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IDAHO DEPARTMENT
OF HEALTH AND WELFARE

DIVISION OF
ENVIRONMENTAL QUALITY

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Philip E. Batt, Governor

December 24, 1997

Ms. Kathleen Hain, Manager
Environmental Restoration Program
U.S. Department of Energy
Idaho Operations Office
850 Energy Drive
Idaho Falls, Idaho 83401-1563

Re: Two-year Review of the Limited Action Remedy for Operable Unit 7-12 (Pad A)

Dear Ms. Hain:

Pursuant to Section XXIII of the Federal Facility Agreement and Consent Order (FFA/CO) and the OU 7-12 Record of Decision (ROD), the Idaho Department of Health and Welfare, Division of Environmental Quality (IDHW-DEQ) has completed a two-year review of the OU 7-12 limited action remedy and hereby certifies that it is protective of human health and the environment. This review was conducted using the documents referenced in Appendix A, evaluation of DOE-ID contractor inspection reports, and inspections performed by IDHW-DEQ personnel. A subsequent five-year review of this limited action will be conducted no later than 2002, unless OU 7-12 is folded into OU 7-13/14 and becomes subject to the provisions of that ROD.

If you have any questions regarding this review, please contact me at (208) 373-0492.

Sincerely,

Daryl Koch
WAG 7-12 Manager
Remediation Bureau

DK:mp

cc: Patti Kroupa, DOE-ID
Matt Wilkening, EPA Region 10
Dean Nygard, DEQ-BOI

Attachments

IDHW-DEQ Two-Year Review of Limited Action Remedy for Operable Unit 7-12 (Pad A)

I. Remediation Goals

The focus of the limited action was to maintain the effectiveness of the soil and grass cover to prevent direct exposure to the waste and to minimize the potential for contaminant migration from the waste to surface or groundwater. The ROD determined that a limited action including recontouring and slope correction, institutional controls, and maintenance and monitoring of the soil cover would be protective of human health and the environment. The specific performance standards were to: a) maintain the soil cover to prevent excessive moisture infiltration, thereby providing continued protection of the groundwater, and b) ensure soil erosion is monitored and controlled to limit soil loss so the infiltration rate is not increased and the potential for exposing waste is eliminated.

There have been at least five subsidence events since the limited action was completed, one severe enough to expose waste containers to the environment. This latter event appears to have been exacerbated by the weight of grass-seeding equipment, with the root cause being the continuing degradation and collapse of wooden and/or metal containers in an intimate soil and moisture contact environment for the past 25 years. Although there is ample evidence of surface erosion from wind, rain, and freeze-thaw conditions upon areas not yet stabilized with a soil-binding grass cover, the initial performance standard of surface erosion recognition and repair appears to be adequate for the purpose of this two-year review.

Initial seeding of the grass cover was completed in November 1994 to reduce soil erosion and to establish an evapotranspirative "pump" to limit moisture infiltration into the cover, and thus prevent moisture from leaching waste constituents. Current guidance used for seeding of the cover, (Guidelines for Revegetation of Disturbed Sites at the INEL, Anderson and Shumar 1989) suggested that successful establishment of a crested wheat grass cover may take several growing seasons. On October 30, 1996, approximately two years after initial seeding, a detailed "transect" inspection was conducted by the DOE-ID contractor and Mark Shumar of IDHW-DEQ. The findings of this inspection were that approximately 1.25 acres of the cover would require re-seeding. This activity was completed in December 1996. A follow up inspection was performed August 4, 1997 with a recommendation to re-seed in the fall of 1997 those areas which had not shown any growth since the 1996 re-seeding and to reinspect those areas with sparse growth, during the summer of 1998. It is now recognized that several factors continue to contribute to the, as yet, unsuccessful establishment of a cover-wide, grass-only community (high winds, severe slopes, plant species competition), in addition to the fact that successful areas of growth are subject to eradication from catastrophic subsidence events.

II. Post Remedy Monitoring Program

A two phase, two year post-remedial action (RA) Short-Term Monitoring Plan (STMP) was implemented at the completion of the RA to determine the effectiveness of the limited action within two years of the ROD signature. The first phase focused on physical and chemical properties of soils to be used in soil cover recontouring and constituent of concern concentrations in soils directly under and near the waste containers. The second phase was to focus on monitoring environmental media including; air, surface/subsurface soils, surface/perched/groundwater, and modeling of moisture infiltration into the soil

cover. The agencies evaluated the data collected from the first phase. Based on the data summarized in the RA report, it was acceptable to proceed with implementation of the Long-Term Monitoring Plan (LTMP). The results of the LTMP (June 1996 and July 1997 monitoring data review packages), coupled with DOE-ID contractor inspection reports of the soil cover, rock armor, grass cover and on-site inspections by the WAG 7-12 Manager and other IDHW-DEQ personnel, constitute the two-year review of the post remedy monitoring program.

III. Overall Evaluation of the Limited Action Remedy

After review of the most recent inspection of August 4, 1997, and the information discussed herein, it is clear that continuing subsidence of the soil cover and the inability to establish a dominant crested wheat grass community (to promote soil stabilization and aid in the evapotranspiration of infiltration moisture), are and will continue to be major issues post limited action. However, for purposes of this two-year review: a) information evaluated in Appendix A, and previously discussed in this review, demonstrate Pad A waste constituents have not been released to the environment, b) response to subsidence events has been satisfactorily upgraded, c) a memorandum of understanding (MOA) has been initiated between the current DOE-ID environmental restoration program contractor and personnel at the Radioactive Waste Management Complex, to further integrate area monitoring programs and provide for more effective maintenance of Pad A, and d) institutional controls to limit exposure to wastes which have been and continue to be enforced. Therefore, for purposes of this two-year review, IDHW-DEQ certifies that the limited action remedy remains protective of human health and the environment.

IV. Specific Revisions to the Monitoring Schedule

In furtherance that the limited action remedy will continue to remain protective, IDHW-DEQ previously proposed the following revisions to the OU 7-12, Pad A Monitoring Schedule, which have been agreed to by DOE-ID and EPA and are herein incorporated in Appendix B of this review: a) to address the issue of continuing subsidence, the frequency (yearly) for documented soil cover inspections is revised to monthly (weather permitting), and b) to address the issue of inadequate grass cover, the frequency (annual) for documented vegetation inspections is revised to twice per year, in the spring and fall.

V. Subsequent Five-Year Review

It is agreed, by all parties, that the next review (5-year review as prescribed by the OU 7-12 ROD and CERCLA) will occur no later than 2002, unless OU 7-12 is subsequently rolled into OU 7-13/14 where it will become subject to the provisions of that ROD.

December 24 1997
Date

Daryl Koch
WAG 7-12 Manager
Remediation Bureau

APPENDIX A

Documents and Basis for Review

Record of Decision, February 1994, Declaration for Pad A at the Radioactive Waste Management Complex Subsurface Disposal Area, Operable Unit 7-12, Idaho National Engineering Laboratory, Idaho Falls, Idaho, issued jointly by the U. S. Department of Energy, U.S. Environmental Protection Agency, and the Idaho Department of Health and Welfare.

Remedial Design/Remedial Action Work Plan for OU 7-12, Pad A Limited Action, Revision 1, MK-Ferguson of Idaho, Doc. No. 07.012.1.1.101.01, June 1994.

Short-term Monitoring Plan for Limited Action at Pad A, Appendix A of the Remedial Design/Remedial Action Work Plan, Revision 1, June 1994.

Operation and Maintenance Plan for the Pad A Limited Action, Appendix H of the Remedial Design/Remedial Action Work Plan, Revision 1, June 1994.

Remedial Action Report, Pad A Limited Action, Revision 2, Parsons Engineering Science, Inc. Doc. No. 07.012.0.320.01, July 1995

Operation and Maintenance Plan for the Pad A Limited Action, Appendix N, Revision 3, of the Remedial Action Report, Revision 2, July 1995.

Long-Term Monitoring Plan for Operable Unit 7-12, Pad A, at the Radioactive Waste Management Complex, Revision 5, Parsons Engineering Science, Inc., Doc. No. ES-14.6.9.8, August 1995.

Pad A 2-year Review Package, Parsons Engineering Science, Inc., Subcontract No. C95-175008, June 1996.

Pad A Two Year Review Close-out Scoping Document, Parsons Engineering Science, Inc., July 1997.