defects in the underlying .080" liners.

4) DOE would like to maintain approximately 18 inches of ITS water in the contingency "empty tank". This water volume is required per the manufacturer's specifications to maintain the tank liners in place within the steel walls during periods of high winds. Such winds as we experience at the site could easily pull the liners out of the tank and result in tears or complete destruction of the liners.

This level of water will be retained throughout the operational life of the tanks. The tanks can be completely emptied if necessary to clean the bottoms or for eventual decommissioning and removal.

Two additional items, listed below, do not directly affect the expedited diversion of the ITS water, but supplement the detail contained in the IM/IRA DD and enhance the operation of Building 910. We would greatly appreciate your review, input and concurrence with the following items:

- 1) The Building 910 basement sump was replaced with a containment tank during the later stages of construction. The tank was preferred when the detailed design showed that adequate leak monitoring of the original sump would be difficult to achieve. The tank will achieve the sump's intended function and will facilitate operations of Building 910. CDH and EPA field representatives were apprised of this modification during routine inspections. We are requesting formal approval of this modification since the IM/IRA specifically calls for a sump.
- 2) The IM/IRA currently specifies that the Building 910 evaporator bottoms will be concentrated to between 300,000 ppm and 400,000 ppm. To allow for increased operational flexibility, we desire to modify this language to specify that the concentration of the Building 910 flash evaporators will not exceed 400,000 ppm.

Per your request, we are providing a revised IM/IRA Milestone Schedule (Table 3.2) for construction and operation activities along with a list of assumptions which provide the basis for our projected dates and several caveats which have the potential of shortening or lengthening the schedule. The schedule and the assumptions are contained in the enclosure.

In our previous letter, we were requesting approval to divert the ITS water prior to the telemetry system being fully operational. That is, we were anticipating that the Radio Frequency (RF) portion of the telemetry system, which allows continuous monitoring of the leak and overflow detection of the tanks from Building 374 would not be in place at the time of the ITS diversion to the tanks. This is no longer the case. The telemetry system will be fully operational at the time of diversion.

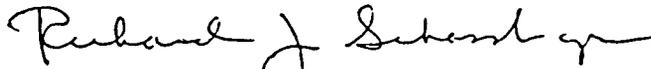
DOE requests your concurrence with these actions. We assume your concurrence will fulfill permitting requirements, consistent with the use of the IM/IRA as the permitting mechanism for the selected remedy. Please notify us at your earliest convenience if this assumption is misplaced. As per our discussions and verbal agreement, this letter and its enclosure along with your letter of concurrence will be placed in the front of the IM/IRA and will constitute an approved amendment to the IM/IRA. Response to comments required by February 4, 1993.

M. Hestmark & G. Baughman
92-DOE-00977

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If you have any questions concerning these actions or require additional information, please contact me on 966-7846 or Scott R. Surovchak on 966-3551.



Frazer R. Lockhart
SEP Program Manager
Environmental Restoration Division

Enclosure

cc w/enclosure:

R. Greenberg, EM-453
J. Hartman, AMEM, RFO
R. Schassburger, ERD, RFO
R. Craun, CED, RFO
R. Benedetti, EG&G
E. Lee, EG&G
R. Boyle, EG&G
F. Dowsett, CDH
H. Ainscough, CDH
M. Hestmark, EPA

Attachment 1

MILESTONE SCHEDULE INTERIM MEASURE/INTERIM REMEDIAL ACTION SOLAR EVAPORATION PONDS OPERABLE UNIT NO. 4

	<u>Original Date</u>	<u>Revised Date</u>	<u>Status</u>
Begin Construction of Treatment and Storage System	March 1, 1992	April 6, 1992	Completed
Complete Construction of Treatment and Storage System	June 1, 1992	July 7, 1993	In Progress
Conduct Trial Run of Treatment System	June 8, 1992	June 28, 1993	Pending
Begin Full-Scale Operations	June 15, 1992	Sept. 9, 1993	Pending

Schedule Assumptions

1. Product water acceptance testing will demonstrate that the Building 910 evaporative system and support equipment will function as described in the IM/IRA to produce distillate which meets commercial water standards and is reusable in the plant raw water system.
2. The ITS water diversion schedule assumes that EPA/CDH will approve this request to amend the IM/IRA Decision Document to allow use of the modular tanks before the startup of the Building 910 evaporators.
3. The B910 schedule assumes EPA/CDH approval of compensatory measures (primarily visual inspections) for the pipeline from B910 to B374. This pipeline passes through several concrete and/or masonry walls in Buildings 774, 776 and 778 where it does not have secondary containment.
4. Building 910 startup can occur on the basis of test results obtained in accordance with the Contract Lab Protocol (CLP) without waiting for validation and reporting of sample data (validation and reporting adds 4 weeks).
5. In the near term the Building 910 evaporators will not be used to process pond water. Before Building 910 is used to process pond water, it will require re qualification of the evaporation process and procedures, along with possible modifications to the building operations (e.g. designating it as a Radiation Contamination Area). These activities are not included in the schedule presented

Schedule Assumptions Cont.

6. The schedule does not include any final review by the Defense Nuclear Facilities Safety Board. It is our intention to brief the board on our approach to determining the readiness of this low hazard, non-nuclear facility, and it is our assumption that the board will agree with our approach an on-site review.