Section 00 - INTRODUCTION

This Quality Assurance (QA) plan is a part of the Agency for Nuclear Projects/Nuclear Waste Project Office's (NWPO's) QA Program. The Program also consists of (1) QA implementing procedures (QAPs), primarily of an administrative nature and prepared by NWPO; (2) technical procedures (TPs), prepared largely by NWPO's contractors and subcontractors; (3) a Statement of Quality Assurance Policy; (4) a glossary of definitions; and (5) appurtenant sections, such as tables of contents. See the Table of Contents, herein, for details of program organization.

NWPO management has instituted this quality assurance program to ensure that activities performed by NWPO and its contractor/subcontractor and vendor/supplier personnel, relative to the U.S. Department of Energy (DOE) site characterization at Yucca Mountain, comply with applicable quality assurance requirements. The purpose of the NWPO activities addressed by the program is to investigate the potential impact on the health, safety, and environment of the residents of Nevada of any nuclear waste repository the DOE may wish to establish. NWPO and its contractors/subcontractors do this (1) by monitoring DOE activities, (2) by critically reviewing and analyzing data and analyses from DOE and other sources, and (3) by conducting independent investigations as needed to (a) appraise DOE data, assumptions, conclusions, and designs and (b) to establish NWPO's own data bases and interpretation techniques.

It is NWPO policy that compliance with the NWPO QA Program is mandatory for all NWPO, contractor/subcontractor, and vendor/supplier personnel performing significant activities to meet NWPO's objectives. There are no separate contractor or subcontractor QA programs that govern these significant activities. There is, likewise, no negotiated or numerical system of QA control.

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NWPO considers all NWPO-sponsored activities equally significant for purposes of QA control.

The term "significant activities" is a substitute for the term "quality-related activities" to indicate that NWPO-sponsored activities do not directly address waste isolation and public safety in the sense that the DOE's site characterization and design activities do. NWPO is concerned with the performance of activities significant to its own goals, which are not necessarily the same as the DOE's.

Through its QA program, NWPO is committed to applicable requirements of the following master documents as they pertain to NWPO's objectives and activities and as they do not contradict the State of Nevada Administrative Code or laws of the United States or of the State of Nevada:

1. 10CFR50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," 1975;
2. 10CFR60, Subpart G, "Disposal of High Level Radioactive Waste in Geologic Repositories, Quality Assurance," 1983;
3. ANSI/ASME NQA-1-1986 Edition, "Quality Assurance Program Requirements for Nuclear Facilities";
4. U.S. NRC, "NRC Review Plan: Quality Assurance Programs for Site Characterization of High Level Nuclear Waste Repositories," June 1984;
5. U.S. NRC NUREG-0856, "Final Technical Position on Documentation of Computer Codes for High-Level Waste Management," June 1983;
6. U.S. NRC NUREG-1297, "Generic Technical Position on Peer Review for High-Level Nuclear Waste Repositories," February 1988; and

7. U.S. NRC NUREG-1298, "Generic Technical Position on Qualification of Existing Data for High-Level Nuclear Waste Repositories," February 1988.

Exceptions to the master documents are as indicated in the QA plan and procedures. The QA Manager and, as appropriate, others evaluate proposed additional exceptions for the NWPO QA Program on a case-by-case basis and provide documented justification to the NRC for any allowed. The QA Program is revised in response to these exceptions, if warranted.

Section 10 - INSPECTION AND MONITORING

This section of the QA plan addresses inspection and monitoring. For purposes of the program objectives, the term "monitoring" means the observation and documentation of a DOE or NWPO-sponsored activity by a qualified, but nonparticipating, independent observer. Inspection is the documented examination or measurement of an item by a qualified and independent non-supervisory person, for compliance to specified requirements. For the purposes of this program, inspection is confined to receiving inspections of purchased items significant to NWPO-sponsored activities, except for "off-the-shelf" items.

Many technical activities outlined in Sections 00 and 02 of the plan consist of the monitoring of DOE and DOE-contractor/subcontractor activities by NWPO and/or contractor personnel. For NWPO-sponsored activities, the decision of whether to monitor an activity or to rely entirely on auditing and/or surveillances to verify satisfactory performance or to perform or not to perform a receiving inspection, is made by NWPO's Administrator of Technical Programs, Executive Director and QA Manager and, as appropriate, by the contractor's Project Manager and Principal Investigator. Their decision, as a minimum, depends on the following questions:

1. Is the activity under the control of NWPO?
2. Is monitoring feasible?
3. Are errors in performance detectable after the fact?
4. How serious are consequences of unobserved nonconformances in procedure?

With respect to inspection, the determining factor is the significance of the item to NWPO's goals. Inspection activities are controlled by technical procedures and performed by qualified personnel who are free from undue pressures

of cost and scheduling. Persons conducting monitoring or inspections are NWPO or contractor/subcontractor staff members, as appropriate, and are appointed by the Administrator of Technical Programs, Project Manager, Principal Investigator, or others. The inspector or monitor is required to submit written reports to specified persons with copies to the QA Manager, Administrator of Technical Programs, Project Manager, Principal Investigator and others, as appropriate. Inspectors of items and monitors of NWPO and contractor/subcontractor activities are required to report nonconformances to the QA Manager for investigation and correction per procedures QAP-15.1 and QAP-16.1. (See Sections 15 and 16, herein.)

QA and technical procedures establish documented qualification requirements for inspectors and monitoring personnel. In addition, technical procedures provide for the following documentation as applicable and feasible:

1. identification of characteristics and activities or items to be monitored or inspected and of the observations to be made;
2. a description of the method of monitoring or inspection;
3. identification of individual(s) performing the monitoring or inspection, or of the data recorder, and the date of the monitoring or inspection;
4. acceptance and rejection criteria (inspections only);
5. identification of required inspection or monitoring procedures (including drawings and specifications), and revisions thereof;
6. specification of necessary measuring equipment including accuracy requirements;
7. mandatory hold points beyond which work cannot proceed without inspection (inspection only);

8. evaluation of data and results and acceptance, as appropriate, by the Principal Investigator, Project Manager, and Administrator of Technical Programs; and
9. a description of the method for controlling the application and removal of status indicators on receipt inspected items.

Receiving inspections conform to special requirements of procurement documents (Sections 04 and 07 of the plan and procedure QAP-4.1) requiring receiving inspections of purchased materials, equipment, instruments, or apparatus before acceptance.

Section 11 - TEST CONTROL

There are no NWPO, contractor, or subcontractor activities that fit the definition of testing of ANSI/ASME NQA-1-1986, Supplement S-1, or the definition implied by the "NRC Review Plan: Quality Assurance Programs for Site Characterization of High Level Nuclear Waste Repositories," (June 1984). In accordance with technical procedures and procurement documents, the contractors and subcontractors perform technical activities of an investigative nature including laboratory research. These investigations establish new methods, techniques, and data bases used in accomplishing NWPO's goals identified in the "Statement of Quality Assurance Policy," and in Sections 00 and 02 of the QA plan, herein. The technical procedures are prepared in accordance with procedures QAP-2.1 and QAP-2.2 and include the following items, as appropriate:

1. instructions for performing the activity;
2. prerequisites for conducting the activity such as calibrated instrumentation, suitable and controlled environmental conditions, and provision for data collection and storage;
3. mandatory inspection hold points (as required);
4. methods of data analysis;
5. methods of documenting or recording data and results;
6. provisions for assuring that prerequisites have been met; and
7. identification of potential sources of uncertainty and error.

Review of activities and procedures and the evaluation and documentation of results are addressed in procedures that implement Sections 02, 03, and 04 of the plan. See, for example, procedures QAP-2.2, QAP-3.2, and QAP-4.1.