

NOV 29 1989

MEMORANDUM FOR: Paul H. Lohaus, Chief
 Operations Branch
 Division of Low-Level Waste Management
 and Decommissioning, NMSS

FROM: Terry L. Johnson
 Operations Branch
 Division of Low-Level Waste Management
 and Decommissioning, NMSS

SUBJECT: REPORT OF VISIT TO GREEN RIVER SITES

On October 11, 1989, T. Johnson and G. Konwinski performed an inspection at the subject site. We were accompanied by NRC consultant, Dave Bennett. Mr. Bennett is a consultant to the Technical Branch on low-level waste disposal activities and accompanied us on this visit in order to observe construction activities associated with geotechnical aspects of waste disposal. Enclosed for your information is a report for the Green River construction inspection.

ORIGINAL SIGNED BY

Terry L. Johnson
 Operations Branch
 Division of Low-Level Waste Management
 and Decommissioning, NMSS

Enclosures: As stated

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 PDR YES GKonwinski, URFO Swastler, LLOB JJones, LLOB r/f
 RHall, URFO

PDR NO Category: Proprietary or CF Only

ACNW YES NO
 SUBJECT ABSTRACT: REPORT OF VISIT TO GREEN RIVER SITE
 * See Previous Concurrence

OFC :LLOB*	:LLOB*	:LLOB*	:LLWM	:LLWM	:NMSS
NAME:TJohnson/jj	:DGillen	:MFliegel	:	:	:
Date:11/15/89	:11/15/89	:11/17/89	: / /89	: / /89	: / /89

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NAME:	TJohnson/jj	:DGillen	:MFliegel	:	:	:
Date:	11/15/89	:11/15/89	: / /89	: / /89	: / /89	: / /89

ENCLOSURE 1

On-Site Construction Inspection Report

Facility Name: Green River Processing and Disposal Site
Uranium Mill Tailings Remedial Action
Project Site
Green River, Utah

Inspection Conducted: October 11, 1989

NRC Personnel: Ted Johnson
Gary Konwinski
Dave Bennett, NRC Consultant

Inspection Summary:

Area Inspected: T. Johnson and G. Konwinski conducted a routine, announced inspection including review of scope of construction activities, site condition, and quality control records.

Details:

1. Persons Contacted:

John Singleton, Site Manager, Morrison-Knudsen (MK), Inc.
Steve Martz, QA Supervisor, MK
Bob Peel, Project Manager, Jacobs Engineering
Milt Scoutaris, U.S. DOE
Frank Guros, Site Designer, MK
Jim Graff, Jacobs Engineering

2. Processing Site/Disposal Site

The inspectors observed conditions associated with placement of Type A riprap and bedding material. The Type A riprap was being placed in the toe trenches surrounding the pile. The bedding material had already been completely placed.

The bedding material appeared to be placed in a very uniform manner and at the proper thickness. Several spot checks revealed that the required thickness had been placed.

The ongoing placement of Type A riprap appeared to be progressing satisfactorily. The riprap appeared to be of the proper gradation and the placement thickness of 6 inches was being properly accomplished.

Inspectors also observed the stockpiling of larger Type B riprap. The rock appeared to be of acceptable quality and gradation.

3. Records Review

Inspectors reviewed various quality control records to ensure compliance with the construction specifications, Remedial Action Inspection Plan, and the Remedial Action Plan. The records that were reviewed included frequency and results of testing of gradation and durability for the bedding material and the Type A riprap. Additionally, results of permeability tests were examined. All test results were found to be acceptable. Each gradation and durability test examined indicated that the required specifications had been met.

4. Exit Interview

The inspectors met with representatives of DOE and the RAC at the conclusion of the inspection. The inspectors summarized the scope and findings of the inspection, as well as observations (signed observations attached).

- Issues from Previous Site Visits

N/A

- Observations:

1. Gradation and durability tests for Type A and Type B riprap have been performed at specified intervals, and the specifications were met in all cases.
2. Some test results for clay and friable materials in the bedding material indicate that the specifications were not met. The material was re-tested and those test results indicate that the material is acceptable.

3. Gradation and durability test results for the bedding material indicate that testing has been performed at required intervals and that the specifications have been met.
4. Permeability test results, moisture curves, and grain size analyses indicate that the requirements for radon barrier material and its hydraulic conductivity design objective of 2×10^{-8} cm/sec have been achieved.
5. Discussions were held regarding acceptable justification of actual moisture/density tests that were performed. It was agreed that such justification would be provided in the RAP, subject to final approval by DOE. This would be a first step in the RAP/RAIP approval process. Other issues that need to be resolved include resolution of problems with moisture content and compliance with groundwater standards.

NRC Site Inspection
Green River UMTRA Site
October 11, 1989

Attendees: T. Johnson, NRC
G. Kenowski, NRC
D. Bennett, NRC Consultant
M. Scutaru, DCE
B. Peol, TRC
J. Singleton, NRC-F
F. Guras, NRC-ES
S. Martz, NRC-F
J. Gratt, Jacobs

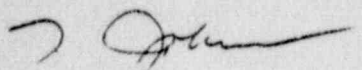
Observations:

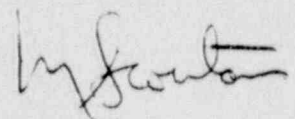

1. Gradation and durability test results ^{for Type A and Type B rock} indicate that testing has been performed at specified intervals and that the specifications were met in all cases.
2. Some test results for ^{clay and} friable materials in the bedding material indicate that the specifications were not met. The material was re-tested as-placed and these results indicate that the material is actually acceptable.
3. Gradation and durability test results for the bedding ^{material} indicate that testing has been performed at required intervals and that the

Specifications have been met in all cases

4. Permeability test results were examined, and it appears that appropriate moisture curves and grain size analyses suggest the design objective of a maximum of 2×10^{-3} cm/sec hydraulic conductivity of the water barrier.

5. Discussions were held regarding acceptable justification of actual moisture/density tests that were performed. It was agreed that such justification would be provided in the RAP, subject to final approval by DOE. This would be ~~the~~^a first step in the RAP/RAMP approval process. Other issues that need to be resolved include resolution of problems with moisture content and compliance with groundwater standards

 10/11/89
T. Johnson, NRC

 10/11/89
M. Scott, DOE
 MK-F

J. Singleton, MK-F