MAR 07 1989

PA REORIENTATION

MEMORANDUM FOR: Philip M. Altomare
Program Element Manager
WSE&I Program Element

FROM: Michael P. Lee
Project Officer
WSE&I Program Element

SUBJECT: OUTSTANDING ISSUES REGARDING THE PROGRAM ARCHITECTURE (PA) DEVELOPMENT PROCESS AND PA CONTENT

In response to your request (memorandum dated March 3, 1989) on the same subject, the following discussion summarizes those areas related to the development of the Program Architecture (PA) I regard to be outstanding. In enumerating these points, I have used as my "baseline" the description of subelement no. 1 (Systems Engineering/Program Architecture) cited in the Program Element Plan for the Waste Systems Engineering and Integration (WSE&I) Program Element and Overall Program Activities for Center activities and operations in year two (ca. 1988). The conclusions I am drawing are based on a comparison of the requirements in this document (attached) with certain Center deliverables and NRC responses thereto. The pertinent Program Architecture development deliverables I have used to make this assessment are as follows:

Old WSE&I major Milestone no. 10 entitled "Regulations and Statutes Identified as Having Potential to the Repository Program" dated January 14, 1988 (NRC response dated February 19, 1988);

WSE&I intermediate milestones D1 and R1 collectively referred to as "Program Architecture Development and Maintenance" (Technical Operating Procedure (TOP)-001 dated June 13, 1988 (NRC response May 23, 1988);

WSE&I intermediate milestones D5, D7, and D8 collectively referred to as "Program Architecture Relational Data Base Work Instruction" (TOP-001-02) dated August 15, 1988 (NRC's response to draft September 1, 1988);

WSE&I intermediate milestones I2 and P3 respectively entitled "Integrate PARC input to update the PASS database" and "Finalize review of WSE&I MS 12 database" dated August 24, 1988 (NRC response dated September 8, 1988);

Regulatory requirement topics E17 and E36 respectively entitled "Adverse Condition -- Geochemical Processes" and "Structures, Systems, and Components Important to Safety -- Protection Against Natural Phenomena and Environmental Conditions" dated October 28, 1988 and November 23, 1988 (NRC responses November 25, 1988 and February 10, 1989); and

WSE&I major milestone R7 letter report (short title: PASS Proof of System) dated December 7, 1988 (NRC response February 15, 1989).

The systems engineering/program architecture subelement cited in the Program Element Plan for the Waste Systems Engineering and Integration (WSE&I) Program Element and Overall Program Activities has six basic requirements (see page 5 and 6 of the attachment). The requirements themselves and my assessment of their completeness are listed below.

REQUIREMENT #1 -- Identify interfaces between major high-level waste system components.

COMMENTS

I believe this requirement has been partially satisfied by the Center in their "old" WSE&I major milestone no. 10 and "new" WSE&I intermediate milestones I2 and P3. Although I recognize that all of the regulatory interfaces for the high-level waste (HLW) system will not be identified until we have completed the first go-around with the 80 or so statutes and regulations regarded as having application or potential application to the HLW system, I believe we could learn more about the system per se that both we and DOE are dealing with through some systems analysis, possibly through a topical paper or letter report in which the systems, subsystems, and interfaces for the HLW system are identified. (As yet, this has not been done by anybody to the best of my knowledge.) Besides, an analysis of some kind will ultimately be needed to determine what data base fields are needed in the Program Architecture Support System (PASS) and how they will be coded. I don't believe this is the type of thing that can be left to a committee, as in the manner of a Program Architecture review Committee (PARC) to do.

REQUIREMENT #2 -- Identify all staff evaluation findings required by NRC to support its licensing decisions for activities under NWPA/NWPAA.

COMMENTS

Again I believe we are on the road to satisfying this requirement as a result of TOP-001 (the 22 step process for the development of the Program Architecture) and TOP-001-02 (PASS data base work instruction). It is incumbent now upon NRC to permit this requirement to reach fruition by permitting the Center to continue with its PA analyses.

REQUIREMENT #3 -- For each regulatory requirement identify:

a) elements of proof imbedded in the requirement;
b) compliance determination method(s);
c) information required for use in conjunction with the compliance determination method(s);
d) uncertainties (quantified, where practicable) associated with each requirement, element of proof, compliance determination method, and information requirement;
e) recommended technical programs (including staff activities, technical assistance and research) in preparation for licensing a high-level waste repository and offering the most promising reduction in the most crucial uncertainties;
f) costs, schedules, and lead times for obtaining the required information and developing the necessary capabilities associated with recommended technical program;
g) capability required of NRC in order to implement its technical program;
h) areas where additional NRC guidance to DOE is necessary; and
i) trade-offs between various alternative regulatory and programmatic approaches.

COMMENTS

For requirements #3a through #3d and #3h, we have a process/procedure in place to provide the needed information, e.g. TOP-001-02. Requirement #3h is derived more-or-less from the analysis of #3a through #3d; however, a little more work is needed, I believe, to correlate the requirements of items #1, #3h, and #4.

For requirements #3e, #3h, #3g and #3i, there is a need to implement some type of decision making apparatus, possibly in the manner of a WSE&I major milestone letter reports R8 and R9 to provide this information. Again, this is something that cannot be left to a committee so I do not believe that a TOP-type of document would be effective here. For example, how does one determine which technical programs offer the most promising reduction in the most crucial uncertainties, or what are the trade-offs between various alternative regulatory and programmatic approaches? Answers to these questions are the results of a comparative analysis of some type rather than speculation or conjecture.

REQUIREMENT #4 -- Provide network displays that identify the above elements, their relationship with respect to each other, and the critical path display for obtaining the required information and capabilities and providing DOE with guidance as needed.

COMMENTS
This requirement contains constituents of requirements #1 and #3e through #3i. NRC and the CNWRA have 9370 computer systems loaded with IBM's project management software capable of performing the required network displays. However, the network display itself cannot be generated until the analysis and attendant data cited in requirement #3 is available.

REQUIREMENT #5 -- For any particular licensing requirement, the ability to display the attendant NRC program.

COMMENTS
For comments on requirement #5, see comments on requirement #4 above.

REQUIREMENT #6 -- A system to document changes to the program architecture (those recommended by the Center and those approved by NRC).

COMMENTS
With the implementation of an NRC approved Center quality assurance (QA) program, in particular chapter 19 of the QA program, and the TOP's, I believe that there is a process/procedure in place to satisfy this requirement. However, we need to consider what type of process or procedure, e.g. a configuration management procedure, NRC will use to document its decisions that are made with regard to Center recommendations (e.g. requirements #3e through #3i) it intends to implement and those which it intends to defer or reject.

In closing, I believe the Center should receive high marks on its Program Architecture development efforts to date given the fact that this is a first-of-a-kind effort and given the nature of the dynamic environment NRC finds itself accustomed to. As a consequence, I look at this review as an assessment of what tasks the Center should consider under its scope of work for the rest of this year. I also wish to point out that there are still a few NRC review comments related to the Center deliverables previously referenced that need to be closed-out during this time frame as well. Although I recognize and support the need to proceed with loading of the PASS data base, I believe the issues I have identified should receive expeditious management consideration in order to support the forthcoming Progam Architecture-related analyses to be performed by the Center.

We also need to consult and coordinate with the Center on how they might be able to support any DHLWM milestones that are identified in the FY89 Division Operating Plan (dated Febrary 14, 1989). I am aware of a few instances where DHLWM staff have already been able to use products derived from the Program Architecture development process.

Original Signed by

Michael P. Lee
Project Officer
WSE&I Program Element

Enclosure: As stated

cc: Those on Attached Distribution List

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PROGRAM ELEMENT PLAN
WASTE SYSTEMS ENGINEERING AND INTEGRATION
AND OVERALL PROGRAM ACTIVITIES

INTRODUCTION

This statement of work (SOW) delineates activities to be performed by the Center for Nuclear Waste Regulatory Analyses (the Center) in providing systems engineering and integration assistance to NRC in planning and implementing its licensing program under the Nuclear Waste Policy Act of 1982 (NWPA) and the Nuclear Waste Policy Amendments Act of 1987 (NWPAA). This also includes overall program activities of technical review, and performance assessment.

BACKGROUND

Under the NWPA, NWPAA, and other authorizing legislation, NRC is required to make licensing decisions for mined geologic repositories, above-ground storage facilities, and transportation of high-level waste -- all of which comprise a national high-level waste management system. The Department of Energy (DOE) has the lead for development of the system. DOE must obtain a construction authorization from NRC prior to construction of high-level waste facilities, a license to receive radioactive material prior to their operation, and an amended license prior to closure. In order to reach its licensing decisions, NRC performs a thorough review of DOE's license application and conducts adjudicatory hearings to determine whether or not DOE's proposed activity, as described in the license application, meets the generally applicable regulatory requirements of NRC, the Environmental Protection Agency and other specified Federal agencies, which seek to assure adequate protection of public health and safety and of the environment. A license application for a geologic repository is expected to be submitted to NRC sometime in 1995. According to NWPA, NRC has up to three years (with an additional fourth year, if needed) to reach a decision on the construction authorization request. In addition to a license application for a repository, NRC must also reach licensing decisions regarding a monitored retrievable storage (MRS) facility (approval by Congress is required prior to proceeding with an MRS) and, for transportation, must certify from-reactor cask designs and assess the impact of a National Transportation Program involving them as part of its review of an Environmental Impact Statement.

In order to prepare for licensing high-level waste disposal and storage facilities, NRC must develop the capability to provide an independent, technically competent evaluation of DOE's activities. In addition, it must assure that its licensing requirements are complete and implemented in a timely manner and that timely guidance is provided to DOE on information needs, acceptable methodologies, and design considerations necessary to support licensing decisions -- all in sufficient scope and detail for individual findings required by Title 10 of the Code of the Federal Regulations and other applicable Federal statutes and regulations.

Because of the first-of-a-kind and evolving nature of the high-level waste program, and the statutory deadlines imposed on DOE and NRC by NWPA, NRC believes it is prudent to implement early on, in the pre-licensing stage, an

ongoing systems engineering program to assure that all NRC high-level waste activities are optimally planned, integrated, implemented, documented, and managed. This will also enable NRC to systematically review and evaluate its high-level waste program and assess the status of its capability to make each individual staff evaluation, finding, together with the status of the inherent uncertainties and its ability to integrate the individual staff evaluation findings to support a licensing decision.

NRC'S FIVE-YEAR OBJECTIVES

NRC's five year high-level waste program objectives are contained in the Division of High-Level Waste Management's Five-Year Plan for the High-Level Waste Program, FY86-FY9, described in Attachment 1A of the Contract.

NRC's first and most important objective in this contractual effort is to develop and sustain the Center's capability to perform systems engineering and integration of NRC's NWPA/NWPAA regulatory program. This objective applies to repositories, MRS and interim storage facilities, and the National Transportation Program. This will include developing and maintaining up-to-date program knowledge, from a total systems perspective, applying state-of-the-art system engineering and integration tools and techniques, and providing timely program recommendations, both at the Center's own initiative and upon NRC's request. The key effort in this objective will be the development and implementation of a recommended NRC Program Architecture, based on relevant statutes, regulations, or other sources which have the force at law, and DOE's programmatic milestones. The program architecture will have the capability to identify all "elements of proof" to which NRC will base its NWPA licensing decisions, as well as the uncertainties involved, the interfaces, information needs, areas where NRC guidance to DOE is necessary, staff capabilities, programs, costs, schedules, and lead times necessary for NRC to make its required evaluations in accordance with the statutory timeframe imposed by NWPA. An NRC approved Program Architecture will serve as a baseline for NRC's planning and controlling of its program under NWPA/NWPAA and for the Center's program recommendations to NRC. Furthermore, the Program Architecture will assist in the identification of research needs, thereby ensuring that overall research efforts are focused and prioritized consistently with NRC's HLW program responsibilities.

NRC's second major objective is to obtain technical support to NRC in its performance assessment program. This shall include: assistance to NRC in the development and implementation of a licensing assessment methodology for assessments of DOE models, computer programs, and performance assessment techniques; documenting, maintaining, validating, and verifying the models and codes that will be used by NRC in performing reviews of DOE's site characterization plans, site characterization activities, license applications, and other related documents/activities; technical support in developing technical positions and other guidance to DOE on matters related to the implementation of EPA's High-Level Waste Standard; identification and analyses of various techniques for assigning probabilities of occurrence to potentially disruptive events which may affect performance; and additional short-term technical assistance, as required, concerning performance assessment.

NRC's third major objective in this effort is to sustain an ongoing technical review and assessment of other NRC contractor activities and other external-NRC activities pertaining to the waste program under NWPA/NWPAA. The technical review program will support the activities conducted under all of the other SOW's for the contractual effort. In this context, technical review is defined as: appraising the technical performance of other contractors or agencies through meetings; exchanging information on progress and problems; reviewing reports; evaluating presentations; reviewing computer hardware and software; witnessing, evaluating, and selectively performing confirmatory tests; analysing plans for future work and evaluating such efforts relative to technical objectives; and providing comments and recommendations as an independent technical assessment to support decisions by NRC. As a result of this effort, the Center shall: (1) keep NRC informed of other contractor, DOE, other agencies, and State and Tribal activities significant to the NWPA/NWPAA program, as well as significant advancements in knowledge and techniques (generic or site-specific) as a result of such activities; (2) provide support to NRC in the integration of other NRC contractor activities with Center activities; (3) provide an assessment of the technical approaches utilized by other agencies and contractors; (4) provide assistance in developing statements of work for other NRC contractor activities; and (5) as needed and approved by the NRC, perform confirmatory tests and measurements relative to the data developed by DOE in support of its high-level waste program. The Center will, on its own initiative, keep NRC fully aware of significant activities and provide timely notification of problems with recommended solutions.

NRC's fourth and last major objective is to development a systems engineering, project management, and technical support capability necessary to assist NRC in developing and implementing its information management requirements. This shall include, but is not limited to, assistance in relation to a licensing document management system, a licensing issue management system, and negotiated rulemaking concerning standardized electronic format and procedures for the processing of license-related information. The Center shall assist NRC in conducting information management system analyses, establishing or modifying information in a Program Architecture data base system, evaluating and recommending for application electronic records and images, and preparing information management procedures. The Center shall provide special expertise so that NRC can effectively participate with DOE in the development and operation of a Licensing Support System designed to store and retrieve a multimillion-document data base.

THE CENTER'S ROLE

- Develop and sustain systems engineering and integration expertise and provide real-time advice and recommendations to NRC's NWPA Program Manager to enable judicious and timely decisions leading to optimal program success.

- Provide technical review of other NRC contractor and external-NRC activities and provide real-time advice and recommendations to NRC's NWPA Program Manager concerning technical problems and solutions, significant

technical advancements, applicability to NRC's program, and integration of such activities with the NRC program.

- o Conduct a program of regulatory research to provide technical support to NRC's regulatory decisions under NWPA/NWPAA.
- o Provide technical support to NRC in activities that cut across all elements of the high-level radioactive waste management program.
- o Provide expert testimony.

PRODUCTS DURING THE SECOND YEAR

The products for this element are the programs established by the Center for the sub-elements described below and the resultant advice and recommendations presented to NRC. Both the programs implemented and recommendations presented shall be documented by the Center. Annually, the Center shall compile and organize the documentation created during the year with a brief overview of historical purpose. However, the Center shall prepare a separate section in the appropriate "operations plan" for each element and sub-element of this Program Element Plan, which shall include: an outline of the technical approach, personnel assigned; specific milestones and schedules; and estimated individual and cumulative costs to achieve each milestone. (See Section F.1.1 of the Contract.) The Center shall maintain such and operations plan changes shall be submitted to the NRC Program Manager (PM), Program Element Manager (PEM), Project Officer (PO), and Contracting Officer (CO) for review and approval. Once the operations plan is approved by the NRC, the CO will issue a directive authorizing performance of the work. (Note: The Center shall evidence its understanding in the areas identified in this element through its technical comments and recommendations provided under Section F.1.8 of the Contract.)

SUB-ELEMENTS OF WORK

Activities to be Initiated in Year 2

During the second year (months 13 through 24), the Center's support in the Systems Engineering and Integration and Overall Program Activities element shall be directed towards:

1. System Engineering/Program Architecture;
2. Performance Assessment;
3. Technical Review; and
4. Licensing Support System and Open Item Management System

1. Systems Engineering/Program Architecture

The Center shall develop the capability to provide systems engineering and integration support to NRC and shall recommend a Program Architecture for NRC's program as defined by NWPA/NWPAA and other applicable Federal regulations. The proposed Program Architecture shall be based on a complete systems analysis of relevant statutes, regulations, and other sources having the force of law, and DOE's latest programmatic milestones and have the capability to:

- o Identify interfaces between major high-level waste system components.
- o Identify all staff evaluation findings required by NRC to support its licensing decisions for activities under NWPA/NWPAA.
- o For each regulatory requirement identify:
  - elements of proof imbedded in the requirement;
  - compliance determination method(s);
  - information required for use in conjunction with the compliance determination method(s);
  - uncertainties (quantified, where practicable) associated with each requirement, element of proof, compliance determination method, and information requirement;
  - recommended technical programs (including staff activities, technical assistance and research) in preparation for licensing a high-level waste repository and offering the most promising reduction in the most crucial uncertainties;
  - costs, schedules, and lead times for obtaining the required information and developing the necessary capabilities associated with recommended technical program;
  - capability required of NRC in order to implement its technical program;
  - areas where additional NRC guidance to DOE is necessary; and
  - trade-offs between various alternative regulatory and programmatic approaches
- o Provide network displays that identify the above elements, their relationship with respect to each other, and the critical path display for obtaining the required information and capabilities and providing DOE with guidance as needed.
- o For any particular licensing requirement, the ability to display the attendant NRC program.

o A system to document changes to the program architecture (those recommended by the Center and those approved by NRC).

Starting in year 2, the Center shall accelerate development of selected portions of the Program Architecture; specifically identifying which regulatory requirements (for those statutes and regulations that have been identified as having application or potential application to NRC's high-level waste regulatory program) that are regarded as being critical to "siting" and activities related thereto. The Center shall take those requirements which are "siting" constrained and apply them to its "Process for Developing and Maintaining the NRC High-Level Waste Program Architecture" and perform the necessary analyses.

The desired outcome of the analysis by the Center is to (1) produce an analysis and evaluation of those regulatory, technical, institutional uncertainties pertaining to "siting", (2) identify those uncertainties for which the Center would recommend the use of rulemaking to reduce the uncertainty to acceptable levels, (3) the relative priorities of the uncertainties themselves and supporting rationale, and (4) an analysis and evaluation of the regulatory requirements and their relative importance to siting that could be an aid to identifying those aspects of the Site Characterization Plan that should have priority consideration in the NRC staff review. NRC will review and provide comments on the recommended program, and the remainder of the Program Architecture shall be completed during the balance of the second year.

In concert with the above activities, the Center shall, on its own initiative, provide prompt notification to NRC of systems engineering and integration problems concerning the NRC's current NWPA/NWPAA program, along with recommended solutions. The Center shall sustain the capability to provide quick response to unforeseen problems of a systems engineering nature that may be encountered by NRC throughout the year (e.g., review and analysis of DOE or NRC positions and plans from a systems perspective). The Center shall provide a systems engineering participant at major NRC meetings with DOE, States, Tribes, or other involved agencies that impact on the systems engineering program.

2. Performance Assessment

Starting in year 2 and for the duration of this contract, the Center shall develop and sustain expertise in performance assessment aspects of the geologic repository program. The Center shall develop a program to integrate the various distinct performance assessment methods and models into an overall licensing assessment methodology. The Center shall perform technical analyses of DOE's models, computer programs and performance assessment techniques.

Beginning in year 2 of the contract period, the Center shall review all performance assessment work performed by Sandia National Laboratories (SNL) under NRC's Technical Assistance in Performance Assessment contract (FIN A-1165) and Risk Methodology Development for Waste Isolation in Alternative Geologic Media (other than salt)) contract (FIN A-1266), interact with NRC

staff and its contractors, and participate in technical meetings and workshops, as necessary, to maintain a working knowledge of current and past programs.

Specifically, during year 2, the Center shall:

- Review and provide comments to NRC on draft documents prepared by Sandia National Laboratories (SNL) under NRC FINs A-1165 and A-1266;

- Recommend a modeling strategy for the NRC review of DOE's pre-closure performance assessment;

- Acquire expertise in the use of key models, and the capability to assess the use of models by others (e.g., DOE, other NRC contractors);

- Upon request by the NRC staff, provide technical support for the purpose of scoping and developing rulemakings regarding licensing requirements associated with Part 60; and

- Take over the program for computer code maintenance and configuration management developed by SNL.

3. Technical Review

The Center shall provide continuing technical review of other NRC contractor activities and activities of DOE, States and Tribes, other Federal agencies, and other countries as they are related to the technical program under the NWPA/NWPAA. The Center shall, on its own initiative, report significant external-NRC activities, technical advancements in high-level waste technology, technical problems that may impact NRC's technical program as they occur and submit recommendations for the NRC NWPA/NWPAA program.

In addition to keeping fully abreast and apprising NRC technical activities external to NRC, the Center shall perform a continuing integration role with regard to all NRC contractor activities pertaining to the NWPA/NWPAA program, (including the Center's own activities and other NRC activities) and a technical assessment role of all other NRC-NWPA/NWPAA contractor activities. This shall include an assessment of how each contractor activity relates to the elements of proof identified in Sub-Element 1, above, and a critique of the technical approaches and results of other NRC-NWPA/NWPAA contractor activities.

4. Licensing Support System and Open Item Management System

The Center shall provide support to the NRC in implementing both its Licensing Support System and Open Item Management System.

The Open Item Management System is intended to identify, track, and document (to resolution) all potential licensing issues. It is intended to be a "proactive" management approach which seeks to allocate staff resources upon the most pressing problems within a framework of a work breakdown structure (consistent with the Program Architecture under Sub-element 1). The system will document all activities leading to the resolution of issues. In this

regard, the Center shall provide support to NRC to identify open items, evaluate the effectiveness of the system, and integrate open items with the Center's Program Architecture Support System.

The Licensing Support System (LSS) will be developed by DOE. NRC's current role is to begin building its portion of the data base by capturing new documents in electronic format and converting existing hard-copy documents into an electronic format. To support this project, the contractor shall remain cognizant of LSS developments, provide technical advice to NRC on the proposed system and, as appropriate, conform the Center's records management procedures and practices to NRC's requirements for the LSS.

QUALITY ASSURANCE

A separate section in the appropriate Operations Plan shall be developed for the QA subelement.

NRC's 5 YEAR QA OBJECTIVES

The first major objective is to continue to develop and sustain contractor capability in the area of QA, and especially its application to those disciplines specifically related to the transportation., storage, and disposal of high-level nuclear waste, as described in the NWPA. The Center's QA expertise shall extend to issues of internal QA for NRC, as well as the programs, methodologies, procedures and issues specific to DOE and effected States and Tribes. This expertise shall be demonstrated through recommendations provided to the NRC on the Center's own initiative or in performance of NRC directives. This effort shall include the development, over contract period, of the capability to show the relationship between those QA efforts carried out by NRC and the Center in connection with the NWPA program and specific regulatory requirements.

The second major objective is to continue implementation of the Center's QA program. This will include modifications of the Center QA Manual, if necessary, development of new procedures, and modification of existing Center and SwRI QA practices and documents, as necessary. It is anticipated by NRC that one or more reviews of Center QA programs will be undertaken during the coming years to calibrate the Center's program with other NWPA related QA activities.

The third major objective is to provide assistance to NRC through participation, with NRC in review/audit type programs of DOE, and its contractors in the NWPA program.

THE CENTER'S QA ROLE

- Develop and sustain expert capability in all aspects of QA.
- Provide expert QA analysis support for NRC's NWPA program.
- Provide expert testimony as required by NRC on NWPA issues.
- Provide expert QA assistance to NRC in interactions with DOE, States, and Tribes.
- Provide full implementation of the CNWRA QA program .

PRODUCTS

Reports on each trip taken under Task 5
Reports on each document reviewed under Task 5
Revised CNWRA QA Manual
Other products will be identified in separate technical direction.

TASKS

The Center shall, on its own initiative, keep NRC fully and timely apprised of significant QA problems encountered during its approved activities, along with recommendations. The Center shall sustain the capability to provide quick response to unforeseen problems concerning QA that may be encountered by NRC. The Center shall provide a QA participant at all major NRC NWPA QA meetings, audits, and site visits. Tasks in the Operations Plan should include the following subjects:

1. Support Development and Maintenance of the Program Architecture

   The Center shall continue to develop and maintain the Program Architecture being developed under the Systems Engineering program element.

2. QA Program Implementation

   The Center shall continue implementation of the CNWRA QA program developed in Year 1. This shall include, but is not limited to, maintenance and enhancement of the CNWRA QA Manual, assistance to CNWRA staff in development of Technical Operating Procedures and QA Operating Procedures. The Center shall continue to develop and maintain its expertise in QA, appropriate to its mission. This may include attendance at meetings as directed by NRC.

3. Review of State QA Programs

   Upon receipt of an NRC directive the Center shall begin the process of identification and assessment of the QA programs undertaken by the affected States and Indian Tribes and determine the validity of the methods chosen which will have a bearing on the acceptability of data generated under these programs. Such data may be presented in future licensing hearings. In undertaking this effort, consideration shall be given to identification of the potential site of a monitored retrievable storage (MRS) facility and all transportation routes associated with the potential waste storage choices actively under consideration.

4. Development of QA Program Guidance

   The Center shall assist the NRC in developing QA program guidance and reviewing DOE documents which interpret this guidance.

5. Audits/Program Review

   The Center shall also provide immediate assistance to the NRC in the execution of audits of portions of the QA programs proposed by the DOE. The Center shall have staff knowledgeable and experienced in the auditing of engineering and geological programs, and particularly in the qualification of data which may have been collected without the benefit of a rigorous QA program in effect.

6. Internal QA

   The Center shall develop a thorough understanding of the existing Internal QA Program of the Division of Waste Management, NMSS. The Center shall provide recommendations for modifications to the Internal QA Plan to ensure that it meets the goal of assurance of the quality and reliability of the work carried out by the Division of Waste Management.

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