UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

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M E M O R A N D U M

DATE: August 15, 1988

FOR: John J. Linehan, Acting Chief, Operations Branch
Division of Waste Management

FROM: Paul T. Prestholt, Sr. OR - NNWSI

SUBJECT: NNWSI Site Report for the month of July, 1988

I. QUALITY ASSURANCE

A. As a result of quality assurance (QA) audit number 88-04 of the U.S. Geological Survey (USGS) by the DOE Waste Management Project Office (WMPO) during the period of June 9 to June 24, 1988, a limited stop work order (SWO) was issued to the USGS by the DOE-WMPO on July 26, 1988.

The SWO requires the USGS to discontinue the analysis, interpretation and publication of results in the following five technical areas:

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PDR WASTE
WM-11 PDC

- Site water level evaluation
- Current seismicity measurements
- Surface water run-off monitoring
- Transport of debris by severe run-off
- Studies of calcite and opaline silica vein deposits (trench 14 problem).

Data collection associated with the above will continue except for the calcite and opaline silica studies.

Twenty "Standard deficiency reports" (SDRs) were identified by the audit team. Originally, the team had assigned a severity level 1 (the most severe) to a number of SDRs. However, in the final audit report, all severity level ones were reduced to severity level two except for SDR number 156.

The letter to Dr. Larry Hayes, USGS Technical Project Office (TPO), informing him of the SWO was signed by Mr. Carl P. Gertz, Project Manager, WMPO. It is interesting to note that in WMPO Quality Management Procedure (QMP) 01-02, in section 4.0 "Responsibilities," it states in paragraph 4.5 "WMPO Project Manager:"

"In addition, the WMPO Project Manager has been designated as the Contract Administration Representative (CAR) by the Contract Administration Representative Authority (CARA) with the authority to recommend to the U. S. Department of Energy Nevada Operations Office (DOE/NV) Assistant Manager for Administration (AMA) that REECo, H&N, F&S or U.S. Geological Survey (USGS) activities be stopped or permitted to continue as appropriate. The actual stop work notification letter and letter closing the SWO (see section 5.10) shall be signed, dated and issued by the AMA." (Emphasis mine).

See also section 5.6 of QMP-01-02.

B. The NNWSI Project is working toward a fully qualified QA program. In order to have a fully qualified QA program in place by January 1, 1989, the following project tasks have been identified (from handout enclosed):

1. Network all new or restart of technical activities through 6/30/89.

2. Identify minimum technical and QA prerequisites for each technical activity.

3. Integrate items 1 and 2.

4. A schedule for development and implementation of a detailed readiness review plan and procedures submitted to OCRWM for approval.

5. Schedule of participants QA program plans and procedures.

6. Scheduled dates for DOE project approval of the contractors' QA procedures required to support technical activities.

7. Scheduled dates for the project office to submit QA program plans to OCRWM and to NRC for review.

8. Schedule of project audits of contractor Quality Assurance Plans (QAPs).

All of the above is to be completed by July 29, 1988.

To help make the above happen, (from the handout enclosed) a "fully qualified QA program" advisory group was established with the following individuals:

- V. Iorii, WMPO
- W. Mansel, WMPO
- W. MacNabb, SAIC
- J. Madsen, Mac Tech

In order to implement the plan to achieve a fully qualified QA program, the following must be accomplished (from the handout, enclosed):

Phase I

- Documentation
  - Top-level plans (PMP, CMP, etc.)
  - QAP (WMPO)
  - QAPP (WMPO, participants)
  - QA procedures (WMPO, participants)
  - Technical procedures (WMPO, participants)
- Organization - staffing
  - Participant organizations' documentation approved
  - Position descriptions (PDs) exist for elements of organization
- Indoctrimation and Training
  - QA orientation
  - Personnel qualifications/training/certification completed and filed.

- Information systems
  - Document control, records management
  - Comment tracking, audits, etc.
- Assessments, audits, surveillance
  - Required to evaluate the readiness of the QA program

Phase II

- QA integration with technical work
- Identify prerequisites and place on a logic diagram and schedule - results in a very busy presentation
- Alternative - develop a checklist of prerequisites to be met prior to authorization of work

Phase III

- QA readiness review (as appropriate) meeting the following criteria
- Restart of work halted by a formal stop work order
- Predetermined hold phases of design, construction and testing
- Large dollar value activities

II. GEOLOGY

A. On July 26 and 27, a "Dry Drilling and Coring Technology Workshop" was held at the SAIC offices in Las Vegas. The purpose of the workshop was to discuss the drilling needs of

the NNWSI participants (USGS, LANL, SNL) and to explore the dry drilling technology now being used at the NTS and available from the drilling industry. The final product of the workshop was to be the recommendation of a drilling system for the prototype vertical seismic profile (VSP) hole at the UZ-9 location.

USGS representatives discussed the surface based investigation needs for geology and for both saturated and unsaturated zone hydrology. LANL gave a presentation on geochemical studies and SNL discussed performance assessment.

A discussion of drilling experience and capabilities at the NTS followed with presentations by the USGS, LANL, F&S, and REECo. Reverse vacuum (UZ-1 and UZ-6) and ODEX drilling systems were described as well as prototype drilling used in G-Tunnel.

The drilling industry was represented by Drill Systems, Inc., Lang Exploratory Drilling, and Atlas Copco. Drill Systems, Inc. described dual-wall reverse circulation drilling, the downhole hammer and rotary cone coring with a wireline core barrel. Land Exploratory Drilling discussed DHH reverse circulation drilling and Atlas Copco described the ODEX system.

The recommended drilling system for the prototype hole, and for all other holes except shallow unsaturated zone (UZ) holes, is the dual-wall reverse air circulation system with either a wire-line core barrel or standard core barrel. It was recommended that the ODEX system be used for drilling shallow UZ holes.

The enclosed handouts give details of the discussions held during this day and a half meeting.

B. The "Sample Management Facility" (SMF) was officially opened on July 20. Over 100 local citizens took advantage of the opportunity to visit the NTS and attended the opening. As I've said before, it is an impressive facility.

The transfer of core continues. The schedules for the core transfer and for QA procedure approval are the same as last reported.

C. There still isn't a final decision as to whether or not the Project will release the full G-4 Forensic report to the staff. I will continue to work to bring this matter to a conclusion.

III. HYDROLOGY

The stop work order imposed on the USGS during July has an impact on the hydrology studies being conducted by the USGS. See the discussion in section I, Quality Assurance for a discussion of this impact.

IV. GEOCHEMISTRY

There is no new activity since last month's report.

V. REPOSITORY ENGINEERING

Enclosed is a handout from the July TPO meeting. It represents the project's initial inventory of the concerns and requests contained in the draft minutes for the July 18-19 Exploratory Shaft Meeting held in Rockville, Maryland. It is emphasized that this is an initial working list taken from draft minutes that have not been officially agreed to by the project.

The 100% Title one design review is scheduled for the week of August 8. It will be conducted in much the same way as the 50% design review. I plan to attend.

VI. WASTE PACKAGE

The work being performed in the area of the waste package is centered around finalizing the SCP and writing study plans. I'm not aware of any new work in this area.

Mike Cloninger, FTS: 544-7847, has joined the WMPO staff and will be responsible for waste package work.

VII. PERFORMANCE ASSESSMENT

The work being performed in the area of performance assessment is centered around finalizing the SCP, reviewing the ESF location from the waste isolation standpoint and quality assurance.

VIII. SITE ENVIRONMENTAL ACTIVITIES

There is nothing new since last month's report.

IX. LICENSING AND NRC-DOE INTERACTIONS

Meetings attended

- July 5 and 6; June TPO-Project Manager meeting.
- July 8; briefing on the core and sample problem by Mike Glora, Uel Clanton and Jack Kepper. An informal meeting with NRC technical and QA staff was suggested and discussed. It was later decided that a "site visit" meeting on this subject during the August-September time frame would not be possible.
- July 11; Monday morning meeting with Carl Gertz, WMPO Manager.

- July 20; Sample Management Facility open house.

- July 26-27; Dry drilling meeting.

- July 28; July TPO-Project Manager meeting.

X. SCP AND STUDY PLANS

The SCP is still on schedule. However, in order to issue the final SCP in December, the review process must be concluded in early September.

The status of the study plans is outlined in the WMPO weekly report that is forwarded weekly.

XI. STATUS INTERACTIONS

There were no state interactions during the month of July.

XII. MISCELLANEOUS

On July 27, I was informed that NRC Commissioner Kenneth Carr and Ms. Margaret Federline, Commissioner Carr's technical assistant, were planning a trip to Las Vegas on September 20. I was asked to prepare an agenda for this visit and coordinate with Mr. Carl Gertz, WMPO Manager.

On July 29, Mr. Gertz and I prepared a suggested agenda. I sent the suggested agenda to Ms. Federline on August 1 by overnight mail along with visitor badge request forms. These forms have been returned and the visitor badge requests have been sent to DOE security.

The suggested agenda includes visits to G-tunnel, Climax mine, the sample management facility, and Yucca Mountain. DOE-WMPO will present a briefing on NNWSI management structure and QA at the sample management facility.

This office has obtained red picture badges that allow access to the NTS for John Gilray and Nancy White.

cc: With enclosures: K. Stablein, R. E. Adler, J. E. Latz

No enclosures: C. P. Gertz, R. R. Loux, M. Glora, D. M. Kunihero, R. E. Browning, G. Cook, L. Kovach, S. Gagner, K. Turner, J. Gilray

Enclosures: Agenda, 7/28/88 TPO Meeting; Project-Level Plans w/NNWSI Project Administrative Procedures Manual Table of Contents; 7/28 TPO Presentation by Carl Gertz; Current Staff Involvement with the Archetype Study Plans; 7/27/88 PM TPO Meeting Handout; USGS NNWSI Program Qualification Schedule; Major Changes in 88-9, Rev. 1; NNWSI Project evaluations of potential areas for cooperative interactions with Atomic Energy Canada, Limited; Workshop information dated 7/28/88; Handwritten list of 23 items w/attachments; Lang Exploratory Drilling info; Update of Information for a Deep Odex Exploratory Hole; Class XIII Rig Specifications; Agenda, 7/26/88 Dry Drilling and Coring Technology Workshop; Vacuum Drilling of Unsaturated Tuffs at a Potential Radioactive-Waste Repository, Yucca Mountain, Nevada (Merrick S. Whitfield, USGS); Overview of Dry Drilling Systems Used at NTS; Saturated Zone Studies (John B. Czarnecki, USGS); Los Alamos/NNWSI Prototype Testing; Surface Based Investigations Unsaturated Zone Drilling; Los Alamos Geochemistry Scientific Needs dated 7/26/88; Fully Qualified QA Program Group/Pilot Study Plan Group Status presented by Vince Iorii 7/26/88