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CORRES. CONTROL
INCOMING LTR NO.



Department of Energy

ROCKY FLATS OFFICE
P.O. BOX 928
GOLDEN, COLORADO 80402-0928

JUN 27 11 43 AM '94

JUN 23 1994

94-DOE-06782

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DUE
DATE

ACTION	DIST	LTR	ENC
BERMAN, H.S.			
CARNIVAL, G.J.			
COPP, R.D.			
CORDOVA, R.C.			
DAVIS, J.G.			
FERRERA, D.W.			
FRANZ, W.A.			
HANNI, B.J.			
HEALY, T.J.			
HEDAHL, T.G.			
HILBIG, J.G.			
HUTCHINS, N.M.			
KELL, R.E.			
KIRBY, W.A.			
KUESTER, A.W.			
MAHAFFEY, J.W.			
MANN, H.P.			
MARX, G.E.			
McKENNA, F.G.			
MORGAN, R.V.			
PIZZUTO, V.M.			
POTTER, G.L.			
SANDLIN, N.B.			
SATTERWHITE, D.G.			
SCHUBERT, A.L.			
SETLOCK, G.H.			
STIGER, S.G.		XX	
SULLIVAN, M.T.			
SWANSON, E.R.			
WILKINSON, R.B.			
WILSON, J.M.			
Keith S		XX	
Ledford A		XX	

Mr. Gary Baughman
Hazardous Waste Facilities Unit Leader
Colorado Department of Health
4300 Cherry Creek Drive South
Denver, Colorado 80222-1530

ADMIN RECORD

Dear Mr. Baughman:

The Department of Energy (DOE) acknowledges receipt of your response to DOE's request for a schedule extension to accommodate the proposed modification to the scope of the Phase I Interim Measure/Interim Remedial Action (IM/IRA) Decision Document (DD) which would address the inclusion of the Solar Pond sludge under the 1,000 year cap. The DOE objects to the determination made by the State and, in accordance with the Interagency Agreement (IAG), paragraph 226 hereby submits a written Statement of Dispute and seeks a determination that good cause exists to grant our request.

The DOE appreciates the State presenting its opinions for the denial of our request. As previously communicated, the milestones expected to be impacted by the change in scope are those associated with the modification, review and approval of the DD and the submission of the Final Title II Design. At this time, the date for the start of construction is not expected to be impacted. However, the proposed milestone extension dates and the construction schedule prepared for the Draft DD are subject to impact from the length of the dispute resolution process. Final milestone dates will be developed and agreed upon during the dispute resolution.

The nature of the dispute lies in the DOE's and the Division's differing positions on the suitability of the processed sludge for inclusion under the cap and the definition of "remediation waste". DOE's position is that good cause exists for the extension requested in our letter of May 26, 1994. Further information on DOE's positions and the information used by DOE to arrive at that position are provided in the enclosure statement per IAG paragraph 92.

This Statement of Dispute is transmitted in good faith, and DOE agrees to work with the Division and the Environmental Protection Agency to expedite, to the extent possible, the dispute resolution process. The DOE reiterates its commitment to the purposes of the IAG, including the investigation of potential environmental impacts at the Rocky Flats Site and to promote methods that will enhance the orderly and effective investigation and cleanup of contamination at the site.

Please contact Frazer Lockhart at 966-7846 for further actions on this dispute.

Sincerely,

Steven W. Slaten
IAG Project Coordinator

DOCUMENT CLASSIFICATION
REVIEW WAIVER PER
CLASSIFICATION OFFICE

Enclosure

CORRES CONTROL	x	x
ADMN RECORD/080	x	2
PATS/T130G		

Reviewed for Addressee
Corres. Control RFP

6/27/94 CA
DATE BY

Ref Ltr. #

DOE ORDER # 54001

A-0004-000930

G. Baughman
94-DOE-06782

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JUN 23 1994

cc w/Enclosure:

R. Lightner, EM-45
H. Belancan, EM-453
J. Roberson, AMER, RFFO
F. Lockhart, ER, RFFO
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M. Hestmark, EPA
A. Duran, EPA
H. Ainscough, CDH
S. Keith, EG&G
A. Ledford, EG&G
S. Howard, SAIC
P. Witherill, SAIC

cc w/o Enclosure:

M. Silverman, OOM, RFFO
L. Smith, OOM, RFFO
S. Stiger, EG&G

WRITTEN STATEMENT OF DISPUTE

on

State Response to Request for Schedule Extension

and

Modification to the IM/IRA Decision Document for Operable Unit No. 4

NATURE OF THE DISPUTE

- 1) The Department of Energy (DOE) requested a schedule extension to the attached Interagency Agreement (IAG) milestones to accommodate a modification to the Interim Measure/Interim Remedial Action (IM/IRA) Decision Document (DD) Operable Unit No. 4. The request was made by letter dated May 26, 1994. The Colorado Department of Health (CDH) denied the request by letter dated June 9, 1994.
- 2) The schedule extension would provide for the modification of the DD to address the inclusion of the Solar Pond sludge under the 1,000 year cap. The DOE has evaluated the impact to related milestones based upon this extension request and provided that information in the original request. Impacts would only occur to those milestones associated with the revision, review and approval of the DD and the submittal of the Final Title II Design. It is not anticipated that the start date for the IM/IRA construction effort will be impacted. However, the proposed milestone extension dates and the construction schedule prepared for the Draft DD are subject to impact from the length of the dispute resolution process. Final milestone dates will be developed and agreed upon during the dispute resolution.
- 3) Central to the resolution of the dispute is the determination of the definition of "remediation waste" as well as the definition of "enhancement of the corrective action". DOE believes that the sludge, as well as the contaminated material from Units 21 and 48, are remediation wastes. We believe this is supported by inclusion of Individual Hazardous Substance Site (IHSS) 101, Solar Evaporation Ponds in the IAG. Specifically Table 5 requires "1. close the regulated units in accordance with this Agreement and the regulations." That the sludge is a remediation waste under the IAG is further strengthened by the enforceable milestone for sludge removal added to the IAG by the September 30, 1993 dispute resolution decision. We further believe inclusion of this material under the cap enhances the corrective action by saving approximately \$20 million and by allowing this money to be dedicated to the acceleration of other portions of the program. Based on these items, we believe the sludge is appropriate for consideration as proposed.
- 4) Another aspect of the dispute is the State's contention that sludges are illegally stored mixed wastes governed under the Agreement in Principle. The IAG was prepared to investigate and initiate proper response actions for past environmental releases, and as such superseded the 1986 Compliance Agreement. All aspects of the Agreement in Principle, Attachment B (DOE Cleanup Initiatives) were likewise included in the IAG. The DOE considers the treatment storage, and disposal of all remediation wastes, including IHSS 101 Solar Ponds, to be governed by the analysis and decision processes in the IAG. All aspects of attachment B of the Agreement in Principle have been superseded by the IAG.
- 5) Disposal of the sludge under the cap is not a new idea and has been discussed with the regulators at various meetings throughout the project. The State, although objecting to the idea, has been unable to cite a regulation that would preclude inclusion of the sludge under the cap. The development of the specifics of the interim action has allowed for evaluation of the impacts of sludge disposal as part of the action. Upon evaluating the issues, DOE finds no impediment in the regulations, no probable impact to the risk to public health and the environment for the action, and a significant opportunity for enhancement of the program. Therefore, DOE is obligated to pursue the issue and believes it to be in the best interest of the Solar Ponds Project and the overall Environmental Restoration Program goals.

Department of Energy Position

The Department of Energy (DOE) disagrees with the Colorado Department of Health's positions as stated in this communication. The DOE further believes information known to all parties and relevant to the extension request was not considered. The issues associated with the dispute and the DOE position are provided on the following issue sheets.

PROPOSED IAG MILESTONE CHANGES

<u>Phase I Milestone</u>	<u>Current Commitment</u>	<u>Proposed* Commitment</u>
Modified Draft Proposed phase I IM/IRA DD	5/27/94	10/26/94
Proposed Phase I IM/IRA DD	8/06/94	1/26/95
Phase I IM/IRA DD Responsiveness Summary	12/14/94	6/05/95
Final Phase IM/IRA DD Responsiveness Summary	2/25/95	7/24/95
Submit Final IM/IRA Title II Design	2/10/95	6/21/95
All Solar Ponds emptied of water and sludge	1/20/95	no change
Begin IM/IRA Construction	9/27/95	no change
<u>Phase II Milestone</u>	Various	no change

*Subject to change thru the dispute resolution discussions.

DEPARTMENT OF ENERGY POSITION

Issue 1

Sludge is a process waste; cannot be disposed as part of remediation effort.

Position

1. Sludge meets definition of remediation waste in 260.10. Wastes are clearly not new or as-generated (generated from an on-going process).
2. IAG, a Corrective Action Document, explicitly addresses the sludge and sets a milestone associated with its management. IAG actions are automatically included in the "Corrective Action" portion of our RCRA permit.
3. CAMU is clearly intended to increase flexibility so as to encourage treatment. A fully acceptable solution, under 265.228, would have been to stabilize the material in-situ; proposed action under CAMU results in more controlled (QA/QC) process/product and expectation of higher performance.
4. Note: Disposal of residues in surface impoundments as part of closure is fully authorized in 265.228. Problem results from removal prior to treatment with subsequent return - placement of hazardous waste in land disposal unit requires compliance with LDR and requires that landfill meet MTRs.

Evidence

1. RCRA/CHWR
2. IAG and Part B Permit
3. CAMU rule (Federal and State)
4. Following info:
 - 1) Remediation waste "managed for the purpose of implementing corrective action."
That's exactly what we are doing - this action is being proposed and will be executed in parallel with the corrective action.
 - 2) From the Preamble... "generated as part of the corrective action ... may be placed without pre-treatment to the ...LDR."
The pondcrete will be generated as part of the IM/IRA under DOE's proposal. Further, the sludge has been consolidated and transferred as part of the IAG/Corrective Action.

DEPARTMENT OF ENERGY POSITION

Issue 2

Solar Pond sludges are not being managed pursuant to a corrective action.

Position

The sludges are managed as part of the corrective action.

Evidence

1. The corrective action program for the Rocky Flats Solar Ponds is the Solar Ponds Remediation Program. Its justification to Congress for funding is to accomplish the corrective action for the ponds. All of its associated activities are focused on the remediation of OU 4 and are dedicated to the accomplishment of this mission.
2. Protection of the environment from continuing insult from the leaking surface impoundment is the significant first step in the corrective action process for the site.
3. DOE proposed a method to CDH to accomplish the above by relining the 207A pond into two cells and storing the B and C pond sludge in these two cells until the remediation of the area began.

During the dispute resolution in the summer of 1993, CDH was insistent on the removal of the sludge from the ponds. A relined pond was not acceptable to CDH. Storage in tanks outside of the IHSS was the preferred method that would satisfy CDH. To accommodate the acceleration of the program, also desired by the regulators and to begin a significant step in the corrective action process, DOE agreed to the tanks.

4. The regulators' insistence on placing the sludge in the tanks located outside of the IHSS does not change the fact that the sludge is a remediation waste derived from the corrective action activities for the Solar Ponds.
5. All IAG activities are incorporated into the corrective action of the plant's RCRA permit.

DEPARTMENT OF ENERGY POSITION

Issue 3

Disposal of the materials under the cap does not provide an enhancement of the corrective action.

Position

From an RFFO programmatic perspective, the inclusion of the remediation waste under the cap does provide an enhancement to the ER corrective action, also enhances the waste management operations for the facility, and resolves a major CDH issue the FFCA program.

Evidence

1. Inclusion of the remediation waste under the cap will have no negative impacts on the cap design or performance standards associated with the corrective action.
2. Placement of the remediation waste under the cap will save the remediation program approximately \$20 million and allow for the acceleration of other phases of the program that will provide treatment and disposal of the non-LDR compliant pondcrete.
3. Placement of the treated sludge under the cap will significantly reduce the inventory of non-LDR mixed waste stored at RFP.
4. Addresses CDH desire to expedite action to solve "their largest mixed waste problem at RFP."
5. Accelerates processing and disposal of existing pondcrete by as much as two years.

DEPARTMENT OF ENERGY POSITION

Issue 4

DOE Order may preclude placement of radionuclide contaminated materials, including remediation waste, under OU 4 cap.

Position

No such preclusion exists.

Evidence

1. DOE Order 5820.2A, Radioactive Waste Management, is the probable order referenced by the State. Order addresses high level, TRU, and low level waste operations such as retrievable storage and licensed final disposal facilities.
2. For Low Level Waste, focus is in management to protect the health and safety of the public and to ensure that no legacy requiring remedial action remains after operations have been terminated.
3. Order does not apply directly to remedial actions.
4. Order does referenced 10 CFR Part 61, Licensing Requirements for Land Disposal of Radioactive Waste, as a guide in performing the calculations in determining greater than Class C quantities of rad waste, but conflicts with some other requirements in the regulation. 10 CFR Part 61 cites the licensing requirements for radioactive waste disposal facilities which will receive waste from other sites. It is not relevant for our action.

DEPARTMENT OF ENERGY POSITION

Issue 5

Proposed action amounts to "burying rad waste at Rocky Flats" which is at variance with previously-stated intentions and assurances that the site will be returned to "green fields." Action could set precedent for other actions at RFP and thereby encourage on-site disposal (burying) rather than treatment and off-site disposal.

Position

1. Disposal of radioactive waste in Colorado has been accomplished before: uranium tailings [although differently perceived and classified] and wastes from the Denver Radium site.
2. Although action(s) proposed in this case may establish a precedent, this in no way removes, for other cases, the requirement to demonstrate that a similar action is appropriate. Each situation is evaluated independently so that, for each case, appropriate actions can be defined. The proposed action is appropriate in this case.
3. The very fact that the plant has been divided into 16 operable units demonstrates the mechanism of individual evaluation and problem-specific solution.
4. Actions proposed in IM/IRA DD, which would be executed even in the absence of sludge disposal, would result in an area at RFP which is at variance with "green fields" perspective.

Evidence

1. Demonstration of appropriateness of action
 - Cost savings
 - Acceleration of re-mix sludge processing and shipment by 18 months possible with continuation of outyear funding at baseline levels
 - No increase in threat is expected [re-evaluation by DOE required; show character/quantity of material is compatible with and does not obviate risk assessment done to date ($< 1 \times 10^{-6}$)]
2. IAG
3. IM/IRA EA DD
4. Denver Radium clean-up (OU 3 and OU 4 at that site)

DEPARTMENT OF ENERGY POSITION

Issue 6

Disposal of sludge at OU4 as part of interim action is outside regulatory authority.

Position

1. No action will be taken unless it is protective. DOE will re-evaluate health impacts of sludge disposal.
2. Legal authority for action comes from CHWR 6 CCR 1007-3 Section 265.228. CAMU may relieve requirements to meet LDR and MTR; Part 2 siting requirements have already been incorporated.

Evidence

1. Re-evaluation will be performed as part of DD modification.
2. CHWR; Colorado CAMU rule

June 17, 1994

DEPARTMENT OF ENERGY POSITION

Issue 7

Promises have been made in 1989 AIP that sludge will be removed from ponds and site.

Position

1. Its true that this course was our intention at the time.
2. IAG supersedes AIP.
3. AIP required development of an IAG, which has been performed.

Evidence

1. Demonstration of appropriateness of action
 - Cost savings
 - Acceleration of re-mix sludge processing and shipment by 18 months possible with continuation of outyear funding at baseline levels
 - No increase in threat is expected [re-evaluation by DOE required; show character/quantity of material is compatible with and does not obviate risk assessment done to date ($< 1 \times 10^{-6}$)]

DEPARTMENT OF ENERGY POSITION

Issue 8

The Department of Energy could be perceived as having not acted/negotiated in good faith. Critics may feel that DOE has intended all along to dispose sludge under the cap, but has not formally raised the issue until now.

Position

1. It is true that DOE has been thinking of this and other options for sludge disposal, and has discussed informally the idea with Regulators since March 1994; it's also true that development of specifics of the interim action allowed proper evaluation of impacts of sludge disposal as part of that action. Upon seeing the balance of pros and cons, DOE feels obligated to pursue this course.
2. We should focus on benefits now apparent.

Evidence

1. Key items which have evolved and which facilitate this approach:
 - Compliance with Part II criteria (1000 year protectiveness)
 - Barrier
 - Subsurface drain
 - Capacity
 - Protective disposal capacity under barrier is adequate for sludge volume
 - CAMU
2. Demonstration of appropriateness of action
 - Cost savings
 - Acceleration of re-mix sludge processing and shipment by 18 months possible with continuation of outyear funding at baseline levels
 - No increase in threat [show character/quantity of material is compatible with and does not obviate risk assessment done to date ($< 1 \times 10^{-6}$)]
3. Advantages
 - Increases available waste storage space
 - Project realizes cost savings up to \$20M in future years
 - Significantly reduces inventory of non-LDR mixed waste
 - Expedites action to solve largest mixed waste problem at RFP

DEPARTMENT OF ENERGY POSITION

Issue 9

Part II (Hazardous Waste Landfill Siting) criteria have not been met; therefore, disposal of hazardous waste is not appropriate.

Position

1. Effects of any site inadequacies identified by Part II criteria have been mitigated through installation of subsurface ground water control structures and 1000-year cap.
2. All parties have already agreed that the above actions satisfy the Part II criteria. EPA would accept less stringent criteria.

Evidence

1. IM/IRA EA Decision Document, the conceptual design, various meeting minutes which describe discussions and resolutions on the part of the Joint Working Group.
2. Since it is not the intent of the DOE to operate a hazardous waste landfill at the OU4 site, all licensing requirements, transportation plans, and the like which bear on start-up and operation of a landfill are not applicable. It is reasonable to ensure that the performance requirements of a *closed* landfill be achieved. It is clearly the intent of the siting criteria to ensure that contaminants in a closed landfill be isolated from humans and the environment for a very long period of time. Construction of a top barrier, with passive design performance exceeding 1000 years, and appropriate subsurface ground water control structures, with equivalent design life, effectively achieve the intent of the siting criteria. These systems prevent or adequately reduce infiltration of water into the wastes, thereby limiting migration of contaminants through water transport, for the period of performance of the systems. Additionally, the barrier prevents uptake of contaminants via the absorption, inhalation, and ingestion pathways.

DEPARTMENT OF ENERGY POSITION

Issue 10

DOE's proposed action is not protective of ground water.

Position

1. For sludge with minimum treatment (minimum treatment is a less costly alternate to dewater sludge):
Ground water protected by placement above subsurface drain and by dewatering or stabilization.
2. For sludge with full LDR-compliant treatment:
Ground water protected by treatability studies that show product will pass TCLP and meet LDR.

Evidence

1. Existing plans and justifications [IM/IRA EA DD, Joint Working Group (JWS) meetings and meeting minutes and DOE options analyses] that commit to installation of subsurface drain, demonstrate commitment to install drain; its effectiveness is ensured by compliance with appropriate design criteria to be reviewed by regulators as part of Title II.
2. Modeling done as part of DOE re-evaluation is expected to show that ground water will meet standards at point of compliance. Model has been discussed and accepted by Joint Working Group. Treatability study and TCLP results for treated waste form will demonstrate compliance with LDR.

DEPARTMENT OF ENERGY POSITION

Issue 11

IAG schedule commitments [milestones] will be affected.

Position

1. Impacts acceptable in view of advantages to be realized.
2. Every reasonable effort will be made to prevent impact to "Start of Construction" milestone.
3. Benefits are worth delay.

Evidence

1. Project plans and schedules will document commitments.
2. Advantages
 - Increases available waste storage space
 - Project realizes cost savings up to \$20M in future years
 - Significantly reduces inventory of non-LDR mixed waste
 - Expedites action to solve largest mixed waste problem at RFP
 - Acceleration of re-mix sludge processing and shipment by 18 months possible with continuation of outyear funding at baseline levels

DEPARTMENT OF ENERGY POSITION

Issue 12

Sludge disposal under cap could prejudice or be inconsistent with final action.

Position

1. Conduct of any interim action presents some risk; since the IAG requires that the interim action be consistent with the yet-to-be-defined final action. DOE has accepted this risk and has committed to appropriate action to remedy any inconsistencies.
2. Sludge no more difficult to remove, if necessary, than other materials planned for interim action if excavation under the cap were to be needed in the future.
3. Data supports assertion that action proposed in IM/IRA DD is final action for closing the impoundments.

Evidence

1. DOE's actions/commitments to date support acceptance of risk, with prudent assessments to minimize. "Consistency with final action" is addressed in IM/IRA DD.
2. Final form of sludge planned to be granular; easy to excavate.
3. Treatability study data [TCLP].
4. IM/IRA risk assessment.

DEPARTMENT OF ENERGY POSITION

Issue 13

No waste acceptance criteria exists for disposal under cap.

Position

1. Equivalent of WAC is defined by IM/IRA DD; disposal is part of interim action. Remediation goals are determined by health risk assessment; actions to achieve goals and technologies to accomplish actions are proposed in IM/IRA DD and reviewed/approved by regulators and public.
2. Treated sludge will meet LDR.
3. Standards to be approved by regulators in DD.

Evidence

1. IAG
2. Treatability study [TCLP]

DEPARTMENT OF ENERGY POSITION

Issue 14

Proposed action does not include double liners and leachate collections system.

Position

1. Liners and leachate collection system are not needed to ensure protectiveness:
 - treated sludge meets leachability standards (TCLP)
 - drain protects ground water [upward migration of water]
 - cap protects ground water [downward migration of surface water/contaminants]
 - treated sludge will not exude moisture
2. Substantive technical requirements of Part II Siting Criteria are met.

Evidence

1. Treatability study conceptual design, IM/IRA EA DD.

DEPARTMENT OF ENERGY POSITION

Issue 15

Sludge is "nasty stuff" (public perception issue).

Position

1. Sludge threat is not fully qualified until included in IM/IRA health effects (risk) analysis; however, DOE will not do anything that is not protective.
2. Evaluation of health effects, to prove protectiveness, will be performed as part of DD modification.
3. DOE wants regulator participation to ensure task is performed optimally

Evidence

1. None at this time; must wait for health effects evaluation. Necessary data is in hand; analysis will be performed.