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NUCLEAR REGULATORY COMMISSION
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WM Project 11
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MAR 14 1978 - 102

WM-11

Project No. ~~WM-11~~
Nevada Test Site

Distribution:

(Return to WM, 623-SS) *sf*

MEMORANDUM FOR: James C. Malero, Chief
High-Level and Transuranic Waste Branch, FC

FROM: Regis R. Boyle
High-Level and Transuranic Waste Branch, FC

SUBJECT: TRIP REPORT FOR NEVADA TEST SITE VISIT

On February 23 and 24, 1978, members of the NRC staff and consultants visited the Las Vegas offices of the U.S. Department of Energy (DOE) to discuss plans for the potential use of the Nevada Test Site for a radioactive waste repository and to examine field tests being conducted by DOE and its consultants on the site itself. The purpose of the visit was twofold: (1) to acquaint NRC staff members and consultants with experimental activities taking place at the Nevada Test Site and (2) to inform DOE of the types of experimental work which should be conducted during the early site review period. A list of attendees and their organizational affiliation is enclosed.

On Thursday, February, 23, 1978, a field visit to the Nevada Test Site took place. The agenda for the day's activities is enclosed. Three separate facilities were visited during the day: (1) the E-MAD facility; (2) the Syncline Ridge Area; and (3) Climax Heater Experiment.

At the E-MAD facility, the staff viewed experimental heater tests on spent fuel storage capsules. Currently, tests are being conducted on a prototype above ground capsule. The heater element generates the approximate heat load associated with a single spent fuel assembly. In the near future, below ground tests will be conducted at this facility.

Heat transfer properties of argillite will be obtained at the Syncline Ridge Area experiments. The proposed test at this site involves the placing of a heater element approximately 80 feet below the surface of the earth in a region composed of argillite. Thermocouples will be placed at points up to about 10 meters from the heater element to monitor rock temperature under various heat loadings. Heat transfer coefficients can then be calculated for the argillite.

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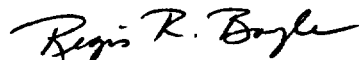
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The Climax Heater Experiment is similar to the Syncline Ridge Experiment except that the tests are currently underway and are being conducted in granite rather than argillity at a point approximately 1,400 feet below the surface. These tests are providing heat transfer coefficients in granite.

On Friday, February 24, 1978, a briefing on the Nevada Test Site was given at the DOE offices in Las Vegas by DOE personnel and their consultants. An agenda of the meeting is enclosed. Detailed discussions on various aspects of the test program took place during this meeting. It was concluded that this type of informational exchange meeting was beneficial to both parties prior to a formal licensing review by NRC and that a follow-up visit should be made in about six months when additional test results are gathered.



Regis R. Boyle
High-Level and Transuranic
Waste Branch
Division of Fuel Cycle
and Material Safety

Enclosures: As stated

cc w/encl:
F. Donath
D. Pentz

NTS SITE TOUR
NTS WASTE MANAGEMENT PROGRAM
FEBRUARY 23, 1978

Enclosure 1

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VIETH, DONALD	DOE/HQ
GILPIN, JOHN	DOE/NV
ROBERTS, ALLEN	DOE/NV
KUNICH, MITCHELL	DOE/NV
BETTERIDGE, RICHARD	DOE/NV
MILLER, DAVID	DOE/NV
BROMLEY, CHARLES	DOE/NTS
BOYLE, REGIS	NRC
CALDWELL, DONALD	NRC CONTRACTOR
HAWKINS, EDWARD	NRC CONTRACTOR
PENTZ, DONALD	NRC CONTRACTOR
LYNCH, RICHARD	SANDIA
TYLER, LYNN	SANDIA
STEPHENSON, ALAN	SANDIA
LINCOLN, RICHARD	SANDIA
ELLOTT, DEE	SANDIA
DONATH, FRED	SANDIA
HOFFMAN, DARLENE	LASL
RAMSPOTT, LAWRENCE	LLL
DUDLEY, WILLIAM	USGS
TWENHOFEL, WILLIAM	USGS
DIXON, GARY	USGS
YANEV, PETER	J. A. BLUME
SCHOLL, ROGER	J. A. BLUME

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AGENDA
NTS TERMINAL WASTE STORAGE PROGRAM
NRC BRIEFING AT DOE/NV
February 24, 1978
A-100

	<u>Time</u>
I. NV PROGRAM MANAGEMENT - M. KUNICH/NV	7:30-7:35 a.m.
II. FY 78 PROGRAM LOGIC - R. LYNCH/SL	7:35-8:15 a.m.
III. SEISMIC ENVIRONMENT & HARDENING - L. VORTMAN/SL and P. YANEV/JBA	8:15-8:40 a.m.
IV. AREA INVESTIGATIONS - W. DUDLEY/USGS	8:40-9:30 a.m.
COFFEE BREAK	9:30-9:45 a.m.
V. MEDIA INVESTIGATIONS	
A. ARGILLITE - L. TYLER/SL	9:45-10:05 a.m.
B. GRANITE - L. RAMSPOTT/LLL	10:05-10:25 a.m.
C. TUFF & ALLUVIUM - L. TYLER/SL and D. HOFFMAN/LASL	10:25-10:45 a.m.
VI. FY 78-80 PROGRAM ALTERNATIVES - R. LYNCH/SL	10:45-11:00 a.m.
VII. WRAP UP - M. KUNICH/NV	11:00-11:30 a.m.

NTS SITE TOUR
NTS WASTE MANAGEMENT PROGRAM

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February 23, 1978

Via - LTR Bus

Tour Coordinator D. F. Miller DOE/NV (FTS 598-3521)

		<u>Time at Sites/ Travel</u>	<u>Arrival/Depart Time</u>
1. Depart NV/HQ main entrance	Travel	2 Hrs.	7:00 a.m.
2. Arrive at E-MAD Facility			9:00 a.m.
Tour E-MAD Facility (D. Durrill, WES, guide)	Travel	1 1/2 Hrs. 3/4 Hr.	
3. Arrive at Syncline Ridge Area -			11:15 a.m.
Tour of general area with a stop at the Sandia Eleana argillite Heater Experiment site (L. Tyler, SL, guide)	} Travel	1/2 Hr. 1/2 Hr.	
4. Arrive at Area 12 cafeteria			12:15 p.m.
Lunch 3/4 Hr.	Travel	1/4 Hr.	
5. Arrive at Piledriver workings			1:15 p.m.
Tour experiment trailer and down hole LLL Climax granite Heater Experiment site (L. Ramspott, LLL, guide)	} Travel	2 Hrs. 2 Hrs.	
6. Arrive at NV/HQ main entrance			5:15 p.m.