



UNITED STATES
NUCLEAR REGULATORY COMMISSION
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M E M O R A N D U M

DATE: September 21, 1989

FOR: John J. Linehan, Director, Repository Licensing Project
Directorate, Division of High-Level Waste Management,
M/S 4-H-3

FROM:  John W. Gilray, Sr. OR - YMP

SUBJECT: YMP Site Report for the month of July, August and
September, 1989

The following report pertains to the QA, waste package and
surface facility activities associated with the Yucca Mountain
Project for the above-referenced time period.

I. QUALITY ASSURANCE

A. YMP QA and Technical Audits of USGS, Sandia (SNL), and
Reynolds Electrical and Engineering Co. (REECO)

This office participated with other NRC QA and technical
staff members as observers of the YMP QA and technical audits at

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USGS from August 14 through August 22, and at SNL from September 11 through September 15, 1989. The purpose of these two audits was to evaluate the improved QA programs, the implementation of these QA programs, and any ongoing technical activities including the QA and technical qualifications of personnel. In addition, these two audits were to determine the readiness of USGS and SNL to start work. Since there was not sufficient implementation of technical activities at USGS and SNL a conclusion could not be reached as to whether the QA program was acceptably being implemented. However, there is general agreement within YMP that the QA programs at both facilities have adequate controls in place and that the qualifications of the QA and technical staff are acceptable to resume quality work recognizing that YMP will conduct follow-up audits and surveillances to verify that the QA programs are properly being implemented. This office and the other NRC staff observers are assisting the lead observers in preparing the two observation audit reports and finalizing the overall conclusions and recommendations.

The YMP audit of REECo is scheduled for September 25 to the 29th and this office will participate as an observer along with other NRC staff members.

B. YMP Surveillances

Recently the following YMP surveillances have been conducted at Project Office, Holmes and Narver (H&N), Fenix and Scisson, Nevada (FSN), and Technical and Management Support Contractor (TMSC):

- ♦ Surveillance of Records Management Activities at Projects from 8/8 to 8/15, YMP-SR-89-125

This surveillance was to determine the adequacy of the implementation of Project Office records management

activities including the review and implementation of associated procedures.

Results: 4 SDRs were issued which pertain to some weaknesses in procedure content, instances where uncontrolled documents were identified and lack of record transmittal to record source for validation. Records Management is required to correct these deficiencies within 20 working days.

◆ Surveillance of YMPD and T&MSS Document Control Activities from 9/5 to 9/11, YMP-SR-89-131

This surveillance consisted of a review of the T&MSS Document Control Organization activities and an inspection of T&MSS and YMPD document holder's controlled documents against the Master List of Controlled Documents.

Results: Documents reviewed were found to contain all required approvals and signatures. Eighteen backup documents for the ESF and ECP were reviewed against the data in the Master List of Controlled Documents and checked to determine compliance with required procedure controls. Also randomly selected documents were checked to ensure that controlled documents in the possession of the document holders were the correct document issued to the individual and that it was complete and up to date. No SDRs were issued.

◆ Surveillance of T&MSS Environmental Radiological Monitoring Program from 6/19 to 7/11, YMP-SR-89-115

This surveillance involved a QA review and evaluation of the Environmental Field Activity Plan (EFAP), Radiological Monitoring Program (RMP), Branch Technical Procedures and

Activities at Area 25 at the Nevada Test Site to determine compliance with current YMPD QA requirements.

Results: Thirteen SDRs and six observations were issued against T&MSS and they are required to respond to these within 20 working days. A summary of the deficiencies are:

Higher tier documents were revised and made effective without consideration of the impact on the lower tier document.

New or revised APs and QMPs were made effective without consideration of the impact on the Branch Technical Procedures.

Reorganization occurred without consideration of the impact on the Branch Technical Procedures responsibility sections.

The EFAP and RMP are not in agreement of each other.

The Branch technical Procedures are not reflective of the APs and QMPs.

The Branch Technical Procedures as currently issued are inadequate and not user friendly.

Branch Technical Procedures and Job Performance Aids (JPAs) procedures required to support the Radiological Monitoring Program are not currently developed and in numerous cases the effective procedures, reference procedures and JPAs are unavailable.

Failure to follow the procedures is evident from the review of the Radiological Monitoring Program QA

Records submitted to the LRC and discussions with the Health Physics Technicians.

The Radiological Monitoring Program does not contain a fast change mechanism for procedure changes and the number of required procedure reviewers is excessive.

◆ Surveillance of the T&MSS Air Quality and Meteorological Monitoring Programs Relating to QA Program Requirements and Implementation from 6/26 to 7/28, YMP-SR-89-119

This surveillance involved the review of procedures and implementing activities associated with the Air Quality and Meteorological Monitoring Program.

Results: 10 SDRs, 2 NCRs and 5 observations were issued against T&MSS and they are required to provide a response within 20 working days. The YMP QA states that these deficiencies taken collectively represents a serious program deficiency and must be corrected expeditiously in order to avoid a possible significant breakdown in the QA program. A summary of the deficiencies are:

Calibration standards used in the Air Quality Monitoring Program to determine particulate concentrations are not calibrated.

Unapproved calibration sources are used to calibrate field equipment supporting the Meteorological Monitoring Program.

A generic calibration procedure does not exist which addresses the control and calibration of measuring and test equipment.

Air Quality work performed under approved, controlled, and issued Branch Technical Procedures (BTPs) was not accomplished in compliance with the BTPs.

Program requirements contained in the Environmental Field Activity Plan for Air Quality are not adequately addressed in the implementing procedures.

Uncontrolled vendor manuals and operator aids are being used to perform quality related activities.

Program documents designated and maintained as QA records do not meet the acceptance criteria for source records.

QA records cannot be retrieved from the Local Records Center when requested by title/subject or author.

The upper-tier and implementing procedures used to govern the conduct of quality related activities do not meet the requirements contained in the Quality Assurance Program Plan, WMPO/88-1.

Deficiency Evaluation Reports have not been issued for deficient quality related field equipment.

The elapsed time indicators used on the air quality particulate samplers do not accurately reflect the equipment run times.

The temperature sensor in service at Fortymile Wash has been inoperative since 6/9/89.

♦ Surveillance of the T&MSS Sample Management Facility (SMF) from 6/27 to 8/1, YMP-SR-89-123

This surveillance involved an evaluation of each of the SMF procedures to determine compliance with current QA controls and an evaluation of ongoing implementing activities of the SMF at Area 25 of the NTS.

Results: Overall the procedures were determined acceptable and the implementation and records in accordance with QA program requirements with the exception of one minor deficiency.

♦ Surveillance of Design Control Activities at Holmes and Narver (H&N) starting 8/22, and Fenix and Scisson Nevada (FSN) starting 8/28.

The surveillance of FSN involved the review of procedure implementation in the areas of configuration management, Design Methodology, Design Analysis, Computer Verification and information flow to the Site and Engineering Properties Data Base and Reference Information Base.

Results: No deficiencies were identified. Procedures, personnel and activities were found in compliance with QA program requirements.

The surveillance of H&N involved a review of design control procedures and the implementation of these procedures including the flow of design information and the use of interface controls. There were no drawings or specifications completed and verified to date. The review of design products was limited and the surveillance scope was confined to small amounts of work-in-progress.

Results: No deficiencies were identified. Procedures, personnel and activities were found in compliance with QA program requirements.

◆ Surveillance of Implementing Procedures used at SAIC and MACTEC from 8/21 to 8/28, YMP-SR-89-128

This surveillance was conducted at Project, SAIC and MACTEC to determine whether procedures other than previously approved Project Administrative, Quality, and Branch Technical Procedures are being used to implement the YMP QA Program Plan 88-9, Rev. 2. Personnel within SAIC and MACTEC were interviewed to determine the documents that were being implemented to perform activities affecting quality.

Results: 4 SDRs were identified as a result of this surveillance. A summary of these deficiencies are:

- MACTEC is implementing unauthorized procedures to perform quality affecting activities.
- Procedures drafts and updates are being withdrawn during the review cycle without written notice from the TPO to the T&MSS contractor and the PQM.
 - a) T&MSS is using interoffice memo to obtain determination from T&MSS QA as to whether project APs are quality related without PQM involvement.
 - b) T&MSS assigning QA Levels to work governed by APs. The QALAs are not being made in accordance with AP 5.4Q and have no PQM involvement.

- Five departments within SAIC T&MSS were found to have available or be using unauthorized procedures and/or instructions to perform quality affecting activities in the work place. This application of procedures violates the requirements of YMP QA programs.

YMP QA considers the above overall deficiencies represents a major breakdown in the QA Program and that immediate corrective action is necessary by management. In addition YMP QA proposed the following actions:

1. Immediately cease any use of unauthorized procedures and/or instructions.
2. Review each procedure and/or instruction to determine compliance with QAP 88/9, WMFO 88/1, YMP AP's, QMP's and BTP's as applicable. Document this review and note any deviations.
3. If deviations are found, determine the effect on the work completed to date using the unauthorized procedures. Document the method(s) to be used to bring past work into compliance with approved procedures.
4. Develop a schedule for incorporation of unauthorized procedures and/or instructions into YMP AP's, QMP's or BTP's as appropriate.
5. Determine the cause of why and how procedures were developed that were not approved by the QAPP.
6. Investigate the depth of the problem and determine how wide spread the use of unauthorized procedures and/or instructions are.

C. Miscellaneous

- ◆ The YMP QA organization under the direction of the Acting QA Director is actively working with YMP management in an effort to reach agreement on those top priority actions necessary to improve the YMP QA program such that it would qualify through an audit. At present the two major improvement goals are (a) the review and simplification of existing program procedures to assure they can be more effective in meeting QA requirements and (b) the establishment of a comprehensive training program to assure all appropriate YMP personnel clearly understand the procedures and how to carry them out. YMP management has committed new resources to accomplish these two tasks.

- ◆ YMP has selected Don Horton from TVA to be the replacement of the Acting QA Director Ed Wilmot. The starting date for Don Horton is October 16, 1989. It is expected to take approximately one month for Don to become sufficiently trained and knowledgeable of the YMP program before taking full responsibility of the QA position.

- ◆ The QA reorganization within SAIC appears to have made this division more effective and responsible in carrying out its charter. The enclosure identifies the organizational departments within the SAIC QA department along with described functions for each. Dale Hedges has been recently assigned head of the Verification Department which is responsible for audits. One of his first actions was to assign dedicated QA Engineers to each participant with responsibility for being knowledgeable of the status of ongoing QA and work activities at each participant.

- ◆ YMP QA will perform within several weeks a QA verification of the documentation which support the DOE Assessment of the process used to develop, review and

approve the five construction phase exploratory shaft study plans to assure they adequately support the conclusions in the assessment.

- ◆ YMP QA expects the report on the Singer allegation to be finalized by the end of September.

II. SURFACE FACILITIES

H&N and FSN continue their ESF Title II design activities in preparing design packages for initial site preparation, auxiliary pads and access roads, and for the head frame/collar. A management design review was completed by REEDCo of H&N general Arrangement Drawings for the site preparation Design Package and comments have been submitted to projects on August 23, 1989

III. WASTE PACKAGE

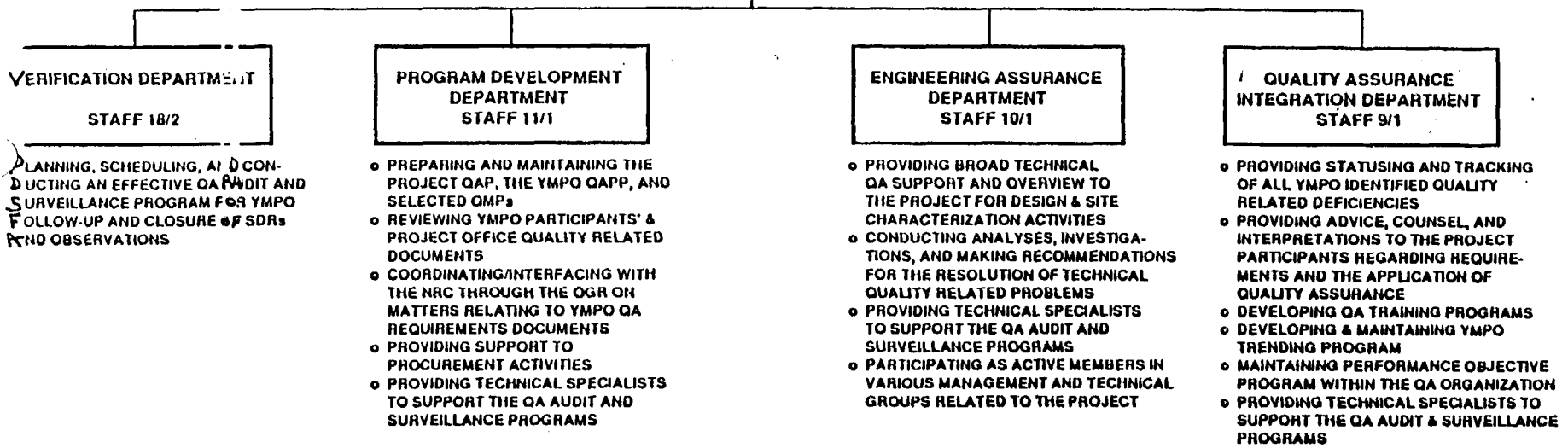
LLNL has scheduled 103 conducting readiness reviews of approximately 150 technical and scientific work packages to determine if the necessary QA controls and technical prerequisites are in place and acceptable before starting work. Six readiness reviews have been completed on planned work activities for Babcox and Willcox and metal-barrier selection and testing. These reviews have found that the implementing procedures and QA program controls are in place and acceptable to start work. LLNL is actively involved in developing Scientific Investigation Plans and Study Plans to meet current QA and Project requirements.

cc: With enclosure : K.Stablein, J.Kennedy, M/S 4 H 3; R.Adler, J. E. Latz, C. P. Gertz, R. R. Loux, M. Glora, G. Cook, D. M. Kunihiro, R. E. Browning, M/S 4 H 3; K. Turner, S. Gagner, M/S 2 G 5; L. Kovach, M/S NLS260; H. Thompson, M/S 17 G21; H. Denton, 17 F2; R. Bernero, 6 A4

**QUALITY ASSURANCE
ASSISTANT PROJECT MANAGER
STAFF 2/3**

- o QA TECHNICAL OVERVIEW
- o QA IMPLEMENTATION SUPPORT
 - DEVELOPMENT OF REQUIRED PLANS AND PROCEDURES
- o AUDITS AND SURVEILLANCES OF YMPO ACTIVITIES
- o DEVELOPMENT OF QA STRATEGIES

**PROJECT OFFICE LIAISON
STAFF 1/0**



**VERIFICATION DEPARTMENT
STAFF 18/2**

- o PLANNING, SCHEDULING, AND CONDUCTING AN EFFECTIVE QA AUDIT AND SURVEILLANCE PROGRAM FOR YMPO FOLLOW-UP AND CLOSURE OF SDRs AND OBSERVATIONS

**PROGRAM DEVELOPMENT DEPARTMENT
STAFF 11/1**

- o PREPARING AND MAINTAINING THE PROJECT QAP, THE YMPO QAPP, AND SELECTED OMPs
- o REVIEWING YMPO PARTICIPANTS' & PROJECT OFFICE QUALITY RELATED DOCUMENTS
- o COORDINATING/INTERFACING WITH THE NRC THROUGH THE OGR ON MATTERS RELATING TO YMPO QA REQUIREMENTS DOCUMENTS
- o PROVIDING SUPPORT TO PROCUREMENT ACTIVITIES
- o PROVIDING TECHNICAL SPECIALISTS TO SUPPORT THE QA AUDIT AND SURVEILLANCE PROGRAMS

**ENGINEERING ASSURANCE DEPARTMENT
STAFF 10/1**

- o PROVIDING BROAD TECHNICAL QA SUPPORT AND OVERVIEW TO THE PROJECT FOR DESIGN & SITE CHARACTERIZATION ACTIVITIES
- o CONDUCTING ANALYSES, INVESTIGATIONS, AND MAKING RECOMMENDATIONS FOR THE RESOLUTION OF TECHNICAL QUALITY RELATED PROBLEMS
- o PROVIDING TECHNICAL SPECIALISTS TO SUPPORT THE QA AUDIT AND SURVEILLANCE PROGRAMS
- o PARTICIPATING AS ACTIVE MEMBERS IN VARIOUS MANAGEMENT AND TECHNICAL GROUPS RELATED TO THE PROJECT

**QUALITY ASSURANCE INTEGRATION DEPARTMENT
STAFF 9/1**

- o PROVIDING STATUSING AND TRACKING OF ALL YMPO IDENTIFIED QUALITY RELATED DEFICIENCIES
- o PROVIDING ADVICE, COUNSEL, AND INTERPRETATIONS TO THE PROJECT PARTICIPANTS REGARDING REQUIREMENTS AND THE APPLICATION OF QUALITY ASSURANCE
- o DEVELOPING QA TRAINING PROGRAMS
- o DEVELOPING & MAINTAINING YMPO TRENDING PROGRAM
- o MAINTAINING PERFORMANCE OBJECTIVE PROGRAM WITHIN THE QA ORGANIZATION
- o PROVIDING TECHNICAL SPECIALISTS TO SUPPORT THE QA AUDIT & SURVEILLANCE PROGRAMS